

Appendix K

Food-Web Model Tables

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Table K-1. Food-web model exposure results for Arctic fox exposed to mean CoPC concentrations at reference site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammals (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	514	3,650	22.6	0.145	11.3	2.49	13.9	4.35	1.9	19	2.3	0.23
Antimony	0.045	0.208	0.004	0.0000127	0.000642	0.000442	0.00110	0.000343	0.66	--	0.00052	--
Arsenic (arsenate)	0.717	3.61	0.118	0.000202	0.0112	0.0130	0.0244	0.00761	0.40	1.6	0.019	0.0048
Arsenic (arsenite)	0.717	3.61	0.118	0.000202	0.0112	0.0130	0.0244	0.00761	0.13	1.3	0.059	0.0059
Barium	125	346	45.4	0.0353	1.07	5.01	6.12	1.91	5.1	20	0.37	0.096
Cadmium	0.0333	0.379	0.326	0.00000940	0.00117	0.0360	0.0372	0.0116	1.0	10	0.012	0.0012
Chromium	1.17	6.76	0.975	0.000329	0.0209	0.108	0.129	0.0403	3.3	69	0.012	0.00058
Cobalt	0.693	7.97	0.177	0.000196	0.0247	0.0196	0.0444	0.0139	0.50	2.0	0.028	0.0069
Lead	0.512	10.2	4.64	0.000144	0.0317	0.512	0.544	0.170	11	90	0.015	0.0019
Mercury	0.05	0.0935	0.0288	0.0000141	0.000289	0.00318	0.00348	0.00109	0.032	0.16	0.034	0.0068
Molybdenum	0.0883	0.689	0.457	0.0000249	0.00213	0.0505	0.0527	0.0165	0.26	2.6	0.063	0.0063
Selenium	0.267	0.594	0.825	0.0000752	0.00184	0.0912	0.0931	0.0291	0.20	0.33	0.15	0.088
Thallium	0.011	0.0769	0.00625	0.00000310	0.000238	0.000691	0.000932	0.000291	0.074	0.74	0.0039	0.00039
Vanadium	1.57	14.5	0.4	0.000442	0.0447	0.0442	0.0894	0.0279	0.21	2.1	0.13	0.013
Zinc	3.16	60.8	110	0.000892	0.188	12.2	12.4	3.87	160	320	0.024	0.012

Note: Data used to develop this scenario are presented in Table K-1a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-1a. Arctic fox EPC calculation for mean and 95% UCL CoPC concentrations at reference site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
PHASE1RA	ST-REF-4	7/20/2003	SW0037	0	0	NA	NA	NA	µg/L unfiltered		0.02
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
PHASE1RA	TP-REF-2	7/20/2003	SW0038	0	0	NA	NA	NA	µg/L unfiltered		0.06
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										reference site mean	0.512 <i>J</i>
										reference site 95% UCL	1.91
Tundra Soil											
PHASE2RA	ST-REF-3	6/26/04	TS-0036	0	0	NA	NA	NA	mg/kg dry		15.3
PHASE2RA	ST-REF-5	6/24/04	TS-0031	0	0	NA	NA	NA	mg/kg dry		10.7
PHASE2RA	ST-REF-6	6/24/04	TS-0033	0	0	NA	NA	NA	mg/kg dry		9.81
PHASE2RA	TP-REF-2	6/24/04	TS-0032	0	0	NA	NA	NA	mg/kg dry		23.6
PHASE2RA	TP-REF-3	6/23/04	TS-0027	0	0	NA	NA	NA	mg/kg dry		12.8
PHASE2RA	TP-REF-5	6/24/04	TS-0030	0	0	NA	NA	NA	mg/kg dry		9.1
PHASE1RA	TS-REF-1	07/20/03	TS0024	0	0	NA	NA	NA	mg/kg dry		5.97 <i>J</i>
PHASE1RA	TS-REF2	07/20/03	TS0023	0	0	NA	NA	NA	mg/kg dry		5 <i>J</i>
PHASE1RA	TS-REF3	07/20/03	TS0022	0	0	NA	NA	NA	mg/kg dry		3.78 <i>J</i>
PHASE1RA	TS-REF-4	07/20/03	TS0021	0	0	NA	NA	NA	mg/kg dry		6.61
PHASE1RA	TS-REF-5	07/20/03	TS0020	0	0	NA	NA	NA	mg/kg dry	23.3	
PHASE2RA	TS-REF-5	06/23/04	TS-0028	0	0	NA	NA	NA	mg/kg dry	3.58	
										survey station mean	13.4
PHASE1RA	TS-REF-6	07/20/03	TS0019	0	0	NA	NA	NA	mg/kg dry		9.87 <i>J</i>
PHASE1RA	TS-REF-7	07/20/03	TS0018	0	0	NA	NA	NA	mg/kg dry	6.26	<i>J</i>
PHASE2RA	TS-REF-7	06/24/04	TS-0029	0	0	NA	NA	NA	mg/kg dry	7.5	
										survey station mean	6.9 <i>J</i>
PHASE1RA	TS-REF-8	07/20/03	TS0031	0	0	NA	NA	NA	mg/kg dry		18.5 <i>J</i>
PHASE1RA	TS-REF-9	07/20/03	TS0030	0	0	NA	NA	NA	mg/kg dry		2.9 <i>J</i>
PHASE1RA	TS-REF10	07/20/03	TS0017	0	0	NA	NA	NA	mg/kg dry		7.23 <i>J</i>
PHASE2RA	TS-REF11	06/25/04	TS-0034	0	0	NA	NA	NA	mg/kg dry		12.7
										reference site mean	10.2 <i>J</i>
										reference site 95% UCL	12.5
Small Mammals											
PHASE2RA	TS-REF-5	7/2/2004	SM0017	0	0	NA	NA	NA	mg/kg dry		0.788
PHASE2RA	TS-REF-5	8/1/2004	SM0021	0	0	NA	NA	NA	mg/kg dry		1.33
PHASE2RA	TS-REF-5	8/1/2004	SM0022	0	0	NA	NA	NA	mg/kg dry		15.9
PHASE2RA	TS-REF-5	8/1/2004	SM0023	0	0	NA	NA	NA	mg/kg dry		0.524
										reference site mean	4.64
										reference site 95% UCL	15.9

Note: Tundra soil are averaged by survey station, then included in the calculation of the site mean.
95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.
CoPC - chemical of potential concern *J* - estimated value
EPC - exposure point concentration *U* - undetected; value reported is half the detection limit

Table K-2. Food-web model exposure results for Arctic fox exposed to 95% UCL CoPC concentrations at reference site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammals (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	2,770 ^a	5,590	78.4 ^a	0.781	17.3	8.66	26.7	8.36	1.9	19	4.4	0.44
Antimony	0.0765	0.241	0.00635	0.0000216	0.000747	0.000702	0.00147	0.000460	0.66	--	0.00070	--
Arsenic (arsenate)	1.36	5.31	0.14 ^a	0.000384	0.0164	0.0155	0.0323	0.0101	0.40	1.6	0.025	0.0063
Arsenic (arsenite)	1.36	5.31	0.14 ^a	0.000384	0.0164	0.0155	0.0323	0.0101	0.13	1.3	0.078	0.0078
Barium	177	417	55.7 ^a	0.0499	1.29	6.16	7.50	2.34	5.1	20	0.46	0.12
Cadmium	0.0580	0.477	0.730	0.0000163	0.00147	0.0806	0.0821	0.0257	1.0	10	0.026	0.0026
Chromium	3.71 ^a	11.8	1.63	0.00105	0.0366	0.180	0.218	0.0680	3.3	69	0.021	0.00099
Cobalt	1.79	11.3	0.201	0.000505	0.0351	0.0222	0.0578	0.0180	0.50	2.0	0.036	0.0090
Lead	1.91 ^a	12.5	15.9	0.000539 ^a	0.0388	1.76	1.80	0.561	11	90	0.051	0.0062
Mercury	0.05 ^a	0.109	0.039	0.0000141 ^a	0.000337	0.00431	0.00466	0.00146	0.032	0.16	0.046	0.0091
Molybdenum	0.158	0.881	0.605	0.0000447	0.00273	0.0668	0.0696	0.0217	0.26	2.6	0.084	0.0084
Selenium	0.366	0.693	1.1	0.000103 ^a	0.00214	0.122	0.124	0.0387	0.20	0.33	0.19	0.12
Thallium	0.04 ^a	0.0919	0.007	0.0000113 ^a	0.000285	0.000774	0.00107	0.000334	0.074	0.74	0.0045	0.00045
Vanadium	5.57 ^a	19.0	0.4	0.00157 ^a	0.0587	0.0442	0.104	0.0326	0.21	2.1	0.16	0.016
Zinc	6.26	68.4	120	0.00176	0.212	13.2	13.4	4.20	160	320	0.026	0.013

Note: Data used to develop this scenario are presented in Table K-1a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-3. Food-web model exposure results for Arctic fox exposed to mean CoPC concentrations at port site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammals (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	35.5	5,610	474	0.0100	17.4	52.4	69.7	21.8	1.9	19	11	1.1
Antimony	0.307	5.83	0.0308	0.0000865	0.0180	0.00341	0.0215	0.00673	0.66	--	0.010	--
Arsenic (arsenate)	0.494	16.7	0.125	0.000139	0.0515	0.0139	0.0655	0.0205	0.40	1.6	0.051	0.013
Arsenic (arsenite)	0.494	16.7	0.125	0.000139	0.0515	0.0139	0.0655	0.0205	0.13	1.3	0.16	0.016
Barium	44.8	597	43.2	0.0126	1.85	4.77	6.63	2.07	5.1	20	0.41	0.10
Cadmium	0.120	15.1	0.271	0.0000337	0.0467	0.0300	0.0767	0.0240	1.0	10	0.024	0.0024
Chromium	0.799	11.1	2.72	0.000225	0.0344	0.301	0.335	0.105	3.3	69	0.032	0.0015
Cobalt	0.903	11.4	0.264	0.000255	0.0354	0.0291	0.0648	0.0202	0.50	2.0	0.040	0.010
Lead	0.462	792	11.6	0.000130	2.45	1.28	3.73	1.17	11	90	0.11	0.013
Mercury	0.0393	0.779	0.0298	0.0000111	0.00241	0.00330	0.00572	0.00179	0.032	0.16	0.056	0.011
Molybdenum	0.793	1.41	0.708	0.000224	0.00435	0.0782	0.0828	0.0259	0.26	2.6	0.099	0.0099
Selenium	0.523	7.71	0.308	0.000148	0.0239	0.0340	0.0580	0.0181	0.20	0.33	0.091	0.055
Thallium	0.0095	0.354	0.0115	0.00000268	0.00110	0.00127	0.00237	0.000739	0.074	0.74	0.010	0.0010
Vanadium	0.285	14.1	0.462	0.0000804	0.0437	0.0510	0.0948	0.0296	0.21	2.1	0.14	0.014
Zinc	22.2	2,490	124	0.00627	7.71	13.7	21.4	6.68	160	320	0.042	0.021

Note: Data used to develop this scenario are presented in Table K-3a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-3a. Arctic fox EPC calculation for mean and 95% UCL CoPC concentrations at port site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										port site mean	0.462
										port site 95% UCL	1.63
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-OW-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											
											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											
											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											
											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											
											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 U
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 U
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	U
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	U
field reps - both non-detects (minimum value)											
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 U
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 U
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 U
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 U
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 U
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 U
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 U
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 UU
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346	
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299	
field rep average											
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		323
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	U
field rep average											
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		13
field rep average											
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 UU

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>U</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
						field reps - both non-detects (minimum value)					18 <i>U</i>
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
field rep average											
											69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
field rep average											
											121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
field rep average											
											283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
field rep average											
											132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	ROT4-ONA	7/4/2002	ROT4-ONA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-OSA	7/4/2002	ROT4-OSA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
field rep average											1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-ONA	7/4/2002	ROT5-ONA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-OSA	7/4/2002	ROT5-OSA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-ONA	7/4/2002	ROT6-ONA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-OSA	7/4/2002	ROT6-OSA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	<i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	
survey station mean											758.5 <i>J</i>
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											413.5

Table K-3a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	<i>J</i>
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.75 <i>J</i>
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
port site mean											792 <i>J</i>
port site 95% UCL											2,103
Small Mammals											
PHASE2RA	TT2-0100	6/17/2004	SM0010	0	0	NA	NA	NA	mg/kg dry		4.18
PHASE2RA	TT2-0100	6/18/2004	SM0012	0	0	NA	NA	NA	mg/kg dry		3.89
PHASE2RA	TT2-0100	6/18/2004	SM0013	0	0	NA	NA	NA	mg/kg dry		4.25
PHASE2RA	TT2-1000	6/17/2004	SM0011	0	0	NA	NA	NA	mg/kg dry		1.18
PHASE2RA	TT5-1000	6/14/2004	SM0001	0	0	NA	NA	NA	mg/kg dry		6.84
PHASE2RA	TT5-1000	6/15/2004	SM0003	0	0	NA	NA	NA	mg/kg dry		15.5
PHASE2RA	TT5-1000	6/16/2004	SM0007	0	0	NA	NA	NA	mg/kg dry		7.86
PHASE2RA	TT5-2000	6/13/2004	SM0006	0	0	NA	NA	NA	mg/kg dry		14.9
PHASE2RA	TT5_0020	6/14/2004	SM0002	0	0	NA	NA	NA	mg/kg dry		19
PHASE2RA	TT5_0020	6/15/2004	SM0004	0	0	NA	NA	NA	mg/kg dry		16.9
PHASE2RA	TT5_0020	6/15/2004	SM0005	0	0	NA	NA	NA	mg/kg dry		37.6
PHASE2RA	TT5_0020	6/16/2004	SM0008	0	0	NA	NA	NA	mg/kg dry		7.85
PHASE2RA	TT5_0020	6/16/2004	SM0009	0	0	NA	NA	NA	mg/kg dry		11.1
port site mean											11.6
port site 95% UCL											18.1

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-4. Food-web model exposure results for Arctic fox exposed to 95% UCL CoPC concentrations at port site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammals (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	103	7,820	940	0.0290	24.2	104	128	40.0	1.9	19	21	2.1
Antimony	0.630 ^a	8.20	0.0426	0.000178	0.0254	0.00471	0.0303	0.00946	0.66	--	0.014	--
Arsenic (arsenate)	0.6 ^a	22.9	0.139	0.000169	0.0707	0.0154	0.0863	0.0270	0.40	1.6	0.067	0.017
Arsenic (arsenite)	0.6 ^a	22.9	0.139	0.000169	0.0707	0.0154	0.0863	0.0270	0.13	1.3	0.21	0.021
Barium	70.3 ^a	817	58.2	0.0198	2.53	6.43	8.97	2.80	5.1	20	0.55	0.14
Cadmium	0.245	27.6	0.393	0.0000691	0.0855	0.0434	0.129	0.0403	1.0	10	0.040	0.0040
Chromium	1.56 ^a	16.4	3.15	0.000440	0.0508	0.348	0.399	0.125	3.3	69	0.038	0.0018
Cobalt	1.56 ^a	14.3	0.313	0.000440	0.0443	0.0346	0.0793	0.0248	0.50	2.0	0.050	0.012
Lead	1.63 ^a	2,100	18.1	0.000460	6.51	2.00	8.51	2.66	11	90	0.24	0.030
Mercury	0.05 ^a	3.23	0.0447	0.0000141	0.00999	0.00494	0.0149	0.00467	0.032	0.16	0.15	0.029
Molybdenum	2.27 ^a	1.68	0.824	0.000640	0.00520	0.0911	0.0969	0.0303	0.26	2.6	0.12	0.012
Selenium	1.17 ^a	20.3	0.397	0.000330	0.0627	0.0438	0.107	0.0334	0.20	0.33	0.17	0.10
Thallium	0.0155 ^a	0.581	0.0173	0.00000437	0.00180	0.00191	0.00372	0.00116	0.074	0.74	0.016	0.0016
Vanadium	0.335 ^a	19.0	0.536	0.0000945	0.0589	0.0592	0.118	0.0369	0.21	2.1	0.18	0.018
Zinc	72.6	4,590	136	0.0205	14.2	15.0	29.2	9.12	160	320	0.057	0.029

Note: Data used to develop this scenario are presented in Table K-3a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-5. Food-web model exposure results for Arctic fox exposed to mean CoPC concentrations at road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammals (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	167	1,510	113	0.0471	4.67	12.5	17.2	5.39	1.9	19	2.8	0.28
Antimony	0.131	0.775	0.0195	0.0000370	0.00240	0.00215	0.00459	0.00143	0.66	--	0.0022	--
Arsenic (arsenate)	0.552	2.55	0.113	0.000156	0.00788	0.0125	0.0206	0.00642	0.40	1.6	0.016	0.0040
Arsenic (arsenite)	0.552	2.55	0.113	0.000156	0.00788	0.0125	0.0206	0.00642	0.13	1.3	0.049	0.0049
Barium	80.9	1,210	54.7	0.0228	3.73	6.05	9.80	3.06	5.1	20	0.60	0.15
Cadmium	0.089	2.89	0.308	0.0000251	0.00894	0.0340	0.0430	0.0134	1.0	10	0.013	0.0013
Chromium	0.9	5.05	1.52	0.000254	0.0156	0.168	0.183	0.0573	3.3	69	0.017	0.00083
Cobalt	0.166	5.81	0.146	0.0000468	0.0180	0.0161	0.0341	0.0107	0.50	2.0	0.021	0.0053
Lead	0.455	121	4.85	0.000128	0.374	0.536	0.910	0.284	11	90	0.026	0.0032
Mercury	0.0233	0.190	2.37	0.00000656	0.000588	0.262	0.263	0.0821	0.032	0.16	2.6	0.51
Molybdenum	0.613	1.14	0.438	0.000173	0.00353	0.0484	0.0521	0.0163	0.26	2.6	0.063	0.0063
Selenium	0.147	0.725	0.583	0.0000415	0.00224	0.0645	0.0667	0.0209	0.20	0.33	0.10	0.063
Thallium	0.0562	0.156	0.00933	0.0000158	0.000483	0.00103	0.00153	0.000478	0.074	0.74	0.0065	0.00065
Vanadium	0.450	7.95	0.483	0.000127	0.0246	0.0534	0.0781	0.0244	0.21	2.1	0.12	0.012
Zinc	7.16	582	105	0.00202	1.80	11.7	13.5	4.20	160	320	0.026	0.013

Note: Data used to develop this scenario are presented in Table K-5a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-5a. Arctic fox EPC calculation for mean and 95% UCL CoPC concentrations at road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
										field rep average	0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 U
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	U
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	U
										field reps - both non-detects (minimum value)	0.089 U
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4

Table K-5a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526

Table K-5a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 U
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U

Table K-5a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										road site mean	0.455
										road site 95% UCL	1.10
Tundra Soil											
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
										field rep average	449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
										survey station mean	385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
										field rep average	34.6
										survey station mean	119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
										survey station mean	16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 <i>J</i>
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 <i>J</i>
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 <i>J</i>
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 <i>J</i>
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 <i>J</i>

Table K-5a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 <i>J</i>
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 <i>J</i>
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 <i>J</i>
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 <i>J</i>
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 <i>J</i>
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 <i>J</i>
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 <i>J</i>
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 <i>U</i>
										road site mean	121 <i>J</i>
										road site 95% UCL	173
Small Mammals											
PHASE2RA	TT3-0100	6/22/2004	SM0015	0	0	NA	NA	NA	mg/kg dry		4.37
PHASE2RA	TT3-0100	6/22/2004	SM0016	0	0	NA	NA	NA	mg/kg dry		8.83
PHASE2RA	TT3-1000	6/22/2004	SM0014	0	0	NA	NA	NA	mg/kg dry		1.74
PHASE2RA	TT3-1000	6/22/2004	SM0019	0	0	NA	NA	NA	mg/kg dry		6.79
PHASE2RA	TT3-1000	7/2/2004	SM0018	0	0	NA	NA	NA	mg/kg dry		0.967
PHASE2RA	TT3_0020	7/1/2004	SM0020	0	0	NA	NA	NA	mg/kg dry		6.42
										road site mean	4.85
										road site 95% UCL	7.38

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-6. Food-web model exposure results for Arctic fox exposed to 95% UCL CoPC concentrations at road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammals (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	178	2,660 ^a	198	0.0503	8.23	21.8	30.1	9.41	1.9	19	5.0	0.50
Antimony	0.215	0.883	0.0314	0.0000606	0.00273	0.00347	0.00626	0.00196	0.66	--	0.0030	--
Arsenic (arsenate)	0.674	3.51	0.156	0.000190	0.0109	0.0172	0.0282	0.00882	0.40	1.6	0.022	0.0055
Arsenic (arsenite)	0.674	3.51	0.156	0.000190	0.0109	0.0172	0.0282	0.00882	0.13	1.3	0.068	0.0068
Barium	136	1,750	69.4	0.0385	5.41	7.67	13.1	4.10	5.1	20	0.80	0.21
Cadmium	0.124	3.85	1.02	0.0000351	0.0119	0.112	0.124	0.0389	1.0	10	0.039	0.0039
Chromium	2.67	9.69 ^a	2.10	0.000754	0.0300	0.232	0.263	0.0823	3.3	69	0.025	0.0012
Cobalt	0.259	7.13	0.192	0.0000731	0.0221	0.0212	0.0434	0.0135	0.50	2.0	0.027	0.0068
Lead	1.10	173	7.38	0.000309	0.535	0.815	1.35	0.422	11	90	0.038	0.0047
Mercury	0.0297	0.223	10.2	0.00000838	0.000691	1.13	1.13	0.354	0.032	0.16	11	2.2
Molybdenum	1.07	1.37	0.532	0.000302	0.00423	0.0588	0.0633	0.0198	0.26	2.6	0.076	0.0076
Selenium	0.675	0.880	0.906	0.000190	0.00272	0.100	0.103	0.0322	0.20	0.33	0.16	0.098
Thallium	0.296	0.246	0.0150	0.0000836	0.000760	0.00166	0.00250	0.000782	0.074	0.74	0.011	0.0011
Vanadium	0.545	10.4	0.651	0.000154	0.0322	0.0720	0.104	0.0326	0.21	2.1	0.16	0.016
Zinc	13.5	799	120	0.00381	2.47	13.3	15.7	4.92	160	320	0.031	0.015

Note: Data used to develop this scenario are presented in Table K-5a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-7. Food-web model exposure results for caribou exposed to mean CoPC concentrations at reference site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
		Sediment (mg/kg dw)							Sediment (mg/day)							Food (mg/day)
Aluminum	514	3,650	304	10.1	66.3	354	3.41	1,240	566	1,810	16.9	1.9	19	8.9	0.89	
Antimony	0.045	0.208	0.0457	0.0319	0.0442	0.103	0.000299	0.0706	0.245	0.316	0.00295	0.66	--	0.0045	--	
Arsenic (arsenate)	0.717	3.61	1.63	0.0313	0.11	0.233	0.00476	1.23	1.33	2.56	0.0240	0.40	1.6	0.060	0.015	
Arsenic (arsenite)	0.717	3.61	1.63	0.0313	0.11	0.233	0.00476	1.23	1.33	2.56	0.0240	0.13	1.3	0.18	0.018	
Barium	125	346	54.6	50.7	26.4	91.1	0.832	118	191	309	2.89	5.1	20	0.57	0.14	
Cadmium	0.0333	0.379	0.0818	0.378	0.142	0.327	0.000221	0.129	0.890	1.02	0.00953	1.0	10	0.0095	0.00095	
Chromium	1.17	6.76	7.46	0.3	0.2	1.87	0.00776	2.30	5.52	7.82	0.0731	3.3	69	0.022	0.0011	
Cobalt	0.693	7.97	1.31	2.36	0.142	1.03	0.00460	2.71	2.84	5.55	0.0519	0.50	2.0	0.10	0.026	
Lead	0.512	10.2	0.794	0.293	3.78	8.00	0.00340	3.48	17.8	21.3	0.199	11	90	0.018	0.0022	
Mercury	0.05	0.0935	0.0323	0.0509	0.0478	0.0573	0.000332	0.0318	0.238	0.270	0.00252	0.032	0.16	0.079	0.016	
Molybdenum	0.0883	0.689	0.411	0.160	0.224	0.23	0.000586	0.234	1.18	1.42	0.0133	0.26	2.6	0.051	0.0051	
Selenium	0.267	0.594	0.155	0.0625	0.108	0.1	0.00177	0.202	0.538	0.742	0.00693	0.20	0.33	0.035	0.021	
Thallium	0.011	0.0769	0.0278	0.00213	0.012	0.0263	0.0000730	0.0262	0.0701	0.0964	0.000901	0.074	0.74	0.012	0.0012	
Vanadium	1.57	14.5	1.51	0.25	0.317	1.00	0.0104	4.92	2.49	7.41	0.0693	0.21	2.1	0.33	0.033	
Zinc	3.16	60.8	33.1	88.6	34.8	55.6	0.0210	20.7	211	231	2.16	160	320	0.014	0.0068	

Note: Data used to develop this scenario are presented in Table K-7a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-7a. Caribou EPC calculation for mean and 95% UCL CoPC concentrations at reference site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
PHASE1RA	ST-REF-4	7/20/2003	SW0037	0	0	NA	NA	NA	µg/L unfiltered		0.02
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
PHASE1RA	TP-REF-2	7/20/2003	SW0038	0	0	NA	NA	NA	µg/L unfiltered		0.06
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										reference site mean	0.512 <i>J</i>
										reference site 95% UCL	1.91
Tundra Soil											
PHASE2RA	ST-REF-3	6/26/04	TS-0036	0	0	NA	NA	NA	mg/kg dry		15.3
PHASE2RA	ST-REF-5	6/24/04	TS-0031	0	0	NA	NA	NA	mg/kg dry		10.7
PHASE2RA	ST-REF-6	6/24/04	TS-0033	0	0	NA	NA	NA	mg/kg dry		9.81
PHASE2RA	TP-REF-2	6/24/04	TS-0032	0	0	NA	NA	NA	mg/kg dry		23.6
PHASE2RA	TP-REF-3	6/23/04	TS-0027	0	0	NA	NA	NA	mg/kg dry		12.8
PHASE2RA	TP-REF-5	6/24/04	TS-0030	0	0	NA	NA	NA	mg/kg dry		9.1
PHASE1RA	TS-REF-1	07/20/03	TS0024	0	0	NA	NA	NA	mg/kg dry		5.97 <i>J</i>
PHASE1RA	TS-REF2	07/20/03	TS0023	0	0	NA	NA	NA	mg/kg dry		5 <i>J</i>
PHASE1RA	TS-REF3	07/20/03	TS0022	0	0	NA	NA	NA	mg/kg dry		3.78 <i>J</i>
PHASE1RA	TS-REF-4	07/20/03	TS0021	0	0	NA	NA	NA	mg/kg dry		6.61
PHASE1RA	TS-REF-5	07/20/03	TS0020	0	0	NA	NA	NA	mg/kg dry	23.3	
PHASE2RA	TS-REF-5	06/23/04	TS-0028	0	0	NA	NA	NA	mg/kg dry	3.58	
										survey station mean	13.4
PHASE1RA	TS-REF-6	07/20/03	TS0019	0	0	NA	NA	NA	mg/kg dry		9.87 <i>J</i>
PHASE1RA	TS-REF-7	07/20/03	TS0018	0	0	NA	NA	NA	mg/kg dry	6.26	<i>J</i>
PHASE2RA	TS-REF-7	06/24/04	TS-0029	0	0	NA	NA	NA	mg/kg dry	7.5	
										survey station mean	6.9 <i>J</i>
PHASE1RA	TS-REF-8	07/20/03	TS0031	0	0	NA	NA	NA	mg/kg dry		18.5 <i>J</i>
PHASE1RA	TS-REF-9	07/20/03	TS0030	0	0	NA	NA	NA	mg/kg dry		2.9 <i>J</i>
PHASE1RA	TS-REF10	07/20/03	TS0017	0	0	NA	NA	NA	mg/kg dry		7.23 <i>J</i>
PHASE2RA	TS-REF11	06/25/04	TS-0034	0	0	NA	NA	NA	mg/kg dry		12.7
										reference site mean	10.2 <i>J</i>
										reference site 95% UCL	12.5
Herbaceous Plant											
PHASE2RA	ST-REF-3	6/26/2004	SE0043	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.28
PHASE2RA	ST-REF-5	6/24/2004	SE0035	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.47
PHASE2RA	ST-REF-6	6/24/2004	SE0039	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.74

Table K-7a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TP-REF-2	6/24/2004	SE0037	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.4
PHASE2RA	TP-REF-3	6/23/2004	SE0029	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		2.3
PHASE2RA	TP-REF-5	6/24/2004	SE0033	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.1
PHASE2RA	TS-REF-5	6/23/2004	SE0031	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.52
PHASE2RA	TS-REF-5	7/1/2004	SE0056	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.46
PHASE2RA	TS-REF-7	6/24/2004	SE0032	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.28
PHASE2RA	TS-REF11	6/25/2004	SE0041	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.39
reference site mean											0.794
reference site 95% UCL											1.23
Shrub											
PHASE2RA	ST-REF-3	6/26/2004	WI0025	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.14
PHASE2RA	ST-REF-5	6/24/2004	WI0021	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.62
PHASE2RA	ST-REF-6	6/24/2004	WI0022	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.09
PHASE2RA	TS-REF-5	6/23/2004	WI0019	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.4
PHASE2RA	TS-REF-7	6/24/2004	BR0005	0	0	<i>Betula</i>	<i>nana</i>	Leaves	mg/kg dry		0.13
PHASE2RA	TS-REF-7	6/24/2004	WI0020	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.11
PHASE2RA	TS-REF11	6/25/2004	BR0006	0	0	<i>Betula</i>	<i>nana</i>	Leaves	mg/kg dry		0.08
PHASE2RA	TS-REF11	6/25/2004	WI0023	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.77
reference site mean											0.293
reference site 95% UCL											0.584
Lichen											
PHASE2RA	TS-REF-5	6/23/2004	LI0028	0	0	<i>Cladina</i>	Sp	Whole Plant	mg/kg dry		7.27
PHASE2RA	TS-REF-5	6/23/2004	LI0029	0	0	<i>Peltigera</i>	Sp	Whole Plant	mg/kg dry		6.14
PHASE2RA	TS-REF-7	6/24/2004	LI0030	0	0	<i>Cladina</i>	Sp	Whole Plant	mg/kg dry		2.69
PHASE2RA	TS-REF-7	6/24/2004	LI0031	0	0	<i>Peltigera</i>	Sp	Whole Plant	mg/kg dry		3.03
PHASE2RA	TS-REF11	6/25/2004	LI0032	0	0	<i>Cladina</i>	Sp	Whole Plant	mg/kg dry		1.96
PHASE2RA	TS-REF11	6/25/2004	LI0033	0	0	<i>Peltigera</i>	Sp	Whole Plant	mg/kg dry		1.58
reference site mean											3.78
reference site 95% UCL											5.71
Moss											
PHASE1RA	TS-REF-7	7/20/2003	MS0011	0	0	NA	NA	NA	mg/kg dry		9.64
PHASE1RA	TS-REF-8	7/20/2003	MS0010	0	0	NA	NA	NA	mg/kg dry		7.71
PHASE1RA	TS-REF10	7/20/2003	MS0009	0	0	NA	NA	NA	mg/kg dry		6.64
reference site mean											8.00
reference site 95% UCL											9.64

Note: Tundra soil are averaged by survey station, then included in the calculation of the site mean.
95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.
CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value
U - undetected; value reported is half the detection limit

Table K-8. Food-web model exposure results for caribou exposed to 95% UCL CoPC concentrations at reference site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss ^a (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)													
Aluminum	2,770 ^a	5,590	1,130	15.0	96.2	713	18.4	1,900	1,270	3,190	29.8	1.9	19	16	1.6
Antimony	0.0765	0.241	0.0605	0.0375	0.0540	0.15	0.000508	0.0821	0.313	0.396	0.00370	0.66	--	0.0056	--
Arsenic (arsenate)	1.36	5.31	6.56	0.0336	0.151	0.3	0.00905	1.81	3.97	5.79	0.0541	0.40	1.6	0.14	0.034
Arsenic (arsenite)	1.36	5.31	6.56	0.0336	0.151	0.3	0.00905	1.81	3.97	5.79	0.0541	0.13	1.3	0.42	0.042
Barium	177	417	72.0	65.7	34.6	119	1.18	142	250	393	3.67	5.1	20	0.72	0.18
Cadmium	0.0580	0.477	0.132	0.502	0.189	0.38	0.000385	0.162	1.17	1.33	0.0124	1.0	10	0.012	0.0012
Chromium	3.71 ^a	11.8	28.0	0.378	0.2 ^a	2.96	0.0246	4.02	16.3	20.4	0.191	3.3	69	0.058	0.0028
Cobalt	1.79	11.3	3.37	5.51	0.209	2.03	0.0119	3.85	6.19	10.1	0.0939	0.50	2.0	0.19	0.047
Lead	1.91 ^a	12.5	1.23	0.584	5.71	9.64	0.0127	4.26	25.7	30.0	0.280	11	90	0.025	0.0031
Mercury	0.05 ^a	0.109	0.0357	0.0582	0.0651	0.067	0.000332	0.0370	0.308	0.346	0.00323	0.032	0.16	0.10	0.020
Molybdenum	0.158	0.881	0.546	0.259	0.902 ^a	0.3	0.00105	0.300	3.71	4.01	0.0375	0.26	2.6	0.14	0.014
Selenium	0.366	0.693	0.362	0.0780	0.2 ^a	0.1	0.00243	0.236	0.970	1.21	0.0113	0.20	0.33	0.056	0.034
Thallium	0.04 ^a	0.0919	0.0756	0.003 ^a	0.0166	0.04	0.000266	0.0313	0.117	0.149	0.00139	0.074	0.74	0.019	0.0019
Vanadium	5.57 ^a	19.0	7.6 ^a	0.286	0.350	1.73	0.0370	6.45	6.03	12.5	0.117	0.21	2.1	0.56	0.056
Zinc	6.26	68.4	37.0	109	44.1	64	0.0415	23.3	259	283	2.64	160	320	0.017	0.0083

Note: Data used to develop this scenario are presented in Table K-7a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-9. Food-web model exposure results for caribou exposed to mean CoPC concentrations at port site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	35.5	5,610	31.3	30.9	717	7,750	0.236	1,910	6,420	8,320	77.8	32.0	9.97	41.9	1.9	19	2.2	2.2
Antimony	0.307	5.83	0.174	0.09	0.954	1.68	0.00204	1.98	4.31	6.30	0.0588	0.0242	0.00174	0.0259	0.66	--	0.039	--
Arsenic (arsenate)	0.494	16.7	0.137	0.0588	0.911	4.81	0.00328	5.66	5.69	11.4	0.106	0.0436	0.0141	0.0578	0.40	1.6	0.14	0.036
Arsenic (arsenite)	0.494	16.7	0.137	0.0588	0.911	4.81	0.00328	5.66	5.69	11.4	0.106	0.0436	0.0141	0.0578	0.13	1.3	0.44	0.044
Barium	44.8	597	33.6	35.1	305	750	0.297	203	1,480	1,680	15.7	6.45	1.70	8.15	5.1	20	1.6	0.41
Cadmium	0.120	15.1	0.287	3.24	3.76	11.2	0.000794	5.13	20.6	25.7	0.240	0.0987	0.00561	0.104	1.0	10	0.10	0.010
Chromium	0.799	11.1	1.01	0.25	3.16	11.8	0.00530	3.77	17.6	21.3	0.199	0.0820	0.0431	0.125	3.3	69	0.038	0.0018
Cobalt	0.903	11.4	1.87	0.91	0.948	4.42	0.00600	3.89	6.92	10.8	0.101	0.0415	0.0306	0.0721	0.50	2.0	0.14	0.036
Lead	0.462	792	6.85	7.59	141	376	0.00307	269	689	958	8.95	3.68	0.117	3.80	11	90	0.35	0.042
Mercury	0.0393	0.779	0.0398	0.04	0.099	0.390	0.000261	0.265	0.581	0.846	0.00791	0.00325	0.00149	0.00474	0.032	0.16	0.15	0.030
Molybdenum	0.793	1.41	0.284	0.121	0.319	0.612	0.00527	0.478	1.63	2.11	0.0197	0.00810	0.00781	0.0159	0.26	2.6	0.061	0.0061
Selenium	0.523	7.71	0.132	0.113	0.286	0.36	0.00347	2.62	1.30	3.93	0.0367	0.0151	0.00408	0.0192	0.20	0.33	0.096	0.058
Thallium	0.0095	0.354	0.0116	0.00388	0.0486	0.246	0.0000631	0.120	0.301	0.421	0.00394	0.00162	0.000530	0.00215	0.074	0.74	0.029	0.0029
Vanadium	0.285	14.1	0.214	0.238	1.81	5.48	0.00189	4.80	9.31	14.1	0.132	0.0542	0.0408	0.0950	0.21	2.1	0.45	0.045
Zinc	22.2	2,490	95.3	290	654	1,650	0.148	848	3,300	4,150	38.8	15.9	1.27	17.2	160	320	0.11	0.054

Note: Data used to develop this scenario are presented in Table K-9a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for caribou in reference site (Table K-7) multiplied by 0.59.

Table K-9a. Caribou EPC calculation for mean and 95% UCL CoPC concentrations at port site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										port site mean	0.462
										port site 95% UCL	1.63
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-0W-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											
											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											
											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											
											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											
											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 U
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 U
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	U
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	U
									field reps - both non-detects (minimum value)		15 U
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 U
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 U
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 U
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 U
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 U
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 U
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 U
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 U
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346	
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299	
									field rep average		323
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		317
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	U
									field rep average		13
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 U

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
											field reps - both non-detects (minimum value)
											11 <i>UJ</i>
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
											field reps - both non-detects (minimum value)
											18 <i>UJ</i>
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>UU</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
field rep average											69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
field rep average											121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
field rep average											283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
field rep average											132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	ROT4-0NA	7/4/2002	ROT4-0NA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-0SA	7/4/2002	ROT4-0SA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
field rep average											1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-0NA	7/4/2002	ROT5-0NA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-0SA	7/4/2002	ROT5-0SA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-0NA	7/4/2002	ROT6-0NA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-0SA	7/4/2002	ROT6-0SA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 U
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 U
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	J
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	
survey station mean											759 J
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											414

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	J
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.8 J
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
port site mean											792 J
port site 95% UCL											2,103
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	Sp	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
field rep average											3.3
PHASE2RA	PLNL	6/28/2004	SE0045	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.81
PHASE2RA	PLNL	6/28/2004	SE0046	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.76
PHASE2RA	TP1-0100	6/17/2004	SE0009	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		48.1
PHASE2RA	TP1-1000	6/17/2004	SE0008	0	0	<i>Carex</i>	Sp	Whole Plant	mg/kg dry		16.1
PHASE2RA	TT2-0010	6/17/2004	SE0010	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		5.63
PHASE2RA	TT2-0100	6/16/2004	SE0006	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.01
PHASE2RA	TT2-1000	6/16/2004	SE0005	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.16
PHASE2RA	TT5-0010	6/12/2004	SE0001	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		10.8
PHASE2RA	TT5-0100	6/15/2004	SE0004	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.33
PHASE2RA	TT5-1000	6/13/2004	SE0002-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.1
PHASE2RA	TT5-1000	6/16/2004	SE0002-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.57
PHASE2RA	TT5-2000	6/15/2004	SE0003	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
port site mean											6.85
port site 95% UCL											14.5
Shrub											
FUGDST01	HR02-01W	8/20/2001	HR-02-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		45.6
FUGDST01	HR02-02W	8/21/2001	HR-02-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		4.21
FUGDST01	HR02-03W	8/24/2001	HR-02-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.856
FUGDST01	PO-07W	8/23/2001	PO-07-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		11.4
FUGDST01	PO-13W	8/23/2001	PO-13-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		4.8
FUGDST01	PO-17W	8/23/2001	PO-17-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		15.6
PHASE2RA	TT2-0010	6/17/2004	WI0006	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		5.76
PHASE2RA	TT2-0100	6/16/2004	WI0005	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.89
PHASE2RA	TT2-1000	6/16/2004	WI0004	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.35

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT5-1000	6/13/2004	WI0002	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.07
PHASE2RA	TT5-2000	6/15/2004	BR0002	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		0.42
										port site mean	7.59
										port site 95% UCL	14.9
Lichen											
FUGDST01	HR01-02L	8/21/2001	HR-01-02-L	0	0	NA	NA	NA	µg/g dry		375
FUGDST01	HR02-02L	8/21/2001	HR-02-02-L	0	0	NA	NA	NA	µg/g dry		107
FUGDST01	HR02-03L	8/24/2001	HR-02-03-L	0	0	NA	NA	NA	µg/g dry		6.86
FUGDST01	PO-04L	8/23/2001	PO-04-L	0	0	NA	NA	NA	µg/g dry		207
FUGDST01	PO-11L	8/23/2001	PO-11-L	0	0	NA	NA	NA	µg/g dry		182
FUGDST01	PO-17L	8/23/2001	PO-17-L	0	0	NA	NA	NA	µg/g dry		218
PHASE2RA	TT2-0010	6/21/2004	LI0018	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		170
PHASE2RA	TT2-0100	6/16/2004	LI0008	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		57.1
PHASE2RA	TT2-1000	6/16/2004	LI0007	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		18.6
PHASE2RA	TT5-0010	7/1/2004	LI0038	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		161
PHASE2RA	TT5-0100	6/15/2004	LI0006	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		179
PHASE2RA	TT5-1000	6/13/2004	LI0002	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		99
PHASE2RA	TT5-2000	6/15/2004	LI0019	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		52.6
										port site mean	141
										port site 95% UCL	190
Moss											
NPS01	050P-M01	6/1/2001	050P-M-01	0	0	NA	NA	NA	µg/g dry		91.2
NPS01	051A-M01	6/1/2001	051A-M-01	0	0	NA	NA	NA	µg/g dry		77
NPS01	052P-M01	6/1/2001	052P-M-01	0	0	NA	NA	NA	µg/g dry		141
NPS01	053D-M01	6/1/2001	053D-M-01	0	0	NA	NA	NA	µg/g dry		31.2
NPS01	053P-M01	6/1/2001	053P-M-01	0	0	NA	NA	NA	µg/g dry		30.4
NPS01	059D-M01	6/1/2001	059D-M-01	0	0	NA	NA	NA	µg/g dry		70.4
NPS01	059P-M01	6/1/2001	059P-M-01	0	0	NA	NA	NA	µg/g dry		91
NPS01	060P-M01	6/1/2001	060P-M-01	0	0	NA	NA	NA	µg/g dry		66.3
NPS01	161P-M01	6/1/2001	161P-M-01	0	0	NA	NA	NA	µg/g dry		21.6
NPS01	161R-M01	6/1/2001	161R-M-01	0	0	NA	NA	NA	µg/g dry		24
FUGDST01	HR01-01A	8/20/2001	HR-01-01-M	0	0	NA	NA	NA	µg/g dry		875
FUGDST01	HR01-02M	8/21/2001	HR-01-02-M	0	0	NA	NA	NA	µg/g dry		424
FUGDST01	HR01-03M	8/24/2001	HR-01-03-M	0	0	NA	NA	NA	µg/g dry		66.2
FUGDST01	HR02-01M	8/20/2001	HR-02-01-M	0	0	NA	NA	NA	µg/g dry		654
FUGDST01	HR02-02M	8/21/2001	HR-02-02-M	0	0	NA	NA	NA	µg/g dry		217
FUGDST01	HR02-03M	8/24/2001	HR-02-03-M	0	0	NA	NA	NA	µg/g dry		9.54
FUGDST01	PO-01M	8/23/2001	PO-01-M	0	0	NA	NA	NA	µg/g dry		323
FUGDST01	PO-02M	8/23/2001	PO-02-M	0	0	NA	NA	NA	µg/g dry		622

Table K-9a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
FUGDST01	PO-04M	8/23/2001	PO-04-M	1	0	NA	NA	NA	µg/g dry	555	
FUGDST01	PO-04M	8/23/2001	PO-04-M	2	0	NA	NA	NA	µg/g dry	496	
field rep average											526
FUGDST01	PO-05M	8/23/2001	PO-05-M	0	0	NA	NA	NA	µg/g dry		1670
FUGDST01	PO-06M	8/23/2001	PO-06-M	0	0	NA	NA	NA	µg/g dry		937
FUGDST01	PO-07M	8/23/2001	PO-07-M	0	0	NA	NA	NA	µg/g dry		381
FUGDST01	PO-09M	8/23/2001	PO-09-M	0	0	NA	NA	NA	µg/g dry		377
FUGDST01	PO-10M	8/23/2001	PO-10-M	0	0	NA	NA	NA	µg/g dry		466
FUGDST01	PO-11M	8/23/2001	PO-11-M	0	0	NA	NA	NA	µg/g dry		365
FUGDST01	PO-13M	8/23/2001	PO-13-M	0	0	NA	NA	NA	µg/g dry		382
FUGDST01	PO-15M	8/23/2001	PO-15-M	0	0	NA	NA	NA	µg/g dry		363
FUGDST01	PO-16M	8/23/2001	PO-16-M	0	0	NA	NA	NA	µg/g dry		368
FUGDST01	PO-17M	8/23/2001	PO-17-M	0	0	NA	NA	NA	µg/g dry		374
FUGDST01	PO-18M	8/24/2001	PO-18-M	0	0	NA	NA	NA	µg/g dry		358
PHASE1RA	TT1-0100	7/17/2003	MS0005	0	0	NA	NA	NA	µg/g dry		1720
PHASE1RA	TT1-1000	7/19/2003	MS0008	0	0	NA	NA	NA	µg/g dry		172
PHASE1RA	TT2-0010	7/17/2003	MS0004	0	0	NA	NA	NA	µg/g dry		506
PHASE1RA	TT2-0100	7/17/2003	MS0003	0	0	NA	NA	NA	µg/g dry		326
PHASE1RA	TT2-1000	7/19/2003	MS0006	1	0	NA	NA	NA	µg/g dry	38.6	
PHASE1RA	TT2-1000	7/19/2003	MS0006	2	0	NA	NA	NA	µg/g dry	44.8	
field rep average											41.7
port site mean											376
port site 95% UCL											522

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

- CoPC - chemical of potential concern
- EPC - exposure point concentration
- J - estimated value
- U - undetected; value reported is half the detection limit

Table K-10. Food-web model exposure results for caribou exposed to 95% UCL CoPC concentrations at port site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	103	7,820	54.3	70.6	1,550	18,500	0.682	2,660	14,700	17,400	163	66.8	17.5	84.4	1.9	19	44	4.4
Antimony	0.630 ^b	8.20	0.295	0.157	1.53	3.27	0.00418	2.79	7.22	10.0	0.0936	0.0385	0.00218	0.0406	0.66	--	0.062	--
Arsenic (arsenate)	0.6 ^b	22.9	0.274	0.0826	1.33	9.51	0.00398	7.77	9.59	17.4	0.162	0.0667	0.0319	0.0986	0.40	1.6	0.25	0.062
Arsenic (arsenite)	0.6 ^b	22.9	0.274	0.0826	1.33	9.51	0.00398	7.77	9.59	17.4	0.162	0.0667	0.0319	0.0986	0.13	1.3	0.76	0.076
Barium	70.3 ^b	817	61.3	50.7	520	1,450	0.467	278	2,600	2,880	26.9	11.1	2.16	13.2	5.1	20	2.6	0.66
Cadmium	0.245	27.6	0.664	7.63	4.97	15.8	0.00163	9.39	29.4	38.8	0.363	0.149	0.00733	0.157	1.0	10	0.16	0.016
Chromium	1.56 ^b	16.4	5.87	0.312	9.14	20.6	0.0104	5.58	45.4	51.0	0.477	0.196	0.112	0.308	3.3	69	0.093	0.0045
Cobalt	1.56 ^b	14.3	17.7	1.56	1.51	8.19	0.0104	4.87	19.0	23.9	0.223	0.0918	0.0553	0.147	0.50	2.0	0.29	0.074
Lead	1.63 ^b	2,100	14.5	14.9	190	522	0.0108	715	942	1,660	15.5	6.37	0.165	6.53	11	90	0.59	0.073
Mercury	0.0500 ^b	3.23	0.0446	0.0451	0.125	0.760	0.000332	1.10	0.864	1.96	0.0183	0.00753	0.00190	0.00944	0.032	0.16	0.29	0.059
Molybdenum	2.27 ^b	1.68	0.356	0.159	0.436	0.948	0.0151	0.572	2.26	2.85	0.0266	0.0109	0.0221	0.0330	0.26	2.6	0.13	0.013
Selenium	1.17 ^b	20.3	0.169	0.136	0.385	0.626	0.00777	6.89	1.81	8.71	0.0814	0.0334	0.00665	0.0401	0.20	0.33	0.20	0.12
Thallium	0.0155 ^b	0.581	0.0271	0.00820	0.0730	0.462	0.000103	0.198	0.504	0.702	0.00656	0.00270	0.000819	0.00352	0.074	0.74	0.048	0.0048
Vanadium	0.335 ^b	19.0	0.231	0.272	3.28	9.96	0.00222	6.47	16.7	23.2	0.217	0.0891	0.0689	0.158	0.21	2.1	0.75	0.075
Zinc	72.6	4,590	194	373	868	2,250	0.482	1,560	4,450	6,010	56.1	23.1	1.56	24.6	160	320	0.15	0.077

Note: Data used to develop this scenario are presented in Table K-9a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Based on 95% UCL daily exposure for caribou in reference site (Table K-8) multiplied by 0.59.

^b Maximum concentration used in place of the 95 percent UCL concentration.

Table K-11. Food-web model exposure results for caribou exposed to mean CoPC concentrations at road site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	167	1,510	285	77.7	746	10,600	1.11	513						8,070	8,590	80.3	33.0
Antimony	0.131	0.775	0.118	0.114	0.565	0.653	0.000871	0.263	2.42	2.68	0.0251	0.0103	0.00174	0.0120	0.66	--	0.018	--
Arsenic (arsenate)	0.552	2.55	0.452	0.115	0.944	2.88	0.00366	0.866	5.03	5.89	0.0551	0.0226	0.0141	0.0368	0.40	1.6	0.092	0.023
Arsenic (arsenite)	0.552	2.55	0.452	0.115	0.944	2.88	0.00366	0.866	5.03	5.89	0.0551	0.0226	0.0141	0.0368	0.13	1.3	0.28	0.028
Barium	80.9	1210	119	101	461	1,290	0.537	410	2,370	2,780	26.0	10.7	1.70	12.4	5.1	20	2.4	0.62
Cadmium	0.0889	2.89	0.239	2.46	1.23	4.05	0.000590	0.983	7.69	8.67	0.0810	0.0333	0.00561	0.0389	1.0	10	0.039	0.0039
Chromium	0.9	5.05	4.88	0.575	3.59	11.6	0.00597	1.72	21.1	22.8	0.213	0.0876	0.0431	0.131	3.3	69	0.040	0.0019
Cobalt	0.166	5.81	0.698	1.69	1.50	2.99	0.00110	1.97	7.93	9.91	0.0926	0.0380	0.0306	0.0686	0.50	2.0	0.14	0.034
Lead	0.455	121	5.88	4.95	45.5	153	0.00302	41.1	241	282	2.63	1.08	0.117	1.20	11	90	0.11	0.013
Mercury	0.0233	0.190	0.0412	0.0441	0.0743	0.123	0.000154	0.0646	0.364	0.429	0.00401	0.00165	0.00149	0.00313	0.032	0.16	0.098	0.020
Molybdenum	0.613	1.14	0.533	0.309	0.495	0.663	0.00407	0.387	2.48	2.88	0.0269	0.0110	0.00781	0.0189	0.26	2.6	0.073	0.0073
Selenium	0.147	0.725	0.16	0.14	0.225	0.333	0.000976	0.247	1.10	1.35	0.0126	0.00519	0.00408	0.00927	0.20	0.33	0.046	0.028
Thallium	0.0562	0.156	0.0412	0.0081	0.0605	0.156	0.000373	0.0531	0.314	0.368	0.00344	0.00141	0.000530	0.00194	0.074	0.74	0.026	0.0026
Vanadium	0.450	7.95	0.83	0.355	2.95	6.95	0.00299	2.70	14.4	17.1	0.160	0.0657	0.0408	0.106	0.21	2.1	0.51	0.051
Zinc	7.16	582	59.4	193	195	643	0.0475	198	1,130	1,330	12.4	5.10	1.27	6.37	160	320	0.040	0.020

Note: Data used to develop this scenario are presented in Table K-11a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for caribou in reference site (Table K-7) multiplied by 0.59.

Table K-11a. Caribou EPC calculation for mean and 95% UCL CoPC concentrations at road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
										field rep average	0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 U
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	U
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	U
										field reps - both non-detects (minimum value)	0.089 U
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 U
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 U

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										road site mean	0.455
										road site 95% UCL	1.10
Tundra Soil											
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
										field rep average	449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
										survey station mean	385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
										field rep average	34.6
										survey station mean	119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
										survey station mean	16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 <i>J</i>
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 <i>J</i>
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 <i>J</i>
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 <i>J</i>

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	
				Replicate	Subsample					calculation	Lead Concentration
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 <i>J</i>
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 <i>J</i>
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 <i>J</i>
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 <i>J</i>
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 <i>J</i>
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 <i>J</i>
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 <i>J</i>
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 <i>J</i>
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 <i>U</i>
										road site mean	121 <i>J</i>
										road site 95% UCL	173
Herbaceous Plant											
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		14.3
PHASE2RA	OR-R	7/1/2004	SE0051	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		8.27
PHASE2RA	TP3	6/20/2004	SE0018-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.01	
PHASE2RA	TP3	6/20/2004	SE0018-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.96	
										field rep average	3.49
PHASE2RA	TP4	6/17/2004	SE0011	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		21.1
PHASE2RA	TT3-0010	6/18/2004	SE0013	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.06
PHASE2RA	TT3-0100	6/20/2004	SE0022	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.91
PHASE2RA	TT3-1000	6/20/2004	SE0021	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.18
PHASE2RA	TT8-0010	6/19/2004	SE0017	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.89
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.17	
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.4	
										field rep average	1.29
PHASE2RA	TT8-1000	6/19/2004	SE0014	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.34
										road site mean	5.88
										road site 95% UCL	13.8
Shrub											
PHASE2RA	AC-R	6/23/2004	WI0018	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		10.9
PHASE2RA	ARC-R	7/1/2004	WI0028	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		11.8
FUGDST01	HR03-01W	8/19/2001	HR-03-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		16.5
FUGDST01	HR03-02W	8/21/2001	HR-03-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		3.94
FUGDST01	HR03-03W	8/24/2001	HR-03-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.431
PHASE2RA	OR-R	7/1/2004	WI0026-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	3.88	
PHASE2RA	OR-R	7/1/2004	WI0026-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	5.85	
										field rep average	4.87
PHASE2RA	TT3-0010	6/18/2004	WI0007	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		7.74
PHASE2RA	TT3-0100	6/20/2004	BR0004	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		1.91
PHASE2RA	TT3-0100	6/20/2004	WI0011	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.48
PHASE2RA	TT3-1000	6/20/2004	BR0003	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		0.58

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	
				Replicate	Subsample					calculation	Lead Concentration
PHASE2RA	TT8-0010	6/19/2004	WI0010	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		2.91
PHASE2RA	TT8-0100	6/19/2004	WI0009	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.79
PHASE2RA	TT8-1000	6/19/2004	WI0008	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.47
										road site mean	4.95
										road site 95% UCL	9.21
Lichen											
FUGDST01	HR03-03L	8/24/2001	HR-03-03-L	0	0	NA	NA	NA	µg/g dry		17.8
FUGDST01	HR05-03L	8/24/2001	HR-05-03-L	0	0	NA	NA	NA	µg/g dry		10.6
PHASE2RA	TT3-0010	6/18/2004	LI0010	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		72.1
PHASE2RA	TT3-0100	6/20/2004	LI0037	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		34.3
PHASE2RA	TT3-1000	6/20/2004	LI0016	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		13
PHASE2RA	TT3-1000	6/20/2004	LI0017	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		17.4
PHASE2RA	TT8-0010	6/19/2004	LI0015	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		140
PHASE2RA	TT8-0100	6/19/2004	LI0014	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		111
PHASE2RA	TT8-1000	6/19/2004	LI0011	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		13.8
PHASE2RA	TT8-1000	6/19/2004	LI0012-D	1	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry	21.1	
PHASE2RA	TT8-1000	6/19/2004	LI0012-D	2	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry	28.6	
										field rep average	24.9
										road site mean	45.5
										road site 95% UCL	83.9
Moss											
NPS01	001P-M01	6/1/2001	001P-M-01	0	0	NA	NA	NA	µg/g dry		383
NPS01	002P-M01	6/1/2001	002P-M-01	0	0	NA	NA	NA	µg/g dry		513
NPS01	003P-M01	6/1/2001	003P-M-01	0	0	NA	NA	NA	µg/g dry		527
NPS01	004P-M01	6/1/2001	004P-M-01	0	0	NA	NA	NA	µg/g dry		334
NPS01	005P-M01	6/1/2001	005P-M-01	0	0	NA	NA	NA	µg/g dry		557
NPS01	006P-M01	6/1/2001	006P-M-01	0	0	NA	NA	NA	µg/g dry		585
NPS01	007P-M01	6/1/2001	007P-M-01	0	0	NA	NA	NA	µg/g dry		341
NPS01	008P-M01	6/1/2001	008P-M-01	0	0	NA	NA	NA	µg/g dry		313
NPS01	009D-M01	6/1/2001	009D-M-01	0	0	NA	NA	NA	µg/g dry		918
NPS01	009P-M01	6/1/2001	009P-M-01	0	0	NA	NA	NA	µg/g dry		912
NPS01	010P-M01	6/1/2001	010P-M-01	0	0	NA	NA	NA	µg/g dry		678
NPS01	011P-M01	6/1/2001	011P-M-01	0	0	NA	NA	NA	µg/g dry		271
NPS01	013P-M01	6/1/2001	013P-M-01	0	0	NA	NA	NA	µg/g dry		379
NPS01	015P-M01	6/1/2001	015P-M-01	0	0	NA	NA	NA	µg/g dry		121
NPS01	016P-M01	6/1/2001	016P-M-01	0	0	NA	NA	NA	µg/g dry		350
NPS01	017P-M01	6/1/2001	017P-M-01	0	0	NA	NA	NA	µg/g dry		47.7
NPS01	018D-M01	6/1/2001	018D-M-01	0	0	NA	NA	NA	µg/g dry		72.8
NPS01	018P-M01	6/1/2001	018P-M-01	0	0	NA	NA	NA	µg/g dry		69.2
NPS01	019P-M01	6/1/2001	019P-M-01	0	0	NA	NA	NA	µg/g dry		141
NPS01	020P-M01	6/1/2001	020P-M-01	0	0	NA	NA	NA	µg/g dry		263
NPS01	021P-M01	6/1/2001	021P-M-01	0	0	NA	NA	NA	µg/g dry		293

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
NPS01	022P-M01	6/1/2001	022P-M-01	0	0	NA	NA	NA	µg/g dry		147
NPS01	023P-M01	6/1/2001	023P-M-01	0	0	NA	NA	NA	µg/g dry		215
NPS01	024P-M01	6/1/2001	024P-M-01	0	0	NA	NA	NA	µg/g dry		213
NPS01	025P-M01	6/1/2001	025P-M-01	0	0	NA	NA	NA	µg/g dry		246
NPS01	026D-M01	6/1/2001	026D-M-01	0	0	NA	NA	NA	µg/g dry		78.9
NPS01	026P-M01	6/1/2001	026P-M-01	0	0	NA	NA	NA	µg/g dry		56
NPS01	028P-M01	6/1/2001	028P-M-01	0	0	NA	NA	NA	µg/g dry		226
NPS01	029P-M01	6/1/2001	029P-M-01	0	0	NA	NA	NA	µg/g dry		22.2
NPS01	030P-M01	6/1/2001	030P-M-01	0	0	NA	NA	NA	µg/g dry		37.4
NPS01	030R-M01	6/1/2001	030R-M-01	0	0	NA	NA	NA	µg/g dry		20.9
NPS01	031P-M01	6/1/2001	031P-M-01	0	0	NA	NA	NA	µg/g dry		62.5
NPS01	031R-M01	6/1/2001	031R-M-01	0	0	NA	NA	NA	µg/g dry		71.8
NPS01	032P-M01	6/1/2001	032P-M-01	0	0	NA	NA	NA	µg/g dry		55.8
NPS01	032R-M01	6/1/2001	032R-M-01	0	0	NA	NA	NA	µg/g dry		39.1
NPS01	033P-M01	6/1/2001	033P-M-01	0	0	NA	NA	NA	µg/g dry		21.9
NPS01	034D-M01	6/1/2001	034D-M-01	0	0	NA	NA	NA	µg/g dry		18.1
NPS01	034P-M01	6/1/2001	034P-M-01	0	0	NA	NA	NA	µg/g dry		23.4
NPS01	034R-M01	6/1/2001	034R-M-01	0	0	NA	NA	NA	µg/g dry		19.6
NPS01	035P-M01	6/1/2001	035P-M-01	0	0	NA	NA	NA	µg/g dry		16.9
NPS01	036P-M01	6/1/2001	036P-M-01	0	0	NA	NA	NA	µg/g dry		110
NPS01	036R-M01	6/1/2001	036R-M-01	0	0	NA	NA	NA	µg/g dry		77.6
NPS01	037P-M01	6/1/2001	037P-M-01	0	0	NA	NA	NA	µg/g dry		25.8
NPS01	038P-M01	6/1/2001	038P-M-01	0	0	NA	NA	NA	µg/g dry		22.3
NPS01	038R-M01	6/1/2001	038R-M-01	0	0	NA	NA	NA	µg/g dry		27.5
NPS01	039P-M01	6/1/2001	039P-M-01	0	0	NA	NA	NA	µg/g dry		44
NPS01	040P-M01	6/1/2001	040P-M-01	0	0	NA	NA	NA	µg/g dry		18.5
NPS01	040R-M01	6/1/2001	040R-M-01	0	0	NA	NA	NA	µg/g dry		16.4
NPS01	041P-M01	6/1/2001	041P-M-01	0	0	NA	NA	NA	µg/g dry		56.8
NPS01	042D-M01	6/1/2001	042D-M-01	0	0	NA	NA	NA	µg/g dry		13.8
NPS01	042P-M01	6/1/2001	042P-M-01	0	0	NA	NA	NA	µg/g dry		11.1
NPS01	042R-M01	6/1/2001	042R-M-01	0	0	NA	NA	NA	µg/g dry		13.3
NPS01	044P-M01	6/1/2001	044P-M-01	0	0	NA	NA	NA	µg/g dry		40
NPS01	044R-M01	6/1/2001	044R-M-01	0	0	NA	NA	NA	µg/g dry		32.6
NPS01	045P-M01	6/1/2001	045P-M-01	0	0	NA	NA	NA	µg/g dry		15.9
NPS01	046P-M01	6/1/2001	046P-M-01	0	0	NA	NA	NA	µg/g dry		49.5
NPS01	048P-M01	6/1/2001	048P-M-01	0	0	NA	NA	NA	µg/g dry		27.8
NPS01	048R-M01	6/1/2001	048R-M-01	0	0	NA	NA	NA	µg/g dry		38.2
NPS01	102P-M01	6/1/2001	102P-M-01	0	0	NA	NA	NA	µg/g dry		29.1
NPS01	103P-M01	6/1/2001	103P-M-01	0	0	NA	NA	NA	µg/g dry		11.9
NPS01	116P-M01	6/1/2001	116P-M-01	0	0	NA	NA	NA	µg/g dry		14.1
NPS01	117P-M01	6/1/2001	117P-M-01	0	0	NA	NA	NA	µg/g dry		22
NPS01	117R-M01	6/1/2001	117R-M-01	0	0	NA	NA	NA	µg/g dry		27

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
NPS01	201P-M01	6/1/2001	201P-M-01	0	0	NA	NA	NA	$\mu\text{g/g dry}$		15.5
FUGDST01	HR03-01M	8/19/2001	HR-03-01-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	199	
FUGDST01	HR03-01M	8/19/2001	HR-03-01-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	263	
										field rep average	231
FUGDST01	HR03-02M	8/21/2001	HR-03-02-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		108
FUGDST01	HR03-03M	8/24/2001	HR-03-03-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		35.5
FUGDST01	HR04-01B	8/20/2001	HR-04-01-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		252
FUGDST01	HR04-02M	8/21/2001	HR-04-02-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		187
FUGDST01	HR04-03M	8/24/2001	HR-04-03-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		38.6
FUGDST01	HR05-01M	8/21/2001	HR-05-01-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		329
FUGDST01	HR05-02M	8/21/2001	HR-05-02-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		117
FUGDST01	HR05-03M	8/24/2001	HR-05-03-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		24.1
NPS00	HS1N0003	6/1/2000	HS-1N-0003-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	413	
NPS00	HS1N0003	6/1/2000	HS-1N-0003-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	430	
										field rep average	422
NPS00	HS1N0050	6/1/2000	HS-1N-0050-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		285
NPS00	HS1N0100	6/1/2000	HS-1N-0100-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		121
NPS00	HS1N0250	6/1/2000	HS-1N-0250-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	49.6	
NPS00	HS1N0250	6/1/2000	HS-1N-0250-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	60.6	
										field rep average	55.1
NPS00	HS1N1000	6/1/2000	HS-1N-1000-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	19.4	
NPS00	HS1N1000	6/1/2000	HS-1N-1000-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	24.1	
										field rep average	21.8
NPS00	HS1S0003	6/1/2000	HS-1S-0003-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		392
NPS00	HS1S0050	6/1/2000	HS-1S-0050-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		87.2
NPS00	HS1S0100	6/1/2000	HS-1S-0100-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		37.1
NPS00	HS1S0250	6/1/2000	HS-1S-0250-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		25
NPS00	HS1S1000	6/1/2000	HS-1S-1000-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		8.56
NPS00	HS1S1600	6/1/2000	HS-1S-1600-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		11.6
NPS00	HS2N0003	6/1/2000	HS-2N-0003-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	458	
NPS00	HS2N0003	6/1/2000	HS-2N-0003-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	448	
										field rep average	453
NPS00	HS2N0050	6/1/2000	HS-2N-0050-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		419
NPS00	HS2N0100	6/1/2000	HS-2N-0100-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		215
NPS00	HS2N0250	6/1/2000	HS-2N-0250-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	102	
NPS00	HS2N0250	6/1/2000	HS-2N-0250-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	98.7	
										field rep average	100
NPS00	HS2N1000	6/1/2000	HS-2N-1000-M	1	0	NA	NA	NA	$\mu\text{g/g dry}$	46.4	
NPS00	HS2N1000	6/1/2000	HS-2N-1000-M	2	0	NA	NA	NA	$\mu\text{g/g dry}$	53	
										field rep average	49.7
NPS00	HS2S0003	6/1/2000	HS-2S-0003-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		288
NPS00	HS2S0050	6/1/2000	HS-2S-0050-M	0	0	NA	NA	NA	$\mu\text{g/g dry}$		64.1

Table K-11a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
NPS00	HS2S0100	6/1/2000	HS-2S-0100-M	0	0	NA	NA	NA	µg/g dry		45.5
NPS00	HS2S0250	6/1/2000	HS-2S-0250-M	0	0	NA	NA	NA	µg/g dry		22.4
NPS00	HS2S1000	6/1/2000	HS-2S-1000-M	0	0	NA	NA	NA	µg/g dry		10.1
NPS00	HS3N0003	6/1/2000	HS-3N-0003-M	0	0	NA	NA	NA	µg/g dry		402
NPS00	HS3N0050	6/1/2000	HS-3N-0050-M	0	0	NA	NA	NA	µg/g dry		193
NPS00	HS3N0100	6/1/2000	HS-3N-0100-M	0	0	NA	NA	NA	µg/g dry		140
NPS00	HS3N0250	6/1/2000	HS-3N-0250-M	0	0	NA	NA	NA	µg/g dry		44
NPS00	HS3N1000	6/1/2000	HS-3N-1000-M	0	0	NA	NA	NA	µg/g dry		21.4
NPS00	HS3N1600	6/1/2000	HS-3N-1600-M	0	0	NA	NA	NA	µg/g dry		30.4
NPS00	HS3S0003	6/1/2000	HS-3S-0003-M	0	0	NA	NA	NA	µg/g dry		408
NPS00	HS3S0050	6/1/2000	HS-3S-0050-M	0	0	NA	NA	NA	µg/g dry		139
NPS00	HS3S0100	6/1/2000	HS-3S-0100-M	0	0	NA	NA	NA	µg/g dry		83.5
NPS00	HS3S0250	6/1/2000	HS-3S-0250-M	0	0	NA	NA	NA	µg/g dry		40.5
NPS00	HS3S1000	6/1/2000	HS-3S-1000-M	0	0	NA	NA	NA	µg/g dry		16.8
SUPP	MI-104	7/21/2003	MS0024	0	0	NA	NA	NA	µg/g dry		21.7
SUPP	MI-107	7/21/2003	MS0020	0	0	NA	NA	NA	µg/g dry		44.2
SUPP	MI-108	7/21/2003	MS0023	0	0	NA	NA	NA	µg/g dry		164
FUGDST01	MI-25-M	7/9/2002	MI-25-M	0	0	NA	NA	NA	µg/g dry		148
FUGDST01	MI-26-M	7/9/2002	MI-26-M	0	0	NA	NA	NA	µg/g dry		42.7
PHASE1RA	TT3-0010	7/17/2003	MS0002	0	0	NA	NA	NA	µg/g dry		241
PHASE1RA	TT3-0100	7/17/2003	MS0001	0	0	NA	NA	NA	µg/g dry		148
PHASE1RA	TT3-1000	7/21/2003	MS0015	0	0	NA	NA	NA	µg/g dry		29.5
										road site mean	153
										road site 95% UCL	261

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

- CoPC - chemical of potential concern
- EPC - exposure point concentration
- J - estimated value
- U - undetected; value reported is half the detection limit

Table K-12. Food-web model exposure results for caribou exposed to 95% UCL CoPC concentrations at road site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	178	2,660 ^b	1,050	156 ^b	1,670	18,400	1.18	904						15,700	16,600	155	63.6
Antimony	0.215	0.883	0.236	0.224	0.830	0.99 ^b	0.00143	0.300	3.63	3.93	0.0368	0.0151	0.00218	0.0173	0.66	--	0.026	--
Arsenic (arsenate)	0.674	3.51	1.16	0.233	1.42	5.37	0.00447	1.19	8.36	9.56	0.0893	0.0367	0.0319	0.0686	0.40	1.6	0.17	0.043
Arsenic (arsenite)	0.674	3.51	1.16	0.233	1.42	5.37	0.00447	1.19	8.36	9.56	0.0893	0.0367	0.0319	0.0686	0.13	1.3	0.53	0.053
Barium	136	1,750	197	154	794	2,530 ^b	0.906	595	4,220	4,820	45.0	18.5	2.16	20.7	5.1	20	4.1	1.0
Cadmium	0.124	3.85	0.484	3.53	2.78	6.93	0.000826	1.31	15.2	16.5	0.154	0.0634	0.00733	0.0707	1.0	10	0.071	0.0071
Chromium	2.67	9.69 ^b	13.1	0.967	11.2	19.5 ^b	0.0178	3.29	55.8	59.1	0.553	0.227	0.112	0.339	3.3	69	0.10	0.0049
Cobalt	0.259	7.13	1.83	2.60	2.38	5.61 ^b	0.00172	2.42	13.3	15.8	0.147	0.0605	0.0553	0.116	0.50	2.0	0.23	0.058
Lead	1.10	173	13.8	9.21	83.9	261	0.00729	58.8	436	495	4.62	1.90	0.165	2.06	11	90	0.19	0.023
Mercury	0.0297	0.223	0.0508	0.0497	0.0973	0.180 ^b	0.000197	0.0759	0.481	0.557	0.00520	0.00214	0.00190	0.00404	0.032	0.16	0.13	0.025
Molybdenum	1.07	1.37	0.733	0.376	0.674	0.88 ^b	0.00710	0.464	3.35	3.82	0.0357	0.0147	0.0221	0.0368	0.26	2.6	0.14	0.014
Selenium	0.675	0.880	0.293	0.181	0.469	0.6 ^b	0.00448	0.299	2.18	2.48	0.0232	0.00953	0.00665	0.0162	0.20	0.33	0.081	0.049
Thallium	0.296	0.246	0.153	0.0182	0.0839	0.265 ^b	0.00197	0.0836	0.512	0.597	0.00558	0.00229	0.000819	0.00311	0.074	0.74	0.042	0.0042
Vanadium	0.545	10.4	1.81	0.472	6.98	12.3 ^b	0.00362	3.54	31.7	35.3	0.329	0.135	0.0689	0.204	0.21	2.1	0.97	0.097
Zinc	13.5	799	72.4	231	320	1,070	0.0896	272	1,810	2,080	19.4	7.99	1.56	9.54	160	320	0.060	0.030

Note: Data used to develop this scenario are presented in Table K-11a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Based on 95% UCL daily exposure for caribou in reference site (Table K-8) multiplied by 0.59.

^b Maximum concentration used in place of the 95 percent UCL concentration.

Table K-13. Food-web model exposure results for caribou exposed to mean CoPC concentrations at mine site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	191	5,150	10.4	13.2	928	8,240	1.26	1,750						7,380	9,130	85.4	35.1
Antimony	0.063	2.82	0.0368	0.047	2.23	1.29	0.000418	0.958	8.48	9.44	0.0882	0.0362	0.00174	0.0380	0.66	--	0.058	--
Arsenic (arsenate)	0.482	6.77	0.0367	0.03	2.04	4.22	0.00320	2.30	9.28	11.6	0.108	0.0445	0.0141	0.0586	0.40	1.6	0.15	0.037
Arsenic (arsenite)	0.482	6.77	0.0367	0.03	2.04	4.22	0.00320	2.30	9.28	11.6	0.108	0.0445	0.0141	0.0586	0.13	1.3	0.45	0.045
Barium	135	3,200	75.0	44.7	1,360	953	0.896	1,090	5,290	6,380	59.6	24.5	1.70	26.2	5.1	20	5.1	1.3
Cadmium	0.0365	9.27	0.209	3.34	5.50	8.57	0.000242	3.15	25.3	28.5	0.266	0.109	0.00561	0.115	1.0	10	0.11	0.011
Chromium	0.396	10.2	0.233	0.263	3.7	11.7	0.00263	3.48	19.0	22.5	0.211	0.0865	0.0431	0.130	3.3	69	0.039	0.0019
Cobalt	0.0125	4.65	0.0583	0.601	0.984	3.88	0.0000830	1.58	5.71	7.29	0.0682	0.0280	0.0306	0.0586	0.50	2.0	0.12	0.029
Lead	0.369	552	2.40	1.61	316	339	0.00245	188	1,280	1,470	13.7	5.63	0.117	5.74	11	90	0.52	0.064
Mercury	0.0179	0.360	0.0307	0.0473	0.185	0.290	0.000119	0.123	0.830	0.953	0.00891	0.00366	0.00149	0.00515	0.032	0.16	0.16	0.032
Molybdenum	0.23	8.09	0.810	0.411	0.663	0.631	0.00153	2.75	3.25	6.00	0.0561	0.0230	0.00781	0.0309	0.26	2.6	0.12	0.012
Selenium	0.348	1.63	0.139	0.05	0.4	0.35	0.00231	0.554	1.67	2.23	0.0208	0.00855	0.00408	0.0126	0.20	0.33	0.063	0.038
Thallium	0.0575	0.860	0.00878	0.00513	0.361	0.212	0.000382	0.292	1.38	1.67	0.0156	0.00641	0.000530	0.00694	0.074	0.74	0.094	0.0094
Vanadium	0.633	18.4	0.256	0.225	2.91	6.03	0.00420	6.24	13.4	19.7	0.184	0.0756	0.0408	0.116	0.21	2.1	0.55	0.055
Zinc	1.48	1,500	65.3	182	682	924	0.00983	509	2,970	3,480	32.5	13.4	1.27	14.6	160	320	0.092	0.046

Note: Data used to develop this scenario are presented in Table K-13a.

For Al and Cr in tundra soil and Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V in moss, no mine data available, so "whole site" means were used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for caribou in reference site (Table K-7) multiplied by 0.59.

Table K-13a. Caribou EPC calculation for mean and 95% UCL CoPC concentrations at mine site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
TECK03	ARC-U	10/10/2003	03-4782	0	0	NA	NA	NA	µg/L unfiltered		0.09 <i>U</i>
										mine site mean	0.369 <i>J</i>
										mine site 95% UCL	0.650
Tundra Soil											
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
PHASE2RA	TT6_0100	6/21/2004	TS-0023	0	0	NA	NA	NA	mg/kg dry		281
PHASE2RA	TT6_1000	6/21/2004	TS-0022	0	0	NA	NA	NA	mg/kg dry		145
PHASE2RA	TT6_2000	6/22/2004	TS-0026	0	0	NA	NA	NA	mg/kg dry		102
PHASE2RA	TT7_0010	6/22/2004	TS-0025	0	0	NA	NA	NA	mg/kg dry		2,630
PHASE2RA	TT7_1000	6/22/2004	TS-0024	0	0	NA	NA	NA	mg/kg dry		201
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	1	0	NA	NA	NA	mg/kg dry	197	
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	2	0	NA	NA	NA	mg/kg dry	111	
										field rep average	154
										mine site mean	552
										mine site 95% UCL	1,220
Herbaceous Plant											
PHASE2RA	TT6-0010	6/25/2004	SE0042	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		0.71
PHASE2RA	TT6-0100	6/21/2004	SE0024	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
PHASE2RA	TT6-0100	6/21/2004	SE0025	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		1.32
PHASE2RA	TT6-1000	6/21/2004	SE0023	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.3 <i>U</i>
PHASE2RA	TT6-2000	6/22/2004	SE0028	0	0	<i>Carex</i>	<i>podocarpa</i>	Blades	mg/kg dry		1.1
PHASE2RA	TT7-0010	6/22/2004	SE0027	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		2.24
PHASE2RA	TT7-1000	6/22/2004	SE0026	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		5.67
PHASE2RA	TT7-2000	7/4/2004	SE0061	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		1.95
PHASE2RA	TT7-2000	7/4/2004	SE0062	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		7.96
										mine site mean	2.40
										mine site 95% UCL	5.10
Shrub											
PHASE2RA	TT6-0010	6/25/2004	WI0024	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.12
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	1.17	
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	0.97	
										field rep average	1.07
PHASE2RA	TT6-1000	6/21/2004	WI0012	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.41
PHASE2RA	TT6-2000	6/22/2004	WI0017	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.37
PHASE2RA	TT7-0010	6/22/2004	WI0016	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		6.89

Table K-13a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT7-1000	6/22/2004	WI0015	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.52
PHASE2RA	TT7-2000	7/4/2004	WI0029	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.4
PHASE2RA	TT7-2000	7/4/2004	WI0030	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.09
										mine site mean	1.61
										mine site 95% UCL	4.97
Lichen											
PHASE2RA	TT6-0010	6/25/2004	LI0034-D	1	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry	98.3	
PHASE2RA	TT6-0010	6/25/2004	LI0034-D	2	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry	96.1	
										field rep average	97.2
PHASE2RA	TT6-0010	6/25/2004	LI0036	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		123
PHASE2RA	TT6-0100	6/21/2004	LI0022	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		178
PHASE2RA	TT6-0100	6/21/2004	LI0023	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		108
PHASE2RA	TT6-1000	6/21/2004	LI0020	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		99.5
PHASE2RA	TT6-1000	6/21/2004	LI0021	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		131
PHASE2RA	TT6-2000	6/22/2004	LI0026	0	0	<i>Peltigera</i>	Sp	Whole Plant	µg/g dry		76.5
PHASE2RA	TT6-2000	6/22/2004	LI0027	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		46.1
PHASE2RA	TT7-0010	6/22/2004	LI0025	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		1530
PHASE2RA	TT7-1000	6/22/2004	LI0024	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		594
PHASE2RA	TT7-2000	7/4/2004	LI0039	0	0	<i>Cladina</i>	Sp	Whole Plant	µg/g dry		492
										mine site mean	316
										mine site 95% UCL	690
Moss											
FUGDST01	HR06-01M	8/20/2001	HR-06-01-M	0	0	NA	NA	NA	µg/g dry		336
FUGDST01	HR06-02M	8/21/2001	HR-06-02-M	0	0	NA	NA	NA	µg/g dry		463
FUGDST01	HR06-03M	8/24/2001	HR-06-03-M	0	0	NA	NA	NA	µg/g dry		648
FUGDST01	HR06-04M	8/24/2001	HR-06-04-M	0	0	NA	NA	NA	µg/g dry		182
FUGDST01	MI-02M	8/31/2001	MI-02-M	0	0	NA	NA	NA	µg/g dry		232
FUGDST01	MI-42-M	7/11/2002	MI-42-M	0	0	NA	NA	NA	µg/g dry		211
FUGDST01	MI-45-M	7/11/2002	MI-45-M	0	0	NA	NA	NA	µg/g dry		303
										mine site mean	339
										mine site 95% UCL	461

Note: Field replicates are averaged first then included in the calculation of the site mean.
95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.
CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value
U - undetected; value reported is half the detection limit

Table K-14. Food-web model exposure results for caribou exposed to 95% UCL CoPC concentrations at mine site

Analyte	Concentration						Daily Exposure				BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg- day)	TRV		Year-Round Hazard Quotient	
	Water ^b (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)					NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	208	7,150	12.8	25.7	1,820	39,100 ^b	1.38	2,430	25,900					28,400	265	109	17.5
Antimony	0.063	8.87	0.0460	0.0699	5.98	2.61	0.000418	3.02	22.3	25.3	0.237	0.0972	0.00218	0.0994	0.66	--	0.15	--
Arsenic (arsenate)	0.482	9.72	0.0469	0.03 ^b	3.19	7.65	0.00320	3.31	15.0	18.3	0.171	0.0705	0.0319	0.102	0.40	1.6	0.26	0.064
Arsenic (arsenite)	0.482	9.72	0.0469	0.03 ^b	3.19	7.65	0.00320	3.31	15.0	18.3	0.171	0.0705	0.0319	0.102	0.13	1.3	0.79	0.079
Barium	140	6,950 ^b	92.0	82.4	1,920	1,540	0.929	2,360	7,580	9,940	92.9	38.2	2.16	40.4	5.1	20	7.9	2.0
Cadmium	0.0365	29.0	0.300	4.18	9.05	11.0	0.000242	9.85	39.4	49.3	0.460	0.189	0.00733	0.197	1.0	10	0.20	0.020
Chromium	0.396	14.7	0.264	0.324	7.78	17.1	0.00263	4.99	36.1	41.1	0.384	0.158	0.112	0.270	3.3	69	0.082	0.0039
Cobalt	0.015	6.40	0.0794	1.27	1.42	6.14	0.0000996	2.18	8.7	10.9	0.102	0.0418	0.0553	0.0971	0.50	2.0	0.19	0.049
Lead	0.65	1,220	5.10	4.97	690	461	0.00432	416	2,650	3,070	28.6	11.8	0.165	11.9	11	90	1.1	0.13
Mercury	0.0179	0.929	0.0363	0.0522	0.434	0.588	0.000119	0.316	1.86	2.17	0.0203	0.00835	0.00190	0.0102	0.032	0.16	0.32	0.064
Molybdenum	0.24	21.4	1.12	0.757	1.10	0.824	0.00159	7.29	5.21	12.5	0.117	0.0480	0.0221	0.0701	0.26	2.6	0.27	0.027
Selenium	0.355	2.17	0.330	0.05 ^b	0.738	0.518	0.00236	0.738	3.03	3.77	0.0352	0.0145	0.00665	0.0211	0.20	0.33	0.11	0.064
Thallium	0.09	1.390	0.0165	0.00713	0.662	0.337	0.000597	0.472	2.50	2.97	0.0278	0.0114	0.000819	0.0122	0.074	0.74	0.17	0.017
Vanadium	0.93	24.9	0.288	0.256	5.71	9.16	0.00617	8.47	24.8	33.3	0.311	0.128	0.0689	0.197	0.21	2.1	0.94	0.094
Zinc	1.79	6,770 ^b	91.2	238	1,450	1,240	0.0119	2,300	5,850	8,150	76.1	31.3	1.56	32.8	160	320	0.21	0.10

Note: Data used to develop this scenario are presented in Table K-13a.

For Al and Cr in tundra soil and Sb, Ba, Cr, Co, Hg, Mo, Se, Tl, V in moss, no mine data available, so "whole site" 95% UCLs (or max) were used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Based on 95% UCL daily exposure for caribou in reference site (Table K-8) multiplied by 0.59.

^b Maximum concentration used in place of the 95 percent UCL concentration.

Table K-15. Food-web model exposure results for caribou exposed to mean CoPC concentrations at the whole site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	159	5,150	103	43.4	815	10,000	1.06	1,750						7,940	9,690	90.6	37.2
Antimony	0.154	3.29	0.120	0.0860	1.37	1.29	0.00102	1.12	5.55	6.67	0.0624	0.0256	0.00174	0.0274	0.66	--	0.041	--
Arsenic (arsenate)	0.533	10.0	0.205	0.0715	1.40	3.88	0.00354	3.41	6.97	10.4	0.0970	0.0399	0.0141	0.0540	0.40	1.6	0.13	0.034
Arsenic (arsenite)	0.533	10.0	0.205	0.0715	1.40	3.88	0.00354	3.41	6.97	10.4	0.0970	0.0399	0.0141	0.0540	0.13	1.3	0.42	0.042
Barium	80.9	1,150	70.8	63.6	799	953	0.537	390	3,340	3,730	34.9	14.3	1.70	16.0	5.1	20	3.1	0.80
Cadmium	0.0901	13.5	0.251	2.98	3.58	5.88	0.000598	4.58	17.1	21.7	0.202	0.0832	0.00561	0.0888	1.0	10	0.089	0.0089
Chromium	0.823	10.2	1.97	0.379	3.52	11.7	0.00546	3.48	19.3	22.8	0.213	0.0877	0.0431	0.131	3.3	69	0.040	0.0019
Cobalt	0.278	8.23	1.02	1.12	1.13	3.88	0.00185	2.80	6.97	9.77	0.0913	0.0375	0.0306	0.0681	0.50	2.0	0.14	0.034
Lead	0.454	704	5.34	5.24	170	211	0.00302	239	704	944	8.82	3.62	0.117	3.74	11	90	0.34	0.042
Mercury	0.0255	0.405	0.0377	0.0438	0.128	0.290	0.000169	0.138	0.632	0.770	0.00720	0.00296	0.00149	0.00444	0.032	0.16	0.14	0.028
Molybdenum	0.600	2.02	0.503	0.282	0.519	0.631	0.00398	0.687	2.52	3.21	0.0300	0.0123	0.00781	0.0202	0.26	2.6	0.078	0.0078
Selenium	0.202	3.99	0.142	0.104	0.315	0.35	0.00134	1.36	1.40	2.76	0.0258	0.0106	0.00408	0.0147	0.20	0.33	0.073	0.044
Thallium	0.0513	0.316	0.0198	0.00588	0.184	0.212	0.000340	0.107	0.764	0.872	0.00815	0.00335	0.000530	0.00388	0.074	0.74	0.052	0.0052
Vanadium	0.442	11.9	0.412	0.279	2.63	6.03	0.00294	4.04	12.6	16.6	0.155	0.0637	0.0408	0.105	0.21	2.1	0.50	0.050
Zinc	7.97	2,240	76.2	229	528	882	0.0529	760	2,440	3,200	29.9	12.3	1.27	13.6	160	320	0.085	0.042

Note: Data used to develop this scenario are presented in Table K-15a.

"Whole site" data set comprises all data from port, road, and mine investigation units.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for caribou in reference site (Table K-7) multiplied by 0.59.

Table K-15a. Caribou EPC calculation for mean and 95% UCL CoPC concentrations at whole site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
field rep average											0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 <i>U</i>
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 <i>U</i>
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	<i>U</i>
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	<i>U</i>
field reps - both non-detects (minimum value)											0.089 <i>U</i>
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 <i>U</i>
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 <i>U</i>
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
TECK03	ARC-U	10/10/2003	03-4782	0	0	NA	NA	NA	µg/L unfiltered		0.09 <i>U</i>
										whole site mean	0.454 <i>J</i>
										whole site 95% UCL	1.05
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-OW-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 U
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 U
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	U
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	U
											field reps - both non-detects (minimum value)
											15 U
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 U
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 U
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 U
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 U
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 U
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 U
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 U
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 UU
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346	
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299	
											field rep average
											323
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		317
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	U
											field rep average
											12.6

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 <i>UJ</i>
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
field reps - both non-detects (minimum value)											
											11 <i>UJ</i>
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
field reps - both non-detects (minimum value)											
											18 <i>UJ</i>
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>UJ</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
field rep average											69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
field rep average											121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
field rep average											283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
field rep average											132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	ROT4-0NA	7/4/2002	ROT4-0NA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-0SA	7/4/2002	ROT4-0SA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
									field rep average		1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-0NA	7/4/2002	ROT5-0NA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-0SA	7/4/2002	ROT5-0SA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-0NA	7/4/2002	ROT6-0NA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-0SA	7/4/2002	ROT6-0SA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	<i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	
									survey station mean		759 <i>J</i>

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											414
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	<i>J</i>
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.8 <i>J</i>
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
field rep average											449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
field rep average											34.6
survey station mean											119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
survey station mean											16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 J
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 J
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 J
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 J
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 J
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 J
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 J
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 J
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 J
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 J
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 J
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 J
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 U
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
PHASE2RA	TT6_0100	6/21/2004	TS-0023	0	0	NA	NA	NA	mg/kg dry		281
PHASE2RA	TT6_1000	6/21/2004	TS-0022	0	0	NA	NA	NA	mg/kg dry		145
PHASE2RA	TT6_2000	6/22/2004	TS-0026	0	0	NA	NA	NA	mg/kg dry		102
PHASE2RA	TT7_0010	6/22/2004	TS-0025	0	0	NA	NA	NA	mg/kg dry		2,630
PHASE2RA	TT7_1000	6/22/2004	TS-0024	0	0	NA	NA	NA	mg/kg dry		201
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	1	0	NA	NA	NA	mg/kg dry	197	
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	2	0	NA	NA	NA	mg/kg dry	111	
field rep average											154
whole site mean											704 J
whole site 95% UCL											1410
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	Sp	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
field rep average											3.3
PHASE2RA	PLNL	6/28/2004	SE0045	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.81
PHASE2RA	PLNL	6/28/2004	SE0046	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.76
PHASE2RA	TP1-0100	6/17/2004	SE0009	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		48.1
PHASE2RA	TP1-1000	6/17/2004	SE0008	0	0	<i>Carex</i>	Sp	Whole Plant	mg/kg dry		16.1
PHASE2RA	TT2-0010	6/17/2004	SE0010	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		5.63
PHASE2RA	TT2-0100	6/16/2004	SE0006	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.01
PHASE2RA	TT2-1000	6/16/2004	SE0005	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.16
PHASE2RA	TT5-0010	6/12/2004	SE0001	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		10.8
PHASE2RA	TT5-0100	6/15/2004	SE0004	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.33
PHASE2RA	TT5-1000	6/13/2004	SE0002-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.1
PHASE2RA	TT5-1000	6/16/2004	SE0002-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.57
PHASE2RA	TT5-2000	6/15/2004	SE0003	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	Carex	aquatilis	Whole Plant	mg/kg dry		14.3
PHASE2RA	OR-R	7/1/2004	SE0051	0	0	Carex	aquatilis	Whole Plant	mg/kg dry		8.27
PHASE2RA	TP3	6/20/2004	SE0018-D	1	0	Carex	aquatilis	Whole Plant	mg/kg dry	5.01	
PHASE2RA	TP3	6/20/2004	SE0018-D	2	0	Carex	aquatilis	Whole Plant	mg/kg dry	1.96	
field rep average											3.49
PHASE2RA	TP4	6/17/2004	SE0011	0	0	Carex	aquatilis	Whole Plant	mg/kg dry		21.1
PHASE2RA	TT3-0010	6/18/2004	SE0013	0	0	Eriophorum	vaginatum	Blades	mg/kg dry		4.06
PHASE2RA	TT3-0100	6/20/2004	SE0022	0	0	Eriophorum	vaginatum	Blades	mg/kg dry		0.91
PHASE2RA	TT3-1000	6/20/2004	SE0021	0	0	Eriophorum	vaginatum	Blades	mg/kg dry		0.18
PHASE2RA	TT8-0010	6/19/2004	SE0017	0	0	Eriophorum	vaginatum	Blades	mg/kg dry		4.89
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	1	0	Eriophorum	vaginatum	Blades	mg/kg dry	1.17	
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	2	0	Eriophorum	vaginatum	Blades	mg/kg dry	1.4	
field rep average											1.29
PHASE2RA	TT8-1000	6/19/2004	SE0014	0	0	Eriophorum	vaginatum	Blades	mg/kg dry		0.34
PHASE2RA	TT6-0010	6/25/2004	SE0042	0	0	Carex	microchaeta	Blades	mg/kg dry		0.71
PHASE2RA	TT6-0100	6/21/2004	SE0024	0	0	Eriophorum	vaginatum	Blades	mg/kg dry		0.33
PHASE2RA	TT6-0100	6/21/2004	SE0025	0	0	Carex	bigelowii	Blades	mg/kg dry		1.32
PHASE2RA	TT6-1000	6/21/2004	SE0023	0	0	Carex	bigelowii	Blades	mg/kg dry		0.3 U
PHASE2RA	TT6-2000	6/22/2004	SE0028	0	0	Carex	podocarpa	Blades	mg/kg dry		1.1
PHASE2RA	TT7-0010	6/22/2004	SE0027	0	0	Carex	microchaeta	Blades	mg/kg dry		2.24
PHASE2RA	TT7-1000	6/22/2004	SE0026	0	0	Carex	scirpoidea	Blades	mg/kg dry		5.67
PHASE2RA	TT7-2000	7/4/2004	SE0061	0	0	Carex	microchaeta	Leaves	mg/kg dry		1.95
PHASE2RA	TT7-2000	7/4/2004	SE0062	0	0	Carex	scirpoidea	Leaves	mg/kg dry		7.96
whole site mean											5.34
whole site 95% UCL											11.9
Shrub											
FUGDST01	HR02-01W	8/20/2001	HR-02-01-W	0	0	Salix	planifolia	Leaves	µg/g dry		45.6
FUGDST01	HR02-02W	8/21/2001	HR-02-02-W	0	0	Salix	planifolia	Leaves	µg/g dry		4.21
FUGDST01	HR02-03W	8/24/2001	HR-02-03-W	0	0	Salix	planifolia	Leaves	µg/g dry		0.856
FUGDST01	PO-07W	8/23/2001	PO-07-W	0	0	Salix	planifolia	Leaves	µg/g dry		11.4
FUGDST01	PO-13W	8/23/2001	PO-13-W	0	0	Salix	planifolia	Leaves	µg/g dry		4.8
FUGDST01	PO-17W	8/23/2001	PO-17-W	0	0	Salix	planifolia	Leaves	µg/g dry		15.6
PHASE2RA	TT2-0010	6/17/2004	WI0006	0	0	Salix	planifolia	Leaves	µg/g dry		5.76
PHASE2RA	TT2-0100	6/16/2004	WI0005	0	0	Salix	planifolia	Leaves	µg/g dry		0.89
PHASE2RA	TT2-1000	6/16/2004	WI0004	0	0	Salix	planifolia	Leaves	µg/g dry		0.35
PHASE2RA	TT5-0010	6/12/2004	WI0001	0	0	Salix	planifolia	Leaves	µg/g dry		6.64
PHASE2RA	TT5-0100	6/15/2004	WI0003	0	0	Salix	planifolia	Leaves	µg/g dry		4.85
PHASE2RA	TT5-1000	6/13/2004	BR0001	0	0	Betula	nana	Leaves	µg/g dry		3.77
PHASE2RA	TT5-1000	6/13/2004	WI0002	0	0	Salix	planifolia	Leaves	µg/g dry		1.07
PHASE2RA	TT5-2000	6/15/2004	BR0002	0	0	Betula	nana	Leaves	µg/g dry		0.42
PHASE2RA	AC-R	6/23/2004	WI0018	0	0	Salix	planifolia	Leaves	µg/g dry		10.9
PHASE2RA	ARC-R	7/1/2004	WI0028	0	0	Salix	planifolia	Leaves	µg/g dry		11.8

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
FUGDST01	HR03-01W	8/19/2001	HR-03-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		16.5
FUGDST01	HR03-02W	8/21/2001	HR-03-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		3.94
FUGDST01	HR03-03W	8/24/2001	HR-03-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.431
PHASE2RA	OR-R	7/1/2004	WI0026-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	3.88	
PHASE2RA	OR-R	7/1/2004	WI0026-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	5.85	
										field rep average	4.87
PHASE2RA	TT3-0010	6/18/2004	WI0007	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		7.74
PHASE2RA	TT3-0100	6/20/2004	BR0004	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		1.91
PHASE2RA	TT3-0100	6/20/2004	WI0011	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.48
PHASE2RA	TT3-1000	6/20/2004	BR0003	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		0.58
PHASE2RA	TT8-0010	6/19/2004	WI0010	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		2.91
PHASE2RA	TT8-0100	6/19/2004	WI0009	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.79
PHASE2RA	TT8-1000	6/19/2004	WI0008	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.47
PHASE2RA	TT6-0010	6/25/2004	WI0024	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.12
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	1.17	
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	0.97	
										field rep average	1.07
PHASE2RA	TT6-1000	6/21/2004	WI0012	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.41
PHASE2RA	TT6-2000	6/22/2004	WI0017	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.37
PHASE2RA	TT7-0010	6/22/2004	WI0016	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		6.89
PHASE2RA	TT7-1000	6/22/2004	WI0015	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.52
PHASE2RA	TT7-2000	7/4/2004	WI0029	0	0	<i>Salix</i>	<i>reticulata</i>	Leaves	μg/g dry		1.4
PHASE2RA	TT7-2000	7/4/2004	WI0030	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.09
										whole site mean	5.24
										whole site 95% UCL	10.3
Lichen											
FUGDST01	HR01-02L	8/21/2001	HR-01-02-L	0	0	NA	NA	NA	μg/g dry		375
FUGDST01	HR02-02L	8/21/2001	HR-02-02-L	0	0	NA	NA	NA	μg/g dry		107
FUGDST01	HR02-03L	8/24/2001	HR-02-03-L	0	0	NA	NA	NA	μg/g dry		6.86
FUGDST01	PO-04L	8/23/2001	PO-04-L	0	0	NA	NA	NA	μg/g dry		207
FUGDST01	PO-11L	8/23/2001	PO-11-L	0	0	NA	NA	NA	μg/g dry		182
FUGDST01	PO-17L	8/23/2001	PO-17-L	0	0	NA	NA	NA	μg/g dry		218
PHASE2RA	TT2-0010	6/21/2004	LI0018	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		170
PHASE2RA	TT2-0100	6/16/2004	LI0008	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		57.1
PHASE2RA	TT2-1000	6/16/2004	LI0007	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		18.6
PHASE2RA	TT5-0010	7/1/2004	LI0038	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		161
PHASE2RA	TT5-0100	6/15/2004	LI0006	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		179
PHASE2RA	TT5-1000	6/13/2004	LI0002	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		99
PHASE2RA	TT5-2000	6/15/2004	LI0019	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		52.6
FUGDST01	HR03-03L	8/24/2001	HR-03-03-L	0	0	NA	NA	NA	μg/g dry		17.8
FUGDST01	HR05-03L	8/24/2001	HR-05-03-L	0	0	NA	NA	NA	μg/g dry		10.6
PHASE2RA	TT3-0010	6/18/2004	LI0010	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		72.1

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT3-0100	6/20/2004	LI0037	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		34.3
PHASE2RA	TT3-1000	6/20/2004	LI0016	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		13
PHASE2RA	TT3-1000	6/20/2004	LI0017	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		17.4
PHASE2RA	TT8-0010	6/19/2004	LI0015	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		140
PHASE2RA	TT8-0100	6/19/2004	LI0014	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		111
PHASE2RA	TT8-1000	6/19/2004	LI0011	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		13.8
PHASE2RA	TT8-1000	6/19/2004	LI0012-D	1	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry	21.1	
PHASE2RA	TT8-1000	6/19/2004	LI0012-D	2	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry	28.6	
field rep average											24.9
PHASE2RA	TT6-0010	6/25/2004	LI0034-D	1	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry	98.3	
PHASE2RA	TT6-0010	6/25/2004	LI0034-D	2	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry	96.1	
field rep average											97.2
PHASE2RA	TT6-0010	6/25/2004	LI0036	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		123
PHASE2RA	TT6-0100	6/21/2004	LI0022	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		178
PHASE2RA	TT6-0100	6/21/2004	LI0023	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		108
PHASE2RA	TT6-1000	6/21/2004	LI0020	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		99.5
PHASE2RA	TT6-1000	6/21/2004	LI0021	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		131
PHASE2RA	TT6-2000	6/22/2004	LI0026	0	0	<i>Peltigera</i>	Sp	Whole Plant	μg/g dry		76.5
PHASE2RA	TT6-2000	6/22/2004	LI0027	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		46.1
PHASE2RA	TT7-0010	6/22/2004	LI0025	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		1530
PHASE2RA	TT7-1000	6/22/2004	LI0024	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		594
PHASE2RA	TT7-2000	7/4/2004	LI0039	0	0	<i>Cladina</i>	Sp	Whole Plant	μg/g dry		492
whole site mean											170
whole site 95% UCL											241
Moss											
NPS01	050P-M01	6/1/2001	050P-M-01	0	0	NA	NA	NA	μg/g dry		91.2
NPS01	051A-M01	6/1/2001	051A-M-01	0	0	NA	NA	NA	μg/g dry		77
NPS01	052P-M01	6/1/2001	052P-M-01	0	0	NA	NA	NA	μg/g dry		141
NPS01	053D-M01	6/1/2001	053D-M-01	0	0	NA	NA	NA	μg/g dry		31.2
NPS01	053P-M01	6/1/2001	053P-M-01	0	0	NA	NA	NA	μg/g dry		30.4
NPS01	059D-M01	6/1/2001	059D-M-01	0	0	NA	NA	NA	μg/g dry		70.4
NPS01	059P-M01	6/1/2001	059P-M-01	0	0	NA	NA	NA	μg/g dry		91
NPS01	060P-M01	6/1/2001	060P-M-01	0	0	NA	NA	NA	μg/g dry		66.3
NPS01	161P-M01	6/1/2001	161P-M-01	0	0	NA	NA	NA	μg/g dry		21.6
NPS01	161R-M01	6/1/2001	161R-M-01	0	0	NA	NA	NA	μg/g dry		24
FUGDST01	HR01-01A	8/20/2001	HR-01-01-M	0	0	NA	NA	NA	μg/g dry		875
FUGDST01	HR01-02M	8/21/2001	HR-01-02-M	0	0	NA	NA	NA	μg/g dry		424
FUGDST01	HR01-03M	8/24/2001	HR-01-03-M	0	0	NA	NA	NA	μg/g dry		66.2
FUGDST01	HR02-01M	8/20/2001	HR-02-01-M	0	0	NA	NA	NA	μg/g dry		654
FUGDST01	HR02-02M	8/21/2001	HR-02-02-M	0	0	NA	NA	NA	μg/g dry		217
FUGDST01	HR02-03M	8/24/2001	HR-02-03-M	0	0	NA	NA	NA	μg/g dry		9.54
FUGDST01	PO-01M	8/23/2001	PO-01-M	0	0	NA	NA	NA	μg/g dry		323

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
FUGDST01	PO-02M	8/23/2001	PO-02-M	0	0	NA	NA	NA	µg/g dry		622
FUGDST01	PO-04M	8/23/2001	PO-04-M	1	0	NA	NA	NA	µg/g dry	555	
FUGDST01	PO-04M	8/23/2001	PO-04-M	2	0	NA	NA	NA	µg/g dry	496	
									field rep average		526
FUGDST01	PO-05M	8/23/2001	PO-05-M	0	0	NA	NA	NA	µg/g dry		1670
FUGDST01	PO-06M	8/23/2001	PO-06-M	0	0	NA	NA	NA	µg/g dry		937
FUGDST01	PO-07M	8/23/2001	PO-07-M	0	0	NA	NA	NA	µg/g dry		381
FUGDST01	PO-09M	8/23/2001	PO-09-M	0	0	NA	NA	NA	µg/g dry		377
FUGDST01	PO-10M	8/23/2001	PO-10-M	0	0	NA	NA	NA	µg/g dry		466
FUGDST01	PO-11M	8/23/2001	PO-11-M	0	0	NA	NA	NA	µg/g dry		365
FUGDST01	PO-13M	8/23/2001	PO-13-M	0	0	NA	NA	NA	µg/g dry		382
FUGDST01	PO-15M	8/23/2001	PO-15-M	0	0	NA	NA	NA	µg/g dry		363
FUGDST01	PO-16M	8/23/2001	PO-16-M	0	0	NA	NA	NA	µg/g dry		368
FUGDST01	PO-17M	8/23/2001	PO-17-M	0	0	NA	NA	NA	µg/g dry		374
FUGDST01	PO-18M	8/24/2001	PO-18-M	0	0	NA	NA	NA	µg/g dry		358
PHASE1RA	TT1-0100	7/17/2003	MS0005	0	0	NA	NA	NA	µg/g dry		1720
PHASE1RA	TT1-1000	7/19/2003	MS0008	0	0	NA	NA	NA	µg/g dry		172
PHASE1RA	TT2-0010	7/17/2003	MS0004	0	0	NA	NA	NA	µg/g dry		506
PHASE1RA	TT2-0100	7/17/2003	MS0003	0	0	NA	NA	NA	µg/g dry		326
PHASE1RA	TT2-1000	7/19/2003	MS0006	1	0	NA	NA	NA	µg/g dry	38.6	
PHASE1RA	TT2-1000	7/19/2003	MS0006	2	0	NA	NA	NA	µg/g dry	44.8	
									field rep average		41.7
NPS01	001P-M01	6/1/2001	001P-M-01	0	0	NA	NA	NA	µg/g dry		383
NPS01	002P-M01	6/1/2001	002P-M-01	0	0	NA	NA	NA	µg/g dry		513
NPS01	003P-M01	6/1/2001	003P-M-01	0	0	NA	NA	NA	µg/g dry		527
NPS01	004P-M01	6/1/2001	004P-M-01	0	0	NA	NA	NA	µg/g dry		334
NPS01	005P-M01	6/1/2001	005P-M-01	0	0	NA	NA	NA	µg/g dry		557
NPS01	006P-M01	6/1/2001	006P-M-01	0	0	NA	NA	NA	µg/g dry		585
NPS01	007P-M01	6/1/2001	007P-M-01	0	0	NA	NA	NA	µg/g dry		341
NPS01	008P-M01	6/1/2001	008P-M-01	0	0	NA	NA	NA	µg/g dry		313
NPS01	009D-M01	6/1/2001	009D-M-01	0	0	NA	NA	NA	µg/g dry		918
NPS01	009P-M01	6/1/2001	009P-M-01	0	0	NA	NA	NA	µg/g dry		912
NPS01	010P-M01	6/1/2001	010P-M-01	0	0	NA	NA	NA	µg/g dry		678
NPS01	011P-M01	6/1/2001	011P-M-01	0	0	NA	NA	NA	µg/g dry		271
NPS01	013P-M01	6/1/2001	013P-M-01	0	0	NA	NA	NA	µg/g dry		379
NPS01	015P-M01	6/1/2001	015P-M-01	0	0	NA	NA	NA	µg/g dry		121
NPS01	016P-M01	6/1/2001	016P-M-01	0	0	NA	NA	NA	µg/g dry		350
NPS01	017P-M01	6/1/2001	017P-M-01	0	0	NA	NA	NA	µg/g dry		47.7
NPS01	018D-M01	6/1/2001	018D-M-01	0	0	NA	NA	NA	µg/g dry		72.8
NPS01	018P-M01	6/1/2001	018P-M-01	0	0	NA	NA	NA	µg/g dry		69.2
NPS01	019P-M01	6/1/2001	019P-M-01	0	0	NA	NA	NA	µg/g dry		141

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
NPS01	020P-M01	6/1/2001	020P-M-01	0	0	NA	NA	NA	µg/g dry		263
NPS01	021P-M01	6/1/2001	021P-M-01	0	0	NA	NA	NA	µg/g dry		293
NPS01	022P-M01	6/1/2001	022P-M-01	0	0	NA	NA	NA	µg/g dry		147
NPS01	023P-M01	6/1/2001	023P-M-01	0	0	NA	NA	NA	µg/g dry		215
NPS01	024P-M01	6/1/2001	024P-M-01	0	0	NA	NA	NA	µg/g dry		213
NPS01	025P-M01	6/1/2001	025P-M-01	0	0	NA	NA	NA	µg/g dry		246
NPS01	026D-M01	6/1/2001	026D-M-01	0	0	NA	NA	NA	µg/g dry		78.9
NPS01	026P-M01	6/1/2001	026P-M-01	0	0	NA	NA	NA	µg/g dry		56
NPS01	028P-M01	6/1/2001	028P-M-01	0	0	NA	NA	NA	µg/g dry		226
NPS01	029P-M01	6/1/2001	029P-M-01	0	0	NA	NA	NA	µg/g dry		22.2
NPS01	030P-M01	6/1/2001	030P-M-01	0	0	NA	NA	NA	µg/g dry		37.4
NPS01	030R-M01	6/1/2001	030R-M-01	0	0	NA	NA	NA	µg/g dry		20.9
NPS01	031P-M01	6/1/2001	031P-M-01	0	0	NA	NA	NA	µg/g dry		62.5
NPS01	031R-M01	6/1/2001	031R-M-01	0	0	NA	NA	NA	µg/g dry		71.8
NPS01	032P-M01	6/1/2001	032P-M-01	0	0	NA	NA	NA	µg/g dry		55.8
NPS01	032R-M01	6/1/2001	032R-M-01	0	0	NA	NA	NA	µg/g dry		39.1
NPS01	033P-M01	6/1/2001	033P-M-01	0	0	NA	NA	NA	µg/g dry		21.9
NPS01	034D-M01	6/1/2001	034D-M-01	0	0	NA	NA	NA	µg/g dry		18.1
NPS01	034P-M01	6/1/2001	034P-M-01	0	0	NA	NA	NA	µg/g dry		23.4
NPS01	034R-M01	6/1/2001	034R-M-01	0	0	NA	NA	NA	µg/g dry		19.6
NPS01	035P-M01	6/1/2001	035P-M-01	0	0	NA	NA	NA	µg/g dry		16.9
NPS01	036P-M01	6/1/2001	036P-M-01	0	0	NA	NA	NA	µg/g dry		110
NPS01	036R-M01	6/1/2001	036R-M-01	0	0	NA	NA	NA	µg/g dry		77.6
NPS01	037P-M01	6/1/2001	037P-M-01	0	0	NA	NA	NA	µg/g dry		25.8
NPS01	038P-M01	6/1/2001	038P-M-01	0	0	NA	NA	NA	µg/g dry		22.3
NPS01	038R-M01	6/1/2001	038R-M-01	0	0	NA	NA	NA	µg/g dry		27.5
NPS01	039P-M01	6/1/2001	039P-M-01	0	0	NA	NA	NA	µg/g dry		44
NPS01	040P-M01	6/1/2001	040P-M-01	0	0	NA	NA	NA	µg/g dry		18.5
NPS01	040R-M01	6/1/2001	040R-M-01	0	0	NA	NA	NA	µg/g dry		16.4
NPS01	041P-M01	6/1/2001	041P-M-01	0	0	NA	NA	NA	µg/g dry		56.8
NPS01	042D-M01	6/1/2001	042D-M-01	0	0	NA	NA	NA	µg/g dry		13.8
NPS01	042P-M01	6/1/2001	042P-M-01	0	0	NA	NA	NA	µg/g dry		11.1
NPS01	042R-M01	6/1/2001	042R-M-01	0	0	NA	NA	NA	µg/g dry		13.3
NPS01	044P-M01	6/1/2001	044P-M-01	0	0	NA	NA	NA	µg/g dry		40
NPS01	044R-M01	6/1/2001	044R-M-01	0	0	NA	NA	NA	µg/g dry		32.6
NPS01	045P-M01	6/1/2001	045P-M-01	0	0	NA	NA	NA	µg/g dry		15.9
NPS01	046P-M01	6/1/2001	046P-M-01	0	0	NA	NA	NA	µg/g dry		49.5
NPS01	048P-M01	6/1/2001	048P-M-01	0	0	NA	NA	NA	µg/g dry		27.8
NPS01	048R-M01	6/1/2001	048R-M-01	0	0	NA	NA	NA	µg/g dry		38.2

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
NPS01	102P-M01	6/1/2001	102P-M-01	0	0	NA	NA	NA	µg/g dry		29.1
NPS01	103P-M01	6/1/2001	103P-M-01	0	0	NA	NA	NA	µg/g dry		11.9
NPS01	116P-M01	6/1/2001	116P-M-01	0	0	NA	NA	NA	µg/g dry		14.1
NPS01	117P-M01	6/1/2001	117P-M-01	0	0	NA	NA	NA	µg/g dry		22
NPS01	117R-M01	6/1/2001	117R-M-01	0	0	NA	NA	NA	µg/g dry		27
NPS01	201P-M01	6/1/2001	201P-M-01	0	0	NA	NA	NA	µg/g dry		15.5
FUGDST01	HR03-01M	8/19/2001	HR-03-01-M	1	0	NA	NA	NA	µg/g dry	199	
FUGDST01	HR03-01M	8/19/2001	HR-03-01-M	2	0	NA	NA	NA	µg/g dry	263	
									field rep average		231
FUGDST01	HR03-02M	8/21/2001	HR-03-02-M	0	0	NA	NA	NA	µg/g dry		108
FUGDST01	HR03-03M	8/24/2001	HR-03-03-M	0	0	NA	NA	NA	µg/g dry		35.5
FUGDST01	HR04-01B	8/20/2001	HR-04-01-M	0	0	NA	NA	NA	µg/g dry		252
FUGDST01	HR04-02M	8/21/2001	HR-04-02-M	0	0	NA	NA	NA	µg/g dry		187
FUGDST01	HR04-03M	8/24/2001	HR-04-03-M	0	0	NA	NA	NA	µg/g dry		38.6
FUGDST01	HR05-01M	8/21/2001	HR-05-01-M	0	0	NA	NA	NA	µg/g dry		329
FUGDST01	HR05-02M	8/21/2001	HR-05-02-M	0	0	NA	NA	NA	µg/g dry		117
FUGDST01	HR05-03M	8/24/2001	HR-05-03-M	0	0	NA	NA	NA	µg/g dry		24.1
NPS00	HS1N0003	6/1/2000	HS-1N-0003-M	1	0	NA	NA	NA	µg/g dry	413	
NPS00	HS1N0003	6/1/2000	HS-1N-0003-M	2	0	NA	NA	NA	µg/g dry	430	
									field rep average		422
NPS00	HS1N0050	6/1/2000	HS-1N-0050-M	0	0	NA	NA	NA	µg/g dry		285
NPS00	HS1N0100	6/1/2000	HS-1N-0100-M	0	0	NA	NA	NA	µg/g dry		121
NPS00	HS1N0250	6/1/2000	HS-1N-0250-M	1	0	NA	NA	NA	µg/g dry	49.6	
NPS00	HS1N0250	6/1/2000	HS-1N-0250-M	2	0	NA	NA	NA	µg/g dry	60.6	
									field rep average		55.1
NPS00	HS1N1000	6/1/2000	HS-1N-1000-M	1	0	NA	NA	NA	µg/g dry	19.4	
NPS00	HS1N1000	6/1/2000	HS-1N-1000-M	2	0	NA	NA	NA	µg/g dry	24.1	
									field rep average		21.8
NPS00	HS1S0003	6/1/2000	HS-1S-0003-M	0	0	NA	NA	NA	µg/g dry		392
NPS00	HS1S0050	6/1/2000	HS-1S-0050-M	0	0	NA	NA	NA	µg/g dry		87.2
NPS00	HS1S0100	6/1/2000	HS-1S-0100-M	0	0	NA	NA	NA	µg/g dry		37.1
NPS00	HS1S0250	6/1/2000	HS-1S-0250-M	0	0	NA	NA	NA	µg/g dry		25
NPS00	HS1S1000	6/1/2000	HS-1S-1000-M	0	0	NA	NA	NA	µg/g dry		8.56
NPS00	HS1S1600	6/1/2000	HS-1S-1600-M	0	0	NA	NA	NA	µg/g dry		11.6
NPS00	HS2N0003	6/1/2000	HS-2N-0003-M	1	0	NA	NA	NA	µg/g dry	458	
NPS00	HS2N0003	6/1/2000	HS-2N-0003-M	2	0	NA	NA	NA	µg/g dry	448	
									field rep average		453

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
NPS00	HS2N0050	6/1/2000	HS-2N-0050-M	0	0	NA	NA	NA	μg/g dry		419
NPS00	HS2N0100	6/1/2000	HS-2N-0100-M	0	0	NA	NA	NA	μg/g dry		215
NPS00	HS2N0250	6/1/2000	HS-2N-0250-M	1	0	NA	NA	NA	μg/g dry	102	
NPS00	HS2N0250	6/1/2000	HS-2N-0250-M	2						98.7	
field rep average											100
NPS00	HS2N1000	6/1/2000	HS-2N-1000-M	1	0	NA	NA	NA	μg/g dry	46.4	
NPS00	HS2N1000	6/1/2000	HS-2N-1000-M	2	0	NA	NA	NA	μg/g dry	53	
field rep average											49.7
NPS00	HS2S0003	6/1/2000	HS-2S-0003-M	0	0	NA	NA	NA	μg/g dry		288
NPS00	HS2S0050	6/1/2000	HS-2S-0050-M	0	0	NA	NA	NA	μg/g dry		64.1
NPS00	HS2S0100	6/1/2000	HS-2S-0100-M	0	0	NA	NA	NA	μg/g dry		45.5
NPS00	HS2S0250	6/1/2000	HS-2S-0250-M	0	0	NA	NA	NA	μg/g dry		22.4
NPS00	HS2S1000	6/1/2000	HS-2S-1000-M	0	0	NA	NA	NA	μg/g dry		10.1
NPS00	HS3N0003	6/1/2000	HS-3N-0003-M	0	0	NA	NA	NA	μg/g dry		402
NPS00	HS3N0050	6/1/2000	HS-3N-0050-M	0	0	NA	NA	NA	μg/g dry		193
NPS00	HS3N0100	6/1/2000	HS-3N-0100-M	0	0	NA	NA	NA	μg/g dry		140
NPS00	HS3N0250	6/1/2000	HS-3N-0250-M	0	0	NA	NA	NA	μg/g dry		44
NPS00	HS3N1000	6/1/2000	HS-3N-1000-M	0	0	NA	NA	NA	μg/g dry		21.4
NPS00	HS3N1600	6/1/2000	HS-3N-1600-M	0	0	NA	NA	NA	μg/g dry		30.4
NPS00	HS3S0003	6/1/2000	HS-3S-0003-M	0	0	NA	NA	NA	μg/g dry		408
NPS00	HS3S0050	6/1/2000	HS-3S-0050-M	0	0	NA	NA	NA	μg/g dry		139
NPS00	HS3S0100	6/1/2000	HS-3S-0100-M	0	0	NA	NA	NA	μg/g dry		83.5
NPS00	HS3S0250	6/1/2000	HS-3S-0250-M	0	0	NA	NA	NA	μg/g dry		40.5
NPS00	HS3S1000	6/1/2000	HS-3S-1000-M	0	0	NA	NA	NA	μg/g dry		16.8
SUPP	MI-104	7/21/2003	MS0024	0	0	NA	NA	NA	μg/g dry		21.7
SUPP	MI-107	7/21/2003	MS0020	0	0	NA	NA	NA	μg/g dry		44.2
SUPP	MI-108	7/21/2003	MS0023	0	0	NA	NA	NA	μg/g dry		164
FUGDST01	MI-25-M	7/9/2002	MI-25-M	0	0	NA	NA	NA	μg/g dry		148
FUGDST01	MI-26-M	7/9/2002	MI-26-M	0	0	NA	NA	NA	μg/g dry		42.7
PHASE1RA	TT3-0010	7/17/2003	MS0002	0	0	NA	NA	NA	μg/g dry		241
PHASE1RA	TT3-0100	7/17/2003	MS0001	0	0	NA	NA	NA	μg/g dry		148
PHASE1RA	TT3-1000	7/21/2003	MS0015	0	0	NA	NA	NA	μg/g dry		29.5
FUGDST01	HR06-01M	8/20/2001	HR-06-01-M	0	0	NA	NA	NA	μg/g dry		336
FUGDST01	HR06-02M	8/21/2001	HR-06-02-M	0	0	NA	NA	NA	μg/g dry		463
FUGDST01	HR06-03M	8/24/2001	HR-06-03-M	0	0	NA	NA	NA	μg/g dry		648
FUGDST01	HR06-04M	8/24/2001	HR-06-04-M	0	0	NA	NA	NA	μg/g dry		182
FUGDST01	MI-02M	8/31/2001	MI-02-M	0	0	NA	NA	NA	μg/g dry		232

Table K-15a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
FUGDST01	MI-42-M	7/11/2002	MI-42-M	0	0	NA	NA	NA	µg/g dry		211
FUGDST01	MI-45-M	7/11/2002	MI-45-M	0	0	NA	NA	NA	µg/g dry		303
										whole site mean	211
										whole site 95% UCL	346

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-16. Food-web model exposure results for caribou exposed to 95% UCL CoPC concentrations at the whole site

Analyte	Concentration						Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	494	7,150	162	146	1,160	17,100	3.28	2,430						12,800	15,200	142	58.3
Antimony	0.280	6.93	0.391	0.118	1.99	2.61	0.00186	2.36	8.51	10.9	0.102	0.0417	0.00218	0.0439	0.66	--	0.067	--
Arsenic (arsenate)	0.618	12.9	0.875	0.128	1.87	5.53	0.00410	4.38	9.80	14.2	0.133	0.0545	0.0319	0.0863	0.40	1.6	0.22	0.054
Arsenic (arsenite)	0.618	12.9	0.875	0.128	1.87	5.53	0.00410	4.38	9.80	14.2	0.133	0.0545	0.0319	0.0863	0.13	1.3	0.66	0.066
Barium	118	1,690	90.4	85.0	1,200	1,540	0.786	575	5,060	5,640	52.7	21.7	2.16	23.8	5.1	20	4.7	1.2
Cadmium	0.125	24.3	0.350	4.06	4.79	9.85	0.000828	8.26	23.9	32.2	0.301	0.124	0.00733	0.131	1.0	10	0.13	0.013
Chromium	2.10	14.7	9.33	0.681	12.9	17.1	0.0139	4.99	58.8	63.8	0.596	0.245	0.112	0.357	3.3	69	0.11	0.0052
Cobalt	0.489	9.78	7.80	1.56	1.54	6.14	0.00324	3.32	13.2	16.5	0.154	0.0633	0.0553	0.119	0.50	2.0	0.24	0.059
Lead	1.05	1,410	11.9	10.3	241	346	0.00699	480	1,030	1,510	14.1	5.80	0.165	5.96	11	90	0.54	0.066
Mercury	0.0314	0.794	0.0414	0.0467	0.159	0.588	0.000208	0.270	0.895	1.17	0.0109	0.00448	0.00190	0.00638	0.032	0.16	0.20	0.040
Molybdenum	1.01	4.08	0.629	0.365	0.680	0.824	0.00670	1.39	3.29	4.68	0.0437	0.0180	0.0221	0.0401	0.26	2.6	0.15	0.015
Selenium	0.771	9.26	0.217	0.155	0.391	0.518	0.00512	3.15	1.81	4.97	0.0464	0.0191	0.00665	0.0257	0.20	0.33	0.13	0.078
Thallium	0.250	0.500	0.106	0.00842	0.314	0.337	0.00166	0.170	1.32	1.50	0.0140	0.00574	0.000819	0.00656	0.074	0.74	0.089	0.0089
Vanadium	0.531	14.3	1.02	0.321	3.84	9.16	0.00352	4.87	18.7	23.6	0.220	0.0905	0.0689	0.159	0.21	2.1	0.76	0.076
Zinc	15.8	4,040	122	266	699	1,450	0.105	1,380	3,360	4,740	44.3	18.2	1.56	19.8	160	320	0.12	0.062

Note: Data used to develop this scenario are presented in Table K-15a.

"Whole site" data set comprises all data from port, road, and mine investigation units.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Based on 95% UCL daily exposure for caribou in reference site (Table K-8) multiplied by 0.59.

Table K-17. Food-web model exposure results for brant exposed to mean CoPC concentrations at the Control Lagoon

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	182	11,100	21.4	354	0.0123	122	5.07	127	103	120	--	0.86	--
Antimony	0.12	0.0767	0.0207	0.103	0.00000813	0.000839	0.00331	0.00416	0.00338	--	--	--	--
Arsenic (arsenite)	76.3	8.2	0.11	0.233	0.00517	0.0898	0.0155	0.110	0.0898	20	50	0.0045	0.0018
Arsenic (arsenate)	76.3	8.2	0.11	0.233	0.00517	0.0898	0.0155	0.110	0.0898	10	40	0.0090	0.0022
Barium	156	226	31.6	91.1	0.0106	2.47	4.61	7.10	5.77	21	42	0.27	0.14
Cadmium	0.05	0.46	0.0913	0.327	0.00000339	0.00503	0.0138	0.0188	0.0153	1.5	20	0.010	0.00076
Chromium	7.16	19.6	0.4	1.87	0.000485	0.215	0.0632	0.278	0.226	0.86	4.3	0.26	0.053
Cobalt	4.39	6.83	0.627	1.03	0.000298	0.0748	0.0863	0.161	0.131	--	--	--	--
Lead	0.17	9.65	1.45	8.00	0.0000115	0.106	0.237	0.343	0.279	3.9	11	0.071	0.025
Mercury	0.05	0.05	0.041	0.0573	0.00000339	0.000547	0.00558	0.00613	0.00499	0.032	0.064	0.16	0.078
Molybdenum	0.08	0.773	0.35	0.23	0.00000542	0.00846	0.0459	0.0544	0.0442	3.5	35	0.013	0.0013
Selenium	0.2	1.1	0.117	0.1	0.0000136	0.0120	0.0155	0.0275	0.0224	0.40	0.80	0.056	0.028
Thallium	0.008	0.081	0.004	0.0263	0.000000542	0.000887	0.000683	0.00157	0.00128	0.24	24	0.0053	0.000053
Vanadium	0.4	25.2	0.2	1.00	0.0000271	0.276	0.0321	0.308	0.251	11	--	0.023	--
Zinc (TRV1)	19	79.3	43.8	55.6	0.00129	0.868	5.93	6.79	5.52	130	--	0.042	--
Zinc (TRV2)	19	79.3	43.8	55.6	0.00129	0.868	5.93	6.79	5.52	70	120	0.079	0.046

Note: The following data were used to develop this scenario: PSCHAR control lagoon water (Cd, Pb, Zn), and PHASE1RA reference lagoon water for all other analytes; PSCHAR sediment; PHASE2RA sediment; PHASE1RA moss (mean for terrestrial reference area); and PHASE2RA whole sedge/grass.

Whole sedge and grass plant data averaged for whole lagoon. Mean of sediment from PHASE2RA and PSCHAR used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-17a. Brant EPC calculation for mean CoPC concentrations at the Control Lagoon

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PSCHAR	CLS	9/17/2002	CLS	1	0	NA	NA	NA	mg/L unfiltered		0.000095
PSCHAR	CLT	9/17/2002	CLT	0	0	NA	NA	NA	mg/L unfiltered		0.00024
										control lagoon mean	0.000168
										µg/L	0.17
Tundra Soil											
PSCHAR	CLQ	8/18/2002	CLQ	0	0	NA	NA	NA	mg/kg dry		11
PSCHAR	CLR	8/18/2002	CLR	0	0	NA	NA	NA	mg/kg dry		7.7
PSCHAR	CLS	9/17/2002	CLS-SD	1	0	NA	NA	NA	mg/kg dry	8.6	
PSCHAR	CLS	9/17/2002	CLS-SD	2	0	NA	NA	NA	mg/kg dry	11.0	U
										field rep average	9.8
PSCHAR	CLT	9/17/2002	CLT-SD	0	0	NA	NA	NA	mg/kg dry		14
PSCHAR	CLU	8/18/2002	CLU	0	0	NA	NA	NA	mg/kg dry		8.0
PHASE2RA	CL-REF-2	7/3/2004	SD0005-D	1	0	NA	NA	NA	mg/kg dry	8.25	
PHASE2RA	CL-REF-2	7/3/2004	SD0005-D	2	0	NA	NA	NA	mg/kg dry	10.4	
										field rep average	9.3
PHASE2RA	CL-REF-3	7/4/2004	SD0007	0	0	NA	NA	NA	mg/kg dry		7.75
										control lagoon mean	9.65
Herbaceous Plant											
PHASE2RA	CL-REF-2	7/3/2004	SE0060	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		3.28
PHASE2RA	CL-REF3b	7/4/2004	SE0063	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.45
PHASE2RA	CL-REF3b	7/4/2004	TH0002	0	0	<i>Deschampsia</i>	<i>beringensis</i>	Whole Plant	mg/kg dry		0.62
										control lagoon mean	1.45
Moss											
PHASE1RA	TS-REF-7	7/20/2003	MS0011	0	0	NA	NA	NA	µg/g dry		9.64
PHASE1RA	TS-REF-8	7/20/2003	MS0010	0	0	NA	NA	NA	µg/g dry		7.71
PHASE1RA	TS-REF10	7/20/2003	MS0009	0	0	NA	NA	NA	µg/g dry		6.64
										terrestrial reference area mean	8.00

Note: Field replicates are averaged first then included in the calculation of the site mean.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
 U - undetected; value reported is half the detection limit

Table K-18. Food-web model exposure results for brant exposed to mean CoPC concentrations at the Reference Lagoon

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	182	11,100	10.6	354	0.0123	122	3.71	126	102	120	--	0.85	--
Antimony	0.12	0.0767	0.0225	0.103	0.00000813	0.000839	0.00354	0.00439	0.00357	--	--	--	--
Arsenic (arsenite)	76.3	4.43	0.03	0.233	0.00517	0.0484	0.00536	0.0590	0.0479	20	50	0.0024	0.00096
Arsenic (arsenate)	76.3	4.43	0.03	0.233	0.00517	0.0484	0.00536	0.0590	0.0479	10	40	0.0048	0.0012
Barium	156	226	17.6	91.1	0.0106	2.47	2.83	5.32	4.32	21	42	0.21	0.10
Cadmium	0.223	0.345	0.053	0.327	0.0000151	0.00378	0.00890	0.0127	0.0103	1.5	20	0.0069	0.00052
Chromium	7.16	19.6	0.35	1.87	0.000485	0.215	0.0569	0.272	0.221	0.86	4.3	0.26	0.051
Cobalt	4.39	6.83	0.205	1.03	0.000298	0.0748	0.0328	0.108	0.0877	--	--	--	--
Lead	0.363	10.1	0.755	8.00	0.0000246	0.110	0.149	0.259	0.211	3.9	11	0.054	0.019
Mercury	0.05	0.05	0.0535	0.0573	0.00000339	0.000547	0.00717	0.00772	0.00627	0.032	0.064	0.20	0.098
Molybdenum	0.08	0.773	0.088	0.23	0.00000542	0.00846	0.0127	0.0212	0.0172	3.5	35	0.0049	0.00049
Selenium	0.2	1.1	0.05	0.1	0.0000136	0.0120	0.00701	0.0191	0.0155	0.40	0.80	0.039	0.019
Thallium	0.008	0.081	0.0025	0.0263	0.000000542	0.000887	0.000493	0.00138	0.00112	0.24	24	0.0047	0.000047
Vanadium	0.4	25.2	0.2	1.00	0.0000271	0.276	0.0321	0.308	0.251	11	--	0.023	--
Zinc (TRV1)	22.9	92.2	35.4	55.6	0.00155	1.01	4.86	5.87	4.77	130	--	0.037	--
Zinc (TRV2)	22.9	92.2	35.4	55.6	0.00155	1.01	4.86	5.87	4.77	70	120	0.068	0.040

Note: The following data were used to develop this scenario: PHASE1RA water; PHASE1RA and PHASE2RA sediment; PHASE1RA moss (mean for terrestrial reference area); and PHASE2RA whole sedge/grass (CL-REF-1).

Sediment concentrations are means of PHASE2RA and PHASE1RA data from reference lagoons.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-19. Food-web model exposure results for brant exposed to mean CoPC concentrations at the Port Lagoon North

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Moss (mg/kg dw)	Water (mg/day)	Soil/							NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)									
Aluminum	44.1	5,590	9.7	4,460	0.00299	61.1	31.0	92.1	74.9	25.9	66.9	92.8	120	--	0.77	--
Antimony	0.545	0.225	0.0385	4.58	0.0000369	0.00246	0.0354	0.0379	0.0309	0.0107	0.00234	0.0130	--	--	--	--
Arsenic (arsenite)	26.7	7.05	0.08	4.7	0.00181	0.0772	0.0415	0.120	0.0980	0.0338	0.0314	0.0652	20	50	0.0033	0.0013
Arsenic (arsenate)	26.7	7.05	0.08	4.7	0.00181	0.0772	0.0415	0.120	0.0980	0.0338	0.0314	0.0652	10	40	0.0065	0.0016
Barium	412	252	17	885	0.0279	2.76	8.06	10.8	8.82	3.04	2.83	5.88	21	42	0.28	0.14
Cadmium	0.0933	2.86	0.056	37.2	0.00000633	0.0313	0.255	0.287	0.233	0.0805	0.00676	0.0873	1.5	20	0.058	0.0044
Chromium	1.84	10.3	0.25	16.3	0.000124	0.112	0.140	0.253	0.206	0.0710	0.145	0.216	0.86	4.3	0.25	0.050
Cobalt	1.32	5.49	0.09	9.35	0.0000891	0.0601	0.0738	0.134	0.109	0.0376	0.0575	0.0951	--	--	--	--
Lead	1.90	92	1.29	1720	0.000129	1.01	11.6	12.6	10.3	3.55	0.138	3.69	3.9	11	0.95	0.34
Mercury	0.05	0.148	0.0355	1.04	0.00000339	0.00162	0.0114	0.0131	0.0106	0.00367	0.00411	0.00778	0.032	0.064	0.24	0.12
Molybdenum	0.545	0.77	0.154	0.88	0.0000369	0.00843	0.0254	0.0339	0.0275	0.00950	0.0113	0.0208	3.5	35	0.0059	0.00059
Selenium	0.45	0.8	0.125	0.7	0.0000305	0.00876	0.0205	0.0293	0.0238	0.00823	0.0101	0.0184	0.40	0.80	0.046	0.023
Thallium	0.029	0.0705	0.004	0.601	0.00000197	0.000772	0.00452	0.00529	0.00430	0.00149	0.000735	0.00222	0.24	24	0.0092	0.000092
Vanadium	0.325	21.1	0.2	8.08	0.0000220	0.231	0.0793	0.310	0.252	0.0871	0.164	0.251	11	--	0.023	--
Zinc (TRV1)	21.0	556	45.1	8,120	0.00142	6.09	59.9	66.0	53.7	18.5	3.13	21.6	130	--	0.17	--
Zinc (TRV2)	21.0	556	45.1	8,120	0.00142	6.09	59.9	66.0	53.7	18.5	3.13	21.6	70	120	0.31	0.18

Note: The following data were used to develop this scenario: PSCHAR water (all Port Lagoon North stations); PHASE1RA water (PLNL and PLNN); PSCHAR sediment (all Port Lagoon North stations); PHASE1RA sediment (PLNL and PLNN); PHASE2RA sediment (PLNL); PHASE1RA moss (TT1-0100); and PHASE2RA whole sedge.

Whole sedge data averaged for all stations at the lagoon and all sedge/grass types. Sediment and water data averaged at a station, then data from all stations at the lagoon averaged to calculate lagoon-wide means.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for brant in reference lagoon (Table K-18) multiplied by 0.65.

Table K-20. Food-web model exposure results for brant exposed to mean CoPC concentrations at the North Lagoon

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)	Total Exposure (mg/kg-day)					NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	24.9	8,420	24.1	393	0.00169	92.2	5.67					97.8	79.5	27.5	66.9
Antimony	0.2	0.085	0.027	0.91	0.0000136	0.000930	0.00950	0.0104	0.00849	0.00293	0.00234	0.00527	--	--	--	--
Arsenic (arsenite)	4.8	5.95	0.245	0.5	0.000325	0.0651	0.0344	0.0999	0.0812	0.0280	0.0314	0.0594	20	50	0.0030	0.0012
Arsenic (arsenate)	4.8	5.95	0.245	0.5	0.000325	0.0651	0.0344	0.0999	0.0812	0.0280	0.0314	0.0594	10	40	0.0059	0.0015
Barium	114	270	19.2	115	0.00769	2.96	3.20	6.17	5.01	1.73	2.83	4.56	21	42	0.22	0.11
Cadmium	0.15	0.996	0.129	4.52	0.0000102	0.0109	0.0465	0.0574	0.0466	0.0161	0.00676	0.0229	1.5	20	0.015	0.0011
Chromium	1.86	11.0	0.4	3.14	0.000126	0.120	0.0717	0.192	0.156	0.0539	0.145	0.199	0.86	4.3	0.23	0.046
Cobalt	0.45	5.75	0.37	0.933	0.0000305	0.0629	0.0531	0.116	0.0944	0.0326	0.0575	0.0900	--	--	--	--
Lead	0.885	60.7	2.62	172	0.0000600	0.664	1.48	2.14	1.74	0.602	0.138	0.740	3.9	11	0.19	0.067
Mercury	0.05	0.04	0.033	0.14	0.00000339	0.000438	0.00512	0.00556	0.00452	0.00156	0.00411	0.00567	0.032	0.064	0.18	0.089
Molybdenum	0.34	0.855	0.171	0.23	0.0000230	0.00936	0.0232	0.0326	0.0265	0.00915	0.0113	0.0204	3.5	35	0.0058	0.00058
Selenium	0.3	0.75	0.2	0.1	0.0000203	0.00821	0.0260	0.0343	0.0279	0.00962	0.0102	0.0198	0.40	0.80	0.049	0.025
Thallium	0.007	0.051	0.007	0.108	0.000000474	0.000558	0.00161	0.00217	0.00176	0.000608	0.000735	0.00134	0.24	24	0.0056	0.000056
Vanadium	0.26	18.4	0.2	0.98	0.0000176	0.201	0.0319	0.233	0.189	0.0653	0.164	0.229	11	--	0.021	--
Zinc (TRV1)	45.6	189	48.3	869	0.00309	2.07	11.9	14.0	11.4	3.93	3.13	7.05	130	--	0.054	--
Zinc (TRV2)	45.6	189	48.3	869	0.00309	2.07	11.9	14.0	11.4	3.93	3.13	7.05	70	120	0.10	0.059

Note: The following data were used to develop this scenario: PHASE1RA water (NLF, NLK); PSCHAR water (all North Lagoon stations); PHASE2RA sediment (NLF, NLK); PHASE1RA sediment (NLF and NLK); PSCHAR sediment (all North Lagoon stations); PHASE1RA moss (TT1-1000); and PHASE2RA whole sedge (NLF, NLK).

Whole sedge data averaged for all stations at the lagoon and all sedge/grass types. Sediment and water data averaged for a station, then data from all stations at the lagoon averaged to calculate lagoon-wide means.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for brant in reference lagoon (Table K-18) multiplied by 0.65.

Table K-20a. Brant EPC calculation for mean CoPC concentrations at the North Lagoon

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	NLF	7/18/2003	SW0025	0	0	NA	NA	NA	µg/L unfiltered		0.43
PHASE1RA	NLK	7/18/2003	SW0023	1	0	NA	NA	NA	µg/L unfiltered	0.58	
PHASE1RA	NLK	7/18/2003	SW0023	2	0	NA	NA	NA	µg/L unfiltered	0.55	
										field rep average	0.57
PSCHAR	NLH	9/17/2002	NLH	0	0	NA	NA	NA	µg/L unfiltered		0.64
PSCHAR	NLJ	9/17/2002	NLJ	0	0	NA	NA	NA	µg/L unfiltered		1.9
										North lagoon mean	0.884
Tundra Soil											
PSCHAR	NLF	8/23/2002	NLF	1	0	NA	NA	NA	mg/kg dry	13	
PSCHAR	NLF	8/23/2002	NLF	2	0	NA	NA	NA	mg/kg dry	10.5	U
										field rep average	11.8
PHASE1RA	NLF	7/18/2003	SD0050	0	0	NA	NA	NA	mg/kg dry	5.86	
PHASE2RA	NLF	7/2/2004	SD0003	0	0	NA	NA	NA	mg/kg dry	14.9	
										survey station mean	10.84
PSCHAR	NLG	8/23/2002	NLG	0	0	NA	NA	NA	mg/kg dry		11
PSCHAR	NLH	9/17/2002	NLH-SD	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	NLJ	9/17/2002	NLJ-SD	0	0	NA	NA	NA	mg/kg dry		215
PSCHAR	NLK	8/23/2002	NLK	0	0	NA	NA	NA	mg/kg dry	64.2	
PHASE1RA	NLK	7/18/2003	SD0048	1	0	NA	NA	NA	mg/kg dry	35	
PHASE1RA	NLK	7/18/2003	SD0048	2	0	NA	NA	NA	mg/kg dry	21.2	
										field rep average	28.1
PHASE2RA	NLK	6/30/2004	SD0002	0	0	NA	NA	NA	mg/kg dry	17.9	
										survey station mean	36.7
										North lagoon mean	60.77
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	<i>caespitosa</i>	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
										field rep average	3.3
										North lagoon mean	2.61
Moss											
PHASE1RA	TT1-1000	7/19/2003	MS0008	0	0	NA	NA	NA	µg/g dry		172
										North lagoon mean	172

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

- CoPC - chemical of potential concern
- EPC - exposure point concentration
- U - undetected; value reported is half the detection limit

Table K-21. Food-web model exposure results for black-bellied plover exposed to mean CoPC concentrations at the Reference Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Invertebrates (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Cadmium	0.223	0.345	0.337	0.0000469	0.00281	0.00948	0.0123	0.0575	1.5	20	0.038	0.0029
Lead	0.363	10.1	24.6	0.0000763	0.0822	0.692	0.774	3.62	3.9	11	0.93	0.33
Zinc (TRV1)	22.9	92.2	77.9	0.000480	0.752	2.19	2.94	13.8	130	--	0.11	--
Zinc (TRV2)	22.9	92.2	77.9	0.000480	0.752	2.19	2.94	13.8	70	120	0.20	0.11

Note: The following data were used to develop this scenario: PHASE1RA water (mean of RL-1-03, RL-2-03, RL-3-03), PHASE1RA and PHASE2RA sediment, PHASE2RA lagoon invertebrates (CL-REF-1).

Sediment values are means of PHASE1RA and PHASE2RA data.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - Boxed concentrations hazard quotient exceeds 1.0.

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-21a. Black-bellied plover EPC calculation for mean CoPC concentrations at the Reference Lagoon

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/intermediate calculation	Lead Concentration
Water											
PHASE1RA	RL-1-03	7/18/2003	SW0026	0	0	NA	NA	NA	mg/L unfiltered		0.00011
PHASE1RA	RL-2-03	7/18/2003	SW0027	0	0	NA	NA	NA	mg/L unfiltered		0.00013
PHASE1RA	RL-3-03	7/18/2003	SW0028	0	0	NA	NA	NA	mg/L unfiltered		0.00085
										Reference lagoon mean	0.000363
										µg/L	0.36
Tundra Soil											
PHASE1RA	RL-1-03	7/18/2003	SD0051	0	0	NA	NA	NA	mg/kg dry		6.39
PHASE1RA	RL-2-03	7/18/2003	SD0052	0	0	NA	NA	NA	mg/kg dry		11.8
PHASE1RA	RL-3-03	7/18/2003	SD0053	0	0	NA	NA	NA	mg/kg dry		10.3
PHASE2RA	CL-REF-1	7/2/2004	SD0004	0	0	NA	NA	NA	mg/kg dry		11.8
										Reference lagoon mean	10.1
Lagoon Invertebrates											
PHASE2RA	CL-REF-1	7/3/2004	BT0010	0	0	NA	NA	NA	mg/kg dry		24.6 <i>J</i>
										Reference lagoon mean	24.6 <i>J</i>

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-22. Food-web model exposure results for black-bellied plover exposed to mean CoPC concentrations at the Control Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Invertebrates (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Cadmium	0.05	0.46	0.979	0.00000105	0.00375	0.0275	0.0313	0.146	1.5	20	0.098	0.0073
Lead	0.17	9.48	3.3	0.00000357	0.0773	0.0928	0.170	0.795	3.9	11	0.20	0.072
Zinc (TRV1)	19	79.3	171	0.000399	0.647	4.81	5.46	25.5	130	--	0.20	--
Zinc (TRV2)	19	79.3	171	0.000399	0.647	4.81	5.46	25.5	70	120	0.36	0.21

Note: The following data were used to develop this scenario: PSCHAR water; PSCHAR sediment; PHASE2RA sediment (CL-REF-2 and CL-REF-3), PHASE2RA lagoon invertebrates (CL-REF-2).

Sediment values are means of PHASE2RA and PSCHAR data.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-23. Food-web model exposure results for black-bellied plover exposed to mean CoPC concentrations at the Port Lagoon North

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Invertebrates (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Cadmium	0.0933	2.86	1.09	0.00000196	0.0233	0.0307	0.0540	0.252	0.0858	0.0380	0.124	1.5	20	0.082	0.0062
Lead	1.9	92	37.1	0.0000400	0.751	1.04	1.79	8.39	2.85	2.39	5.24	3.9	11	1.3	0.48
Zinc (TRV1)	21	556	272	0.000440	4.54	7.65	12.2	57.0	19.4	9.08	28.4	130	--	0.22	--
Zinc (TRV2)	21	556	272	0.000440	4.54	7.65	12.2	57.0	19.4	9.08	28.4	70	120	0.41	0.24

Note: The following data were used to develop this scenario: PSCHAR water (all Port Lagoon North stations); PHASE1RA water (PLNL and PLNN); PSCHAR sediment; PHASE1RA sediment (PLNL and PLNN); PHASE2RA sediment (PLNL); PHASE2RA lagoon invertebrates.

Sediment (and water) concentrations averaged at a station, then data from all stations at the lagoon averaged to calculate mean for the lagoon.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

^a Based on mean daily exposure for plover in reference lagoon (Table K-21) multiplied by 0.66.

Table K-23a. Black-bellied plover EPC calculation for mean CoPC concentrations at the Port Lagoon North

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/intermediate calculation	Lead Concentration
Water											
PHASE1RA	PLNL	7/22/2003	SW0041	0	0	NA	NA	NA	µg/L unfiltered		1.54
PSCHAR	PLNN	9/17/2002	PLNN	0	0	NA	NA	NA	µg/L unfiltered	2.2	
PHASE1RA	PLNN	7/22/2003	SW0040	0	0	NA	NA	NA	µg/L unfiltered	1.54	
survey station mean											1.87
PSCHAR	PLNP	9/17/2002	PLNP	0	0	NA	NA	NA	µg/L unfiltered		2.3
Port lagoon north mean											1.9
Tundra Soil											
PSCHAR	PLNL	8/23/2002	PLNL	0	0	NA	NA	NA	mg/kg dry	302	
PHASE1RA	PLNL	7/22/2003	SD0076	0	0	NA	NA	NA	mg/kg dry	29.4	
PHASE2RA	PLNL	6/28/2004	SD0001	0	0	NA	NA	NA	mg/kg dry	481	
survey station mean											271
PSCHAR	PLNM	8/23/2002	PLNM	0	0	NA	NA	NA	mg/kg dry		77.0
PSCHAR	PLNN	9/17/2002	PLNN-SD	0	0	NA	NA	NA	mg/kg dry	8.6	
PHASE1RA	PLNN	7/22/2003	SD0075	0	0	NA	NA	NA	mg/kg dry	58.8	
survey station mean											33.7
PSCHAR	PLNO	8/23/2002	PLNO	0	0	NA	NA	NA	mg/kg dry		47.1
PSCHAR	PLNP	9/17/2002	PLNP-SD	0	0	NA	NA	NA	mg/kg dry		31.4
Port lagoon north mean											92.0
Lagoon Invertebrates											
PHASE2RA	PLNL	ECO-P	6/29/2004	BT0005	0	NA	NA	NA	mg/kg dry		37.1 <i>J</i>
Port lagoon north mean											37.1 <i>J</i>

Note: Inorganic media are averaged by survey station, then included in the calculation of the site mean.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-24. Food-web model exposure results for black-bellied plover exposed to mean CoPC concentrations at the North Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Invertebrates (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Cadmium	0.15	0.996	0.858	0.00000315	0.00813						0.0241	0.0323	0.151	0.0512
Lead	0.885	60.7	8.74	0.0000186	0.495	0.246	0.741	3.46	1.18	2.39	3.57	3.9	11	0.91	0.32
Zinc (TRV1)	45.6	189	243	0.000957	1.54	6.84	8.38	39.1	13.3	9.08	22.4	130	--	0.17	--
Zinc (TRV2)	45.6	189	243	0.000957	1.54	6.84	8.38	39.1	13.3	9.08	22.4	70	120	0.32	0.19

Note: The following data were used to develop this scenario: PSCHAR water (all Port Lagoon North stations); PHASE1RA water (NLF and NLK); PSCHAR sediment; PHASE1RA and PHASE2RA sediment (NLF, NLK); PHASE2RA lagoon invertebrates.

Invertebrate data from NLF and NLK averaged. Sediment data averaged at a station, then data from all stations averaged to calculate a mean for the lagoon.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for plover in reference lagoon (Table K-21) multiplied by 0.66.

Table K-25. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at reference site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	91.2	11,300	11.1	5.6	0.000459	0.838	0.0326	0.872	34.3	120	--	0.29	--
Antimony	0.1	0.22	0.07	0.003	0.00000504	0.0000163	0.0000514	0.0000682	0.00269	--	--	--	--
Arsenic (arsenate)	0.9	3.5	0.07	0.05	0.00000453	0.000260	0.000276	0.000540	0.0213	10	40	0.0021	0.00053
Arsenic (arsenite)	0.9	3.5	0.07	0.05	0.00000453	0.000260	0.000276	0.000540	0.0213	20	50	0.0011	0.00043
Barium	48.4	383	51.2	5.63	0.000244	0.0284	0.0540	0.0826	3.25	21	42	0.15	0.077
Cadmium	0.06	0.293	0.199	0.96	0.00000302	0.0000217	0.00468	0.00471	0.185	1.5	20	0.12	0.0093
Chromium	0.72	19.7	0.4	0.3	0.00000363	0.00146	0.00164	0.00311	0.122	0.86	4.3	0.14	0.028
Cobalt	0.19	15.3	0.25	0.029	0.00000957	0.00113	0.000271	0.00141	0.0553	--	--	--	--
Lead	0.5	13.4	0.37	0.15	0.00000252	0.000997	0.000912	0.00191	0.0753	3.9	11	0.019	0.0068
Mercury	0.05	0.105	0.033	0.09	0.00000252	0.00000779	0.000447	0.000455	0.0179	0.032	0.064	0.56	0.28
Molybdenum	0.22	0.805	0.829	0.324	0.00000111	0.0000597	0.00198	0.00205	0.0805	3.5	35	0.023	0.0023
Selenium	0.2	0.55	0.05	0.65	0.00000101	0.0000408	0.00313	0.00317	0.125	0.40	0.80	0.31	0.16
Thallium	0.04	0.0575	0.004	0.002	0.00000201	0.00000427	0.0000117	0.0000161	0.000635	0.24	24	0.0026	0.000026
Vanadium	2.41	12.7	0.2	0.2	0.0000121	0.000941	0.00106	0.00201	0.0793	11	--	0.0072	--
Zinc (TRV1)	2.87	57.4	30	214	0.0000145	0.00426	1.04	1.04	41.0	130	--	0.32	--
Zinc (TRV2)	2.87	57.4	30	214	0.0000145	0.00426	1.04	1.04	41.0	70	120	0.59	0.34

Note: The following data were used to develop this scenario: PHASE1RA water data (TP-REF-3); PHASE2RA soil; PHASE1RA soil (TS-REF-5); PHASE2RA invertebrates; and PHASE2RA sedge seeds (TP-REF-3).

No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil at TS-REF-5 used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-25a. Lapland longspur EPC calculation for mean CoPC concentrations at reference site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
										Reference site mean	0.5
Tundra Soil											
PHASE1RA	TS-REF-5	7/20/2003	TS0020	0	0	NA	NA	NA	mg/kg dry	23.3	
PHASE2RA	TS-REF-5	6/23/2004	TS-0028	0	0	NA	NA	NA	mg/kg dry	3.58	
										survey station mean	13.4
										Reference site mean	13.4
Herbaceous Plant											
PHASE2RA	TP-REF-3	6/23/2004	SE0030	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.37
										Reference site mean	0.37
Soil Invertebrates											
PHASE2RA	TS-REF-5	7/5/2004	SI0018	0	0	NA	NA	NA	mg/kg dry		0.15 <i>J</i>
										Reference site mean	0.15 <i>J</i>

Note: Tundra soil are averaged by survey station, then included in the calculation of the site mean.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-26. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT5-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient			
	Water (µg/L)	Soil/		Herb. Plant (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/						Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)				Soil Inverts. (mg/kg dw)											Sediment (mg/day)
Aluminum	11.4	6,940	12.6	95.1	0.0000574	0.515	0.460	0.975	38.4	15.8	20.2	36.0	120	--	0.30	--		
Antimony	0.2	2.75	0.037	0.14	0.00000101	0.000204	0.000685	0.000890	0.0350	0.0144	0.00158	0.0160	--	--	--	--		
Arsenic (arsenate)	0.6	8	0.03	0.195	0.00000302	0.000594	0.000946	0.00154	0.0607	0.0250	0.0125	0.0375	10	40	0.0037	0.00094		
Arsenic (arsenite)	0.6	8	0.03	0.195	0.00000302	0.000594	0.000946	0.00154	0.0607	0.0250	0.0125	0.0375	20	50	0.0019	0.00075		
Barium	70.3	1,200	26.2	25.9	0.000354	0.0890	0.137	0.227	8.92	3.67	1.92	5.58	21	42	0.27	0.13		
Cadmium	0.27	20.6	0.062	11.7	0.00000136	0.00153	0.0556	0.0572	2.25	0.925	0.109	1.03	1.5	20	0.69	0.052		
Chromium	0.44	17.9	0.4	0.45	0.00000222	0.00133	0.00236	0.00369	0.145	0.0597	0.0721	0.132	0.86	4.3	0.15	0.031		
Cobalt	0.88	18.6	0.14	0.139	0.00000443	0.00138	0.000735	0.00212	0.0834	0.0343	0.0326	0.0669	--	--	--	--		
Lead	1.63	1210	1.6	16.7	0.00000821	0.0898	0.0803	0.170	6.70	2.75	0.0443	2.80	3.9	11	0.72	0.25		
Mercury	0.05	1.75	0.044	0.15	0.000000252	0.000130	0.000739	0.000869	0.0342	0.0141	0.0105	0.0246	0.032	0.064	0.77	0.38		
Molybdenum	0.09	0.89	0.159	0.276	0.000000453	0.0000660	0.00140	0.00146	0.0577	0.0237	0.0474	0.0711	3.5	35	0.020	0.0020		
Selenium	0.2	1.5	0.05	1	0.00000101	0.000111	0.00480	0.00491	0.193	0.0794	0.0735	0.153	0.40	0.80	0.38	0.19		
Thallium	0.01	0.455	0.001	0.038	0.0000000504	0.0000338	0.000182	0.000216	0.00849	0.00349	0.000374	0.00386	0.24	24	0.016	0.00016		
Vanadium	0.24	11.6	0.2	0.4	0.00000121	0.000861	0.00201	0.00288	0.113	0.0465	0.0467	0.0932	11	--	0.0085	--		
Zinc (TRV1)	99	4,330	65	419	0.000499	0.321	2.03	2.35	92.6	38.1	24.1	62.2	130	--	0.48	--		
Zinc (TRV2)	99	4,330	65	419	0.000499	0.321	2.03	2.35	92.6	38.1	24.1	62.2	70	120	0.89	0.52		

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA TT1-0010 soil Al and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-0100 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-26a. Lapland longspur EPC calculation for mean CoPC concentrations at TT5-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
										TT5-0010 site mean	1.63
Tundra Soil											
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1,210
										TT5-0010 site mean	1,210
Herbaceous Plant											
PHASE2RA	TP1-0100	7/1/2004	SE0054	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		1.6
										TT5-0010 site mean	1.6
Soil Invertebrates											
PHASE2RA	TT5_0010	6/16/2004	SI0005	0	0	NA	NA	NA	mg/kg dry		10.1
PHASE2RA	TT5_0010	6/16/2004	SI0006	0	0	NA	NA	NA	mg/kg dry		23.2
										TT5-0010 site mean	16.7

Note:

- CoPC - chemical of potential concern
- EPC - exposure point concentration
- J - estimated value

Table K-27. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT5-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	11.4	1,820	12.6	136	0.0000574	0.135	0.657	0.792	31.2	12.8	20.2	33.0	120	--	0.28	--	
Antimony	0.2	2.46	0.037	0.081	0.00000101	0.000183	0.000406	0.000590	0.0232	0.00954	0.00158	0.0111	--	--	--	--	
Arsenic (arsenate)	0.6	5.3	0.03	0.17	0.00000302	0.000393	0.000827	0.00122	0.0482	0.0198	0.0125	0.0323	10	40	0.0032	0.00081	
Arsenic (arsenite)	0.6	5.3	0.03	0.17	0.00000302	0.000393	0.000827	0.00122	0.0482	0.0198	0.0125	0.0323	20	50	0.0016	0.00065	
Barium	70.3	1,200	26.2	46.5	0.000354	0.0890	0.235	0.325	12.8	5.26	1.92	7.17	21	42	0.34	0.17	
Cadmium	0.27	24	0.062	3.14	0.00000136	0.00178	0.0150	0.0168	0.661	0.272	0.109	0.381	1.5	20	0.25	0.019	
Chromium	0.44	5.15	0.4	0.45	0.00000222	0.000382	0.00236	0.00274	0.108	0.0444	0.0721	0.116	0.86	4.3	0.14	0.027	
Cobalt	0.88	8.18	0.14	0.166	0.00000443	0.000607	0.000864	0.00148	0.0581	0.0239	0.0326	0.0565	--	--	--	--	
Lead	1.63	1060	1.6	16.2	0.00000821	0.0787	0.0781	0.157	6.17	2.54	0.0443	2.58	3.9	11	0.66	0.23	
Mercury	0.05	0.25	0.044	0.115	0.000000252	0.0000186	0.000572	0.000591	0.0233	0.00956	0.0105	0.0201	0.032	0.064	0.63	0.31	
Molybdenum	0.09	0.84	0.159	0.415	0.000000453	0.0000623	0.00206	0.00212	0.0836	0.0344	0.0474	0.0818	3.5	35	0.023	0.0023	
Selenium	0.2	1.9	0.05	0.4	0.00000101	0.000141	0.00193	0.00208	0.0818	0.0336	0.0735	0.107	0.40	0.80	0.27	0.13	
Thallium	0.01	0.368	0.001	0.0235	0.0000000504	0.0000273	0.000113	0.000140	0.00551	0.00226	0.000374	0.00264	0.24	24	0.011	0.00011	
Vanadium	0.24	8.25	0.2	0.4	0.00000121	0.000612	0.00201	0.00263	0.103	0.0425	0.0467	0.0892	11	--	0.0081	--	
Zinc (TRV1)	99	5,120	65	291	0.000499	0.380	1.42	1.80	71.0	29.2	24.1	53.3	130	--	0.41	--	
Zinc (TRV2)	99	5,120	65	291	0.000499	0.380	1.42	1.80	71.0	29.2	24.1	53.3	70	120	0.76	0.44	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA TT1-0100 soil Al and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates. Seed data from station TP-0100 used (no terrestrial seed samples collected). Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-28. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT5-1000 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	143	548	2	19.3	0.000720	0.0407	0.0931	0.135	5.30	2.18	20.2	22.4	120	--	0.19	--	
Antimony	0.09	0.83	0.046	0.019	0.00000453	0.0000616	0.000115	0.000177	0.00697	0.00286	0.00158	0.00445	--	--	--	--	
Arsenic (arsenate)	0.4	1.8	0.03	0.105	0.00000201	0.000134	0.000517	0.000652	0.0257	0.0106	0.0125	0.0231	10	40	0.0023	0.00058	
Arsenic (arsenite)	0.4	1.8	0.03	0.105	0.00000201	0.000134	0.000517	0.000652	0.0257	0.0106	0.0125	0.0231	20	50	0.0012	0.00046	
Barium	39.4	15.3	47.5	5.78	0.000198	0.00114	0.0527	0.0541	2.13	0.875	1.92	2.79	21	42	0.13	0.066	
Cadmium	0.06	4.08	0.079	2.53	0.00000302	0.000303	0.0121	0.0124	0.490	0.201	0.109	0.310	1.5	20	0.21	0.016	
Chromium	1.56	1.85	0.4	0.2	0.00000786	0.000137	0.00117	0.00131	0.0516	0.0212	0.0721	0.0933	0.86	4.3	0.11	0.022	
Cobalt	1.56	6.82	0.7	0.054	0.00000786	0.000506	0.000629	0.00114	0.0450	0.0185	0.0326	0.0511	--	--	--	--	
Lead	1.06	8.62	0.79	2.79	0.00000534	0.000640	0.0137	0.0144	0.566	0.233	0.0443	0.277	3.9	11	0.071	0.025	
Mercury	0.05	0.33	0.037	0.15	0.00000252	0.0000245	0.000735	0.000760	0.0299	0.0123	0.0105	0.0228	0.032	0.064	0.71	0.36	
Molybdenum	0.02	1.16	0.069	0.289	0.00000101	0.0000861	0.00141	0.00150	0.0590	0.0243	0.0474	0.0717	3.5	35	0.020	0.0020	
Selenium	0.2	0.9	0.05	0.75	0.00000101	0.0000668	0.00360	0.00367	0.145	0.0594	0.0735	0.133	0.40	0.80	0.33	0.17	
Thallium	0.003	0.072	0.001	0.0085	0.000000151	0.00000534	0.0000411	0.0000464	0.00183	0.000751	0.000374	0.00113	0.24	24	0.0047	0.000047	
Vanadium	0.28	4.64	0.2	0.4	0.00000141	0.000344	0.00201	0.00236	0.0929	0.0382	0.0467	0.0849	11	--	0.0077	--	
Zinc (TRV1)	30.6	38.9	58.5	302	0.000154	0.00289	1.47	1.47	58.0	23.8	24.1	48.0	130	--	0.37	--	
Zinc (TRV2)	30.6	38.9	58.5	302	0.000154	0.00289	1.47	1.47	58.0	23.8	24.1	48.0	70	120	0.69	0.40	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA TT1-1000 soil Al and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates. Seed data from station TP-1000 used (no terrestrial seed samples collected). Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-29. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT5-2000 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	143	548	2	14.1	0.000720	0.0407	0.0683	0.110	4.32	1.77	20.2	22.0	120	--	0.18	--	
Antimony	0.09	0.56	0.046	0.009	0.00000453	0.0000416	0.0000673	0.000109	0.00430	0.00177	0.00158	0.00335	--	--	--	--	
Arsenic (arsenate)	0.4	0.5	0.03	0.2	0.00000201	0.0000371	0.0000970	0.00101	0.0397	0.0163	0.0125	0.0288	10	40	0.0029	0.00072	
Arsenic (arsenite)	0.4	0.5	0.03	0.2	0.00000201	0.0000371	0.0000970	0.00101	0.0397	0.0163	0.0125	0.0288	20	50	0.0014	0.00058	
Barium	39.4	96	47.5	4.61	0.000198	0.00712	0.0472	0.0545	2.15	0.882	1.92	2.80	21	42	0.13	0.067	
Cadmium	0.06	1.31	0.079	3.53	0.00000302	0.0000972	0.0169	0.0170	0.668	0.275	0.109	0.384	1.5	20	0.26	0.019	
Chromium	1.56	1.85	0.4	0.3	0.00000786	0.000137	0.00164	0.00179	0.0704	0.0289	0.0721	0.101	0.86	4.3	0.12	0.023	
Cobalt	1.56	1.97	0.7	0.059	0.00000786	0.000146	0.000652	0.000806	0.0318	0.0130	0.0326	0.0456	--	--	--	--	
Lead	1.06	54.1	0.79	1.77	0.00000534	0.00401	0.00886	0.0129	0.507	0.208	0.0443	0.253	3.9	11	0.065	0.023	
Mercury	0.05	0.27	0.037	0.13	0.00000252	0.0000200	0.000640	0.000660	0.0260	0.0107	0.0105	0.0212	0.032	0.064	0.66	0.33	
Molybdenum	0.02	0.8	0.069	0.243	0.000000101	0.0000594	0.00120	0.00126	0.0494	0.0203	0.0474	0.0677	3.5	35	0.019	0.0019	
Selenium	0.2	0.5	0.05	0.9	0.00000101	0.0000371	0.00432	0.00436	0.172	0.0705	0.0735	0.144	0.40	0.80	0.36	0.18	
Thallium	0.003	0.036	0.001	0.003	0.0000000151	0.00000267	0.0000148	0.0000175	0.000690	0.000284	0.000374	0.000658	0.24	24	0.0027	0.000027	
Vanadium	0.28	0.98	0.2	0.4	0.00000141	0.0000727	0.00201	0.00209	0.0822	0.0338	0.0467	0.0805	11	--	0.0073	--	
Zinc (TRV1)	30.6	286	58.5	539	0.000154	0.0212	2.60	2.62	103	42.4	24.1	66.6	130	--	0.51	--	
Zinc (TRV2)	30.6	286	58.5	539	0.000154	0.0212	2.60	2.62	103	42.4	24.1	66.6	70	120	0.95	0.55	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA (TT1-1000) soil AI and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-1000 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-30. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT2-0010 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	11.4	6,000	12.6	202	0.0000574	0.445	0.970	1.42	55.7	22.9	20.2	43.1	120	--	0.36	--	
Antimony	0.2	2.2	0.037	0.063	0.0000101	0.000163	0.000320	0.000484	0.0191	0.00783	0.00158	0.00941	--	--	--	--	
Arsenic (arsenate)	0.6	6.45	0.03	0.17	0.00000302	0.000479	0.000827	0.00131	0.0515	0.0212	0.0125	0.0337	10	40	0.0034	0.00084	
Arsenic (arsenite)	0.6	6.45	0.03	0.17	0.00000302	0.000479	0.000827	0.00131	0.0515	0.0212	0.0125	0.0337	20	50	0.0017	0.00067	
Barium	70.3	2,070	26.2	45.3	0.000354	0.153	0.230	0.384	15.1	6.21	1.92	8.12	21	42	0.39	0.19	
Cadmium	0.27	16.4	0.062	7.13	0.00000136	0.00121	0.0340	0.0353	1.39	0.570	0.109	0.680	1.5	20	0.45	0.034	
Chromium	0.44	9.9	0.4	0.56	0.00000222	0.000735	0.00288	0.00362	0.143	0.0586	0.0721	0.131	0.86	4.3	0.15	0.030	
Cobalt	0.88	9.75	0.14	0.139	0.00000443	0.000723	0.000737	0.00147	0.0577	0.0237	0.0326	0.0563	--	--	--	--	
Lead	1.63	759	1.6	6.38	0.00000821	0.0563	0.0313	0.0876	3.45	1.42	0.0443	1.46	3.9	11	0.37	0.13	
Mercury	0.05	0.455	0.044	0.11	0.000000252	0.0000338	0.000548	0.000582	0.0229	0.00942	0.0105	0.0200	0.032	0.064	0.62	0.31	
Molybdenum	0.09	0.77	0.159	0.287	0.000000453	0.0000571	0.00145	0.00151	0.0595	0.0244	0.0474	0.0719	3.5	35	0.021	0.0021	
Selenium	0.2	1.25	0.05	0.2	0.00000101	0.0000928	0.000981	0.00107	0.0423	0.0174	0.0735	0.0909	0.40	0.80	0.23	0.11	
Thallium	0.01	0.366	0.001	0.015	0.0000000504	0.0000272	0.0000721	0.0000993	0.00391	0.00161	0.000374	0.00198	0.24	24	0.0083	0.000083	
Vanadium	0.24	12	0.2	0.41	0.00000121	0.000890	0.00206	0.00295	0.116	0.0478	0.0467	0.0945	11	--	0.0086	--	
Zinc (TRV1)	99	3,460	65	407	0.000499	0.257	1.98	2.23	87.9	36.1	24.1	60.3	130	--	0.46	--	
Zinc (TRV2)	99	3,460	65	407	0.000499	0.257	1.98	2.23	87.9	36.1	24.1	60.3	70	120	0.86	0.50	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA (TT2-0010) soil; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-0100 used (no terrestrial seed samples collected). Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-31. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT2-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	11.4	3,060	12.6	47.6	0.0000574	0.227	0.234	0.461	18.1	7.46	20.2	27.7	120	--	0.23	--	
Antimony	0.2	2.04	0.037	0.021	0.00000101	0.000151	0.000120	0.000272	0.0107	0.00440	0.00158	0.00598	--	--	--	--	
Arsenic (arsenate)	0.6	3.95	0.03	0.1	0.00000302	0.000293	0.000493	0.000789	0.0311	0.0128	0.0125	0.0253	10	40	0.0025	0.00063	
Arsenic (arsenite)	0.6	3.95	0.03	0.1	0.00000302	0.000293	0.000493	0.000789	0.0311	0.0128	0.0125	0.0253	20	50	0.0013	0.00051	
Barium	70.3	890	26.2	17.5	0.000354	0.0660	0.0974	0.164	6.45	2.65	1.92	4.56	21	42	0.22	0.11	
Cadmium	0.27	9.89	0.062	3.09	0.00000136	0.000734	0.0148	0.0155	0.611	0.251	0.109	0.360	1.5	20	0.24	0.018	
Chromium	0.44	6.02	0.4	0.4	0.00000222	0.000447	0.00212	0.00257	0.101	0.0416	0.0721	0.114	0.86	4.3	0.13	0.026	
Cobalt	0.88	6.88	0.14	0.066	0.00000443	0.000510	0.000389	0.000904	0.0356	0.0146	0.0326	0.0472	--	--	--	--	
Lead	1.63	414	1.6	2.88	0.00000821	0.0307	0.0146	0.0453	1.78	0.733	0.0443	0.777	3.9	11	0.20	0.071	
Mercury	0.05	0.37	0.044	0.1	0.00000252	0.0000275	0.000500	0.000528	0.0208	0.00854	0.0105	0.0191	0.032	0.064	0.60	0.30	
Molybdenum	0.09	0.79	0.159	0.279	0.000000453	0.0000586	0.00142	0.00147	0.0580	0.0239	0.0474	0.0713	3.5	35	0.020	0.0020	
Selenium	0.2	1.1	0.05	0.6	0.00000101	0.0000816	0.00289	0.00297	0.117	0.0481	0.0735	0.122	0.40	0.80	0.30	0.15	
Thallium	0.01	0.19	0.001	0.007	0.0000000504	0.0000141	0.0000339	0.0000481	0.00189	0.000778	0.000374	0.00115	0.24	24	0.0048	0.000048	
Vanadium	0.24	7.31	0.2	0.4	0.00000121	0.000542	0.00201	0.00256	0.101	0.0414	0.0467	0.0881	11	--	0.0080	--	
Zinc (TRV1)	99	1,970	65	236	0.000499	0.146	1.16	1.31	51.5	21.1	24.1	45.3	130	--	0.35	--	
Zinc (TRV2)	99	1,970	65	236	0.000499	0.146	1.16	1.31	51.5	21.1	24.1	45.3	70	120	0.65	0.38	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA (TT2-0100) soil; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-0100 used (no terrestrial seed samples collected). Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-32. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT2-1000 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. ^a (mg/kg-day)	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	143	405	12.6	17.4	0.000720	0.0301	0.0897	0.120	4.74	1.95	20.2	22.2	120	--	0.18	--	
Antimony	0.09	0.28	0.037	0.003	0.00000453	0.000208	0.000339	0.000551	0.00217	0.000892	0.00158	0.00247	--	--	--	--	
Arsenic (arsenate)	0.4	0.95	0.03	0.07	0.00000201	0.0000705	0.000350	0.000422	0.0166	0.00683	0.0125	0.0194	10	40	0.0019	0.00048	
Arsenic (arsenite)	0.4	0.95	0.03	0.07	0.00000201	0.0000705	0.000350	0.000422	0.0166	0.00683	0.0125	0.0194	20	50	0.00097	0.00039	
Barium	39.4	146	26.2	6.89	0.000198	0.0108	0.0468	0.0577	2.27	0.934	1.92	2.85	21	42	0.14	0.068	
Cadmium	0.06	0.915	0.062	1.14	0.00000302	0.0000679	0.00547	0.00554	0.218	0.0896	0.109	0.199	1.5	20	0.13	0.0099	
Chromium	1.56	1.03	0.4	0.2	0.00000786	0.0000764	0.00117	0.00125	0.0492	0.0202	0.0721	0.0923	0.86	4.3	0.11	0.021	
Cobalt	1.56	5.99	0.14	0.062	0.00000786	0.000444	0.000370	0.000822	0.0324	0.0133	0.0326	0.0459	--	--	--	--	
Lead	1.06	23.8	1.6	1.05	0.00000534	0.00176	0.00586	0.00762	0.300	0.123	0.0443	0.168	3.9	11	0.043	0.015	
Mercury	0.05	0.23	0.044	0.1	0.00000252	0.000171	0.000500	0.000518	0.0204	0.00838	0.0105	0.0189	0.032	0.064	0.59	0.30	
Molybdenum	0.02	0.855	0.159	0.325	0.00000101	0.0000634	0.00163	0.00170	0.0669	0.0275	0.0474	0.0749	3.5	35	0.021	0.0021	
Selenium	0.2	0.5	0.05	0.9	0.00000101	0.0000371	0.00432	0.00436	0.172	0.0705	0.0735	0.144	0.40	0.80	0.36	0.18	
Thallium	0.003	0.0375	0.001	0.002	0.000000151	0.00000278	0.0000101	0.0000129	0.000507	0.000208	0.000374	0.000582	0.24	24	0.0024	0.000024	
Vanadium	0.28	2.23	0.2	0.4	0.00000141	0.000165	0.00201	0.00218	0.0859	0.0353	0.0467	0.0820	11	--	0.0075	--	
Zinc (TRV1)	30.6	327	65	232	0.000154	0.0243	1.14	1.17	45.9	18.9	24.1	43.0	130	--	0.33	--	
Zinc (TRV2)	30.6	327	65	232	0.000154	0.0243	1.14	1.17	45.9	18.9	24.1	43.0	70	120	0.61	0.36	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA (TT2-1000) soil; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-1000 used (no terrestrial seed samples collected). Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-33. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT3-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Herb. Plant (mg/kg dw)														
Aluminum	75	2,660	10.6	151	0.000378	0.197	0.726	0.924	36.4	14.9	20.2	35.2	120	--	0.29	--
Antimony	0.03	0.925	0.5	0.037	0.00000151	0.0000686	0.000441	0.000510	0.0201	0.00826	0.00158	0.00984	--	--	--	--
Arsenic (arsenate)	0.5	5.3	0.04	0.25	0.00000252	0.000393	0.00121	0.00161	0.0634	0.0260	0.0125	0.0386	10	40	0.0039	0.00096
Arsenic (arsenite)	0.5	5.3	0.04	0.25	0.00000252	0.000393	0.00121	0.00161	0.0634	0.0260	0.0125	0.0386	20	50	0.0019	0.00077
Barium	46.8	2,280	44.3	71.8	0.000236	0.169	0.366	0.535	21.1	8.66	1.92	10.6	21	42	0.50	0.25
Cadmium	0.02	7.07	0.143	4.31	0.00000101	0.000525	0.0206	0.0212	0.833	0.342	0.109	0.451	1.5	20	0.30	0.023
Chromium	1.6	9.69	0.2	0.3	0.00000806	0.000719	0.00154	0.00226	0.0891	0.0366	0.0721	0.109	0.86	4.3	0.13	0.025
Cobalt	0.13	8.33	0.426	0.134	0.00000655	0.000618	0.000865	0.00148	0.0584	0.0240	0.0326	0.0566	--	--	--	--
Lead	0.44	385	0.49	4.3	0.00000222	0.0285	0.0208	0.0493	1.94	0.798	0.0443	0.842	3.9	11	0.22	0.077
Mercury	0.05	0.285	0.04	0.21	0.00000252	0.0000211	0.00102	0.00104	0.0411	0.0169	0.0105	0.0274	0.032	0.064	0.86	0.43
Molybdenum	0.05	1.08	1.49	0.274	0.00000252	0.0000798	0.00210	0.00218	0.0857	0.0352	0.0474	0.0827	3.5	35	0.024	0.0024
Selenium	0.2	1	0.1	0.2	0.00000101	0.0000742	0.00101	0.00108	0.0426	0.0175	0.0735	0.0910	0.40	0.80	0.23	0.11
Thallium	0.003	0.296	0.001	0.014	0.000000151	0.0000219	0.0000673	0.0000893	0.00351	0.00144	0.000374	0.00182	0.24	24	0.0076	0.000076
Vanadium	0.31	14.2	0.3	0.49	0.00000156	0.00105	0.00250	0.00355	0.140	0.0575	0.0467	0.104	11	--	0.0095	--
Zinc (TRV1)	6.08	1,350	57.2	205	0.0000306	0.100	1.01	1.11	43.6	17.9	24.1	42.1	130	--	0.32	--
Zinc (TRV2)	6.08	1,350	57.2	205	0.0000306	0.100	1.01	1.11	43.6	17.9	24.1	42.1	70	120	0.60	0.35

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA (TT3-0010) soil; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-3 used (no terrestrial seed samples collected). Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-33a. Lapland longspur EPC calculation for mean CoPC concentrations at TT3-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	μg/L unfiltered		0.44
										TT3-0010 site mean	0.44
Tundra Soil											
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry		362
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry		407
										TT3-0010 site mean	385
Herbaceous Plant											
PHASE2RA	TP3	6/20/2004	SE0019	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.49
										TT3-0010 site mean	0.49
Soil Invertebrates											
PHASE2RA	TT3-0010	7/1/2004	SI0014	0	0	NA	NA	NA	mg/kg dry		4.3 <i>J</i>
										TT3-0010 site mean	4.3 <i>J</i>

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-34. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT3-0100 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	75	1,510	10.6	79.8	0.000378	0.112	0.386	0.499	19.6	8.07	20.2	28.3	120	--	0.24	--	
Antimony	0.03	0.915	0.5	0.018	0.00000151	0.0000679	0.000351	0.000419	0.0165	0.00678	0.00158	0.00836	--	--	--	--	
Arsenic (arsenate)	0.5	2.2	0.04	0.14	0.00000252	0.000163	0.000689	0.000855	0.0337	0.0138	0.0125	0.0263	10	40	0.0026	0.00066	
Arsenic (arsenite)	0.5	2.2	0.04	0.14	0.00000252	0.000163	0.000689	0.000855	0.0337	0.0138	0.0125	0.0263	20	50	0.0013	0.00053	
Barium	46.8	694	44.3	29.9	0.000236	0.0515	0.166	0.218	8.58	3.52	1.92	5.44	21	42	0.26	0.13	
Cadmium	0.02	2.06	0.143	4.51	0.00000101	0.000152	0.0216	0.0217	0.856	0.352	0.109	0.461	1.5	20	0.31	0.023	
Chromium	1.6	3.93	0.2	0.3	0.00000806	0.000292	0.00154	0.00184	0.0723	0.0297	0.0721	0.102	0.86	4.3	0.12	0.024	
Cobalt	0.13	2.69	0.426	0.161	0.00000655	0.000200	0.000994	0.00119	0.0470	0.0193	0.0326	0.0519	--	--	--	--	
Lead	0.44	119	0.49	3.08	0.00000222	0.00881	0.0150	0.0238	0.936	0.385	0.0443	0.429	3.9	11	0.11	0.039	
Mercury	0.05	0.12	0.04	0.24	0.00000252	0.00000890	0.00117	0.00118	0.0463	0.0190	0.0105	0.0296	0.032	0.064	0.92	0.46	
Molybdenum	0.05	0.475	1.49	0.225	0.00000252	0.0000352	0.00186	0.00190	0.0747	0.0307	0.0474	0.0782	3.5	35	0.022	0.0022	
Selenium	0.2	0.45	0.1	0.2	0.00000101	0.0000334	0.00101	0.00104	0.0410	0.0168	0.0735	0.0903	0.40	0.80	0.23	0.11	
Thallium	0.003	0.0885	0.001	0.019	0.000000151	0.00000657	0.0000912	0.0000977	0.00385	0.00158	0.000374	0.00196	0.24	24	0.0081	0.000081	
Vanadium	0.31	4.98	0.3	0.2	0.00000156	0.000369	0.00111	0.00148	0.0584	0.0240	0.0467	0.0707	11	--	0.0064	--	
Zinc (TRV1)	6.08	465	57.2	235	0.0000306	0.0345	1.15	1.19	46.7	19.2	24.1	43.3	130	--	0.33	--	
Zinc (TRV2)	6.08	465	57.2	235	0.0000306	0.0345	1.15	1.19	46.7	19.2	24.1	43.3	70	120	0.62	0.36	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA (TT3-0100) soil; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-3 used (no terrestrial seed samples collected). Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-35. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT3-1000 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	177	358	10.6	12.5	0.000891	0.0266	0.0652	0.0927	3.65	1.50	20.2	21.7	120	--	0.18	--	
Antimony	0.02	0.365	0.5	0.003	0.00000101	0.0000271	0.000279	0.000306	0.0121	0.00496	0.00158	0.00654	--	--	--	--	
Arsenic (arsenate)	1.3	0.75	0.04	0.06	0.00000655	0.0000557	0.000307	0.000370	0.0146	0.00598	0.0125	0.0185	10	40	0.0018	0.00046	
Arsenic (arsenite)	1.3	0.75	0.04	0.06	0.00000655	0.0000557	0.000307	0.000370	0.0146	0.00598	0.0125	0.0185	20	50	0.00092	0.00037	
Barium	73.6	131	44.3	6.82	0.000371	0.00972	0.0560	0.0661	2.60	1.07	1.92	2.99	21	42	0.14	0.071	
Cadmium	0.06	0.549	0.143	1.05	0.00000302	0.0000407	0.00508	0.00513	0.202	0.0829	0.109	0.192	1.5	20	0.13	0.0096	
Chromium	5.24	1.54	0.2	0.3	0.0000264	0.000114	0.00154	0.00168	0.0660	0.0271	0.0721	0.0992	0.86	4.3	0.12	0.023	
Cobalt	0.48	0.615	0.426	0.031	0.00000242	0.0000456	0.000374	0.000422	0.0166	0.00682	0.0326	0.0394	--	--	--	--	
Lead	0.67	16.1	0.49	0.45	0.00000337	0.00119	0.00241	0.00360	0.142	0.0583	0.0443	0.103	3.9	11	0.026	0.0093	
Mercury	0.05	0.145	0.04	0.07	0.000000252	0.0000108	0.000355	0.000366	0.0144	0.00592	0.0105	0.0165	0.032	0.064	0.51	0.26	
Molybdenum	0.08	0.793	1.49	0.447	0.000000403	0.0000588	0.00292	0.00298	0.117	0.0482	0.0474	0.0957	3.5	35	0.027	0.0027	
Selenium	0.2	0.4	0.1	0.2	0.00000101	0.0000297	0.00101	0.00104	0.0409	0.0168	0.0735	0.0903	0.40	0.80	0.23	0.11	
Thallium	0.005	0.049	0.001	0.004	0.0000000252	0.00000364	0.0000196	0.0000233	0.000916	0.000377	0.000374	0.000751	0.24	24	0.0031	0.000031	
Vanadium	0.64	1.45	0.3	0.2	0.00000322	0.000108	0.00111	0.00122	0.0482	0.0198	0.0467	0.0665	11	--	0.0060	--	
Zinc (TRV1)	11	78.4	57.2	171	0.0000554	0.00581	0.846	0.852	33.5	13.8	24.1	37.9	130	--	0.29	--	
Zinc (TRV2)	11	78.4	57.2	171	0.0000554	0.00581	0.846	0.852	33.5	13.8	24.1	37.9	70	120	0.54	0.32	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-1000); PHASE1RA (TT3-1000) soil; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates. Seed data from station TP-3 used (no terrestrial seed samples collected). Mean of PHASE1RA and PHASE2RA soil used. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-36. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT6-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)											
Aluminum	208	2,660	17.1	58	0.00105	0.197	0.286	0.484	19.1	7.83	20.2	28.0	120	--	0.23	--	
Antimony	0.063	1.92	1.44	0.017	0.00000317	0.000142	0.000844	0.000987	0.0389	0.0160	0.00158	0.0176	--	--	--	--	
Arsenic (arsenate)	0.482	9.1	0.09	0.12	0.00000243	0.000675	0.000620	0.00130	0.0511	0.0210	0.0125	0.0335	10	40	0.0034	0.00084	
Arsenic (arsenite)	0.482	9.1	0.09	0.12	0.00000243	0.000675	0.000620	0.00130	0.0511	0.0210	0.0125	0.0335	20	50	0.0017	0.00067	
Barium	140	6,950	49.9	52.5	0.000705	0.516	0.277	0.793	31.2	12.8	1.92	14.8	21	42	0.70	0.35	
Cadmium	0.0365	5.47	0.043	5.98	0.000000184	0.000406	0.0285	0.0290	1.14	0.468	0.109	0.578	1.5	20	0.39	0.029	
Chromium	0.396	9.69	0.65	0.3	0.00000199	0.000719	0.00178	0.00250	0.0983	0.0404	0.0721	0.112	0.86	4.3	0.13	0.026	
Cobalt	0.015	9.11	0.497	0.07	0.000000755	0.000676	0.000597	0.00127	0.0501	0.0206	0.0326	0.0532	--	--	--	--	
Lead	0.65	349	0.89	2.07	0.00000327	0.0259	0.0103	0.0362	1.43	0.586	0.0443	0.631	3.9	11	0.16	0.057	
Mercury	0.0179	0.25	0.05	0.07	0.000000901	0.0000186	0.000360	0.000379	0.0149	0.00613	0.0105	0.0167	0.032	0.064	0.52	0.26	
Molybdenum	0.22	1.95	0.182	0.229	0.00000111	0.000145	0.00119	0.00133	0.0525	0.0216	0.0474	0.0690	3.5	35	0.020	0.0020	
Selenium	0.355	1.5	0.3	0.2	0.00000179	0.000111	0.00111	0.00123	0.0483	0.0198	0.0735	0.0933	0.40	0.80	0.23	0.12	
Thallium	0.09	1.29	0.003	0.015	0.000000453	0.0000957	0.0000731	0.000169	0.00667	0.00274	0.000374	0.00311	0.24	24	0.013	0.00013	
Vanadium	0.335	19.7	0.7	0.2	0.00000169	0.00146	0.00133	0.00279	0.110	0.0451	0.0467	0.0918	11	--	0.0083	--	
Zinc (TRV1)	1.79	1,020	59.6	249	0.00000901	0.0757	1.22	1.30	51.0	21.0	24.1	45.1	130	--	0.35	--	
Zinc (TRV2)	1.79	1,020	59.6	249	0.00000901	0.0757	1.22	1.30	51.0	21.0	24.1	45.1	70	120	0.64	0.38	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA (TT3-0010) soil AI and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-4 used (no terrestrial seed samples collected). No pond water data collected near mine, so Anxiety Ridge Creek downstream data used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-36a. Lapland longspur EPC calculation for mean CoPC concentrations at TT6-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
										TT6-0010 site mean	0.65 <i>J</i>
Tundra Soil											
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
										TT6-0010 site mean	349
Herbaceous Plant											
PHASE2RA	TP4	6/17/2004	SE0012	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.89
										TT6-0010 site mean	0.89
Soil Invertebrates											
PHASE2RA	TT6-0010	7/4/2004	SI0017	0	0	NA	NA	NA	mg/kg dry		2.07 <i>J</i>
										TT6-0010 site mean	2.07 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-37. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT6-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)											
Aluminum	208	1,510	17.1	78.3	0.00105	0.112	0.383	0.496	19.5	8.02	20.2	28.2	120	--	0.24	--	
Antimony	0.063	2.03	1.44	0.027	0.00000317	0.000151	0.000892	0.00104	0.0411	0.0169	0.00158	0.0185	--	--	--	--	
Arsenic (arsenate)	0.482	4.9	0.09	0.13	0.00000243	0.000364	0.000668	0.00103	0.0407	0.0167	0.0125	0.0292	10	40	0.0029	0.00073	
Arsenic (arsenite)	0.482	4.9	0.09	0.13	0.00000243	0.000364	0.000668	0.00103	0.0407	0.0167	0.0125	0.0292	20	50	0.0015	0.00058	
Barium	140	6,360	49.9	108	0.000705	0.472	0.542	1.01	39.9	16.4	1.92	18.3	21	42	0.87	0.44	
Cadmium	0.0365	5.06	0.043	13	0.000000184	0.000375	0.0620	0.0624	2.46	1.01	0.109	1.12	1.5	20	0.75	0.056	
Chromium	0.396	3.93	0.65	0.3	0.00000199	0.000292	0.00178	0.00207	0.0815	0.0335	0.0721	0.106	0.86	4.3	0.12	0.025	
Cobalt	0.015	3.3	0.497	0.087	0.000000755	0.000245	0.000678	0.000923	0.0364	0.0149	0.0326	0.0475	--	--	--	--	
Lead	0.65	281	0.89	10.1	0.00000327	0.0209	0.0486	0.0695	2.74	1.12	0.0443	1.17	3.9	11	0.30	0.11	
Mercury	0.0179	0.27	0.05	0.12	0.000000901	0.0000200	0.000599	0.000619	0.0244	0.0100	0.0105	0.0206	0.032	0.064	0.64	0.32	
Molybdenum	0.22	2.47	0.182	0.335	0.00000111	0.000183	0.00169	0.00188	0.0740	0.0304	0.0474	0.0778	3.5	35	0.022	0.0022	
Selenium	0.355	0.9	0.3	0.2	0.00000179	0.0000668	0.00111	0.00118	0.0465	0.0191	0.0735	0.0926	0.40	0.80	0.23	0.12	
Thallium	0.09	0.755	0.003	0.02	0.000000453	0.0000560	0.0000970	0.000153	0.00604	0.00248	0.000374	0.00286	0.24	24	0.012	0.00012	
Vanadium	0.335	7.51	0.7	0.2	0.00000169	0.000557	0.00133	0.00188	0.0742	0.0305	0.0467	0.0772	11	--	0.0070	--	
Zinc (TRV1)	1.79	764	59.6	310	0.00000901	0.0567	1.51	1.57	61.7	25.4	24.1	49.5	130	--	0.38	--	
Zinc (TRV2)	1.79	764	59.6	310	0.00000901	0.0567	1.51	1.57	61.7	25.4	24.1	49.5	70	120	0.71	0.41	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA (TT3-0100) soil AI and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-4 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-38. Food-web model exposure results for Lapland longspur exposed to CoPC concentrations at TT6-1000 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)											
Aluminum	208	358	17.1	15.6	0.00105	0.0266	0.0835	0.111	4.37	1.80	20.2	22.0	120	--	0.18	--	
Antimony	0.063	1.22	1.44	0.016	0.00000317	0.0000905	0.000840	0.000930	0.0366	0.0151	0.00158	0.0166	--	--	--	--	
Arsenic (arsenate)	0.482	2.9	0.09	0.06	0.00000243	0.000215	0.000334	0.000552	0.0217	0.00892	0.0125	0.0214	10	40	0.0021	0.00054	
Arsenic (arsenite)	0.482	2.9	0.09	0.06	0.00000243	0.000215	0.000334	0.000552	0.0217	0.00892	0.0125	0.0214	20	50	0.0011	0.00043	
Barium	140	1,290	49.9	12.7	0.000705	0.0957	0.0870	0.183	7.22	2.97	1.92	4.88	21	42	0.23	0.12	
Cadmium	0.0365	6.11	0.043	5.8	0.00000184	0.000453	0.0277	0.0281	1.11	0.455	0.109	0.564	1.5	20	0.38	0.028	
Chromium	0.396	1.54	0.65	0.3	0.0000199	0.000114	0.00178	0.00189	0.0745	0.0306	0.0721	0.103	0.86	4.3	0.12	0.024	
Cobalt	0.015	1.87	0.497	0.024	0.000000755	0.000139	0.000378	0.000517	0.0203	0.00836	0.0326	0.0409	--	--	--	--	
Lead	0.65	145	0.89	1.31	0.0000327	0.0108	0.00672	0.0175	0.688	0.283	0.0443	0.327	3.9	11	0.084	0.030	
Mercury	0.0179	0.22	0.05	0.05	0.000000901	0.0000163	0.000265	0.000281	0.0111	0.00455	0.0105	0.0151	0.032	0.064	0.47	0.24	
Molybdenum	0.22	2.09	0.182	0.827	0.00000111	0.000155	0.00404	0.00420	0.165	0.0679	0.0474	0.115	3.5	35	0.033	0.0033	
Selenium	0.355	1.6	0.3	0.2	0.00000179	0.000119	0.00111	0.00123	0.0486	0.0200	0.0735	0.0934	0.40	0.80	0.23	0.12	
Thallium	0.09	0.38	0.003	0.014	0.000000453	0.0000282	0.0000684	0.0000970	0.00382	0.00157	0.000374	0.00194	0.24	24	0.0081	0.000081	
Vanadium	0.335	16	0.7	0.2	0.00000169	0.00119	0.00133	0.00251	0.0990	0.0407	0.0467	0.0874	11	--	0.0079	--	
Zinc (TRV1)	1.79	592	59.6	224	0.00000901	0.0439	1.10	1.14	45.0	18.5	24.1	42.6	130	--	0.33	--	
Zinc (TRV2)	1.79	592	59.6	224	0.00000901	0.0439	1.10	1.14	45.0	18.5	24.1	42.6	70	120	0.61	0.36	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA (TT3-1000) soil AI and Cr; PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA invertebrates.

Seed data from station TP-4 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for longspur in terrestrial reference station 5 (Table K-25) multiplied by 0.59.

Table K-39. Food-web model exposure results for common snipe exposed to CoPC concentrations at TS-REF-5 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water	Soil/Sediment	Herb. Plant	Invert.	Water	Soil/Sediment	Food			NOAEL	LOAEL	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	(µg/L)	(mg/kg dw)	(mg/kg dw)	(mg/kg dw)	(mg/day)	(mg/day)	(mg/day)			(mg/kg-day)	(mg/kg-day)		
Aluminum	91.2	11,300	11.1	5.6	0.00127	18.1	0.0946	18.2	157	120	--	1.3	--
Antimony	0.1	0.22	0.07	0.003	0.00000139	0.000352	0.000149	0.000502	0.00433	--	--	--	--
Arsenic (arsenate)	0.9	3.5	0.07	0.05	0.0000125	0.00560	0.000800	0.00641	0.0553	10	40	0.0055	0.0014
Arsenic (arsenite)	0.9	3.5	0.07	0.05	0.0000125	0.00560	0.000800	0.00641	0.0553	20	50	0.0028	0.0011
Barium	48.4	383	51.2	5.63	0.000674	0.612	0.157	0.769	6.63	21	42	0.32	0.16
Cadmium	0.06	0.293	0.199	0.96	0.00000836	0.000468	0.0136	0.0141	0.121	1.5	20	0.081	0.0061
Chromium	0.72	19.7	0.4	0.3	0.0000100	0.0315	0.00477	0.0363	0.313	0.86	4.3	0.36	0.073
Cobalt	0.19	15.3	0.25	0.029	0.00000265	0.0244	0.000786	0.0252	0.217	--	--	--	--
Lead	0.5	13.4	0.37	0.15	0.00000697	0.0215	0.00265	0.0241	0.208	3.9	11	0.053	0.019
Mercury	0.05	0.105	0.033	0.09	0.000000697	0.000168	0.00130	0.00147	0.0126	0.032	0.064	0.39	0.20
Molybdenum	0.22	0.805	0.829	0.324	0.00000307	0.00129	0.00576	0.00705	0.0608	3.5	35	0.017	0.0017
Selenium	0.2	0.55	0.05	0.65	0.00000279	0.000880	0.00907	0.0100	0.0858	0.40	0.80	0.21	0.11
Thallium	0.04	0.0575	0.004	0.002	0.000000557	0.0000920	0.0000338	0.000126	0.00109	0.24	24	0.0045	0.000045
Vanadium	2.41	12.7	0.2	0.2	0.0000336	0.0203	0.00308	0.0234	0.202	11	--	0.018	--
Zinc (TRV1)	2.87	57.4	30	214	0.0000400	0.0917	3.01	3.10	26.7	130	--	0.21	--
Zinc (TRV2)	2.87	57.4	30	214	0.0000400	0.0917	3.01	3.10	26.7	70	120	0.38	0.22

Note: The following data were used to develop this scenario: PHASE1RA water data (TP-REF-3); PHASE1RA soil (TS-REF-5); PHASE2RA soil; PHASE2RA invertebrates; and PHASE2RA sedge seeds (TP-REF-3).

No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-39a. Common snipe EPC calculation for mean CoPC concentrations at TS-REF-5 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
										TS-REF-5 site mean	0.5
Tundra Soil											
PHASE1RA	TS-REF-5	7/20/2003	TS0020	0	0	NA	NA	NA	mg/kg dry		23.3
PHASE2RA	TS-REF-5	6/23/2004	TS-0028	0	0	NA	NA	NA	mg/kg dry		3.58
										TS-REF-5 site mean	13.4
Herbaceous Plant											
PHASE2RA	TP-REF-3	6/23/2004	SE0030	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.37
										TS-REF-5 site mean	0.37
Soil Invertebrates											
PHASE2RA	TS-REF-5	7/5/2004	SI0018	0	0	NA	NA	NA	mg/kg dry		0.15 <i>J</i>
										TS-REF-5 site mean	0.15 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-40. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT5-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. ^a (mg/kg-day)	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	11.4	6,940	12.6	95.1	0.000159	11.1	1.34	12.4	107	32.0	110	142	120	--	1.2	--	
Antimony	0.2	2.75	0.037	0.140	0.0000279	0.00440	0.00199	0.00639	0.0551	0.0164	0.00304	0.0195	--	--	--	--	
Arsenic (arsenate)	0.6	8	0.03	0.195	0.00000836	0.0128	0.00275	0.0155	0.134	0.0400	0.0388	0.0788	10	40	0.0079	0.0020	
Arsenic (arsenite)	0.6	8	0.03	0.195	0.00000836	0.0128	0.00275	0.0155	0.134	0.0400	0.0388	0.0788	20	50	0.0039	0.0016	
Barium	70.3	1,200	26.2	25.9	0.000979	1.92	0.398	2.32	20.0	5.97	4.65	10.6	21	42	0.51	0.25	
Cadmium	0.27	20.6	0.062	11.7	0.00000376	0.0329	0.161	0.194	1.68	0.500	0.0850	0.585	1.5	20	0.39	0.029	
Chromium	0.44	17.9	0.4	0.45	0.00000613	0.0286	0.00684	0.0355	0.306	0.0913	0.219	0.311	0.86	4.3	0.36	0.072	
Cobalt	0.88	18.6	0.14	0.139	0.0000123	0.0298	0.00213	0.0319	0.275	0.0821	0.152	0.235	--	--	--	--	
Lead	1.63	1,210	1.6	16.7	0.0000227	1.94	0.233	2.17	18.7	5.58	0.146	5.73	3.9	11	1.5	0.52	
Mercury	0.05	1.75	0.044	0.15	0.000000697	0.00280	0.00214	0.00494	0.0426	0.0127	0.00886	0.0216	0.032	0.064	0.67	0.34	
Molybdenum	0.09	0.89	0.159	0.276	0.00000125	0.00142	0.00406	0.00548	0.0473	0.0141	0.0426	0.0567	3.5	35	0.016	0.0016	
Selenium	0.2	1.5	0.05	1	0.00000279	0.00240	0.0139	0.0163	0.141	0.0420	0.0602	0.102	0.40	0.80	0.26	0.13	
Thallium	0.01	0.455	0.001	0.038	0.000000139	0.000728	0.000528	0.00126	0.0108	0.00323	0.000764	0.00400	0.24	24	0.017	0.00017	
Vanadium	0.24	11.6	0.2	0.4	0.00000334	0.0186	0.00584	0.0244	0.210	0.0628	0.141	0.204	11	--	0.019	--	
Zinc (TRV1)	99	4,330	65	419	0.00138	6.93	5.89	12.8	111	33.0	18.7	51.7	130	--	0.40	--	
Zinc (TRV2)	99	4,330	65	419	0.00138	6.93	5.89	12.8	111	33.0	18.7	51.7	70	120	0.74	0.43	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP-0100 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-41. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT5-0100 site

Analyte	Concentration				Daily Exposure							TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	1,820	12.6	136.4	0.000159	2.91	1.91	4.82	41.5	12.4	110	122	120	--	1.0	--
Antimony	0.2	2.46	0.037	0.081	0.0000279	0.00393	0.00118	0.00512	0.0441	0.0132	0.00304	0.0162	--	--	--	--
Arsenic (arsenate)	0.6	5.3	0.03	0.17	0.0000836	0.00848	0.00240	0.0109	0.0938	0.0280	0.0388	0.0668	10	40	0.0067	0.0017
Arsenic (arsenite)	0.6	5.3	0.03	0.17	0.0000836	0.00848	0.00240	0.0109	0.0938	0.0280	0.0388	0.0668	20	50	0.0033	0.0013
Barium	70.3	1,200	26.2	46.5	0.000979	1.92	0.683	2.60	22.4	6.70	4.65	11.4	21	42	0.54	0.27
Cadmium	0.27	24.0	0.062	3.14	0.0000376	0.0384	0.0436	0.0819	0.706	0.211	0.0850	0.296	1.5	20	0.20	0.015
Chromium	0.44	5.15	0.4	0.45	0.0000613	0.00824	0.00684	0.0151	0.130	0.0388	0.219	0.258	0.86	4.3	0.30	0.060
Cobalt	0.88	8.18	0.14	0.166	0.0000123	0.0131	0.00251	0.0156	0.134	0.0402	0.152	0.193	--	--	--	--
Lead	1.63	1,060	1.6	16.2	0.0000227	1.70	0.226	1.92	16.6	4.95	0.146	5.09	3.9	11	1.3	0.46
Mercury	0.05	0.25	0.044	0.115	0.00000697	0.000400	0.00166	0.00206	0.0178	0.00530	0.00886	0.0142	0.032	0.064	0.44	0.22
Molybdenum	0.09	0.84	0.159	0.415	0.0000125	0.00134	0.00598	0.00733	0.0632	0.0189	0.0426	0.0615	3.5	35	0.018	0.0018
Selenium	0.2	1.9	0.05	0.4	0.0000279	0.00304	0.00561	0.00866	0.0746	0.0223	0.0602	0.0825	0.40	0.80	0.21	0.10
Thallium	0.01	0.368	0.001	0.0235	0.00000139	0.000589	0.000327	0.000916	0.00789	0.00236	0.000764	0.00312	0.24	24	0.013	0.00013
Vanadium	0.24	8.25	0.2	0.4	0.0000334	0.0132	0.00584	0.0190	0.164	0.0490	0.141	0.191	11	--	0.017	--
Zinc (TRV1)	99	5,120	65	291	0.00138	8.19	4.13	12.3	106	31.7	18.7	50.5	130	--	0.39	--
Zinc (TRV2)	99	5,120	65	291	0.00138	8.19	4.13	12.3	106	31.7	18.7	50.5	70	120	0.72	0.42

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP-0100 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-42. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT5-1000 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	143	548	2	19.3	0.00199	0.877	0.270	1.15	9.90	2.96	110	113	120	--	0.94	--	
Antimony	0.09	0.83	0.046	0.019	0.00000125	0.00133	0.000334	0.00166	0.0143	0.00428	0.00304	0.00732	--	--	--	--	
Arsenic (arsenate)	0.4	1.8	0.03	0.105	0.00000557	0.00288	0.00150	0.00438	0.0378	0.0113	0.0388	0.0500	10	40	0.0050	0.0013	
Arsenic (arsenite)	0.4	1.8	0.03	0.105	0.00000557	0.00288	0.00150	0.00438	0.0378	0.0113	0.0388	0.0500	20	50	0.0025	0.0010	
Barium	39.4	15.3	47.5	5.78	0.000549	0.0245	0.153	0.178	1.54	0.458	4.65	5.11	21	42	0.24	0.12	
Cadmium	0.06	4.08	0.079	2.53	0.000000836	0.00653	0.0352	0.0417	0.360	0.107	0.0850	0.192	1.5	20	0.13	0.0096	
Chromium	1.56	1.85	0.4	0.2	0.0000217	0.00296	0.00338	0.00636	0.0549	0.0164	0.219	0.236	0.86	4.3	0.27	0.055	
Cobalt	1.56	6.82	0.7	0.054	0.0000217	0.0109	0.00182	0.0128	0.110	0.0328	0.152	0.185	--	--	--	--	
Lead	1.06	8.62	0.79	2.79	0.0000148	0.0138	0.0398	0.0536	0.462	0.138	0.146	0.284	3.9	11	0.073	0.026	
Mercury	0.05	0.33	0.037	0.15	0.000000697	0.000528	0.00213	0.00266	0.0229	0.00685	0.00886	0.0157	0.032	0.064	0.49	0.25	
Molybdenum	0.02	1.16	0.069	0.289	0.000000279	0.00186	0.00410	0.00596	0.0513	0.0153	0.0426	0.0580	3.5	35	0.017	0.0017	
Selenium	0.2	0.9	0.05	0.75	0.00000279	0.00144	0.0105	0.0119	0.103	0.0306	0.0602	0.0908	0.40	0.80	0.23	0.11	
Thallium	0.003	0.072	0.001	0.0085	0.0000000418	0.000115	0.000119	0.000234	0.00202	0.000603	0.000764	0.00137	0.24	24	0.0057	0.000057	
Vanadium	0.28	4.64	0.2	0.4	0.00000390	0.00742	0.00584	0.0133	0.114	0.0342	0.141	0.176	11	--	0.016	--	
Zinc (TRV1)	30.6	38.9	58.5	302	0.000426	0.0622	4.26	4.33	37.3	11.1	18.7	29.9	130	--	0.23	--	
Zinc (TRV2)	30.6	38.9	58.5	302	0.000426	0.0622	4.26	4.33	37.3	11.1	18.7	29.9	70	120	0.43	0.25	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP-1000 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-43. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT5-2000 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	143	548	2	14.1	0.00199	0.877	0.198	1.08	9.28	2.77	110	113	120	--	0.94	--
Antimony	0.09	0.56	0.046	0.009	0.00000125	0.000896	0.000195	0.00109	0.00942	0.00281	0.00304	0.00585	--	--	--	--
Arsenic (arsenate)	0.4	0.5	0.03	0.2	0.00000557	0.000800	0.00281	0.00362	0.0312	0.00932	0.0388	0.0481	10	40	0.0048	0.0012
Arsenic (arsenite)	0.4	0.5	0.03	0.2	0.00000557	0.000800	0.00281	0.00362	0.0312	0.00932	0.0388	0.0481	20	50	0.0024	0.0010
Barium	39.4	96	47.5	4.61	0.000549	0.154	0.137	0.291	2.51	0.749	4.65	5.40	21	42	0.26	0.13
Cadmium	0.06	1.31	0.079	3.53	0.00000836	0.00210	0.0490	0.0511	0.440	0.131	0.0850	0.217	1.5	20	0.14	0.011
Chromium	1.56	1.85	0.4	0.3	0.0000217	0.00296	0.00477	0.00775	0.0668	0.0199	0.219	0.239	0.86	4.3	0.28	0.056
Cobalt	1.56	1.97	0.7	0.059	0.0000217	0.00315	0.00189	0.00507	0.0437	0.0130	0.152	0.166	--	--	--	--
Lead	1.06	54.1	0.79	1.77	0.0000148	0.0865	0.0257	0.112	0.968	0.289	0.146	0.435	3.9	11	0.11	0.040
Mercury	0.05	0.27	0.037	0.13	0.00000697	0.000432	0.00186	0.00229	0.0197	0.00589	0.00886	0.0148	0.032	0.064	0.46	0.23
Molybdenum	0.02	0.8	0.069	0.243	0.00000279	0.00128	0.00347	0.00475	0.0409	0.0122	0.0426	0.0549	3.5	35	0.016	0.0016
Selenium	0.2	0.5	0.05	0.9	0.00000279	0.000800	0.0125	0.0133	0.115	0.0343	0.0602	0.0945	0	1	0.24	0.12
Thallium	0.003	0.036	0.001	0.003	0.0000000418	0.0000576	0.0000431	0.000101	0.000868	0.000259	0.000764	0.00102	0.24	24	0.0043	0.000043
Vanadium	0.28	0.98	0.2	0.4	0.00000390	0.00157	0.00584	0.00742	0.0639	0.0191	0.141	0.161	11	--	0.015	--
Zinc (TRV1)	30.6	286	58.5	539	0.000426	0.457	7.55	8.01	69.0	20.6	18.7	39.4	130	--	0.30	--
Zinc (TRV2)	30.6	286	58.5	539	0.000426	0.457	7.55	8.01	69.0	20.6	18.7	39.4	70	120	0.56	0.33

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP-1000 used (no terrestrial seed samples collected).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-44. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT2-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	11.4	6,000	12.6	202	0.000159	9.60						2.82	12.4	107	32.0
Antimony	0.2	2.20	0.037	0.063	0.00000279	0.00351	0.000929	0.00444	0.0383	0.0114	0.00304	0.0145	--	--	--	--
Arsenic (arsenate)	0.6	6.45	0.03	0.17	0.00000836	0.0103	0.00240	0.0127	0.110	0.0328	0.0388	0.0715	10	40	0.0072	0.0018
Arsenic (arsenite)	0.6	6.45	0.03	0.17	0.00000836	0.0103	0.00240	0.0127	0.110	0.0328	0.0388	0.0715	20	50	0.0036	0.0014
Barium	70.3	2,070	26.2	45.3	0.000979	3.30	0.667	3.97	34.2	10.2	4.65	14.9	21	42	0.71	0.35
Cadmium	0.27	16.4	0.062	7.13	0.00000376	0.0262	0.0988	0.125	1.08	0.322	0.0850	0.407	1.5	20	0.27	0.020
Chromium	0.44	9.9	0.4	0.56	0.00000613	0.0158	0.00837	0.0242	0.209	0.0623	0.219	0.282	0.86	4.3	0.33	0.066
Cobalt	0.88	9.75	0.14	0.139	0.0000123	0.0156	0.00214	0.0177	0.153	0.0457	0.152	0.198	--	--	--	--
Lead	1.63	759	1.6	6.38	0.0000227	1.21	0.0908	1.30	11.2	3.36	0.146	3.51	3.9	11	0.90	0.32
Mercury	0.05	0.455	0.044	0.11	0.00000697	0.000728	0.00159	0.00232	0.0200	0.00597	0.00886	0.0148	0.032	0.064	0.46	0.23
Molybdenum	0.09	0.77	0.159	0.287	0.00000125	0.00123	0.00422	0.00545	0.0470	0.0140	0.0426	0.0567	3.5	35	0.016	0.0016
Selenium	0.2	1.25	0.05	0.2	0.00000279	0.00200	0.00285	0.00485	0.0418	0.0125	0.0602	0.0727	0.40	0.80	0.18	0.091
Thallium	0.01	0.366	0.001	0.015	0.000000139	0.000585	0.000209	0.000795	0.00685	0.00205	0.000764	0.00281	0.24	24	0.012	0.00012
Vanadium	0.24	12	0.2	0.41	0.00000334	0.0192	0.00598	0.0252	0.217	0.0648	0.141	0.206	11	--	0.019	--
Zinc (TRV1)	99	3,460	65	407	0.00138	5.53	5.73	11.3	97.1	29.0	18.7	47.8	130	--	0.37	--
Zinc (TRV2)	99	3,460	65	407	0.00138	5.53	5.73	11.3	97.1	29.0	18.7	47.8	70	120	0.68	0.40

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT2-0010); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP1-0100 used. No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-44a. Common snipe EPC calculation for mean CoPC concentrations at TT2-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
										TT2-0010 site mean	1.63
Tundra Soil											
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry		661 <i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry		856
										TT2-0010 site mean	759 <i>J</i>
Herbaceous Plant											
PHASE2RA	TP1-0100	7/1/2004	SE0054	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		1.6
										TT2-0010 site mean	1.6
Soil Invertebrates											
PHASE2RA	TT2-0010	6/24/2004	SI0011	0	0	NA	NA	NA	mg/kg dry		6.38 <i>J</i>
										TT2-0010 site mean	6.38 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-45. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT2-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	11.4	3,060	12.6	47.6	0.000159	4.89	0.678	5.57	48.0	14.3	110	124	120	--	1.0	--	
Antimony	0.2	2.04	0.037	0.021	0.00000279	0.00325	0.000348	0.00361	0.0311	0.00928	0.00304	0.0123	--	--	--	--	
Arsenic (arsenate)	0.6	3.95	0.03	0.1	0.00000836	0.00632	0.00143	0.00776	0.0669	0.0200	0.0388	0.0587	10	40	0.0059	0.0015	
Arsenic (arsenite)	0.6	3.95	0.03	0.1	0.00000836	0.00632	0.00143	0.00776	0.0669	0.0200	0.0388	0.0587	20	50	0.0029	0.0012	
Barium	70.3	890	26.2	17.5	0.000979	1.42	0.283	1.71	14.7	4.39	4.65	9.04	21	42	0.43	0.22	
Cadmium	0.27	9.89	0.062	3.09	0.00000376	0.0158	0.0429	0.0587	0.506	0.151	0.0850	0.236	1.5	20	0.16	0.012	
Chromium	0.44	6.02	0.4	0.4	0.00000613	0.00963	0.00615	0.0158	0.136	0.0406	0.219	0.260	0.86	4.3	0.30	0.060	
Cobalt	0.88	6.88	0.14	0.066	0.0000123	0.0110	0.00113	0.0121	0.105	0.0312	0.152	0.184	--	--	--	--	
Lead	1.63	414	1.6	2.88	0.0000227	0.661	0.0423	0.704	6.07	1.81	0.146	1.96	3.9	11	0.50	0.18	
Mercury	0.05	0.37	0.044	0.1	0.000000697	0.000592	0.00145	0.00204	0.0176	0.00526	0.00886	0.0141	0.032	0.064	0.44	0.22	
Molybdenum	0.09	0.79	0.159	0.279	0.00000125	0.00126	0.00411	0.00537	0.0463	0.0138	0.0426	0.0565	3.5	35	0.016	0.0016	
Selenium	0.2	1.1	0.05	0.6	0.00000279	0.00176	0.00838	0.0101	0.0874	0.0261	0.0602	0.0863	0.40	0.80	0.22	0.11	
Thallium	0.01	0.19	0.001	0.007	0.000000139	0.000304	0.0000984	0.000402	0.00347	0.00104	0.000764	0.00180	0.24	24	0.0075	0.000075	
Vanadium	0.24	7.31	0.2	0.4	0.00000334	0.0117	0.00584	0.0175	0.151	0.0452	0.141	0.187	11	--	0.017	--	
Zinc (TRV1)	99	1,970	65	236	0.00138	3.15	3.37	6.52	56.2	16.8	18.7	35.5	130	--	0.27	--	
Zinc (TRV2)	99	1,970	65	236	0.00138	3.15	3.37	6.52	56.2	16.8	18.7	35.5	70	120	0.51	0.30	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT2-0100); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP1-0100 used. No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-46. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT2-1000 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	143	405	2	17.4	0.00199	0.648						0.244	0.894	7.70	2.30
Antimony	0.09	0.28	0.046	0.003	0.00000125	0.000448	0.000112	0.000561	0.00484	0.00145	0.00304	0.00448	--	--	--	--
Arsenic (arsenate)	0.4	0.95	0.03	0.07	0.00000557	0.00152	0.00102	0.00254	0.0219	0.00654	0.0388	0.0453	10	40	0.0045	0.0011
Arsenic (arsenite)	0.4	0.95	0.03	0.07	0.00000557	0.00152	0.00102	0.00254	0.0219	0.00654	0.0388	0.0453	20	50	0.0023	0.00091
Barium	39.4	146	47.5	6.89	0.000549	0.233	0.168	0.402	3.46	1.03	4.65	5.68	21	42	0.27	0.14
Cadmium	0.06	0.915	0.079	1.14	0.000000836	0.00146	0.0159	0.0174	0.150	0.0447	0.0850	0.130	1.5	20	0.086	0.0065
Chromium	1.56	1.03	0.4	0.2	0.0000217	0.00165	0.00338	0.00505	0.0436	0.0130	0.219	0.232	0.86	4.3	0.27	0.054
Cobalt	1.56	5.99	0.7	0.062	0.0000217	0.00958	0.00193	0.0115	0.0995	0.0297	0.152	0.182	--	--	--	--
Lead	1.06	23.8	0.79	1.05	0.0000148	0.0380	0.0157	0.0538	0.463	0.138	0.146	0.284	3.9	11	0.073	0.026
Mercury	0.05	0.23	0.037	0.1	0.000000697	0.000368	0.00144	0.00181	0.0156	0.00466	0.00886	0.0135	0.032	0.064	0.42	0.21
Molybdenum	0.02	0.855	0.069	0.325	0.000000279	0.00137	0.00460	0.00597	0.0515	0.0154	0.0426	0.0580	3.5	35	0.017	0.0017
Selenium	0.2	0.5	0.05	0.9	0.00000279	0.000800	0.0125	0.0133	0.115	0.0343	0.0602	0.0945	0.40	0.80	0.24	0.12
Thallium	0.003	0.0375	0.001	0.002	0.0000000418	0.0000600	0.0000292	0.0000892	0.000769	0.000230	0.000764	0.000994	0.24	24	0.0041	0.000041
Vanadium	0.28	2.23	0.2	0.4	0.00000390	0.00357	0.00584	0.00941	0.0812	0.0242	0.141	0.166	11	--	0.015	--
Zinc (TRV1)	30.6	327	58.5	232	0.000426	0.523	3.30	3.82	33.0	9.85	18.7	28.6	130	--	0.22	--
Zinc (TRV2)	30.6	327	58.5	232	0.000426	0.523	3.30	3.82	33.0	9.85	18.7	28.6	70	120	0.41	0.24

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA soil (TT2-1000); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP1-1000 used. No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-47. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT3-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	75	2,660	10.6	151	0.00104	4.25	2.11	6.36	54.8	16.4	110	126	120	--	1.1	--	
Antimony	0.03	0.925	0.5	0.037	0.000000418	0.00148	0.00128	0.00276	0.0238	0.00711	0.00304	0.0101	--	--	--	--	
Arsenic (arsenate)	0.5	5.3	0.04	0.25	0.00000697	0.00848	0.00352	0.0120	0.104	0.0309	0.0388	0.0697	10	40	0.0070	0.0017	
Arsenic (arsenite)	0.5	5.3	0.04	0.25	0.00000697	0.00848	0.00352	0.0120	0.104	0.0309	0.0388	0.0697	20	50	0.0035	0.0014	
Barium	46.8	2,280	44.3	71.8	0.000652	3.65	1.06	4.71	40.6	12.1	4.65	16.8	21	42	0.80	0.40	
Cadmium	0.02	7.07	0.143	4.31	0.00000279	0.0113	0.0599	0.0712	0.614	0.183	0.0850	0.268	1.5	20	0.18	0.013	
Chromium	1.6	9.69	0.2	0.3	0.0000223	0.0155	0.00446	0.0200	0.172	0.0514	0.219	0.271	0.86	4.3	0.31	0.063	
Cobalt	0.13	8.33	0.426	0.134	0.00000181	0.0133	0.00251	0.0158	0.136	0.0407	0.152	0.193	--	--	--	--	
Lead	0.44	385	0.49	4.3	0.00000613	0.615	0.0603	0.675	5.82	1.74	0.146	1.88	3.9	11	0.48	0.17	
Mercury	0.05	0.285	0.04	0.21	0.00000697	0.000456	0.00297	0.00342	0.0295	0.00882	0.00886	0.0177	0.032	0.064	0.55	0.28	
Molybdenum	0.05	1.08	1.49	0.274	0.00000697	0.00172	0.00608	0.00780	0.0673	0.0201	0.0426	0.0627	3.5	35	0.018	0.0018	
Selenium	0.2	1	0.1	0.2	0.00000279	0.00160	0.00292	0.00452	0.0390	0.0116	0.0602	0.0718	0.40	0.80	0.18	0.090	
Thallium	0.003	0.296	0.001	0.014	0.0000000418	0.000473	0.000195	0.000668	0.00576	0.00172	0.000764	0.00248	0.24	24	0.010	0.00010	
Vanadium	0.31	14.2	0.3	0.49	0.00000432	0.0227	0.00724	0.0300	0.258	0.0771	0.141	0.219	11	--	0.020	--	
Zinc (TRV1)	6.08	1,350	57.2	205	0.0000847	2.16	2.93	5.08	43.8	13.1	18.7	31.8	130	--	0.24	--	
Zinc (TRV2)	6.08	1,350	57.2	205	0.0000847	2.16	2.93	5.08	43.8	13.1	18.7	31.8	70	120	0.45	0.27	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0010); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP3 used. No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-47a. Common snipe EPC calculation for mean CoPC concentrations at TT3-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
										TT3-0010 site mean	0.44
Tundra Soil											
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry		362
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry		407
										TT3-0010 site mean	385
Herbaceous Plant											
PHASE2RA	TP3	6/20/2004	SE0019	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.49
										TT3-0010 site mean	0.49
Soil Invertebrates											
PHASE2RA	TT3-0010	7/1/2004	SI0014	0	0	NA	NA	NA	mg/kg dry		4.3 <i>J</i>
										TT3-0010 site mean	4.3 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-48. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT3-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	75	1,510	10.6	79.8	0.00104	2.42	1.12	3.54	30.5	9.11	110	119	120	--	0.99	--	
Antimony	0.03	0.915	0.5	0.018	0.00000418	0.00146	0.00102	0.00248	0.0214	0.00639	0.00304	0.00943	--	--	--	--	
Arsenic (arsenate)	0.5	2.2	0.04	0.14	0.00000697	0.00352	0.00200	0.00553	0.0476	0.0142	0.0388	0.0530	10	40	0.0053	0.0013	
Arsenic (arsenite)	0.5	2.2	0.04	0.14	0.00000697	0.00352	0.00200	0.00553	0.0476	0.0142	0.0388	0.0530	20	50	0.0026	0.0011	
Barium	46.8	694	44.3	29.9	0.000652	1.11	0.482	1.59	13.7	4.10	4.65	8.75	21	42	0.42	0.21	
Cadmium	0.02	2.06	0.143	4.51	0.00000279	0.00329	0.0626	0.0659	0.568	0.170	0.0847	0.255	1.5	20	0.17	0.013	
Chromium	1.6	3.93	0.2	0.3	0.0000223	0.00629	0.00446	0.0108	0.0928	0.0277	0.219	0.247	0.86	4.3	0.29	0.057	
Cobalt	0.13	2.69	0.426	0.161	0.00000181	0.00430	0.00288	0.00719	0.0620	0.0185	0.152	0.171	--	--	--	--	
Lead	0.44	119	0.49	3.08	0.00000613	0.190	0.0434	0.233	2.01	0.601	0.146	0.747	3.9	11	0.19	0.068	
Mercury	0.05	0.12	0.04	0.24	0.000000697	0.000192	0.00338	0.00358	0.0308	0.00921	0.00886	0.0181	0.032	0.064	0.56	0.28	
Molybdenum	0.05	0.475	1.49	0.225	0.000000697	0.000760	0.00541	0.00617	0.0532	0.0159	0.0426	0.0585	3.5	35	0.017	0.0017	
Selenium	0.2	0.45	0.1	0.2	0.00000279	0.000720	0.00292	0.00364	0.0314	0.00938	0.0602	0.0696	0.40	0.80	0.17	0.087	
Thallium	0.003	0.0885	0.001	0.019	0.000000418	0.000142	0.000265	0.000406	0.00350	0.00105	0.000764	0.00181	0.24	24	0.0075	0.000075	
Vanadium	0.31	4.98	0.3	0.2	0.00000432	0.00796	0.00323	0.0112	0.0965	0.0288	0.141	0.170	11	--	0.015	--	
Zinc (TRV1)	6.08	465	57.2	235	0.0000847	0.743	3.34	4.08	35.2	10.5	18.7	29.3	130	--	0.23	--	
Zinc (TRV2)	6.08	465	57.2	235	0.0000847	0.743	3.34	4.08	35.2	10.5	18.7	29.3	70	120	0.42	0.24	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0100); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP3 used. No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-49. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT3-1000 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)		Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Herb. Plant (mg/kg dw)														
Aluminum	177	358	10.6	12.5	0.00247	0.573	0.189	0.764	6.59	1.97	110	112	120	--	0.93	--
Antimony	0.02	0.365	0.5	0.003	0.000000279	0.000584	0.000810	0.00139	0.0120	0.00359	0.00304	0.00663	--	--	--	--
Arsenic (arsenate)	1.3	0.75	0.04	0.06	0.0000181	0.00120	0.000892	0.00211	0.0182	0.00543	0.0388	0.0442	10	40	0.0044	0.0011
Arsenic (arsenite)	1.3	0.75	0.04	0.06	0.0000181	0.00120	0.000892	0.00211	0.0182	0.00543	0.0388	0.0442	20	50	0.0022	0.00088
Barium	73.6	131	44.3	6.82	0.00103	0.210	0.163	0.373	3.22	0.960	4.65	5.61	21	42	0.27	0.13
Cadmium	0.06	0.549	0.143	1.05	0.000000836	0.000878	0.0148	0.0156	0.135	0.0402	0.0850	0.125	1.5	20	0.084	0.0063
Chromium	5.24	1.54	0.2	0.3	0.0000730	0.00246	0.00446	0.00700	0.0603	0.0180	0.219	0.237	0.86	4.3	0.28	0.055
Cobalt	0.48	0.615	0.426	0.031	0.00000669	0.000984	0.00108	0.00207	0.0179	0.00534	0.152	0.158	--	--	--	--
Lead	0.67	16.1	0.49	0.45	0.00000933	0.0257	0.00698	0.0327	0.282	0.0841	0.146	0.230	3.9	11	0.059	0.021
Mercury	0.05	0.145	0.04	0.07	0.000000697	0.000232	0.00103	0.00126	0.0109	0.00325	0.00886	0.0121	0.032	0.064	0.38	0.19
Molybdenum	0.08	0.793	1.49	0.447	0.00000111	0.00127	0.00848	0.00975	0.0840	0.0251	0.0426	0.0677	3.5	35	0.019	0.0019
Selenium	0.2	0.4	0.1	0.2	0.00000279	0.000640	0.00292	0.00356	0.0307	0.00918	0.0602	0.0694	0.40	0.80	0.17	0.087
Thallium	0.005	0.049	0.001	0.004	0.0000000697	0.0000784	0.0000569	0.000135	0.00117	0.000348	0.000764	0.00111	0.24	24	0.0046	0.000046
Vanadium	0.64	1.45	0.3	0.2	0.00000892	0.00232	0.00323	0.00556	0.0479	0.0143	0.141	0.156	11	--	0.014	--
Zinc (TRV1)	11	78.4	57.2	171	0.000153	0.125	2.45	2.58	22.2	6.64	18.7	25.4	130	--	0.20	--
Zinc (TRV2)	11	78.4	57.2	171	0.000153	0.125	2.45	2.58	22.2	6.64	18.7	25.4	70	120	0.36	0.21

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-1000); PHASE1RA soil (TT3-1000); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP3 used. No terrestrial sedge seed data available. Mean of PHASE1RA and PHASE2RA soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-50. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT6-0010 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	2660	17.1	58	0.00290	4.25	0.829	5.09	43.8	13.1	110	123	120	--	1.0	--
Antimony	0.063	1.92	1.44	0.017	0.00000878	0.00307	0.00245	0.00552	0.0476	0.0142	0.00304	0.0173	--	--	--	--
Arsenic (arsenate)	0.482	9.1	0.09	0.12	0.00000672	0.0146	0.00180	0.0164	0.141	0.0421	0.0388	0.0809	10	40	0.0081	0.0020
Arsenic (arsenite)	0.482	9.1	0.09	0.12	0.00000672	0.0146	0.00180	0.0164	0.141	0.0421	0.0388	0.0809	20	50	0.0040	0.0016
Barium	140	6950	49.9	52.5	0.00195	11.1	0.803	11.9	103	30.7	4.65	35.3	21	42	1.7	0.84
Cadmium	0.037	5.47	0.043	5.98	0.00000509	0.00875	0.0828	0.0916	0.790	0.236	0.0850	0.321	1.5	20	0.21	0.016
Chromium	0.396	9.69	0.65	0.3	0.00000552	0.0155	0.00515	0.0207	0.178	0.0532	0.219	0.273	0.86	4.3	0.32	0.063
Cobalt	0.015	9.11	0.497	0.07	0.00000209	0.0146	0.00173	0.0163	0.141	0.0420	0.152	0.194	--	--	--	--
Lead	0.65	349	0.89	2.07	0.00000906	0.558	0.0300	0.588	5.07	1.51	0.146	1.66	3.9	11	0.43	0.15
Mercury	0.018	0.25	0.05	0.07	0.00000249	0.000400	0.00105	0.00145	0.0125	0.00372	0.00886	0.0126	0.032	0.064	0.39	0.20
Molybdenum	0.22	1.95	0.182	0.229	0.00000307	0.00312	0.00345	0.00657	0.0567	0.0169	0.0426	0.0595	3.5	35	0.017	0.0017
Selenium	0.355	1.5	0.3	0.2	0.00000495	0.00240	0.00323	0.00563	0.0486	0.0145	0.0602	0.0747	0.40	0.80	0.19	0.093
Thallium	0.09	1.29	0.003	0.015	0.00000125	0.00206	0.000212	0.00228	0.0196	0.00586	0.000764	0.00663	0.24	24	0.028	0.00028
Vanadium	0.335	19.7	0.7	0.2	0.00000467	0.0315	0.00384	0.0354	0.305	0.0910	0.141	0.233	11	--	0.021	--
Zinc (TRV1)	1.79	1020	59.6	249	0.0000249	1.63	3.54	5.17	44.6	13.3	18.7	32.1	130	--	0.25	--
Zinc (TRV2)	1.79	1020	59.6	249	0.0000249	1.63	3.54	5.17	44.6	13.3	18.7	32.1	70	120	0.46	0.27

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP4 used; no terrestrial seed data collected. No pond water data collected near mine, so Anxiety Ridge Creek downstream data used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-50a. Common snipe EPC calculation for mean CoPC concentrations at TT6-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
										TT6-0010 site mean	0.65 <i>J</i>
Tundra Soil											
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
										TT6-0010 site mean	349
Herbaceous Plant											
PHASE2RA	TP4	6/17/2004	SE0012	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.89
										TT6-0010 site mean	0.89
Soil Invertebrates											
PHASE2RA	TT6-0010	7/4/2004	SI0017	0	0	NA	NA	NA	mg/kg dry		2.07 <i>J</i>
										TT6-0010 site mean	2.07 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-51. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT6-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	208	1,510	17.1	78.3	0.00290	2.42	1.11	3.53	30.4	9.08	110	119	120	--	1.0	--	
Antimony	0.063	2.03	1.44	0.027	0.00000878	0.00325	0.00259	0.00584	0.0503	0.0150	0.00304	0.0181	--	--	--	--	
Arsenic (arsenate)	0.482	4.9	0.09	0.13	0.00000672	0.00784	0.00194	0.00978	0.0843	0.0252	0.0388	0.0639	10	40	0.0064	0.0016	
Arsenic (arsenite)	0.482	4.9	0.09	0.13	0.00000672	0.00784	0.00194	0.00978	0.0843	0.0252	0.0388	0.0639	20	50	0.0032	0.0013	
Barium	140	6,360	49.9	108	0.00195	10.2	1.57	11.7	101	30.2	4.65	34.9	21	42	1.7	0.83	
Cadmium	0.037	5.06	0.043	13	0.00000509	0.00809	0.180	0.188	1.62	0.484	0.0850	0.569	1.5	20	0.38	0.028	
Chromium	0.396	3.93	0.65	0.3	0.00000552	0.00629	0.00515	0.0114	0.0987	0.0295	0.219	0.249	0.86	4.3	0.29	0.058	
Cobalt	0.015	3.3	0.497	0.087	0.00000209	0.00528	0.00197	0.00725	0.0625	0.0187	0.152	0.171	--	--	--	--	
Lead	0.65	281	0.89	10.1	0.00000906	0.449	0.141	0.591	5.09	1.52	0.146	1.67	3.9	11	0.43	0.15	
Mercury	0.018	0.27	0.05	0.12	0.00000249	0.000432	0.00174	0.00217	0.0187	0.00559	0.00886	0.0144	0.032	0.064	0.45	0.23	
Molybdenum	0.22	2.47	0.182	0.335	0.00000307	0.00395	0.00492	0.00887	0.0765	0.0228	0.0426	0.0655	3.5	35	0.019	0.0019	
Selenium	0.355	0.9	0.3	0.2	0.00000495	0.00144	0.00323	0.00467	0.0403	0.0120	0.0602	0.0722	0.40	0.80	0.18	0.090	
Thallium	0.09	0.755	0.003	0.02	0.00000125	0.00121	0.000281	0.00149	0.0128	0.00384	0.000764	0.00460	0.24	24	0.019	0.00019	
Vanadium	0.335	7.51	0.7	0.2	0.00000467	0.0120	0.00384	0.0159	0.137	0.0408	0.141	0.182	11	--	0.017	--	
Zinc (TRV1)	1.79	764	59.6	310	0.0000249	1.22	4.38	5.60	48.3	14.4	18.7	33.2	130	--	0.26	--	
Zinc (TRV2)	1.79	764	59.6	310	0.0000249	1.22	4.38	5.60	48.3	14.4	18.7	33.2	70	120	0.47	0.28	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP4 used; no terrestrial seed data collected.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-52. Food-web model exposure results for common snipe exposed to CoPC concentrations at TT6-1000 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)										
Aluminum	208	358	17.1	15.6	0.00290	0.573	0.242	0.818	7.05	2.11	110	112	120	--	0.93	--	
Antimony	0.063	1.22	1.44	0.016	0.00000878	0.00195	0.00244	0.00439	0.0378	0.0113	0.00304	0.0143	--	--	--	--	
Arsenic (arsenate)	0.482	2.9	0.09	0.06	0.00000672	0.00464	0.000969	0.00561	0.0484	0.0145	0.0388	0.0532	10	40	0.0053	0.0013	
Arsenic (arsenite)	0.482	2.9	0.09	0.06	0.00000672	0.00464	0.000969	0.00561	0.0484	0.0145	0.0388	0.0532	20	50	0.0027	0.0011	
Barium	140	1290	49.9	12.7	0.00195	2.06	0.253	2.32	20.0	5.97	4.65	10.6	21	42	0.51	0.25	
Cadmium	0.037	6.11	0.043	5.8	0.00000509	0.00977	0.0803	0.0901	0.777	0.232	0.0850	0.317	1.5	20	0.21	0.016	
Chromium	0.396	1.54	0.65	0.3	0.00000552	0.00246	0.00515	0.00762	0.0657	0.0196	0.219	0.239	0.86	4.3	0.28	0.056	
Cobalt	0.015	1.87	0.497	0.024	0.00000209	0.00299	0.00110	0.00409	0.0352	0.0105	0.152	0.163	--	--	--	--	
Lead	0.65	145	0.89	1.31	0.00000906	0.232	0.0195	0.251	2.17	0.647	0.146	0.793	3.9	11	0.20	0.072	
Mercury	0.018	0.22	0.05	0.05	0.00000249	0.000352	0.000769	0.00112	0.00966	0.00289	0.00886	0.0117	0.032	0.064	0.37	0.18	
Molybdenum	0.22	2.09	0.182	0.827	0.00000307	0.00334	0.0117	0.0151	0.130	0.0388	0.0426	0.0814	3.5	35	0.023	0.0023	
Selenium	0.355	1.6	0.3	0.2	0.00000495	0.00256	0.00323	0.00579	0.0499	0.0149	0.0602	0.0751	0.40	0.80	0.19	0.094	
Thallium	0.09	0.38	0.003	0.014	0.00000125	0.000608	0.000198	0.000807	0.00696	0.00208	0.000764	0.00284	0.24	24	0.012	0.00012	
Vanadium	0.335	16	0.7	0.2	0.00000467	0.0256	0.00384	0.0294	0.254	0.0758	0.141	0.217	11	--	0.020	--	
Zinc (TRV1)	1.79	592	59.6	224	0.0000249	0.947	3.19	4.14	35.7	10.7	18.7	29.4	130	--	0.23	--	
Zinc (TRV2)	1.79	592	59.6	224	0.0000249	0.947	3.19	4.14	35.7	10.7	18.7	29.4	70	120	0.42	0.24	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE2RA soil; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates.

Seed data from station TP4 used; no terrestrial seed data collected.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for snipe in terrestrial reference station 5 (Table K-39) multiplied by 0.70.

Table K-53. Food-web model exposure results for common snipe exposed to CoPC concentrations at ST-REF-3 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Cadmium	0.005	0.245	0.0	0.696	0.000000697	0.000392	0.00970	0.0101	0.0870	1.5	20	0.058	0.0043
Lead	0.02	9.5	0.17	8.14	0.000000279	0.0152	0.113	0.128	1.10	3.9	11	0.28	0.10
Mercury	0.05	0.0215	0.039	0.07	0.000000697	0.0000344	0.00103	0.00106	0.00917	0.032	0.064	0.29	0.14
Zinc (TRV1)	0.31	66.9	40.3	137	0.00000432	0.107	1.96	2.07	17.8	130	--	0.14	--
Zinc (TRV2)	0.31	66.9	40.3	137	0.00000432	0.107	1.96	2.07	17.8	70	120	0.25	0.15

Note: The following data were used to develop this scenario: PHASE1RA water data (ST-REF-1); PHASE1RA sediment (ST-REF-3); PHASE2RA sediment; Phase2RA creek invertebrates; and PHASE2RA sedge seeds.

Mean of PHASE1RA and PHASE2RA used. No water data collected at station ST-REF-3, so data from closest reference creek (ST-REF-1) used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-53a. Common snipe EPC calculation for mean CoPC concentrations at ST-REF-3 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
										ST-REF-3 site mean	0.02 <i>J</i>
Tundra Soil											
PHASE1RA	ST-REF-3	7/20/2003	SD0066	0	0	NA	NA	NA	mg/kg dry		9.17
PHASE2RA	ST-REF-3	7/5/2004	SD0012	0	0	NA	NA	NA	mg/kg dry		9.82
										ST-REF-3 site mean	9.5
Herbaceous Plant											
PHASE2RA	ST-REF-3	6/26/2004	SE0044	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.17
										ST-REF-3 site mean	0.17
Stream Invertebrates											
PHASE2RA	ST-REF-3	7/1/2004	BT0007	0	0	NA	NA	NA	mg/kg dry		8.14 <i>J</i>
										ST-REF-3 site mean	8.14

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-54. Food-web model exposure results for common snipe exposed to CoPC concentrations at ST-REF-6 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Cadmium	0.07	0.19	0.071	0.347	0.000000975	0.000304	0.00491	0.00522	0.0450	1.5	20	0.030	0.0022
Lead	1.91	5.71	0.21	2.73	0.0000266	0.00913	0.0381	0.0473	0.407	3.9	11	0.10	0.037
Mercury	0.05	0.003	0.031	0.14	0.00000697	0.0000480	0.00199	0.00199	0.0172	0.032	0.064	0.54	0.27
Zinc (TRV1)	9.84	33.1	31.7	91.3	0.000137	0.0529	1.31	1.37	11.8	130	--	0.091	--
Zinc (TRV2)	9.84	33.1	31.7	91.3	0.000137	0.0529	1.31	1.37	11.8	70	120	0.17	0.10

Note: The following data were used to develop this scenario: PHASE1RA water data (ST-REF-5); PHASE2RA sediment; Phase2RA creek invertebrates; and PHASE2RA sedge seeds.

Sedge seed data and water data from station ST-REF-5 used (no seed or water data for ST-REF-6); sediment and invertebrate data from ST-REF-6.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-55. Food-web model exposure results for common snipe exposed to CoPC concentrations at Aufeis Creek road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Invert. (mg/kg dw)		Sediment (mg/day)	Food (mg/day)										
Cadmium	0.121	0.49	0.228	0.00000169	0.000784	0.00351	0.00429	0.0370	0.0110	0.0610	0.0720	1.5	20	0.048	0.0036	
Lead	0.344	29.2	4.43	0.00000479	0.0466	0.0681	0.115	0.989	0.295	0.775	1.07	3.9	11	0.27	0.097	
Mercury	0.0179	0.0535	0.09	0.000000249	0.0000856	0.00138	0.00147	0.0127	0.00378	0.00643	0.0102	0.032	0.064	0.32	0.16	
Zinc (TRV1)	8.09	125	87.8	0.000113	0.200	1.35	1.55	13.4	3.99	12.5	16.5	130	--	0.13	--	
Zinc (TRV2)	8.09	125	87.8	0.000113	0.200	1.35	1.55	13.4	3.99	12.5	16.5	70	120	0.24	0.14	

Note: The following data were used to develop this scenario: TECK03 water (mean of AufRoad); PHASE1RA sediment; PHASE2RA sediment; and Phase2RA creek invertebrates.

Invertebrates are 100% of diet because no sedge seeds collected. Mean of PHASE1RA and PHASE2RA sediment data used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for snipe in stream reference station 3 (Table K-53) multiplied by 0.70.

Table K-56. Food-web model exposure results for common snipe exposed to CoPC concentrations at Omikviorok River road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Cadmium	0.0849	0.435	0.137	0.365	0.00000118	0.000696						0.00526	0.00596	0.0514	0.0153
Lead	0.506	22.5	2.6	5.16	0.00000705	0.0359	0.0754	0.111	0.960	0.287	0.775	1.06	3.9	11	0.27	0.096
Mercury	0.0179	0.0315	0.041	0.08	0.000000249	0.0000504	0.00117	0.00122	0.0105	0.00314	0.00643	0.00958	0.032	0.064	0.30	0.15
Zinc (TRV1)	6.46	108	57.1	79	0.0000899	0.172	1.18	1.35	11.7	3.48	12.5	16.0	130	--	0.12	--
Zinc (TRV2)	6.46	108	57.1	79	0.0000899	0.172	1.18	1.35	11.7	3.48	12.5	16.0	70	120	0.23	0.18

Note: The following data were used to develop this scenario: TECK03 water (mean of OmiRoad); PHASE1RA sediment; PHASE2RA sediment; Phase2RA creek invertebrates; and PHASE2RA sedge seeds.

Mean of PHASE1RA and PHASE2RA sediment data used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for snipe in stream reference station 3 (Table K-53) multiplied by 0.70.

Table K-56a. Common snipe EPC calculation for mean CoPC concentrations at Omikviorok River road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.500
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										Omikviorok River road site mean	0.506
Tundra Soil											
PHASE1RA	OR-R	7/16/2003	SD0047	0	0	NA	NA	NA	mg/kg dry		19
PHASE2RA	OR-R	7/5/2004	SD0009-D	1	0	NA	NA	NA	mg/kg dry	33.5	
PHASE2RA	OR-R	7/5/2004	SD0009-D	2	0	NA	NA	NA	mg/kg dry	18.3	
										field rep average	25.9
										Omikviorok River road site mean	22.5
Herbaceous Plant											
PHASE2RA	OR-R	7/1/2004	SE0052	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		2.6
										Omikviorok River road site mean	2.6
Stream Invertebrates											
PHASE2RA	OR-R	6/27/2004	BT0002-D	1	0	NA	NA	NA	mg/kg dry	4.36	<i>J</i>
PHASE2RA	OR-R	6/27/2004	BT0002-D	2	0	NA	NA	NA	mg/kg dry	5.96	<i>J</i>
										field rep average	5.16 <i>J</i>
										Omikviorok River road site mean	5.16 <i>J</i>

Note: Field replicates are averaged first then included in the calculation of the site mean.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value
U - undetected; value reported is half the detection limit

Table K-57. Food-web model exposure results for common snipe exposed to CoPC concentrations at Anxiety Ridge Creek road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/		Water (mg/day)	Soil/							Food (mg/day)	NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Invert. (mg/kg dw)		Sediment (mg/day)	Food (mg/day)										
Cadmium	0.0365	1.02	0.803	0.00000509	0.00162	0.0123	0.0140	0.120	0.0360	0.0610	0.0970	1.5	20	0.065	0.0048	
Lead	0.65	124	10.9	0.0000906	0.198	0.168	0.365	3.15	0.940	0.775	1.71	3.9	11	0.44	0.16	
Mercury	0.0179	0.0625	0.04	0.00000249	0.000100	0.000615	0.000715	0.00617	0.00184	0.00643	0.00827	0.032	0.064	0.26	0.13	
Zinc (TRV1)	1.79	204	96.2	0.0000249	0.325	1.48	1.81	15.6	4.65	12.5	17.1	130	--	0.13	--	
Zinc (TRV2)	1.79	204	96.2	0.0000249	0.325	1.48	1.81	15.6	4.65	12.5	17.1	70	120	0.24	0.14	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA sediment; PHASE2RA sediment; Phase2RA creek invertebrates; and PHASE2RA sedge seeds.

Invertebrates are 100% of diet because no sedge seeds collected. Mean of PHASE1RA (ARD-D1) and PHASE2RA (ARC-R) sediment data used. Mean for Anxiety Ridge Creek road station (except for sediment...average of downstream from PHASE1RA and road station from PHASE2RA)

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

^a Based on mean daily exposure for snipe in stream reference station 3 (Table K-53) multiplied by 0.70.

Table K-58. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP-REF-2 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	14.5	4,310	2.5	5.6	0.000399	4.37			0.158	4.53	14.2	120
Antimony	0.02	0.03	0.03	0.003	0.00000550	0.0000304	0.00138	0.00142	0.00442	--	--	--	--
Arsenic (arsenate)	0.5	7	0.18	0.05	0.0000137	0.00710	0.00856	0.0157	0.0490	10	40	0.0049	0.0012
Arsenic (arsenite)	0.5	7	0.18	0.05	0.0000137	0.00710	0.00856	0.0157	0.0490	20	50	0.0024	0.0010
Barium	133	232	42.3	5.63	0.00366	0.235	1.96	2.20	6.88	21	42	0.33	0.16
Cadmium	0.005	0.35	0.119	0.96	0.00000137	0.000355	0.0131	0.0134	0.0420	1.5	20	0.028	0.0021
Chromium	0.18	10.9	0.2	0.3	0.0000495	0.0111	0.0115	0.0225	0.0704	0.86	4.3	0.082	0.016
Cobalt	0.21	8.13	1.34	0.029	0.00000577	0.00824	0.0610	0.0693	0.216	--	--	--	--
Lead	0.06	7.48	0.5	0.15	0.00000165	0.00758	0.0239	0.0315	0.0983	3.9	11	0.025	0.0089
Mercury	0.05	0.03	0.03	0.09	0.00000137	0.0000304	0.00208	0.00211	0.0066	0.032	0.064	0.21	0.10
Molybdenum	0.02	0.46	1.08	0.324	0.0000055	0.000466	0.0516	0.0520	0.163	3.5	35	0.046	0.0046
Selenium	0.5	0.5	0.2	0.65	0.0000137	0.000507	0.0143	0.0148	0.0462	0.40	0.80	0.12	0.058
Thallium	0.003	0.056	0.022	0.002	0.000000825	0.0000568	0.00101	0.00107	0.00335	0.24	24	0.014	0.00014
Vanadium	0.17	14.9	0.3	0.2	0.0000467	0.0151	0.0152	0.0303	0.0947	11	--	0.0086	--
Zinc (TRV1)	0.59	65.4	28.3	214	0.0000162	0.0663	3.00	3.06	9.57	130	--	0.074	--
Zinc (TRV2)	0.59	65.4	28.3	214	0.0000162	0.0663	3.00	3.06	9.57	70	120	0.14	0.080

Note: The following data were used to develop this scenario: PHASE1RA water data (TP-REF-2); PHASE1RA sediment (TP-REF-2); PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates (TS-REF-5).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-59. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP-REF-3 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	91.2	17,100	11.1	5.6	0.00251	17.3			0.548	17.9	55.9	120
Antimony	0.1	0.05	0.07	0.003	0.00000275	0.0000507	0.00320	0.00325	0.0102	--	--	--	--
Arsenic (arsenate)	0.9	2.6	0.07	0.05	0.0000247	0.00264	0.00357	0.00624	0.0195	10	40	0.0019	0.00049
Arsenic (arsenite)	0.9	2.6	0.07	0.05	0.0000247	0.00264	0.00357	0.00624	0.0195	20	50	0.0010	0.00039
Barium	48.4	516	51.2	5.63	0.00133	0.523	2.37	2.89	9.04	21	42	0.43	0.22
Cadmium	0.06	0.27	0.199	0.96	0.0000165	0.000274	0.0167	0.0170	0.0531	1.5	20	0.035	0.0027
Chromium	0.72	28	0.4	0.3	0.0000198	0.0284	0.0205	0.0489	0.153	0.86	4.3	0.18	0.036
Cobalt	0.19	8.01	0.25	0.029	0.00000522	0.00812	0.0116	0.0197	0.0616	--	--	--	--
Lead	0.5	10.5	0.37	0.15	0.0000137	0.0106	0.0180	0.0286	0.0895	3.9	11	0.023	0.0081
Mercury	0.05	0.04	0.033	0.09	0.00000137	0.0000406	0.00222	0.00226	0.00706	0.032	0.064	0.22	0.11
Molybdenum	0.22	0.48	0.829	0.324	0.00000605	0.000487	0.0402	0.0407	0.127	3.5	35	0.036	0.0036
Selenium	0.2	0.7	0.05	0.65	0.00000550	0.000710	0.00747	0.00819	0.0256	0.40	0.80	0.064	0.032
Thallium	0.04	0.174	0.004	0.002	0.00000110	0.000176	0.000197	0.000375	0.00117	0.24	24	0.0049	0.00049
Vanadium	2.41	36.5	0.2	0.2	0.0000663	0.0370	0.0107	0.0477	0.149	11	--	0.014	--
Zinc (TRV1)	2.87	88.7	30	214	0.0000789	0.0899	3.07	3.16	9.89	130	--	0.076	--
Zinc (TRV2)	2.87	88.7	30	214	0.0000789	0.0899	3.07	3.16	9.89	70	120	0.14	0.082

Note: The following data were used to develop this scenario: PHASE1RA water data (TP-REF-3); PHASE1RA sediment (TP-REF-3); PHASE2RA sedge seeds; and

PHASE2RA terrestrial invertebrates (TS-REF-5).

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-60. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP-REF-5 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	170	11,700	714	5.6	0.00467	11.9	32.4	44.3	138	120	--	1.2	--
Antimony	0.05	0.03	0.075	0.003	0.00000137	0.0000304	0.00343	0.00346	0.0108	--	--	--	--
Arsenic (arsenate)	0.5	3.1	9.36	0.05	0.0000137	0.00314	0.425	0.428	1.34	10	40	0.13	0.033
Arsenic (arsenite)	0.5	3.1	9.36	0.05	0.0000137	0.00314	0.425	0.428	1.34	20	50	0.067	0.027
Barium	93.5	508	117	5.63	0.00257	0.515	5.35	5.87	18.3	21	42	0.87	0.44
Cadmium	0.05	0.36	0.179	0.96	0.0000137	0.000365	0.0158	0.0162	0.0505	1.5	20	0.034	0.0025
Chromium	1.98	26.1	6.2	0.3	0.0000544	0.0265	0.284	0.310	0.969	0.86	4.3	1.1	0.23
Cobalt	0.7	11.7	4.56	0.029	0.0000192	0.0119	0.207	0.219	0.684	--	--	--	--
Lead	0.56	10.7	1.1	0.15	0.0000154	0.0108	0.0511	0.0620	0.194	3.9	11	0.050	0.018
Mercury	0.05	0.06	0.033	0.09	0.00000137	0.0000608	0.00222	0.00228	0.00712	0.032	0.064	0.22	0.11
Molybdenum	0.05	0.38	0.38	0.324	0.00000137	0.000385	0.0198	0.0202	0.0632	3.5	35	0.018	0.0018
Selenium	0.3	0.6	0.2	0.65	0.00000825	0.000608	0.0143	0.0149	0.0465	0.40	0.80	0.12	0.058
Thallium	0.003	0.139	0.049	0.002	0.000000825	0.000141	0.00224	0.00238	0.00744	0.24	24	0.031	0.00031
Vanadium	0.89	32.5	3.9	0.2	0.0000245	0.0329	0.178	0.211	0.661	11	--	0.060	--
Zinc (TRV1)	5.01	68.2	32	214	0.000138	0.0691	3.16	3.23	10.1	130	--	0.078	--
Zinc (TRV2)	5.01	68.2	32	214	0.000138	0.0691	3.16	3.23	10.1	70	120	0.14	0.084

Note: The following data were used to develop this scenario: PHASE1RA water data (TP-REF-5); PHASE1RA sediment (TP-REF-5); PHASE2RA whole sedge (no seed data available); and

PHASE2RA terrestrial invertebrates (TS-REF-5).

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-60a. Green-winged teal EPC calculation for mean CoPC concentrations at TP-REF-5 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										TP-REF-5 site mean	0.56
Tundra Soil											
PHASE1RA	TP-REF-5	7/20/2003	SD0062	0	0	NA	NA	NA	mg/kg dry		10.7
										TP-REF-5 site mean	10.7
Herbaceous Plant											
PHASE2RA	TP-REF-5	6/24/2004	SE0033	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.1
										TP-REF-5 site mean	1.1
Terrestrial Invertebrates											
PHASE2RA	TS-REF-5	7/5/2004	SI0018	0	0	NA	NA	NA	mg/kg dry		0.15 <i>J</i>
										TP-REF-5 site mean	0.15 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-61. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP1-0100 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	4,290	12.6	136	0.000313	4.35	1.66	6.01	18.8	6.33	36.9	43.2	120	--	0.36	--
Antimony	0.2	9	0.037	0.081	0.0000550	0.00912	0.00233	0.0115	0.0358	0.0121	0.00671	0.0188	--	--	--	--
Arsenic (arsenate)	0.6	7.5	0.03	0.17	0.0000165	0.00760	0.00272	0.0103	0.0323	0.0109	0.0129	0.0238	10	40	0.0024	0.00060
Arsenic (arsenite)	0.6	7.5	0.03	0.17	0.0000165	0.00760	0.00272	0.0103	0.0323	0.0109	0.0129	0.0238	20	50	0.0012	0.00048
Barium	70.3	498	26.2	46.5	0.00193	0.505	1.56	2.07	6.46	2.18	5.96	8.14	21	42	0.39	0.19
Cadmium	0.27	101	0.062	3.14	0.00000742	0.102	0.0279	0.130	0.407	0.137	0.0350	0.172	1.5	20	0.115	0.0086
Chromium	0.44	13	0.4	0.45	0.0000121	0.0132	0.0217	0.0349	0.109	0.0368	0.101	0.138	0.86	4.3	0.16	0.032
Cobalt	0.88	24.1	0.14	0.166	0.0000242	0.0244	0.00767	0.0321	0.100	0.0338	0.0406	0.0745	--	--	--	--
Lead	1.63	1,810	1.6	16.2	0.0000448	1.83	0.202	2.04	6.37	2.15	0.0591	2.20	3.9	11	0.57	0.20
Mercury	0.05	1.1	0.044	0.115	0.00000137	0.00112	0.00292	0.00403	0.0126	0.00425	0.00466	0.00891	0.032	0.064	0.28	0.14
Molybdenum	0.09	2.43	0.159	0.415	0.00000247	0.00246	0.0105	0.0130	0.0406	0.0137	0.0839	0.0976	3.5	35	0.028	0.0028
Selenium	0.2	3	0.05	0.40	0.00000550	0.00304	0.00547	0.00852	0.0266	0.00897	0.0169	0.0259	0.40	0.80	0.065	0.032
Thallium	0.01	1.64	0.001	0.0235	0.000000275	0.00166	0.000233	0.00190	0.00593	0.00200	0.000773	0.00277	0.24	24	0.012	0.00012
Vanadium	0.24	12.2	0.2	0.4	0.00000660	0.0124	0.0123	0.0246	0.0770	0.0260	0.0985	0.124	11	--	0.011	--
Zinc (TRV1)	99	21,900	65	291	0.00272	22.2	5.28	27.5	85.9	28.9	6.52	35.5	130	--	0.27	--
Zinc (TRV2)	99	21,900	65	291	0.00272	22.2	5.28	27.5	85.9	28.9	6.52	35.5	70	120	0.51	0.30

Note: The following data were used to develop this scenario: PHASE1RA water data (TP1-0100); PHASE1RA sediment; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates (TT5-0100).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for teal in pond reference station 3 (Table K-59) multiplied by 0.66.

Table K-62. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP1-1000 site

Analyte	Concentration				Daily Exposure				BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg- day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)					NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	143	4,330	2	19.3	0.00393	4.39	0.245	4.64	14.5	4.89	36.9	41.8	120	--	0.35	--
Antimony	0.09	0.2	0.046	0.019	0.00000247	0.000203	0.00224	0.00244	0.00764	0.00257	0.00671	0.00928	--	--	--	--
Arsenic (arsenate)	0.4	5.1	0.03	0.105	0.0000110	0.00517	0.00220	0.00738	0.0231	0.00777	0.0129	0.0206	10	40	0.0021	0.00052
Arsenic (arsenite)	0.4	5.1	0.03	0.105	0.0000110	0.00517	0.00220	0.00738	0.0231	0.00777	0.0129	0.0206	20	50	0.0010	0.00041
Barium	39.4	281	47.5	5.78	0.00108	0.285	2.20	2.49	7.77	2.62	5.96	8.58	21	42	0.41	0.20
Cadmium	0.06	0.94	0.079	2.53	0.00000165	0.000953	0.0239	0.0248	0.0776	0.0261	0.0350	0.0612	1.5	20	0.041	0.0031
Chromium	1.56	9.71	0.4	0.2	0.0000429	0.00984	0.0197	0.0296	0.0926	0.0312	0.101	0.132	0.86	4.3	0.15	0.031
Cobalt	1.56	22.6	0.7	0.054	0.0000429	0.0229	0.0322	0.0551	0.172	0.0581	0.0406	0.0987	--	--	--	--
Lead	1.06	8.96	0.79	2.79	0.0000291	0.00908	0.0582	0.0673	0.210	0.0708	0.0591	0.130	3.9	11	0.033	0.012
Mercury	0.05	0.06	0.037	0.15	0.00000137	0.0000608	0.00288	0.00294	0.00919	0.00310	0.00466	0.00776	0.032	0.064	0.24	0.12
Molybdenum	0.02	1.17	0.069	0.289	0.000000550	0.00119	0.00544	0.00663	0.0207	0.00698	0.0839	0.0909	3.5	35	0.026	0.0026
Selenium	0.2	1.6	0.05	0.75	0.00000550	0.00162	0.00827	0.00990	0.0309	0.0104	0.0169	0.0273	0.40	0.80	0.068	0.034
Thallium	0.003	0.021	0.001	0.0085	0.0000000825	0.0000213	0.000113	0.000135	0.000421	0.000142	0.000773	0.000915	0.24	24	0.0038	0.000038
Vanadium	0.28	15.1	0.2	0.4	0.00000770	0.0153	0.0123	0.0276	0.0862	0.0291	0.0985	0.128	11	--	0.012	--
Zinc (TRV1)	30.6	162	58.5	302	0.000841	0.164	5.07	5.23	16.3	5.51	6.52	12.0	130	--	0.093	--
Zinc (TRV2)	30.6	162	58.5	302	0.000841	0.164	5.07	5.23	16.3	5.51	6.52	12.0	70	120	0.17	0.10

Note: The following data were used to develop this scenario: PHASE1RA water data (TP1-1000); PHASE1RA sediment; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates (TT5-1000).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for teal in pond reference station 3 (Table K-59) multiplied by 0.66.

Table K-63. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP3 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient		
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
Aluminum	75	1,920	10.6	79.8	0.00206	1.95	1.12	3.07	9.59	3.23	36.9	40.1	120	--	--	0.34	--
Antimony	0.03	0.26	0.5	0.018	0.00000825	0.000264	0.0228	0.0231	0.0721	0.0243	0.00671	0.0310	--	--	--	--	--
Arsenic (arsenate)	0.5	3.5	0.04	0.14	0.0000137	0.00355	0.00293	0.00650	0.0203	0.00684	0.0129	0.0197	10	40	0.0020	0.00049	
Arsenic (arsenite)	0.5	3.5	0.04	0.14	0.0000137	0.00355	0.00293	0.00650	0.0203	0.00684	0.0129	0.0197	20	50	0.00099	0.00040	
Barium	46.8	388	44.3	29.9	0.00129	0.393	2.25	2.64	8.26	2.78	5.96	8.75	21	42	0.42	0.21	
Cadmium	0.02	1.91	0.143	4.51	0.00000550	0.00194	0.0426	0.0445	0.139	0.0469	0.0350	0.0819	1.5	20	0.055	0.0041	
Chromium	1.6	9.42	0.2	0.3	0.0000440	0.00955	0.0115	0.0211	0.0658	0.0222	0.101	0.123	0.86	4.3	0.14	0.029	
Cobalt	0.13	7.56	0.426	0.161	0.00000357	0.00766	0.0206	0.0283	0.0884	0.0298	0.0406	0.0704	--	--	--	--	
Lead	0.44	93.2	0.49	3.08	0.0000121	0.0945	0.0469	0.141	0.442	0.149	0.0591	0.208	3.9	11	0.053	0.019	
Mercury	0.05	0.11	0.04	0.24	0.00000137	0.000112	0.00374	0.00385	0.0120	0.00405	0.00466	0.00871	0.032	0.064	0.27	0.136	
Molybdenum	0.05	2	1.49	0.225	0.00000137	0.00203	0.0694	0.0714	0.223	0.0752	0.0839	0.159	3.5	35	0.046	0.0046	
Selenium	0.2	0.75	0.1	0.2	0.00000550	0.000760	0.00614	0.00690	0.0216	0.00727	0.0169	0.0242	0.40	0.80	0.061	0.030	
Thallium	0.003	0.023	0.001	0.019	0.000000825	0.0000233	0.000197	0.000221	0.000690	0.000233	0.000773	0.00101	0.24	24	0.0042	0.000042	
Vanadium	0.31	28.3	0.3	0.2	0.00000852	0.0287	0.0152	0.0439	0.137	0.0462	0.0985	0.145	11	--	0.013	--	
Zinc (TRV1)	6.08	288	57.2	235	0.000167	0.292	4.48	4.77	14.9	5.02	6.52	11.5	130	--	0.089	--	
Zinc (TRV2)	6.08	288	57.2	235	0.000167	0.292	4.48	4.77	14.9	5.02	6.52	11.5	70	120	0.17	0.096	

Note: The following data were used to develop this scenario: PHASE1RA water data (TP2-0100); PHASE1RA sediment; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates (TT3-0100).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for teal in pond reference station 3 (Table K-59) multiplied by 0.66.

Table K-63a. Green-winged teal EPC calculation for mean CoPC concentrations at TP3 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
										TP3 site mean	0.44
Tundra Soil											
PHASE1RA	TP2-0100	7/19/2003	SD0060	0	0	NA	NA	NA	mg/kg dry		93.2
										TP3 site mean	93.2
Herbaceous Plant											
PHASE2RA	TP3	6/20/2004	SE0019	0	0	<i>Carex</i>	<i>aquatilis</i>	Seeds	mg/kg dry		0.49
										TP3 site mean	0.49
Terrestrial Invertebrates											
PHASE2RA	TT3-0100	ECO-R	7/1/2004	SI0015	0	NA	NA	NA	mg/kg dry		3.08 <i>J</i>
										TP3 site mean	3.08 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-64. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at TP4 site

Analyte	Concentration				Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/		Invert. (mg/kg dw)	Water (mg/day)	Soil/		Food (mg/day)					NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)			Sediment (mg/day)	Food (mg/day)									
Aluminum	75	1,920	17.1	78.3	0.00206	1.95	1.40	3.35	10.5	3.53	36.9	40.4	120	--	0.34	--
Antimony	0.03	0.26	1.44	0.027	0.00000825	0.000264	0.0655	0.0658	0.206	0.0693	0.00671	0.0760	--	--	--	--
Arsenic (arsenate)	0.5	3.5	0.09	0.13	0.0000137	0.00355	0.00512	0.00868	0.0271	0.00915	0.0129	0.0220	10	40	0.0022	0.00055
Arsenic (arsenite)	0.5	3.5	0.09	0.13	0.0000137	0.00355	0.00512	0.00868	0.0271	0.00915	0.0129	0.0220	20	50	0.0011	0.00044
Barium	46.8	388	49.9	108	0.00129	0.393	3.13	3.52	11.0	3.71	5.96	9.67	21	42	0.46	0.23
Cadmium	0.02	1.91	0.043	13	0.00000550	0.00194	0.106	0.108	0.337	0.114	0.0350	0.149	1.5	20	0.099	0.0074
Chromium	1.6	9.42	0.65	0.3	0.0000440	0.00955	0.0319	0.0415	0.130	0.0437	0.101	0.145	0.86	4.3	0.17	0.034
Cobalt	0.13	7.56	0.497	0.087	0.00000357	0.00766	0.0232	0.0309	0.0966	0.0325	0.0406	0.0732	--	--	--	--
Lead	0.44	93.2	0.89	10.1	0.0000121	0.0945	0.121	0.216	0.674	0.227	0.0591	0.286	3.9	11	0.073	0.026
Mercury	0.05	0.11	0.05	0.12	0.00000137	0.000112	0.00323	0.00334	0.0104	0.00352	0.00466	0.00818	0.032	0.064	0.26	0.13
Molybdenum	0.05	2	0.182	0.335	0.00000137	0.00203	0.0109	0.0130	0.0405	0.0137	0.0839	0.0976	3.5	35	0.028	0.0028
Selenium	0.2	0.75	0.3	0.2	0.00000550	0.000760	0.0152	0.0160	0.0499	0.0168	0.0169	0.0337	0.40	0.80	0.084	0.042
Thallium	0.003	0.023	0.003	0.02	0.000000825	0.0000233	0.000296	0.000320	0.00100	0.000336	0.000773	0.00111	0.24	24	0.0046	0.000046
Vanadium	0.31	28.3	0.7	0.2	0.00000852	0.0287	0.0333	0.0620	0.194	0.0653	0.0985	0.164	11	--	0.015	--
Zinc (TRV1)	6.08	288	59.6	310	0.000167	0.292	5.18	5.48	17.1	5.77	6.52	12.3	130	--	0.095	--
Zinc (TRV2)	6.08	288	59.6	310	0.000167	0.292	5.18	5.48	17.1	5.77	6.52	12.3	70	120	0.18	0.10

Note: The following data were used to develop this scenario: PHASE1RA water data (TP2-0100); PHASE1RA sediment; PHASE2RA sedge seeds; and PHASE2RA terrestrial invertebrates (TT6-0100).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for teal in pond reference station 3 (Table K-59) multiplied by 0.66.

Table K-65. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at ST-REF-3 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	17.3	3,620	5.6	5.6	0.000476	3.67	0.299	3.97	12.4	120	--	0.10	--
Antimony	0.01	0.03	0.055	0.003	0.00000275	0.0000304	0.00252	0.00255	0.00797	--	--	--	--
Arsenic (arsenate)	0.1	8.1	0.26	0.05	0.00000275	0.00821	0.0122	0.0204	0.0638	10	40	0.0064	0.0016
Arsenic (arsenite)	0.1	8.1	0.26	0.05	0.00000275	0.00821	0.0122	0.0204	0.0638	20	50	0.0032	0.0013
Barium	169	177	30.2	5.63	0.00465	0.179	1.41	1.60	5.00	21	42	0.24	0.12
Cadmium	0.005	0.245	0.04	0.696	0.00000137	0.000248	0.00738	0.00763	0.0239	1.5	20	0.016	0.0012
Chromium	0.25	7.22	0.3	0.3	0.00000687	0.00732	0.0160	0.0233	0.0729	0.86	4.3	0.085	0.017
Cobalt	0.22	11	0.71	0.029	0.00000605	0.0112	0.0324	0.0436	0.136	--	--	--	--
Lead	0.02	9.50	0.17	8.14	0.00000550	0.00963	0.0729	0.0825	0.258	3.9	11	0.066	0.023
Mercury	0.05	0.022	0.039	0.07	0.00000137	0.0000218	0.00233	0.00235	0.00735	0.032	0.064	0.23	0.11
Molybdenum	0.05	0.52	0.3	0.324	0.00000137	0.000527	0.0162	0.0167	0.0523	3.5	35	0.015	0.0015
Selenium	0.2	0.5	0.2	0.65	0.00000550	0.000507	0.0143	0.0148	0.0462	0.40	0.80	0.12	0.058
Thallium	0.003	0.041	0.002	0.002	0.000000825	0.0000416	0.000107	0.000148	0.000464	0.24	24	0.0019	0.000019
Vanadium	0.2	10.7	0.3	0.2	0.00000550	0.0108	0.0152	0.0261	0.0814	11	--	0.0074	--
Zinc (TRV1)	0.31	66.9	40.3	137	0.00000852	0.0678	2.92	2.99	9.35	130	--	0.072	--
Zinc (TRV2)	0.31	66.9	40.3	137	0.00000852	0.0678	2.92	2.99	9.35	70	120	0.13	0.078

Note: The following data were used to develop this scenario: PHASE1RA water data (sedge ST-REF-1); PHASE1RA sediment (ST-REF-3); PHASE2RA sediment for Cd, Pb, Hg, Zn; PHASE2RA sedge seeds; PHASE2RA stream invertebrates for Cd, Pb, Hg, Zn (ST-REF-3); and PHASE2RA terrestrial invertebrates for Al, As, Ba, Cr, Co, Mo, Se, Ti, V (TS-REF-5).

Mean of PHASE1RA and PHASE2RA sediment data used. No water data available for ST-REF-3, so data from closest stream, ST-REF-1, used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-66. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at ST-REF-5 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	2,770	12,100	5.4	5.6	0.0762	12.3			0.290	12.6	39.5	120
Antimony	0.08	0.05	0.04	0.003	0.0000220	0.0000507	0.00184	0.00189	0.00591	--	--	--	--
Arsenic (arsenate)	2.2	3.5	0.09	0.05	0.0000605	0.00355	0.00448	0.00809	0.0253	10	40	0.0025	0.00063
Arsenic (arsenite)	2.2	3.5	0.09	0.05	0.0000605	0.00355	0.00448	0.00809	0.0253	20	50	0.0013	0.00051
Barium	222	483	46.9	5.63	0.00610	0.490	2.17	2.67	8.34	21	42	0.40	0.20
Cadmium	0.07	0.3	0.071	0.96	0.0000192	0.000304	0.0109	0.0112	0.0350	1.5	20	0.023	0.0018
Chromium	3.71	19.9	0.2	0.3	0.000102	0.0202	0.0115	0.0317	0.0992	0.86	4.3	0.12	0.023
Cobalt	2.72	8.74	0.42	0.029	0.0000748	0.00886	0.0193	0.0282	0.0882	--	--	--	--
Lead	1.91	8.87	0.21	0.15	0.0000525	0.00899	0.0107	0.0198	0.0618	3.9	11	0.016	0.0056
Mercury	0.05	0.04	0.031	0.09	0.00000137	0.0000406	0.00213	0.00217	0.00678	0.032	0.064	0.21	0.11
Molybdenum	0.17	0.3	0.506	0.324	0.00000467	0.000304	0.0255	0.0259	0.0808	3.5	35	0.023	0.0023
Selenium	0.2	0.7	0.05	0.65	0.00000550	0.000710	0.00747	0.00819	0.0256	0.40	0.80	0.064	0.032
Thallium	0.014	0.07	0.003	0.002	0.000000385	0.0000710	0.000152	0.000223	0.000698	0.24	24	0.0029	0.000029
Vanadium	5.57	24.8	0.3	0.2	0.000153	0.0251	0.0152	0.0405	0.127	11	--	0.012	--
Zinc (TRV1)	9.84	68.1	31.7	214	0.000271	0.0690	3.15	3.22	10.1	130	--	0.077	--
Zinc (TRV2)	9.84	68.1	31.7	214	0.000271	0.0690	3.15	3.22	10.1	70	120	0.14	0.084

Note: The following data were used to develop this scenario: PHASE1RA water data (ST-REF-5); PHASE1RA sediment (ST-REF-5); PHASE2RA sedge seeds; and

PHASE2RA terrestrial invertebrates (TS-REF-5).

No PHASE2RA sediment data collected.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-67. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at ST-REF-6 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	2,770	12,100	396	5.6	0.0762	12.3	18.0	30.3	94.8	120	--	0.79	--
Antimony	0.08	0.05	0.05	0.003	0.00000220	0.0000507	0.00229	0.00234	0.00733	--	--	--	--
Arsenic (arsenate)	2.2	3.5	1.08	0.05	0.0000605	0.00355	0.0494	0.0530	0.166	10	40	0.017	0.0041
Arsenic (arsenite)	2.2	3.5	1.08	0.05	0.0000605	0.00355	0.0494	0.0530	0.166	20	50	0.0083	0.0033
Barium	222	483	64	5.63	0.00610	0.490	2.95	3.44	10.8	21	42	0.51	0.26
Cadmium	0.07	0.19	0.057	0.347	0.00000192	0.000193	0.00536	0.00556	0.0174	1.5	20	0.012	0.00087
Chromium	3.71	19.9	4.1	0.3	0.000102	0.0202	0.188	0.209	0.652	0.86	4.3	0.76	0.15
Cobalt	2.72	8.74	1.62	0.029	0.0000748	0.00886	0.0737	0.0826	0.258	--	--	--	--
Lead	1.91	5.71	0.74	2.73	0.0000525	0.00579	0.0554	0.0613	0.191	3.9	11	0.049	0.017
Mercury	0.05	0.003	0.025	0.14	0.00000137	0.00000304	0.00225	0.00226	0.00706	0.032	0.064	0.22	0.11
Molybdenum	0.17	0.3	0.147	0.324	0.00000467	0.000304	0.00926	0.00957	0.0299	3.5	35	0.0085	0.00085
Selenium	0.2	0.7	0.2	0.65	0.00000550	0.000710	0.0143	0.0150	0.0468	0.40	0.80	0.12	0.059
Thallium	0.014	0.07	0.009	0.002	0.000000385	0.0000710	0.000424	0.000496	0.00155	0.24	24	0.0065	0.000065
Vanadium	5.57	24.8	0.85	0.2	0.000153	0.0251	0.0402	0.0654	0.205	11	--	0.019	--
Zinc (TRV1)	9.84	33.1	30	91.3	0.000271	0.0336	2.09	2.13	6.64	130	--	0.051	--
Zinc (TRV2)	9.84	33.1	30	91.3	0.000271	0.0336	2.09	2.13	6.64	70	120	0.095	0.055

Note: The following data were used to develop this scenario: PHASE1RA water data (ST-REF-5); PHASE1RA sediment for Al, As, Ba, Cr, Co, Mo, Se, Ti, V (ST-REF-5); PHASE2RA sediment for Cd, Pb, Hg, Zn (ST-REF-6); PHASE2RA whole sedge (no seed data available); PHASE2RA stream invertebrates for Cd, Pb, Hg, Zn (ST-REF-6); and PHASE2RA terrestrial invertebrates for Al, As, Ba, Cr, Co, Mo, Se, Ti, V (TS-REF-5).
No sediment or water data collected at ST-REF-6 during PHASE1RA, so data from closest stream (ST-REF-5) was used.
Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-67a. Green-winged teal EPC calculation for mean CoPC concentrations at ST-REF-6 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	μg/L unfiltered		1.91
										ST-REF-6 site mean	1.91
Tundra Soil											
PHASE2RA	ST-REF-6	7/5/2004	SD0011	0	0	NA	NA	NA	mg/kg dry		5.71
										ST-REF-6 site mean	5.71
Herbaceous Plant											
PHASE2RA	ST-REF-6	6/24/2004	SE0039	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.74
										ST-REF-6 site mean	0.74
Stream Invertebrates											
PHASE2RA	ST-REF-6	7/1/2004	BT0008	0	0	NA	NA	NA	mg/kg dry		2.73 <i>J</i>
										ST-REF-6 site mean	2.73 <i>J</i>

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-68. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at Omikviorok River road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	96.3	9,520	163	151	0.00265	9.65						8.60	18.3	57.0	19.2
Antimony	0.063	0.14	0.047	0.037	0.00000173	0.000142	0.00243	0.00257	0.00804	0.00271	0.00390	0.00661	--	--	--	--
Arsenic (arsenate)	0.482	7.6	0.23	0.25	0.0000133	0.00770	0.0124	0.0202	0.0630	0.0212	0.0167	0.0379	10	40	0.0038	0.00095
Arsenic (arsenite)	0.482	7.6	0.23	0.25	0.0000133	0.00770	0.0124	0.0202	0.0630	0.0212	0.0167	0.0379	20	50	0.0019	0.00076
Barium	133	407	74	71.8	0.00366	0.413	3.93	4.35	13.6	4.58	5.50	10.1	21	42	0.48	0.24
Cadmium	0.0849	0.44	0.137	0.365	0.00000234	0.000441	0.00913	0.00958	0.0299	0.0101	0.0231	0.0332	1.5	20	0.022	0.0017
Chromium	0.396	20.6	0.6	0.3	0.0000109	0.0209	0.0296	0.0505	0.158	0.0532	0.0655	0.119	0.86	4.3	0.14	0.028
Cobalt	0.1	13.5	0.39	0.134	0.00000275	0.0137	0.0188	0.0324	0.101	0.0342	0.0582	0.0924	--	--	--	--
Lead	0.506	22.5	2.6	5.16	0.0000139	0.0228	0.159	0.182	0.569	0.192	0.0408	0.232	3.9	11	0.060	0.021
Mercury	0.0179	0.0315	0.041	0.08	0.000000492	0.0000319	0.00250	0.00253	0.00791	0.00267	0.00447	0.00714	0.032	0.064	0.22	0.11
Molybdenum	0.69	0.49	0.202	0.274	0.0000190	0.000497	0.0114	0.0119	0.0371	0.0125	0.0533	0.0658	3.5	35	0.019	0.0019
Selenium	0.0201	0.6	0.1	0.2	0.000000553	0.000608	0.00614	0.00674	0.0211	0.00710	0.0169	0.0240	0.40	0.80	0.060	0.030
Thallium	0.0428	0.106	0.005	0.014	0.00000118	0.000107	0.000339	0.000447	0.00140	0.000471	0.000461	0.000932	0.24	24	0.0039	0.00039
Vanadium	0.335	24.9	0.5	0.49	0.00000921	0.0252	0.0266	0.0519	0.162	0.0546	0.0835	0.138	11	--	0.013	--
Zinc (TRV1)	6.46	108	57.1	79	0.000178	0.109	3.22	3.33	10.4	3.51	6.64	10.1	130	--	0.078	--
Zinc (TRV2)	6.46	108	57.1	79	0.000178	0.109	3.22	3.33	10.4	3.51	6.64	10.1	70	120	0.15	0.085

Note: The following data were used to develop this scenario: TECK03 water (mean of OmiRoad); PHASE1RA sediment; PHASE2RA sediment for Cd, Pb, Hg, Zn; PHASE2RA sedge seeds;

PHASE2RA stream invertebrates for Cd, Pb, Hg, Zn; and PHASE2RA terrestrial invertebrates for Al, As, Ba, Cr, Co, Mo, Se, Ti, V (TT3-0010).

Mean of PHASE1RA and PHASE2RA sediment data used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for teal in stream reference station 5 (Table K-66) multiplied by 0.66.

Table K-69. Food-web model exposure results for green-winged teal exposed to CoPC concentrations at Anxiety Ridge Creek road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	Time Use Adjusted Exposure (mg/kg-day)	Ref. Time Use Adjusted Exp. (mg/kg-day) ^a	Total Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Invert. (mg/kg dw)	Water (mg/day)	Soil/ Sediment (mg/day)	Food (mg/day)						NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	208	7,200	307	58	0.00572	7.30						14.4	21.7	67.8	22.8
Antimony	0.063	0.42	0.04	0.017	0.00000173	0.000426	0.00195	0.00238	0.00743	0.00250	0.00390	0.00640	--	--	--	--
Arsenic (arsenate)	0.482	8.4	1.13	0.12	0.0000133	0.00852	0.0522	0.0607	0.190	0.0640	0.0167	0.0807	10	40	0.0081	0.0020
Arsenic (arsenite)	0.482	8.4	1.13	0.12	0.0000133	0.00852	0.0522	0.0607	0.190	0.0640	0.0167	0.0807	20	50	0.0040	0.0016
Barium	140	922	250	52.5	0.00385	0.935	11.8	12.7	39.7	13.4	5.50	18.9	21	42	0.90	0.45
Cadmium	0.0365	1.02	0.638	0.803	0.00000100	0.00103	0.0354	0.0364	0.114	0.0383	0.0231	0.0614	1.5	20	0.041	0.0031
Chromium	0.396	14.6	3.1	0.3	0.0000109	0.0148	0.143	0.158	0.493	0.166	0.0655	0.232	0.86	4.3	0.27	0.054
Cobalt	0.015	11.1	0.92	0.07	0.000000412	0.0113	0.0423	0.0535	0.167	0.0564	0.0582	0.115	--	--	--	--
Lead	0.65	124	14.3	10.9	0.0000179	0.125	0.736	0.861	2.69	0.907	0.0408	0.948	3.9	11	0.24	0.086
Mercury	0.0179	0.06	0.06	0.04	0.000000492	0.0000634	0.00304	0.00311	0.00970	0.00327	0.00447	0.00774	0.032	0.064	0.24	0.12
Molybdenum	0.22	1.62	0.309	0.229	0.00000605	0.00164	0.0158	0.0175	0.0547	0.0184	0.0533	0.0717	3.5	35	0.021	0.0021
Selenium	0.355	1.5	0.3	0.2	0.00000976	0.00152	0.0152	0.0167	0.0523	0.0176	0.0169	0.0345	0.40	0.80	0.086	0.043
Thallium	0.09	0.19	0.027	0.015	0.00000247	0.000193	0.00134	0.00154	0.00481	0.00162	0.000461	0.00208	0.24	24	0.0087	0.000087
Vanadium	0.335	20.5	0.7	0.2	0.00000921	0.0208	0.0333	0.0541	0.169	0.0570	0.0835	0.141	11	--	0.013	--
Zinc (TRV1)	1.79	204	87.4	96.2	0.0000492	0.206	4.73	4.94	15.4	5.20	6.64	11.8	130	--	0.091	--
Zinc (TRV2)	1.79	204	87.4	96.2	0.0000492	0.206	4.73	4.94	15.4	5.20	6.64	11.8	70	120	0.17	0.099

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA sediment (ARC-D1); PHASE2RA sediment (Cd, Pb, Hg, Zn at ARC-R); PHASE2RA whole sedge (no seed data available);

PHASE2RA stream invertebrates for Cd, Pb, Hg, Zn; and PHASE2RA terrestrial invertebrates for Al, As, Ba, Cr, Co, Mo, Se, Ti, V (TT6-0010).

Mean for Anxiety Ridge Creek road station, except PHASE1RA sediment and water from downstream location. Mean of PHASE1RA (ARC_D1) and PHASE2RA (ARC-R) sediment data used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

^a Based on mean daily exposure for teal in stream reference station 5 (Table K-66) multiplied by 0.66.

Table K-69a. Green-winged teal EPC calculation for mean CoPC concentrations at Anxiety Ridge Creek road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
										Anxiety Ridge Creek road site mean	0.65 <i>J</i>
Tundra Soil											
PHASE1RA	ARC-D1	7/22/2003	SD0072	0	0	NA	NA	NA	mg/kg dry		130
PHASE2RA	ARC-R	7/5/2004	SD0008	0	0	NA	NA	NA	mg/kg dry		117
										Anxiety Ridge Creek road site mean	124
Herbaceous Plant											
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		14.3
										Anxiety Ridge Creek road site mean	14.3
Stream Invertebrates											
PHASE2RA	ARC-R	6/27/2004	BT0001	0	0	NA	NA	NA	mg/kg dry		10.9 <i>J</i>
										Anxiety Ridge Creek road site mean	10.9 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-70. Food-web model exposure results for snowy owl exposed to mean CoPC concentrations at reference site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammal (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	514	3,650	22.6	0.0527	7.48	2.31	9.84	4.32	120	--	0.036	--
Antimony	0.045	0.208	0.004	0.00000461	0.000425	0.000410	0.000839	0.000368	--	--	--	--
Arsenic (arsenate)	0.717	3.61	0.118	0.0000734	0.00740	0.0120	0.0195	0.00855	10	40	0.00086	0.00021
Arsenic (arsenite)	0.717	3.61	0.118	0.0000734	0.00740	0.0120	0.0195	0.00855	20	50	0.00043	0.00017
Barium	125	346	45.4	0.0128	0.708	4.64	5.36	2.35	21	42	0.11	0.056
Cadmium	0.0333	0.379	0.326	0.00000342	0.000777	0.0333	0.0341	0.0150	1.5	20	0.010	0.00075
Chromium	1.17	6.76	0.975	0.000120	0.0139	0.0998	0.114	0.0499	0.86	4.3	0.058	0.012
Cobalt	0.693	7.97	0.177	0.0000710	0.0163	0.0182	0.0345	0.0151	--	--	--	--
Lead	0.512	10.2	4.64	0.0000524	0.0210	0.475	0.496	0.217	3.9	11	0.056	0.020
Mercury	0.05	0.0935	0.0288	0.00000512	0.000192	0.00294	0.00314	0.00138	0.032	0.064	0.043	0.022
Molybdenum	0.0883	0.689	0.457	0.00000905	0.00141	0.0468	0.0482	0.0212	3.5	35	0.0060	0.00060
Selenium	0.267	0.594	0.825	0.0000273	0.00122	0.0845	0.0857	0.0376	0.40	0.80	0.094	0.047
Thallium	0.011	0.0769	0.00625	0.00000113	0.000158	0.000640	0.000799	0.000350	0.24	24	0.0015	0.000015
Vanadium	1.57	14.5	0.4	0.000161	0.0296	0.0410	0.0707	0.0310	11	--	0.0028	--
Zinc (TRV1)	3.16	60.8	110	0.000324	0.125	11.3	11.4	5.01	130	--	0.039	--
Zinc (TRV2)	3.16	60.8	110	0.000324	0.125	11.3	11.4	5.01	70	120	0.072	0.042

Note: Data used to develop this scenario are presented in Table K-70a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-70a. Snowy owl EPC calculation for mean and 95% UCL CoPC concentrations at reference site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
PHASE1RA	ST-REF-4	7/20/2003	SW0037	0	0	NA	NA	NA	µg/L unfiltered		0.02
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
PHASE1RA	TP-REF-2	7/20/2003	SW0038	0	0	NA	NA	NA	µg/L unfiltered		0.06
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										reference site mean	0.512 <i>J</i>
										reference site 95% UCL	1.91
Tundra Soil											
PHASE2RA	ST-REF-3	6/26/04	TS-0036	0	0	NA	NA	NA	mg/kg dry		15.3
PHASE2RA	ST-REF-5	6/24/04	TS-0031	0	0	NA	NA	NA	mg/kg dry		10.7
PHASE2RA	ST-REF-6	6/24/04	TS-0033	0	0	NA	NA	NA	mg/kg dry		9.81
PHASE2RA	TP-REF-2	6/24/04	TS-0032	0	0	NA	NA	NA	mg/kg dry		23.6
PHASE2RA	TP-REF-3	6/23/04	TS-0027	0	0	NA	NA	NA	mg/kg dry		12.8
PHASE2RA	TP-REF-5	6/24/04	TS-0030	0	0	NA	NA	NA	mg/kg dry		9.1
PHASE1RA	TS-REF-1	07/20/03	TS0024	0	0	NA	NA	NA	mg/kg dry		5.97 <i>J</i>
PHASE1RA	TS-REF2	07/20/03	TS0023	0	0	NA	NA	NA	mg/kg dry		5 <i>J</i>
PHASE1RA	TS-REF3	07/20/03	TS0022	0	0	NA	NA	NA	mg/kg dry		3.78 <i>J</i>
PHASE1RA	TS-REF-4	07/20/03	TS0021	0	0	NA	NA	NA	mg/kg dry		6.61
PHASE1RA	TS-REF-5	07/20/03	TS0020	0	0	NA	NA	NA	mg/kg dry	23.3	
PHASE2RA	TS-REF-5	06/23/04	TS-0028	0	0	NA	NA	NA	mg/kg dry	3.58	
										survey station mean	13.4
PHASE1RA	TS-REF-6	07/20/03	TS0019	0	0	NA	NA	NA	mg/kg dry		9.87 <i>J</i>
PHASE1RA	TS-REF-7	07/20/03	TS0018	0	0	NA	NA	NA	mg/kg dry	6.26	<i>J</i>
PHASE2RA	TS-REF-7	06/24/04	TS-0029	0	0	NA	NA	NA	mg/kg dry	7.5	
										survey station mean	6.9 <i>J</i>
PHASE1RA	TS-REF-8	07/20/03	TS0031	0	0	NA	NA	NA	mg/kg dry		18.5 <i>J</i>
PHASE1RA	TS-REF-9	07/20/03	TS0030	0	0	NA	NA	NA	mg/kg dry		2.9 <i>J</i>
PHASE1RA	TS-REF10	07/20/03	TS0017	0	0	NA	NA	NA	mg/kg dry		7.23 <i>J</i>
PHASE2RA	TS-REF11	06/25/04	TS-0034	0	0	NA	NA	NA	mg/kg dry		12.7
										reference site mean	10.2 <i>J</i>
										reference site 95% UCL	12.5

Table K-70a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Small Mammals											
PHASE2RA	TS-REF-5	7/2/2004	SM0017	0	0	NA	NA	NA	mg/kg dry		0.788
PHASE2RA	TS-REF-5	8/1/2004	SM0021	0	0	NA	NA	NA	mg/kg dry		1.33
PHASE2RA	TS-REF-5	8/1/2004	SM0022	0	0	NA	NA	NA	mg/kg dry		15.9
PHASE2RA	TS-REF-5	8/1/2004	SM0023	0	0	NA	NA	NA	mg/kg dry		0.524
										reference site mean	4.64
										reference site 95% UCL	15.9

Note: Tundra soil are averaged by survey station, then included in the calculation of the site mean.
 95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern
 EPC - exposure point concentration
 J - estimated value

Table K-71. Food-web model exposure results for snowy owl exposed to 95%UCL CoPC concentrations at reference site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammal (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	2,770 ^a	5,590	78.4 ^a	0.284	11.5	8.03	19.8	8.67	120	--	0.072	--
Antimony	0.0765	0.241	0.00635	0.00000784	0.000495	0.000651	0.00115	0.000506	--	--	--	--
Arsenic (arsenate)	1.36	5.31	0.14 ^a	0.000140	0.0109	0.0143	0.0253	0.0111	10	40	0.0011	0.00028
Arsenic (arsenite)	1.36	5.31	0.14 ^a	0.000140	0.0109	0.0143	0.0253	0.0111	20	50	0.00056	0.00022
Barium	177	417	55.7 ^a	0.0181	0.854	5.70	6.58	2.88	21	42	0.14	0.069
Cadmium	0.058	0.477	0.73	0.00000594	0.000976	0.0747	0.0757	0.0332	1.5	20	0.022	0.0017
Chromium	3.71 ^a	11.8	1.63	0.000380	0.0242	0.167	0.191	0.0840	0.86	4.3	0.098	0.020
Cobalt	1.79	11.3	0.201	0.000183	0.0232	0.0206	0.0440	0.0193	--	--	--	--
Lead	1.91 ^a	12.5	15.9 ^a	0.000196	0.0257	1.63	1.65	0.725	3.9	11	0.19	0.066
Mercury	0.05 ^a	0.109	0.039 ^a	0.00000512	0.000223	0.00399	0.00422	0.00185	0.032	0.064	0.058	0.029
Molybdenum	0.158	0.881	0.605	0.0000162	0.00180	0.0619	0.0637	0.0280	3.5	35	0.0080	0.00080
Selenium	0.366	0.693	1.1 ^a	0.0000375	0.00142	0.113	0.114	0.0500	0.40	0.80	0.13	0.063
Thallium	0.04 ^a	0.0919	0.007 ^a	0.00000410	0.000188	0.000717	0.000909	0.000399	0.24	24	0.0017	0.000017
Vanadium	5.57 ^a	19	0.4 ^a	0.000571	0.0388	0.0410	0.0804	0.0353	11	--	0.0032	--
Zinc (TRV1)	6.26	68.4	120	0.000641	0.140	12.2	12.4	5.43	130	--	0.042	--
Zinc (TRV2)	6.26	68.4	120	0.000641	0.140	12.2	12.4	5.43	70	120	0.078	0.045

Note: Data used to develop this scenario are presented in Table K-70a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-72. Food-web model exposure results for snowy owl exposed to mean CoPC concentrations at port site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammal (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	35.5	5,610	474	0.00364	11.5	48.5	60.0	26.3	120	--	0.22	--
Antimony	0.307	5.83	0.0308	0.0000314	0.0119	0.00316	0.0151	0.00664	--	--	--	--
Arsenic (arsenate)	0.494	16.7	0.125	0.0000506	0.0341	0.0128	0.0470	0.0206	10	40	0.0021	0.00052
Arsenic (arsenite)	0.494	16.7	0.125	0.0000506	0.0341	0.0128	0.0470	0.0206	20	50	0.0010	0.00041
Barium	44.8	597	43.2	0.00459	1.22	4.42	5.65	2.48	21	42	0.12	0.059
Cadmium	0.12	15.1	0.271	0.0000123	0.0309	0.0278	0.0587	0.0257	1.5	20	0.017	0.0013
Chromium	0.799	11.1	2.72	0.0000818	0.0227	0.279	0.302	0.132	0.86	4.3	0.15	0.031
Cobalt	0.903	11.4	0.264	0.0000926	0.0234	0.0270	0.0505	0.0222	--	--	--	--
Lead	0.462	792	11.6	0.0000474	1.62	1.19	2.81	1.23	3.9	11	0.32	0.11
Mercury	0.0393	0.779	0.0298	0.00000403	0.00160	0.00306	0.00466	0.00204	0.032	0.064	0.064	0.032
Molybdenum	0.793	1.41	0.708	0.0000813	0.00288	0.0725	0.0754	0.0331	3.5	35	0.0095	0.00095
Selenium	0.523	7.71	0.308	0.0000536	0.0158	0.0315	0.0474	0.0208	0.40	0.80	0.052	0.026
Thallium	0.0095	0.354	0.0115	0.000000973	0.000726	0.00117	0.00190	0.000833	0.24	24	0.0035	0.000035
Vanadium	0.285	14.1	0.462	0.0000292	0.0289	0.0473	0.0762	0.0334	11	--	0.0030	--
Zinc (TRV1)	22.2	2490	124	0.00228	5.11	12.7	17.8	7.79	130	--	0.060	--
Zinc (TRV2)	22.2	2490	124	0.00228	5.11	12.7	17.8	7.79	70	120	0.11	0.065

Note: Data used to develop this scenario are presented in Table K-72a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-72a. Snowy owl EPC calculation for mean and 95% UCL CoPC concentrations at port site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										port site mean	0.462
										port site 95% UCL	1.63
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-0W-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 <i>U</i>
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	<i>U</i>
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 <i>U</i>
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 <i>U</i>
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 <i>U</i>
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 <i>U</i>
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 <i>UU</i>
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346	
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299	
field rep average											
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		323
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	<i>U</i>
field rep average											
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		13
field rep average											
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 <i>UU</i>

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	
				Replicate	Subsample					calculation	Lead Concentration
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>UJ</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
field rep average											69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
field rep average											121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
field rep average											283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
field rep average											132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate	Lead Concentration
				Replicate	Subsample					calculation	
PSCHAR	ROT4-0NA	7/4/2002	ROT4-0NA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-0SA	7/4/2002	ROT4-0SA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
field rep average											1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-0NA	7/4/2002	ROT5-0NA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-0SA	7/4/2002	ROT5-0SA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-0NA	7/4/2002	ROT6-0NA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-0SA	7/4/2002	ROT6-0SA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	<i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	<i>J</i>
survey station mean											759
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											414

Table K-72a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	<i>J</i>
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.8 <i>J</i>
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
port site mean											792 <i>J</i>
port site 95% UCL											2,100
Small Mammals											
PHASE2RA	TT2-0100	6/17/2004	SM0010	0	0	NA	NA	NA	mg/kg dry		4.18
PHASE2RA	TT2-0100	6/18/2004	SM0012	0	0	NA	NA	NA	mg/kg dry		3.89
PHASE2RA	TT2-0100	6/18/2004	SM0013	0	0	NA	NA	NA	mg/kg dry		4.25
PHASE2RA	TT2-1000	6/17/2004	SM0011	0	0	NA	NA	NA	mg/kg dry		1.18
PHASE2RA	TT5-1000	6/14/2004	SM0001	0	0	NA	NA	NA	mg/kg dry		6.84
PHASE2RA	TT5-1000	6/15/2004	SM0003	0	0	NA	NA	NA	mg/kg dry		15.5
PHASE2RA	TT5-1000	6/16/2004	SM0007	0	0	NA	NA	NA	mg/kg dry		7.86
PHASE2RA	TT5-2000	6/13/2004	SM0006	0	0	NA	NA	NA	mg/kg dry		14.9
PHASE2RA	TT5_0020	6/14/2004	SM0002	0	0	NA	NA	NA	mg/kg dry		19
PHASE2RA	TT5_0020	6/15/2004	SM0004	0	0	NA	NA	NA	mg/kg dry		16.9
PHASE2RA	TT5_0020	6/15/2004	SM0005	0	0	NA	NA	NA	mg/kg dry		37.6
PHASE2RA	TT5_0020	6/16/2004	SM0008	0	0	NA	NA	NA	mg/kg dry		7.85
PHASE2RA	TT5_0020	6/16/2004	SM0009	0	0	NA	NA	NA	mg/kg dry		11.1
port site mean											11.6
port site 95% UCL											18.1

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-73. Food-web model exposure results for snowy owl exposed to 95% UCL CoPC concentrations at port site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammal (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	103	7,820	940	0.0105	16.0	96.3	112	49.3	120	--	0.41	--
Antimony	0.63 ^a	8.2	0.0426	0.0000645	0.0168	0.00436	0.0212	0.00931	--	--	--	--
Arsenic (arsenate)	0.6 ^a	22.9	0.139	0.0000615	0.0468	0.0142	0.0611	0.0268	10	40	0.0027	0.00067
Arsenic (arsenite)	0.6 ^a	22.9	0.139	0.0000615	0.0468	0.0142	0.0611	0.0268	20	50	0.0013	0.00054
Barium	70.3 ^a	817	58.2	0.00720	1.67	5.96	7.64	3.35	21	42	0.16	0.080
Cadmium	0.245	27.6	0.393	0.0000251	0.0566	0.0402	0.0968	0.0425	1.5	20	0.028	0.0021
Chromium	1.56 ^a	16.4	3.15	0.000160	0.0336	0.322	0.356	0.156	0.86	4.3	0.18	0.036
Cobalt	1.56 ^a	14.3	0.313	0.000160	0.0293	0.0321	0.0615	0.0270	--	--	--	--
Lead	1.63 ^a	2100	18.1	0.000167	4.31	1.85	6.16	2.70	3.9	11	0.69	0.25
Mercury	0.05 ^a	3.23	0.0447	0.00000512	0.00661	0.00457	0.0112	0.00491	0.032	0.064	0.15	0.077
Molybdenum	2.27 ^a	1.68	0.824	0.000233	0.00344	0.0844	0.0881	0.0386	3.5	35	0.011	0.0011
Selenium	1.17 ^a	20.3	0.397	0.000120	0.0415	0.0406	0.0822	0.0361	0.40	0.80	0.090	0.045
Thallium	0.0155 ^a	0.581	0.0173	0.00000159	0.00119	0.00177	0.00297	0.00130	0.24	24	0.0054	0.000054
Vanadium	0.335 ^a	19	0.536	0.0000343	0.0390	0.0549	0.0939	0.0412	11	--	0.0037	--
Zinc (TRV1)	72.6	4590	136	0.00744	9.40	13.9	23.3	10.2	130	--	0.079	--
Zinc (TRV2)	72.6	4590	136	0.00744	9.40	13.9	23.3	10.2	70	120	0.15	0.085

Note: Data used to develop this scenario are presented in Table K-72a.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-74. Food-web model exposure results for snowy owl exposed to mean CoPC concentrations at road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammal (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	167	1,510	113	0.0171	3.09	11.6	14.7	6.45	120	--	0.054	--
Antimony	0.131	0.775	0.0195	0.0000134	0.00159	0.00200	0.00360	0.00158	--	--	--	--
Arsenic (arsenate)	0.552	2.55	0.113	0.0000565	0.00522	0.0116	0.0169	0.00740	10	40	0.00074	0.00019
Arsenic (arsenite)	0.552	2.55	0.113	0.0000565	0.00522	0.0116	0.0169	0.00740	20	50	0.00037	0.00015
Barium	80.9	1210	54.7	0.00829	2.47	5.60	8.08	3.54	21	42	0.17	0.084
Cadmium	0.0889	2.89	0.308	0.00000911	0.00592	0.0315	0.0374	0.0164	1.5	20	0.011	0.00082
Chromium	0.9	5.05	1.52	0.0000922	0.0103	0.155	0.166	0.0727	0.86	4.3	0.085	0.017
Cobalt	0.166	5.81	0.146	0.0000170	0.0119	0.0149	0.0268	0.0118	--	--	--	--
Lead	0.455	121	4.85	0.0000466	0.247	0.497	0.744	0.326	3.9	11	0.084	0.030
Mercury	0.0233	0.19	2.37	0.00000238	0.000389	0.243	0.243	0.107	0.032	0.064	3.3	1.7
Molybdenum	0.613	1.14	0.438	0.0000628	0.00233	0.0449	0.0473	0.0207	3.5	35	0.0059	0.00059
Selenium	0.147	0.725	0.583	0.0000151	0.00148	0.0597	0.0612	0.0269	0.40	0.80	0.067	0.034
Thallium	0.0562	0.156	0.00933	0.00000576	0.000320	0.000956	0.00128	0.000562	0.24	24	0.0023	0.000023
Vanadium	0.45	7.95	0.483	0.0000461	0.0163	0.0495	0.0658	0.0289	11	--	0.0026	--
Zinc (TRV1)	7.16	582	105	0.000733	1.19	10.8	12.0	5.26	130	--	0.040	--
Zinc (TRV2)	7.16	582	105	0.000733	1.19	10.8	12.0	5.26	70	120	0.075	0.044

Note: Data used to develop this scenario are presented in Table K-74a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-74a. Snowy owl EPC calculation for mean and 95% UCL CoPC concentrations at road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
										field rep average	0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 U
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	U
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	U
										field reps - both non-detects (minimum value)	0.089 U
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4

Table K-74a. (cont.)

Survey	Survey station	Date	Sample ID	Field			Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample							
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394	
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391	
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2	
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72	
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 <i>U</i>	
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231	
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146	
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>	
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4	
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14	
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27	
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458	
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411	
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56	
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236	
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>	
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5	
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55	
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124	
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>	
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 <i>U</i>	
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328	
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101	
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>	
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>	
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526	

Table K-74a. (cont.)

Survey	Survey station	Date	Sample ID	Field			Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample							
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34	
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191	
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843	
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17	
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18	
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49	
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519	
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7	
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326	
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32	
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242	
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U	
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505	
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191	
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U	
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 U	
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414	
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253	
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304	
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 U	

Table K-74a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										road site mean	0.455
										road site 95% UCL	1.10
Tundra Soil											
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
										field rep average	449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
										survey station mean	385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
										field rep average	34.6
										survey station mean	119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
										survey station mean	16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 <i>J</i>
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 <i>J</i>
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 <i>J</i>
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 <i>J</i>

Table K-74a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 <i>J</i>
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 <i>J</i>
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 <i>J</i>
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 <i>J</i>
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 <i>J</i>
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 <i>J</i>
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 <i>J</i>
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 <i>J</i>
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 <i>U</i>
										road site mean	121 <i>J</i>
										road site 95% UCL	173
Small Mammals											
PHASE2RA	TT3-0100	6/22/2004	SM0015	0	0	NA	NA	NA	mg/kg dry		4.37
PHASE2RA	TT3-0100	6/22/2004	SM0016	0	0	NA	NA	NA	mg/kg dry		8.83
PHASE2RA	TT3-1000	6/22/2004	SM0014	0	0	NA	NA	NA	mg/kg dry		1.74
PHASE2RA	TT3-1000	6/22/2004	SM0019	0	0	NA	NA	NA	mg/kg dry		6.79
PHASE2RA	TT3-1000	7/2/2004	SM0018	0	0	NA	NA	NA	mg/kg dry		0.967
PHASE2RA	TT3_0020	7/1/2004	SM0020	0	0	NA	NA	NA	mg/kg dry		6.42
										road site mean	4.85
										road site 95% UCL	7.38

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-75. Food-web model exposure results for snowy owl exposed to 95% UCL CoPC concentrations at road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Small Mammal (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	178	2,660 ^a	198	0.0183	5.45	20.2	25.7	11.3	120	--	0.094	--
Antimony	0.215	0.883	0.0314	0.0000220	0.00181	0.00321	0.00504	0.00221	--	--	--	--
Arsenic (arsenate)	0.674	3.51	0.156	0.0000690	0.00718	0.0159	0.0232	0.0102	10	40	0.0010	0.00025
Arsenic (arsenite)	0.674	3.51	0.156	0.0000690	0.00718	0.0159	0.0232	0.0102	20	50	0.00051	0.00020
Barium	136	1750	69.4	0.0140	3.58	7.11	10.7	4.69	21	42	0.22	0.11
Cadmium	0.124	3.85	1.02	0.0000128	0.00789	0.104	0.112	0.0492	1.5	20	0.033	0.0025
Chromium	2.67	9.69 ^a	2.1	0.000274	0.0198	0.215	0.236	0.103	0.86	4.3	0.12	0.024
Cobalt	0.259	7.13	0.192	0.0000266	0.0146	0.0197	0.0343	0.0150	--	--	--	--
Lead	1.1	173	7.38	0.000112	0.354	0.755	1.11	0.487	3.9	11	0.12	0.044
Mercury	0.0297	0.223	10.2	0.00000305	0.000457	1.05	1.05	0.460	0.032	0.064	14	7.2
Molybdenum	1.07	1.37	0.532	0.000110	0.00280	0.0545	0.0574	0.0252	3.5	35	0.0072	0.00072
Selenium	0.675	0.88	0.906	0.0000692	0.00180	0.0928	0.0946	0.0415	0.40	0.80	0.10	0.052
Thallium	0.296	0.246	0.015	0.0000304	0.000503	0.00154	0.00207	0.000908	0.24	24	0.0038	0.000038
Vanadium	0.545	10.4	0.651	0.0000559	0.0213	0.0667	0.0881	0.0386	11	--	0.0035	--
Zinc (TRV1)	13.5	799	120	0.00138	1.64	12.3	13.9	6.11	130	--	0.047	--
Zinc (TRV2)	13.5	799	120	0.00138	1.64	12.3	13.9	6.11	70	120	0.087	0.051

Note: Data used to develop this scenario are presented in Table K-74a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL concentration.

Table K-76. Food-web model exposure results for willow ptarmigan exposed to mean CoPC concentrations at reference site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	514	3,650	304	10.1	0.0197	20.4	2.37	22.8	43.3	120	--	0.36	--
Antimony	0.045	0.208	0.0457	0.0319	0.00000173	0.00116	0.00200	0.00316	0.00600	--	--	--	--
Arsenic (arsenate)	0.717	3.61	1.63	0.0313	0.0000275	0.0202	0.0115	0.0316	0.0602	10	40	0.0060	0.0015
Arsenic (arsenite)	0.717	3.61	1.63	0.0313	0.0000275	0.0202	0.0115	0.0316	0.0602	20	50	0.0030	0.0012
Barium	125	346	54.6	50.7	0.00481	1.93	3.07	5.00	9.51	21	42	0.45	0.23
Cadmium	0.0333	0.379	0.0818	0.378	0.00000128	0.00212	0.0209	0.0230	0.0437	1.5	20	0.029	0.0022
Chromium	1.17	6.76	7.46	0.3	0.0000448	0.0377	0.0610	0.0987	0.188	0.86	4.3	0.22	0.044
Cobalt	0.693	7.97	1.31	2.36	0.0000266	0.0445	0.135	0.180	0.342	--	--	--	--
Lead	0.512	10.2	0.794	0.293	0.0000196	0.0572	0.0206	0.0777	0.148	3.9	11	0.038	0.013
Mercury	0.05	0.0935	0.0323	0.0509	0.00000192	0.000522	0.00294	0.00346	0.00659	0.032	0.064	0.21	0.10
Molybdenum	0.0883	0.689	0.411	0.160	0.00000339	0.00384	0.0111	0.0150	0.0285	3.5	35	0.0081	0.00081
Selenium	0.267	0.594	0.155	0.0625	0.0000102	0.00332	0.00431	0.00763	0.0145	0.40	0.80	0.036	0.018
Thallium	0.011	0.0769	0.0278	0.00213	0.000000422	0.000429	0.000282	0.000711	0.00135	0.24	24	0.0056	0.000056
Vanadium	1.57	14.5	1.51	0.25	0.0000601	0.0807	0.0225	0.103	0.196	11	--	0.018	--
Zinc (TRV1)	3.16	60.8	33.1	88.6	0.000121	0.339	4.99	5.32	10.1	130	--	0.078	--
Zinc (TRV2)	3.16	60.8	33.1	88.6	0.000121	0.339	4.99	5.32	10.1	70	120	0.14	0.084

Note: Data used to develop this scenario are presented in Table K-76a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-76a. Willow ptarmigan EPC calculation for mean and 95% UCL CoPC concentrations at reference site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
PHASE1RA	ST-REF-4	7/20/2003	SW0037	0	0	NA	NA	NA	µg/L unfiltered		0.02
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
PHASE1RA	TP-REF-2	7/20/2003	SW0038	0	0	NA	NA	NA	µg/L unfiltered		0.06
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										reference site mean	0.512 <i>J</i>
										reference site 95% UCL	1.91
Tundra Soil											
PHASE2RA	ST-REF-3	6/26/04	TS-0036	0	0	NA	NA	NA	mg/kg dry		15.3
PHASE2RA	ST-REF-5	6/24/04	TS-0031	0	0	NA	NA	NA	mg/kg dry		10.7
PHASE2RA	ST-REF-6	6/24/04	TS-0033	0	0	NA	NA	NA	mg/kg dry		9.81
PHASE2RA	TP-REF-2	6/24/04	TS-0032	0	0	NA	NA	NA	mg/kg dry		23.6
PHASE2RA	TP-REF-3	6/23/04	TS-0027	0	0	NA	NA	NA	mg/kg dry		12.8
PHASE2RA	TP-REF-5	6/24/04	TS-0030	0	0	NA	NA	NA	mg/kg dry		9.1
PHASE1RA	TS-REF-1	07/20/03	TS0024	0	0	NA	NA	NA	mg/kg dry		5.97 <i>J</i>
PHASE1RA	TS-REF2	07/20/03	TS0023	0	0	NA	NA	NA	mg/kg dry		5 <i>J</i>
PHASE1RA	TS-REF3	07/20/03	TS0022	0	0	NA	NA	NA	mg/kg dry		3.78 <i>J</i>
PHASE1RA	TS-REF-4	07/20/03	TS0021	0	0	NA	NA	NA	mg/kg dry		6.61
PHASE1RA	TS-REF-5	07/20/03	TS0020	0	0	NA	NA	NA	mg/kg dry	23.3	
PHASE2RA	TS-REF-5	06/23/04	TS-0028	0	0	NA	NA	NA	mg/kg dry	3.58	
										survey station mean	13.4
PHASE1RA	TS-REF-6	07/20/03	TS0019	0	0	NA	NA	NA	mg/kg dry		9.87 <i>J</i>
PHASE1RA	TS-REF-7	07/20/03	TS0018	0	0	NA	NA	NA	mg/kg dry	6.26	<i>J</i>
PHASE2RA	TS-REF-7	06/24/04	TS-0029	0	0	NA	NA	NA	mg/kg dry	7.5	
										survey station mean	6.9 <i>J</i>
PHASE1RA	TS-REF-8	07/20/03	TS0031	0	0	NA	NA	NA	mg/kg dry		18.5 <i>J</i>
PHASE1RA	TS-REF-9	07/20/03	TS0030	0	0	NA	NA	NA	mg/kg dry		2.9 <i>J</i>
PHASE1RA	TS-REF10	07/20/03	TS0017	0	0	NA	NA	NA	mg/kg dry		7.23 <i>J</i>
PHASE2RA	TS-REF11	06/25/04	TS-0034	0	0	NA	NA	NA	mg/kg dry		12.7
										reference site mean	10.2 <i>J</i>
										reference site 95% UCL	12.5
Herbaceous Plant											
PHASE2RA	ST-REF-3	6/26/2004	SE0043	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.28
PHASE2RA	ST-REF-5	6/24/2004	SE0035	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.47
PHASE2RA	ST-REF-6	6/24/2004	SE0039	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.74

Table K-76a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TP-REF-2	6/24/2004	SE0037	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.4
PHASE2RA	TP-REF-3	6/23/2004	SE0029	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		2.3
PHASE2RA	TP-REF-5	6/24/2004	SE0033	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.1
PHASE2RA	TS-REF-5	6/23/2004	SE0031	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.52
PHASE2RA	TS-REF-5	7/1/2004	SE0056	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.46
PHASE2RA	TS-REF-7	6/24/2004	SE0032	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.28
PHASE2RA	TS-REF11	6/25/2004	SE0041	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.39
										reference site mean	0.794
										reference site 95% UCL	1.23
Shrub											
PHASE2RA	ST-REF-3	6/26/2004	WI0025	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.14
PHASE2RA	ST-REF-5	6/24/2004	WI0021	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.62
PHASE2RA	ST-REF-6	6/24/2004	WI0022	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.09
PHASE2RA	TS-REF-5	6/23/2004	WI0019	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.4
PHASE2RA	TS-REF-7	6/24/2004	BR0005	0	0	<i>Betula</i>	<i>nana</i>	Leaves	mg/kg dry		0.13
PHASE2RA	TS-REF-7	6/24/2004	WI0020	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.11
PHASE2RA	TS-REF11	6/25/2004	BR0006	0	0	<i>Betula</i>	<i>nana</i>	Leaves	mg/kg dry		0.08
PHASE2RA	TS-REF11	6/25/2004	WI0023	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.77
										reference site mean	0.293
										reference site 95% UCL	0.584

Note: Tundra soil are averaged by survey station, then included in the calculation of the site mean.
95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value
U - undetected; value reported is half the detection limit

Table K-77. Food-web model exposure results for willow ptarmigan exposed to 95% UCL CoPC concentrations at reference site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	2770	5591	1130	15.0	0.106	31.2	7.60	38.9	74.0	120	--	0.62	--
Antimony	0.0765	0.241	0.0605	0.0375	0.00000294	0.00135	0.00239	0.00374	0.00711	--	--	--	--
Arsenic (arsenate)	1.36	5.31	6.56	0.0336	0.0000523	0.0296	0.0412	0.0709	0.135	10	40	0.013	0.0034
Arsenic (arsenite)	1.36	5.31	6.56	0.0336	0.0000523	0.0296	0.0412	0.0709	0.135	20	50	0.0067	0.0027
Barium	177	417	72.0	65.7	0.00679	2.33	3.98	6.31	12.0	21	42	0.57	0.29
Cadmium	0.0580	0.477	0.132	0.502	0.00000222	0.00266	0.0279	0.0306	0.0581	1.5	20	0.039	0.0029
Chromium	3.71	11.8	28.0	0.378	0.000142	0.0660	0.188	0.254	0.483	0.86	4.3	0.56	0.11
Cobalt	1.79	11.3	3.37	5.51	0.0000687	0.0632	0.318	0.381	0.725	--	--	--	--
Lead	1.91	12.5	1.23	0.584	0.0000733	0.0700	0.0389	0.109	0.207	3.9	11	0.053	0.019
Mercury	0.0500	0.109	0.0357	0.0582	0.00000192	0.000608	0.00336	0.00397	0.00755	0.032	0.064	0.24	0.12
Molybdenum	0.158	0.881	0.546	0.259	0.00000608	0.00492	0.0173	0.0222	0.0422	3.5	35	0.012	0.0012
Selenium	0.366	0.693	0.362	0.0780	0.0000141	0.00387	0.00638	0.0103	0.0195	0.4	0.8	0.049	0.024
Thallium	0.0400	0.0919	0.0756	0.00300	0.00000153	0.000513	0.000616	0.00113	0.00215	0.24	24	0.0090	0.000090
Vanadium	5.57	19.0	7.60	0.286	0.000214	0.106	0.0610	0.167	0.318	11	--	0.029	--
Zinc (TRV1)	6.26	68.4	37.0	109	0.000240	0.382	6.09	6.47	12.3	130	--	0.095	--
Zinc (TRV2)	6.26	68.4	37.0	109	0.000240	0.382	6.09	6.47	12.3	70	120	0.18	0.10

Note: Data used to develop this scenario are presented in Table K-76a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-78. Food-web model exposure results for willow ptarmigan exposed to mean CoPC concentrations at port site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	35.5	5610	31.3	30.9	0.00136	31.3	1.86	33.2	63.0	120	--	0.53	--
Antimony	0.307	5.83	0.174	0.0900	0.0000118	0.0325	0.00591	0.0385	0.0731	--	--	--	--
Arsenic (arsenate)	0.494	16.7	0.137	0.0588	0.0000190	0.0930	0.00400	0.0970	0.184	10	40	0.018	0.0046
Arsenic (arsenite)	0.494	16.7	0.137	0.0588	0.0000190	0.0930	0.00400	0.0970	0.184	20	50	0.0092	0.0037
Barium	44.8	597	33.6	35.1	0.00172	3.33	2.10	5.43	10.3	21	42	0.49	0.25
Cadmium	0.120	15.1	0.287	3.24	0.0000459	0.0842	0.177	0.261	0.496	1.5	20	0.33	0.025
Chromium	0.799	11.1	1.01	0.250	0.0000306	0.0620	0.0196	0.0815	0.155	0.86	4.3	0.18	0.036
Cobalt	0.903	11.4	1.87	0.910	0.0000347	0.0638	0.0603	0.124	0.236	--	--	--	--
Lead	0.462	792	6.85	7.59	0.0000177	4.42	0.451	4.87	9.26	3.9	11	2.4	0.84
Mercury	0.0393	0.779	0.0398	0.0400	0.00000151	0.00435	0.00240	0.00675	0.0128	0.032	0.064	0.40	0.20
Molybdenum	0.793	1.41	0.284	0.121	0.0000304	0.00785	0.00822	0.0161	0.0306	3.5	35	0.0087	0.00087
Selenium	0.523	7.71	0.132	0.113	0.0000201	0.0430	0.00687	0.0499	0.0949	0.4	0.8	0.24	0.12
Thallium	0.00950	0.354	0.0116	0.00388	0.000000364	0.00198	0.000279	0.00226	0.00429	0.24	24	0.018	0.00018
Vanadium	0.285	14.1	0.214	0.238	0.0000109	0.0788	0.0141	0.0929	0.177	11	--	0.016	--
Zinc (TRV1)	22.2	2490	95.3	290	0.000853	13.9	16.2	30.1	57.3	130	--	0.44	--
Zinc (TRV2)	22.2	2490	95.3	290	0.000853	13.9	16.2	30.1	57.3	70	120	0.82	0.48

Note: Data used to develop this scenario are presented in Table K-78a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-78a. Willow ptarmigan EPC calculation for mean and 95% UCL CoPC concentrations at port site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										port site mean	0.462
										port site 95% UCL	1.63
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-0W-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											
											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											
											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											
											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											
											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 U
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 U
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	U
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	U
										field reps - both non-detects (minimum value)	15 U
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 U
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 U
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 U
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 U
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 U
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 U
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 U
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 UU
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346	
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299	
										field rep average	323
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		317
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	U
										field rep average	13
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 UU

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
field reps - both non-detects (minimum value)											
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>UJ</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
											field reps - both non-detects (minimum value)
											18 <i>U</i>
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
field rep average											69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
field rep average											121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
field rep average											283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
field rep average											132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	ROT4-0NA	7/4/2002	ROT4-0NA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-0SA	7/4/2002	ROT4-0SA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
field rep average											1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-0NA	7/4/2002	ROT5-0NA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-0SA	7/4/2002	ROT5-0SA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-0NA	7/4/2002	ROT6-0NA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-0SA	7/4/2002	ROT6-0SA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	<i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	
survey station mean											759 <i>J</i>
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											414
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	<i>J</i>
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.8 <i>J</i>
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
										port site mean	792 J
										port site 95% UCL	2,100
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	Sp	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
										field rep average	3.3
PHASE2RA	PLNL	6/28/2004	SE0045	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.81
PHASE2RA	PLNL	6/28/2004	SE0046	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.76
PHASE2RA	TP1-0100	6/17/2004	SE0009	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		48.1
PHASE2RA	TP1-1000	6/17/2004	SE0008	0	0	<i>Carex</i>	Sp	Whole Plant	mg/kg dry		16.1
PHASE2RA	TT2-0010	6/17/2004	SE0010	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		5.63
PHASE2RA	TT2-0100	6/16/2004	SE0006	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.01
PHASE2RA	TT2-1000	6/16/2004	SE0005	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.16
PHASE2RA	TT5-0010	6/12/2004	SE0001	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		10.8
PHASE2RA	TT5-0100	6/15/2004	SE0004	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.33
PHASE2RA	TT5-1000	6/13/2004	SE0002-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.1
PHASE2RA	TT5-1000	6/16/2004	SE0002-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.57
PHASE2RA	TT5-2000	6/15/2004	SE0003	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
										port site mean	6.85
										port site 95% UCL	14.5
Shrub											
FUGDST01	HR02-01W	8/20/2001	HR-02-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		45.6
FUGDST01	HR02-02W	8/21/2001	HR-02-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		4.21
FUGDST01	HR02-03W	8/24/2001	HR-02-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.856
FUGDST01	PO-07W	8/23/2001	PO-07-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		11.4
FUGDST01	PO-13W	8/23/2001	PO-13-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		4.8
FUGDST01	PO-17W	8/23/2001	PO-17-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		15.6
PHASE2RA	TT2-0010	6/17/2004	WI0006	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		5.76
PHASE2RA	TT2-0100	6/16/2004	WI0005	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.89
PHASE2RA	TT2-1000	6/16/2004	WI0004	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.35
PHASE2RA	TT5-0010	6/12/2004	WI0001	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		6.64

Table K-78a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT5-0100	6/15/2004	WI0003	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.85
PHASE2RA	TT5-1000	6/13/2004	BR0001	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		3.77
PHASE2RA	TT5-1000	6/13/2004	WI0002	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.07
PHASE2RA	TT5-2000	6/15/2004	BR0002	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		0.42
										port site mean	7.59
										port site 95% UCL	14.9

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-79. Food-web model exposure results for willow ptarmigan exposed to 95% UCL CoPC concentrations at port site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	103	7820	54.3	70.6	0.00394	43.6	4.14	47.8	90.8	120	--	0.76	--
Antimony	0.63	8.20	0.295	0.157	0.0000242	0.0458	0.0103	0.0560	0.107	--	--	--	--
Arsenic (arsenate)	0.60	22.9	0.274	0.0826	0.0000230	0.128	0.00611	0.134	0.254	10	40	0.025	0.0064
Arsenic (arsenite)	0.60	22.9	0.274	0.0826	0.0000230	0.128	0.00611	0.134	0.254	20	50	0.013	0.0051
Barium	70.3	817	61.3	50.7	0.00270	4.56	3.11	7.67	14.6	21	42	0.69	0.35
Cadmium	0.245	27.6	0.664	7.63	0.0000939	0.154	0.416	0.570	1.08	1.5	20	0.72	0.054
Chromium	1.56	16.4	5.87	0.312	0.0000598	0.0916	0.0521	0.144	0.273	0.86	4.3	0.32	0.064
Cobalt	1.56	14.3	17.7	1.56	0.0000598	0.0799	0.190	0.270	0.514	--	--	--	--
Lead	1.63	2100	14.5	14.9	0.0000625	11.7	0.892	12.6	24.0	3.9	11	6.2	2.2
Mercury	0.05	3.23	0.0446	0.0451	0.00000192	0.0180	0.00270	0.0207	0.0394	0.032	0.064	1.2	0.62
Molybdenum	2.27	1.68	0.356	0.159	0.0000871	0.00939	0.0107	0.0202	0.0384	3.5	35	0.011	0.0011
Selenium	1.17	20.3	0.169	0.136	0.0000449	0.113	0.00837	0.121	0.231	0.4	0.8	0.58	0.29
Thallium	0.0155	0.581	0.0271	0.00820	0.000000595	0.00324	0.000605	0.00385	0.00732	0.24	24	0.030	0.00030
Vanadium	0.335	19.0	0.231	0.272	0.0000129	0.106	0.0161	0.122	0.233	11	--	0.021	--
Zinc (TRV1)	72.6	4590	194	373	0.00278	25.6	21.3	46.9	89.2	130	--	0.69	--
Zinc (TRV2)	72.6	4590	194	373	0.00278	25.6	21.3	46.9	89.2	70	120	1.3	0.74

Note: Data used to develop this scenario are presented in Table K-78a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-80. Food-web model exposure results for willow ptarmigan exposed to mean CoPC concentrations at road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	167	1510	285	77.7	0.00640	8.42	5.90	14.3	27.2	120	--	0.23	--
Antimony	0.131	0.775	0.118	0.114	0.00000504	0.00432	0.00686	0.0112	0.0213	--	--	--	--
Arsenic (arsenate)	0.552	2.55	0.452	0.115	0.0000212	0.0142	0.00892	0.0232	0.0440	10	40	0.0044	0.0011
Arsenic (arsenite)	0.552	2.55	0.452	0.115	0.0000212	0.0142	0.00892	0.0232	0.0440	20	50	0.0022	0.00088
Barium	80.9	1210	119	101	0.00311	6.73	6.19	12.9	24.6	21	42	1.2	0.59
Cadmium	0.0889	2.89	0.239	2.46	0.00000341	0.0161	0.135	0.151	0.286	1.5	20	0.19	0.014
Chromium	0.9	5.05	4.88	0.575	0.0000345	0.0282	0.0603	0.0886	0.168	0.86	4.3	0.20	0.039
Cobalt	0.166	5.81	0.698	1.69	0.00000636	0.0324	0.0956	0.128	0.243	--	--	--	--
Lead	0.455	121	5.88	4.95	0.0000175	0.674	0.302	0.976	1.86	3.9	11	0.48	0.17
Mercury	0.0233	0.190	0.0412	0.0441	0.000000892	0.00106	0.00263	0.00369	0.00702	0.032	0.064	0.22	0.11
Molybdenum	0.613	1.14	0.533	0.309	0.0000235	0.00636	0.0199	0.0263	0.0499	3.5	35	0.014	0.0014
Selenium	0.147	0.725	0.160	0.140	0.00000564	0.00405	0.00852	0.0126	0.0239	0.4	0.8	0.060	0.030
Thallium	0.0562	0.156	0.0412	0.00810	0.00000215	0.000871	0.000685	0.00156	0.00296	0.24	24	0.012	0.00012
Vanadium	0.450	7.95	0.830	0.355	0.0000173	0.0443	0.0242	0.0685	0.130	11	--	0.012	--
Zinc (TRV1)	7.16	582	59.4	193	0.000275	3.25	10.8	14.0	26.7	130	--	0.21	--
Zinc (TRV2)	7.16	582	59.4	193	0.000275	3.25	10.8	14.0	26.7	70	120	0.38	0.22

Note: Data used to develop this scenario are presented in Table K-80a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-80a. Willow ptarmigan EPC calculation for mean and 95% UCL CoPC concentrations at road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
										field rep average	0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 U
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	U
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	U
										field reps - both non-detects (minimum value)	0.089 U
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4

Table K-80a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526

Table K-80a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 U
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 U

Table K-80a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										road site mean	0.455
										road site 95% UCL	1.10
Tundra Soil											
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
										field rep average	449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
										survey station mean	385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
										field rep average	34.6
										survey station mean	119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
										survey station mean	16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 <i>J</i>
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 <i>J</i>
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 <i>J</i>
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 <i>J</i>

Table K-80a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 <i>J</i>
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 <i>J</i>
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 <i>J</i>
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 <i>J</i>
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 <i>J</i>
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 <i>J</i>
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 <i>J</i>
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 <i>J</i>
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 <i>U</i>
										road site mean	121 <i>J</i>
										road site 95% UCL	173
Herbaceous Plant											
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		14.3
PHASE2RA	OR-R	7/1/2004	SE0051	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		8.27
PHASE2RA	TP3	6/20/2004	SE0018-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.01	
PHASE2RA	TP3	6/20/2004	SE0018-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.96	
										field rep average	3.49
PHASE2RA	TP4	6/17/2004	SE0011	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		21.1
PHASE2RA	TT3-0010	6/18/2004	SE0013	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.06
PHASE2RA	TT3-0100	6/20/2004	SE0022	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.91
PHASE2RA	TT3-1000	6/20/2004	SE0021	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.18
PHASE2RA	TT8-0010	6/19/2004	SE0017	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.89
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.17	
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.4	
										field rep average	1.29
PHASE2RA	TT8-1000	6/19/2004	SE0014	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.34
										road site mean	5.88
										road site 95% UCL	13.8
Shrub											
PHASE2RA	AC-R	6/23/2004	WI0018	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		10.9
PHASE2RA	ARC-R	7/1/2004	WI0028	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		11.8
FUGDST01	HR03-01W	8/19/2001	HR-03-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		16.5
FUGDST01	HR03-02W	8/21/2001	HR-03-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		3.94
FUGDST01	HR03-03W	8/24/2001	HR-03-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.431
PHASE2RA	OR-R	7/1/2004	WI0026-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	3.88	
PHASE2RA	OR-R	7/1/2004	WI0026-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	5.85	
										field rep average	4.87
PHASE2RA	TT3-0010	6/18/2004	WI0007	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		7.74
PHASE2RA	TT3-0100	6/20/2004	BR0004	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		1.91

Table K-80a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT3-0100	6/20/2004	WI0011	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.48
PHASE2RA	TT3-1000	6/20/2004	BR0003	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		0.58
PHASE2RA	TT8-0010	6/19/2004	WI0010	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		2.91
PHASE2RA	TT8-0100	6/19/2004	WI0009	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.79
PHASE2RA	TT8-1000	6/19/2004	WI0008	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.47
										road site mean	4.95
										road site 95% UCL	9.21

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-81. Food-web model exposure results for willow ptarmigan exposed to 95% UCL CoPC concentrations at road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	178	2660	1050	156	0.00684	14.8	14.7	29.6	56.2	120	--	0.47	--
Antimony	0.215	0.883	0.236	0.224	0.00000825	0.00493	0.0135	0.0184	0.0350	--	--	--	--
Arsenic (arsenate)	0.674	3.51	1.16	0.233	0.0000259	0.0196	0.0195	0.0391	0.0744	10	40	0.0074	0.0019
Arsenic (arsenite)	0.674	3.51	1.16	0.233	0.0000259	0.0196	0.0195	0.0391	0.0744	20	50	0.0037	0.0015
Barium	136	1750	197	154	0.00523	9.76	9.50	19.3	36.6	21	42	1.7	0.87
Cadmium	0.124	3.85	0.484	3.53	0.00000477	0.0215	0.194	0.215	0.409	1.5	20	0.27	0.020
Chromium	2.67	9.69	13.1	0.967	0.000103	0.0541	0.131	0.185	0.352	0.86	4.3	0.41	0.082
Cobalt	0.259	7.13	1.83	2.60	0.00000994	0.0398	0.152	0.191	0.364	--	--	--	--
Lead	1.10	173	13.8	9.21	0.0000421	0.965	0.580	1.55	2.94	3.9	11	0.75	0.27
Mercury	0.0297	0.223	0.0508	0.0497	0.00000114	0.00125	0.00299	0.00424	0.00806	0.032	0.064	0.25	0.13
Molybdenum	1.07	1.37	0.733	0.376	0.0000410	0.00762	0.0247	0.0323	0.0615	3.5	35	0.018	0.0018
Selenium	0.675	0.880	0.293	0.181	0.0000259	0.00491	0.0115	0.0164	0.0313	0.4	0.8	0.078	0.039
Thallium	0.296	0.246	0.153	0.0182	0.0000114	0.00137	0.00190	0.00329	0.00625	0.24	24	0.026	0.00026
Vanadium	0.545	10.4	1.81	0.472	0.0000209	0.0581	0.0363	0.0945	0.180	11	--	0.016	--
Zinc (TRV1)	13.5	799	72.4	231	0.000518	4.46	12.9	17.4	33.1	130	--	0.25	--
Zinc (TRV2)	13.5	799	72.4	231	0.000518	4.46	12.9	17.4	33.1	70	120	0.47	0.28

Note: Data used to develop this scenario are presented in Table K-80a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-82. Food-web model exposure results for willow ptarmigan exposed to mean CoPC concentrations at mine site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	191	5150	10.4	13.2	0.00731	28.8	0.776	29.5	56.2	120	--	0.47	--
Antimony	0.0630	2.82	0.0368	0.0470	0.00000242	0.0157	0.00276	0.0185	0.0351	--	--	--	--
Arsenic (arsenate)	0.482	6.77	0.0367	0.0300	0.0000185	0.0378	0.00184	0.0396	0.0754	10	40	0.0075	0.0019
Arsenic (arsenite)	0.482	6.77	0.0367	0.0300	0.0000185	0.0378	0.00184	0.0396	0.0754	20	50	0.0038	0.0015
Barium	135	3200	75.0	44.7	0.00518	17.8	2.86	20.7	39.4	21	42	1.9	0.94
Cadmium	0.0365	9.27	0.209	3.34	0.00000140	0.0517	0.182	0.233	0.444	1.5	20	0.30	0.022
Chromium	0.396	10.2	0.233	0.263	0.0000152	0.0571	0.0156	0.0727	0.138	0.86	4.3	0.16	0.032
Cobalt	0.0125	4.65	0.0583	0.601	0.000000480	0.0259	0.0328	0.0588	0.112	--	--	--	--
Lead	0.369	552	2.40	1.61	0.0000142	3.08	0.101	3.18	6.05	3.9	11	1.6	0.55
Mercury	0.0179	0.360	0.0307	0.0473	0.000000687	0.00201	0.00274	0.00475	0.00903	0.032	0.064	0.28	0.14
Molybdenum	0.230	8.09	0.810	0.411	0.00000882	0.0452	0.0270	0.0722	0.137	3.5	35	0.039	0.0039
Selenium	0.348	1.63	0.139	0.0500	0.0000133	0.00909	0.00353	0.0126	0.0240	0.4	0.8	0.060	0.030
Thallium	0.0575	0.860	0.00878	0.00513	0.00000221	0.00480	0.000329	0.00513	0.00975	0.24	24	0.041	0.00041
Vanadium	0.633	18.4	0.256	0.225	0.0000243	0.102	0.0137	0.116	0.221	11	--	0.020	--
Zinc (TRV1)	1.48	1500	65.3	182	0.0000568	8.35	10.2	18.6	35.4	130	--	0.27	--
Zinc (TRV2)	1.48	1500	65.3	182	0.0000568	8.35	10.2	18.6	35.4	70	120	0.51	0.29

Note: Data used to develop this scenario are presented in Table K-82a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-82a. Willow ptarmigan EPC calculation for mean and 95% UCL CoPC concentrations at mine site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
TECK03	ARC-U	10/10/2003	03-4782	0	0	NA	NA	NA	µg/L unfiltered		0.09 <i>U</i>
										mine site mean	0.369 <i>J</i>
										mine site 95% UCL	0.650
Tundra Soil											
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
PHASE2RA	TT6_0100	6/21/2004	TS-0023	0	0	NA	NA	NA	mg/kg dry		281
PHASE2RA	TT6_1000	6/21/2004	TS-0022	0	0	NA	NA	NA	mg/kg dry		145
PHASE2RA	TT6_2000	6/22/2004	TS-0026	0	0	NA	NA	NA	mg/kg dry		102
PHASE2RA	TT7_0010	6/22/2004	TS-0025	0	0	NA	NA	NA	mg/kg dry		2,630
PHASE2RA	TT7_1000	6/22/2004	TS-0024	0	0	NA	NA	NA	mg/kg dry		201
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	1	0	NA	NA	NA	mg/kg dry	197	
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	2	0	NA	NA	NA	mg/kg dry	111	
										field rep average	154
										mine site mean	552
										mine site 95% UCL	1,220
Herbaceous Plant											
PHASE2RA	TT6-0010	6/25/2004	SE0042	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		0.71
PHASE2RA	TT6-0100	6/21/2004	SE0024	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
PHASE2RA	TT6-0100	6/21/2004	SE0025	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		1.32
PHASE2RA	TT6-1000	6/21/2004	SE0023	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.3 <i>U</i>
PHASE2RA	TT6-2000	6/22/2004	SE0028	0	0	<i>Carex</i>	<i>podocarpa</i>	Blades	mg/kg dry		1.1
PHASE2RA	TT7-0010	6/22/2004	SE0027	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		2.24
PHASE2RA	TT7-1000	6/22/2004	SE0026	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		5.67
PHASE2RA	TT7-2000	7/4/2004	SE0061	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		1.95
PHASE2RA	TT7-2000	7/4/2004	SE0062	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		7.96
										mine site mean	2.40
										mine site 95% UCL	5.10
Shrub											
PHASE2RA	TT6-0010	6/25/2004	WI0024	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.12
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	1.17	
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	0.97	
										field rep average	1.07
PHASE2RA	TT6-1000	6/21/2004	WI0012	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.41
PHASE2RA	TT6-2000	6/22/2004	WI0017	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.37

Table K-82a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT7-0010	6/22/2004	WI0016	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		6.89
PHASE2RA	TT7-1000	6/22/2004	WI0015	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.52
PHASE2RA	TT7-2000	7/4/2004	WI0029	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.4
PHASE2RA	TT7-2000	7/4/2004	WI0030	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.09
										mine site mean	1.61
										mine site 95% UCL	4.97

Note: Field replicates are averaged first then included in the calculation of the site mean.
 95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value
U - undetected; value reported is half the detection limit

Table K-83. Food-web model exposure results for willow ptarmigan exposed to 95% UCL CoPC concentrations at mine site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	7150	12.8	25.7	0.00798	39.9	1.46	41.3	78.6	120	--	0.65	--
Antimony	0.063	8.87	0.0460	0.0699	0.0000242	0.0495	0.00405	0.0536	0.102	--	--	--	--
Arsenic (arsenate)	0.482	9.72	0.0469	0.0300	0.0000185	0.0543	0.00190	0.0562	0.107	10	40	0.011	0.0027
Arsenic (arsenite)	0.482	9.72	0.0469	0.0300	0.0000185	0.0543	0.00190	0.0562	0.107	20	50	0.0053	0.0021
Barium	140	6950	92.0	82.4	0.00537	38.8	5.00	43.8	83.2	21	42	4.0	2.0
Cadmium	0.0365	29.0	0.300	4.18	0.0000140	0.162	0.227	0.389	0.739	1.5	20	0.49	0.037
Chromium	0.396	14.7	0.264	0.324	0.0000152	0.0819	0.0191	0.101	0.192	0.86	4.3	0.22	0.045
Cobalt	0.015	6.40	0.0794	1.27	0.00000575	0.0357	0.0692	0.105	0.199	--	--	--	--
Lead	0.65	1220	5.10	4.97	0.0000249	6.83	0.299	7.13	13.5	3.9	11	3.5	1.2
Mercury	0.0179	0.929	0.0363	0.0522	0.00000687	0.00518	0.00303	0.00822	0.0156	0.032	0.064	0.49	0.24
Molybdenum	0.24	21.4	1.12	0.757	0.00000921	0.120	0.0476	0.167	0.318	3.5	35	0.091	0.0091
Selenium	0.355	2.17	0.330	0.0500	0.0000136	0.0121	0.00468	0.0168	0.0319	0.4	0.8	0.080	0.040
Thallium	0.09	1.39	0.0165	0.00713	0.00000345	0.00775	0.000484	0.00823	0.0157	0.24	24	0.065	0.00065
Vanadium	0.93	24.9	0.288	0.256	0.0000357	0.139	0.0156	0.155	0.294	11	--	0.027	--
Zinc (TRV1)	1.79	6770	91.2	238	0.0000687	37.8	13.4	51.2	97.3	130	--	0.75	--
Zinc (TRV2)	1.79	6770	91.2	238	0.0000687	37.8	13.4	51.2	97.3	70	120	1.4	0.81

Note: Data used to develop this scenario are presented in Table K-82a.

Whole site 95% UCL for Al and Cr soil data.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-84. Food-web model exposure results for moose exposed to CoPC concentrations at ST-REF-3 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	17.3	3,620	261	11	0.324	466	232	699	2.06	1.9	19	1.1	0.11
Antimony	0.01	0.03	0.05	0.035	0.000187	0.00386	0.235	0.239	0.000705	0.66	--	0.0011	--
Arsenic (arsenate)	0.1	8.1	2.93	0.04	0.00187	1.04	2.12	3.16	0.00933	0.40	1.6	0.023	0.0058
Arsenic (arsenite)	0.1	8.1	2.93	0.04	0.00187	1.04	2.12	3.16	0.00933	0.13	1.3	0.072	0.0072
Barium	169	177	50.6	26.4	3.17	22.8	186	212	0.624	5.1	20	0.12	0.031
Cadmium	0.005	0.25	0.18	0.356	0.0000937	0.0316	2.18	2.21	0.00652	1.0	10	0.0065	0.00065
Chromium	0.25	7.22	3.7	0.2	0.00469	0.930	3.54	4.48	0.0132	3.3	69	0.0040	0.00019
Cobalt	0.22	11	2.17	2.4	0.00412	1.42	15.3	16.7	0.0494	0.50	2.0	0.099	0.025
Lead	0.02	9.5	1.28	0.14	0.000375	1.22	1.64	2.86	0.00844	11	90	0.00077	0.000094
Mercury	0.05	0.022	0.032	0.068	0.000937	0.00277	0.415	0.419	0.00123	0.032	0.16	0.039	0.0077
Molybdenum	0.05	0.52	0.231	0.112	0.000937	0.0670	0.798	0.866	0.00255	0.26	2.6	0.0098	0.00098
Selenium	0.2	0.5	0.5	0.1	0.00375	0.0644	0.902	0.970	0.00286	0.20	0.33	0.014	0.0087
Thallium	0.003	0.041	0.023	0.003	0.0000562	0.00528	0.0322	0.0375	0.000111	0.074	0.74	0.0015	0.00015
Vanadium	0.2	10.7	0.65	0.2	0.00375	1.38	1.58	2.96	0.00873	0.21	2.1	0.042	0.0042
Zinc	0.31	66.9	47.7	97.6	0.00581001	8.62	597	605	1.79	160	320	0.011	0.0056

Note: The following data were used to develop this scenario: PHASE1RA water (ST-REF-1), Phase1RA sediment (ST-REF-3); Phase2RA sediment (Cd, Pb, Hg, Zn); PHASE2RA willow; and PHASE2RA whole sedge. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-85. Food-web model exposure results for moose exposed to CoPC concentrations at ST-REF-5 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	2,770	12,100	290	15.5	51.9	1560	277	1890	5.57	1.9	19	2.9	0.29
Antimony	0.08	0.05	0.06	0.04	0.00150	0.00644	0.271	0.278	0.000821	0.66	--	0.0012	--
Arsenic (arsenate)	2.2	3.5	0.32	0.03	0.0412	0.451	0.380	0.872	0.00257	0.40	1.6	0.0064	0.0016
Arsenic (arsenite)	2.2	3.5	0.32	0.03	0.0412	0.451	0.380	0.872	0.00257	0.13	1.3	0.020	0.0020
Barium	222	483	73.3	57.2	4.16	62.2	379	445	1.31	5.1	20	0.26	0.066
Cadmium	0.07	0.3	0.132	0.401	0.00131	0.0386	2.41	2.45	0.00723	1.0	10	0.0072	0.00072
Chromium	3.71	19.9	2.6	0.3	0.0695	2.56	3.41	6.05	0.0178	3.3	69	0.0054	0.00026
Cobalt	2.72	8.74	1.13	2.43	0.0510	1.13	14.8	16.0	0.0472	0.50	2.0	0.094	0.024
Lead	1.91	8.87	0.47	0.62	0.0358	1.14	3.90	5.08	0.0150	11	90	0.0014	0.00017
Mercury	0.05	0.04	0.034	0.037	0.000937	0.00515	0.236	0.242	0.000715	0.032	0.16	0.022	0.0045
Molybdenum	0.17	0.3	0.378	0.435	0.00319	0.0386	2.77	2.81	0.00828	0.26	2.6	0.032	0.0032
Selenium	0.2	0.7	0.05	0.05	0.00375	0.0902	0.322	0.416	0.00123	0.20	0.33	0.0061	0.0037
Thallium	0.014	0.07	0.05	0.003	0.000262	0.00902	0.0496	0.0589	0.000174	0.074	0.74	0.0023	0.00023
Vanadium	5.57	24.8	0.65	0.3	0.104	3.19	2.16	5.46	0.0161	0.21	2.1	0.077	0.0077
Zinc	9.84	68.1	29.6	79.2	0.184	8.77	478	487	1.44	160	320	0.0090	0.0045

Note: The following data were used to develop this scenario: PHASE1RA water (ST-REF-5), Phase1RA sediment (ST-REF-5); PHASE2RA willow; and PHASE2RA whole sedge.

No PHASE2RA sediment data collected at ST-REF-5, so PHASE1RA sediment data used for all analytes.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-85a. Moose EPC calculation for mean CoPC concentrations at ST-REF-5 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
										ST-REF-5 site mean	1.91
Tundra Soil											
PHASE2RA	ST-REF-5	7/20/2003	SD0063	0	0	NA	NA	NA	mg/kg dry		8.87
										ST-REF-5 site mean	8.87
Herbaceous Plant											
PHASE2RA	ST-REF-5	6/24/2004	SE0035	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.47
										ST-REF-5 site mean	0.47
Shrub											
PHASE2RA	ST-REF-5	6/24/2004	WI0021	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.62
										ST-REF-5 site mean	0.62

Note: CoPC - chemical of potential concern
EPC - exposure point concentration

Table K-86. Food-web model exposure results for moose exposed to CoPC concentrations at ST-REF-6 site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	2,770	12,100	396	2.5	51.9	1560	270	1880	5.55	1.9	19	2.9	0.29
Antimony	0.08	0.05	0.05	0.04	0.00150	0.00644	0.264	0.272	0.000802	0.66	--	0.0012	--
Arsenic (arsenate)	2.2	3.5	1.08	0.03	0.0412	0.451	0.870	1.36	0.00402	0.40	1.6	0.010	0.0025
Arsenic (arsenite)	2.2	3.5	1.08	0.03	0.0412	0.451	0.870	1.36	0.00402	0.13	1.3	0.031	0.0031
Barium	222	483	64	24.1	4.16	62.2	181	247	0.730	5.1	20	0.14	0.036
Cadmium	0.07	0.19	0.057	0.558	0.00131	0.0245	3.27	3.30	0.00973	1.0	10	0.0097	0.00097
Chromium	3.71	19.9	4.1	0.2	0.0695	2.56	3.80	6.43	0.0190	3.3	69	0.0058	0.00028
Cobalt	2.72	8.74	1.62	2.06	0.0510	1.13	13.0	14.2	0.0418	0.50	2.0	0.084	0.021
Lead	1.91	5.71	0.74	0.09	0.0358	0.736	0.998	1.77	0.00522	11	90	0.00047	0.000058
Mercury	0.05	0.003	0.025	0.065	0.000937	0.000386	0.393	0.394	0.00116	0.032	0.16	0.036	0.0073
Molybdenum	0.17	0.3	0.147	0.09	0.00319	0.0386	0.616	0.658	0.00194	0.26	2.6	0.0075	0.00075
Selenium	0.2	0.7	0.2	0.05	0.00375	0.0902	0.419	0.513	0.00151	0.20	0.33	0.0076	0.0046
Thallium	0.014	0.07	0.009	0.002	0.000262	0.00902	0.0174	0.0267	0.0000787	0.074	0.74	0.0011	0.00011
Vanadium	5.57	24.8	0.85	0.2	0.104	3.19	1.71	5.01	0.0148	0.21	2.1	0.070	0.0070
Zinc	9.84	33.1	30	92.2	0.184	4.26	554	558	1.65	160	320	0.010	0.0051

Note: The following data were used to develop this scenario: PHASE1RA water (ST-REF-5), Phase1RA sediment for Al, As, Ba, Co, Mo, Se, Ti, V (ST-REF-5); Phase2RA sediment for Cd, Pb, Hg, Zn; PHASE2RA willow; and PHASE2RA whole sedge.

No PHASE1RA sediment or water data collected at ST-REF-6, so ST-REF-5 data used -- nearest creek sediment and water station from PHASE1RA.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-86a. Moose EPC calculation for mean CoPC concentrations at ST-REF-6 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
										ST-REF-6 site mean	1.91
Tundra Soil											
PHASE2RA	ST-REF-6	7/5/2004	SD0011	0	0	NA	NA	NA	mg/kg dry		5.71
										ST-REF-6 site mean	5.71
Herbaceous Plant											
PHASE2RA	ST-REF-6	6/24/2004	SE0039	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.74
										ST-REF-6 site mean	0.74
Shrub											
PHASE2RA	ST-REF-6	6/24/2004	WI0022	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.09
										ST-REF-6 site mean	0.09

Note: CoPC - chemical of potential concern
EPC - exposure point concentration

Table K-87. Food-web model exposure results for moose exposed to CoPC concentrations at Aufeis Creek road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	86.7	7,580	156	1.63	976	1000	1980	5.85	1.9	19	3.1	0.31
Antimony	0.063	0.07	0.07	0.00118	0.00902	0.451	0.461	0.00136	0.66	--	0.0021	--
Arsenic (arsenate)	0.482	7.2	0.21	0.00903	0.928	1.35	2.29	0.00675	0.40	1.6	0.017	0.0042
Arsenic (arsenite)	0.482	7.2	0.21	0.00903	0.928	1.35	2.29	0.00675	0.13	1.3	0.052	0.0052
Barium	24.3	172	81	0.454	22.2	522	544	1.61	5.1	20	0.31	0.080
Cadmium	0.121	0.49	1.99	0.00227	0.0631	12.8	12.9	0.0380	1.0	10	0.038	0.0038
Chromium	0.396	15.5	0.8	0.00742	2.00	5.15	7.16	0.0211	3.3	69	0.0064	0.00031
Cobalt	0.09	9.64	0.65	0.00169	1.24	4.19	5.43	0.0160	0.50	2.0	0.032	0.0080
Lead	0.344	29.2	10.9	0.00644	3.76	70.2	74.0	0.218	11	90	0.020	0.0024
Mercury	0.0179	0.054	0.051	0.000335	0.00689	0.328	0.336	0.00099	0.032	0.16	0.031	0.0062
Molybdenum	0.389	0.66	0.21	0.00729	0.0850	1.35	1.44	0.00426	0.26	2.6	0.016	0.0016
Selenium	0.139	1.5	0.2	0.00261	0.193	1.29	1.48	0.00438	0.20	0.33	0.022	0.013
Thallium	0.296	0.101	0.015	0.00555	0.0130	0.0966	0.115	0.000340	0.074	0.74	0.0046	0.00046
Vanadium	0.583	16	0.55	0.0109	2.06	3.54	5.61	0.0166	0.21	2.1	0.079	0.0079
Zinc	8.09	125	185	0.152	16.1	1190	1210	3.56	160	320	0.022	0.011

Note: The following data were used to develop this scenario: TECK03 water (mean of AufRoad), Phase1RA sediment; Phase2RA sediment (Cd, Pb, Hg, Zn); PHASE2RA willow (no sedge collected).

Assumes diet is 100% willow because no sedge data available for Aufeis Creek; sediment data from station AC-R.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-88. Food-web model exposure results for moose exposed to CoPC concentrations at Omikviorok River road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	96.3	9,520	1,900	134	1.81	1230	2000	3230	9.52	1.9	19	5.0	0.50
Antimony	0.063	0.14	0.0515	0.0615	0.00118	0.0180	0.390	0.409	0.00121	0.66	--	0.0018	--
Arsenic (arsenate)	0.482	7.6	1.87	0.2	0.00903	0.979	2.36	3.35	0.00989	0.40	1.6	0.025	0.0062
Arsenic (arsenite)	0.482	7.6	1.87	0.2	0.00903	0.979	2.36	3.35	0.00989	0.13	1.3	0.076	0.0076
Barium	133	407	208	65.2	2.49	52.4	512	567	1.67	5.1	20	0.33	0.084
Cadmium	0.0849	0.44	0.492	0.528	0.00159	0.056	3.38	3.44	0.0101	1.0	10	0.010	0.0010
Chromium	0.396	20.6	16.2	1	0.00742	2.65	16.2	18.9	0.0557	3.3	69	0.017	0.00081
Cobalt	0.1	13.5	2.96	1.3	0.00187	1.74	9.44	11.2	0.0330	0.50	2.0	0.066	0.016
Lead	0.506	22.5	8.27	4.86	0.00948	2.89	33.5	36.4	0.107	11	90	0.0098	0.0012
Mercury	0.0179	0.032	0.042	0.05	0.000335	0.00406	0.317	0.321	0.000948	0.032	0.16	0.030	0.0059
Molybdenum	0.69	0.49	0.238	0.36	0.0129	0.0631	2.24	2.32	0.00683	0.26	2.6	0.026	0.0026
Selenium	0.0201	0.6	0.3	0.1	0.000377	0.0773	0.773	0.851	0.00251	0.20	0.33	0.013	0.0076
Thallium	0.0428	0.106	0.033	0.006	0.000801	0.0137	0.0560	0.0705	0.000208	0.074	0.74	0.0028	0.00028
Vanadium	0.335	24.9	4.8	0.3	0.00628	3.21	4.83	8.04	0.0237	0.21	2.1	0.11	0.011
Zinc	6.46	108	59.4	61.7	0.121	13.8	396	410	1.21	160	320	0.0076	0.0038

Note: The following data were used to develop this scenario: TECK03 water (mean of OmiRoad), Phase1RA sediment; Phase2RA sediment (Cd, Pb, Hg, Zn); PHASE2RA willow; and PHASE2RA whole sedge.

Sediment data from station OR-R.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-89. Food-web model exposure results for moose exposed to CoPC concentrations at Anxiety Ridge Creek road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	208	7,200	307	142	3.90	928	1020	1950	5.76	1.9	19	3.0	0.30
Antimony	0.063	0.42	0.04	0.0775	0.00118	0.0541	0.475	0.530	0.00156	0.66	--	0.0024	--
Arsenic (arsenate)	0.482	8.4	1.13	0.24	0.00903	1.08	2.12	3.21	0.00947	0.40	1.6	0.024	0.0059
Arsenic (arsenite)	0.482	8.4	1.13	0.24	0.00903	1.08	2.12	3.21	0.00947	0.13	1.3	0.073	0.0073
Barium	140	922	250	308	2.62	119	1950	2070	6.10	5.1	20	1.2	0.30
Cadmium	0.0365	1.02	0.638	3.9	0.000684	0.131	23.0	23.2	0.0683	1.0	10	0.068	0.0068
Chromium	0.396	14.6	3.1	1.8	0.00742	1.88	12.4	14.3	0.0422	3.3	69	0.013	0.00061
Cobalt	0.015	11.1	0.92	1.04	0.000281	1.43	6.62	8.05	0.0238	0.50	2.0	0.048	0.012
Lead	0.65	124	14.3	11.8	0.0122	16.0	77.6	93.6	0.276	11	90	0.025	0.0031
Mercury	0.0179	0.063	0.06	0.05	0.000335	0.00812	0.328	0.337	0.000994	0.032	0.16	0.031	0.0062
Molybdenum	0.22	1.62	0.309	0.411	0.00412	0.209	2.58	2.79	0.00824	0.26	2.6	0.032	0.0032
Selenium	0.355	1.5	0.3	0.3	0.00665	0.193	1.93	2.13	0.00629	0.20	0.33	0.031	0.019
Thallium	0.09	0.19	0.027	0.022	0.00169	0.0245	0.145	0.171	0.000505	0.074	0.74	0.0068	0.00068
Vanadium	0.335	20.5	0.7	0.7	0.00628	2.64	4.51	7.16	0.0211	0.21	2.1	0.10	0.010
Zinc	1.79	204	87.4	198	0.0335	26.3	1200	1230	3.63	160	320	0.023	0.011

Note: The following data were used to develop this scenario: TECK03 water (ARC-D), Phase1RA sediment (ARC-D1); Phase2RA sediment (Cd, Pb, Hg, Zn at ARC-R); PHASE2RA willow; and PHASE2RA whole sedge.

Mean of PHASE1RA (ARC-D1) and PHASE2RA (ARC-R) sediment used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-89a. Moose EPC calculation for mean CoPC concentrations at Anxiety Ridge Creek road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	$\mu\text{g/L}$ unfiltered		0.65 <i>J</i>
										Anxiety Ridge Creek road site mean	0.65 <i>J</i>
Tundra Soil											
PHASE1RA	ARC-D1	7/22/2003	SD0072	0	0	NA	NA	NA	mg/kg dry		130
PHASE2RA	ARC-R	7/5/2004	SD0008	0	0	NA	NA	NA	mg/kg dry		117
										Anxiety Ridge Creek road site mean	124
Herbaceous Plant											
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		14.3
										Anxiety Ridge Creek road site mean	14.3
Shrub											
PHASE2RA	ARC-R	7/1/2004	WI0028	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		11.8
										Anxiety Ridge Creek road site mean	11.8

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-90. Food-web model exposure results for moose exposed to mean CoPC concentrations at reference site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	514	3,650	304	10.1	9.64	470	254	734	2.16	1.9	19	1.1	0.11
Antimony	0.045	0.208	0.0457	0.0319	0.000843	0.0267	0.214	0.242	0.000713	0.66	--	0.0011	--
Arsenic (arsenate)	0.717	3.61	1.63	0.0313	0.0134	0.465	1.23	1.71	0.00504	0.40	1.6	0.013	0.0032
Arsenic (arsenite)	0.717	3.61	1.63	0.0313	0.0134	0.465	1.23	1.71	0.00504	0.13	1.3	0.039	0.0039
Barium	125	346	54.6	50.7	2.35	44.5	329	376	1.11	5.1	20	0.22	0.055
Cadmium	0.0333	0.379	0.0818	0.378	0.000625	0.0489	2.24	2.29	0.00676	1.0	10	0.0068	0.00068
Chromium	1.17	6.76	7.46	0.3	0.0219	0.871	6.54	7.44	0.0219	3.3	69	0.0066	0.00032
Cobalt	0.693	7.97	1.31	2.36	0.0130	1.03	14.5	15.6	0.0459	0.50	2.0	0.092	0.023
Lead	0.512	10.2	0.794	0.293	0.00959	1.32	2.21	3.54	0.0104	11	90	0.00095	0.00012
Mercury	0.05	0.0935	0.0323	0.0509	0.000937	0.0120	0.316	0.329	0.000970	0.032	0.16	0.030	0.0061
Molybdenum	0.0883	0.689	0.411	0.16	0.00166	0.0888	1.19	1.28	0.00379	0.26	2.6	0.015	0.0015
Selenium	0.267	0.594	0.155	0.0625	0.00500	0.0765	0.462	0.544	0.00160	0.20	0.33	0.0080	0.0049
Thallium	0.011	0.0769	0.0278	0.00213	0.000206	0.00991	0.0302	0.0403	0.000119	0.074	0.74	0.0016	0.00016
Vanadium	1.57	14.5	1.51	0.25	0.0294	1.86	2.42	4.31	0.0127	0.21	2.1	0.061	0.0061
Zinc	3.16	60.8	33.1	88.6	0.0593	7.83	535	543	1.60	160	320	0.010	0.0050

Note: Data used to develop this scenario are presented in Table K-91a.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-90a. Moose EPC calculation for mean and 95% UCL CoPC concentrations at reference site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
PHASE1RA	ST-REF-4	7/20/2003	SW0037	0	0	NA	NA	NA	µg/L unfiltered		0.02
PHASE1RA	ST-REF-5	7/20/2003	SW0034	0	0	NA	NA	NA	µg/L unfiltered		1.91
PHASE1RA	TP-REF-2	7/20/2003	SW0038	0	0	NA	NA	NA	µg/L unfiltered		0.06
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										reference site mean	0.512 <i>J</i>
										reference site 95% UCL	1.91
Tundra Soil											
PHASE2RA	ST-REF-3	6/26/04	TS-0036	0	0	NA	NA	NA	mg/kg dry		15.3
PHASE2RA	ST-REF-5	6/24/04	TS-0031	0	0	NA	NA	NA	mg/kg dry		10.7
PHASE2RA	ST-REF-6	6/24/04	TS-0033	0	0	NA	NA	NA	mg/kg dry		9.81
PHASE2RA	TP-REF-2	6/24/04	TS-0032	0	0	NA	NA	NA	mg/kg dry		23.6
PHASE2RA	TP-REF-3	6/23/04	TS-0027	0	0	NA	NA	NA	mg/kg dry		12.8
PHASE2RA	TP-REF-5	6/24/04	TS-0030	0	0	NA	NA	NA	mg/kg dry		9.1
PHASE1RA	TS-REF-1	07/20/03	TS0024	0	0	NA	NA	NA	mg/kg dry		5.97 <i>J</i>
PHASE1RA	TS-REF2	07/20/03	TS0023	0	0	NA	NA	NA	mg/kg dry		5 <i>J</i>
PHASE1RA	TS-REF3	07/20/03	TS0022	0	0	NA	NA	NA	mg/kg dry		3.78 <i>J</i>
PHASE1RA	TS-REF-4	07/20/03	TS0021	0	0	NA	NA	NA	mg/kg dry		6.61
PHASE1RA	TS-REF-5	07/20/03	TS0020	0	0	NA	NA	NA	mg/kg dry	23.3	
PHASE2RA	TS-REF-5	06/23/04	TS-0028	0	0	NA	NA	NA	mg/kg dry	3.58	
										survey station mean	13.4
PHASE1RA	TS-REF-6	07/20/03	TS0019	0	0	NA	NA	NA	mg/kg dry		9.87 <i>J</i>
PHASE1RA	TS-REF-7	07/20/03	TS0018	0	0	NA	NA	NA	mg/kg dry	6.26	<i>J</i>
PHASE2RA	TS-REF-7	06/24/04	TS-0029	0	0	NA	NA	NA	mg/kg dry	7.5	
										survey station mean	6.9 <i>J</i>
PHASE1RA	TS-REF-8	07/20/03	TS0031	0	0	NA	NA	NA	mg/kg dry		18.5 <i>J</i>
PHASE1RA	TS-REF-9	07/20/03	TS0030	0	0	NA	NA	NA	mg/kg dry		2.9 <i>J</i>
PHASE1RA	TS-REF10	07/20/03	TS0017	0	0	NA	NA	NA	mg/kg dry		7.23 <i>J</i>
PHASE2RA	TS-REF11	06/25/04	TS-0034	0	0	NA	NA	NA	mg/kg dry		12.7
										reference site mean	10.2 <i>J</i>
										reference site 95% UCL	12.5
Herbaceous Plant											
PHASE2RA	ST-REF-3	6/26/2004	SE0043	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.28
PHASE2RA	ST-REF-5	6/24/2004	SE0035	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.47
PHASE2RA	ST-REF-6	6/24/2004	SE0039	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.74

Table K-90a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TP-REF-2	6/24/2004	SE0037	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.4
PHASE2RA	TP-REF-3	6/23/2004	SE0029	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		2.3
PHASE2RA	TP-REF-5	6/24/2004	SE0033	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.1
PHASE2RA	TS-REF-5	6/23/2004	SE0031	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.52
PHASE2RA	TS-REF-5	7/1/2004	SE0056	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.46
PHASE2RA	TS-REF-7	6/24/2004	SE0032	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.28
PHASE2RA	TS-REF11	6/25/2004	SE0041	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.39
										reference site mean	0.794
										reference site 95% UCL	1.23
Shrub											
PHASE2RA	ST-REF-3	6/26/2004	WI0025	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.14
PHASE2RA	ST-REF-5	6/24/2004	WI0021	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.62
PHASE2RA	ST-REF-6	6/24/2004	WI0022	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.09
PHASE2RA	TS-REF-5	6/23/2004	WI0019	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.4
PHASE2RA	TS-REF-7	6/24/2004	BR0005	0	0	<i>Betula</i>	<i>nana</i>	Leaves	mg/kg dry		0.13
PHASE2RA	TS-REF-7	6/24/2004	WI0020	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.11
PHASE2RA	TS-REF11	6/25/2004	BR0006	0	0	<i>Betula</i>	<i>nana</i>	Leaves	mg/kg dry		0.08
PHASE2RA	TS-REF11	6/25/2004	WI0023	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	mg/kg dry		0.77
										reference site mean	0.293
										reference site 95% UCL	0.584

Note: Tundra soil are averaged by survey station, then included in the calculation of the site mean.
 95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
 J - estimated value

Table K-91. Food-web model exposure results for moose exposed to 95% UCL CoPC concentrations at reference site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	2,770 ^a	5,590	1,130	15.0	51.9	720	816	1590	4.69	1.9	19	2.5	0.25
Antimony	0.0765	0.241	0.0605	0.0375	0.00143	0.0311	0.256	0.289	0.000852	0.66	--	0.0013	--
Arsenic (arsenate)	1.36	5.31	6.56	0.0336	0.0255	0.684	4.42	5.13	0.0151	0.40	1.6	0.038	0.0095
Arsenic (arsenite)	1.36	5.31	6.56	0.0336	0.0255	0.684	4.42	5.13	0.0151	0.13	1.3	0.12	0.012
Barium	177	417	72.0	65.7	3.32	53.7	427	484	1.43	5.1	20	0.28	0.071
Cadmium	0.0580	0.477	0.132	0.502	0.00109	0.0614	2.99	3.06	0.00902	1.0	10	0.0090	0.00090
Chromium	3.71 ^a	11.8	28.0	0.378	0.0695	1.52	20.2	21.8	0.0643	3.3	69	0.019	0.00093
Cobalt	1.79	11.3	3.37	5.51	0.0336	1.46	34.1	35.6	0.105	0.50	2.0	0.21	0.053
Lead	1.91 ^a	12.5	1.23	0.584	0.0358	1.62	4.18	5.83	0.0172	11	90	0.0016	0.00019
Mercury	0.05 ^a	0.109	0.0357	0.0582	0.000937	0.0140	0.361	0.376	0.00111	0.032	0.16	0.035	0.0069
Molybdenum	0.158	0.881	0.546	0.259	0.00297	0.113	1.85	1.97	0.00581	0.26	2.6	0.022	0.0022
Selenium	0.366	0.693	0.362	0.0780	0.00687	0.0893	0.685	0.781	0.00230	0.20	0.33	0.012	0.0070
Thallium	0.04 ^a	0.0919	0.0756	0.003 ^a	0.000750	0.0118	0.0661	0.0787	0.000232	0.074	0.74	0.0031	0.00031
Vanadium	5.57 ^a	19.0	7.6 ^a	0.286	0.104	2.44	6.55	9.10	0.0268	0.21	2.1	0.13	0.013
Zinc	6.26	68.4	37.0	109	0.117	8.81	653	662	1.95	160	320	0.012	0.0061

Note: Data used to develop this scenario are presented in Table K-91a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL as the mean concentration.

Table K-92. Food-web model exposure results for moose exposed to mean CoPC concentrations at port site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL	LOAEL	NOAEL Hazard Quotient	LOAEL Hazard Quotient
										(mg/kg-day)	(mg/kg-day)		
Aluminum	35.5	5,610	31.3	30.9	0.665	723	199	922	2.72	1.9	19	1.4	0.14
Antimony	0.307	5.83	0.174	0.09	0.00575	0.751	0.634	1.39	0.00410	0.66	--	0.0062	--
Arsenic (arsenate)	0.494	16.7	0.137	0.0588	0.00926	2.15	0.429	2.58	0.00762	0.40	1.6	0.019	0.0048
Arsenic (arsenite)	0.494	16.7	0.137	0.0588	0.00926	2.15	0.429	2.58	0.00762	0.13	1.3	0.059	0.0059
Barium	44.8	597	33.6	35.1	0.839	76.9	225	303	0.893	5.1	20	0.18	0.045
Cadmium	0.120	15.1	0.287	3.24	0.00224	1.94	19.0	20.9	0.0617	1.0	10	0.062	0.0062
Chromium	0.799	11.1	1.01	0.25	0.0150	1.43	2.10	3.55	0.0105	3.3	69	0.0032	0.00015
Cobalt	0.903	11.4	1.87	0.91	0.0169	1.47	6.48	7.97	0.0235	0.50	2.0	0.047	0.012
Lead	0.462	792	6.85	7.59	0.00866	102	48.4	150	0.444	11	90	0.040	0.0049
Mercury	0.0393	0.779	0.0398	0.04	0.000737	0.100	0.258	0.359	0.00106	0.032	0.16	0.033	0.0066
Molybdenum	0.793	1.41	0.284	0.121	0.0149	0.181	0.883	1.08	0.00318	0.26	2.6	0.012	0.0012
Selenium	0.523	7.71	0.132	0.113	0.00981	0.993	0.737	1.74	0.00513	0.20	0.33	0.026	0.016
Thallium	0.0095	0.354	0.0116	0.00388	0.000178	0.0456	0.0299	0.0757	0.000223	0.074	0.74	0.0030	0.00030
Vanadium	0.285	14.1	0.214	0.238	0.00534	1.82	1.51	3.34	0.00985	0.21	2.1	0.047	0.0047
Zinc	22.2	2490	95.3	290	0.417	321	1740	2060	6.09	160	320	0.038	0.019

Note: Data used to develop this scenario are presented in Table K-93a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-92a. Moose EPC calculation for mean and 95% UCL CoPC concentrations at port site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										port site mean	0.462
										port site 95% UCL	1.63
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-0W-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											
											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											
											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											
											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											
											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 U
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 U
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	U
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	U
											field reps - both non-detects (minimum value)
											15 U
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 U
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 U
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 U
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 U
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 U
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 U
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 U
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 UJ
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346	
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299	
											field rep average
											323
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		317
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	U
											field rep average
											13
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 UJ

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
field reps - both non-detects (minimum value)											
											11 <i>UJ</i>
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
field reps - both non-detects (minimum value)											
											18 <i>UJ</i>
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>UU</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
field reps - both non-detects (minimum value)											
											18 <i>U</i>
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
field rep average											69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
field rep average											121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
field rep average											283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
field rep average											132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	ROT4-0NA	7/4/2002	ROT4-0NA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-0SA	7/4/2002	ROT4-0SA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
field rep average											1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-0NA	7/4/2002	ROT5-0NA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-0SA	7/4/2002	ROT5-0SA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-0NA	7/4/2002	ROT6-0NA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-0SA	7/4/2002	ROT6-0SA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	<i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	
survey station mean											759 <i>J</i>
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											414
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	<i>J</i>
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.8 <i>J</i>
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
										port site mean	792 J
										port site 95% UCL	2,100
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	Sp	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
										field rep average	3.3
PHASE2RA	PLNL	6/28/2004	SE0045	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.81
PHASE2RA	PLNL	6/28/2004	SE0046	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.76
PHASE2RA	TP1-0100	6/17/2004	SE0009	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		48.1
PHASE2RA	TP1-1000	6/17/2004	SE0008	0	0	<i>Carex</i>	Sp	Whole Plant	mg/kg dry		16.1
PHASE2RA	TT2-0010	6/17/2004	SE0010	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		5.63
PHASE2RA	TT2-0100	6/16/2004	SE0006	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.01
PHASE2RA	TT2-1000	6/16/2004	SE0005	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.16
PHASE2RA	TT5-0010	6/12/2004	SE0001	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		10.8
PHASE2RA	TT5-0100	6/15/2004	SE0004	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.33
PHASE2RA	TT5-1000	6/13/2004	SE0002-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.1
PHASE2RA	TT5-1000	6/16/2004	SE0002-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.57
PHASE2RA	TT5-2000	6/15/2004	SE0003	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
										port site mean	6.85
										port site 95% UCL	14.5
Shrub											
FUGDST01	HR02-01W	8/20/2001	HR-02-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		45.6
FUGDST01	HR02-02W	8/21/2001	HR-02-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.21
FUGDST01	HR02-03W	8/24/2001	HR-02-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.856
FUGDST01	PO-07W	8/23/2001	PO-07-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		11.4
FUGDST01	PO-13W	8/23/2001	PO-13-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.8
FUGDST01	PO-17W	8/23/2001	PO-17-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		15.6
PHASE2RA	TT2-0010	6/17/2004	WI0006	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		5.76
PHASE2RA	TT2-0100	6/16/2004	WI0005	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.89
PHASE2RA	TT2-1000	6/16/2004	WI0004	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.35
PHASE2RA	TT5-0010	6/12/2004	WI0001	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		6.64

Table K-92a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT5-0100	6/15/2004	WI0003	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.85
PHASE2RA	TT5-1000	6/13/2004	BR0001	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		3.77
PHASE2RA	TT5-1000	6/13/2004	WI0002	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.07
PHASE2RA	TT5-2000	6/15/2004	BR0002	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		0.42
										port site mean	7.59
										port site 95% UCL	14.9

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-93. Food-web model exposure results for moose exposed to 95% UCL CoPC concentrations at port site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	103	7,820	54.3	70.6	1.93	1010	444	1450	4.29	1.9	19	2.3	0.23
Antimony	0.63 ^a	8.20	0.295	0.157	0.0118	1.06	1.10	2.17	0.00640	0.66	--	0.0097	--
Arsenic (arsenate)	0.6 ^a	22.9	0.274	0.0826	0.0112	2.94	0.655	3.61	0.0107	0.40	1.6	0.027	0.0067
Arsenic (arsenite)	0.6 ^a	22.9	0.274	0.0826	0.0112	2.94	0.655	3.61	0.0107	0.13	1.3	0.082	0.0082
Barium	70.3 ^a	817	61.3	50.7	1.32	105	334	440	1.30	5.1	20	0.25	0.065
Cadmium	0.245	27.6	0.664	7.63	0.00459	3.56	44.6	48.2	0.142	1.0	10	0.14	0.014
Chromium	1.56 ^a	16.4	5.87	0.312	0.0292	2.12	5.59	7.73	0.0228	3.3	69	0.0069	0.00033
Cobalt	1.56 ^a	14.3	17.7	1.56	0.0292	1.84	20.4	22.3	0.0658	0.50	2.0	0.13	0.033
Lead	1.63 ^a	2,100	14.5	14.9	0.0305	271	95.8	367	1.08	11	90	0.098	0.012
Mercury	0.05 ^a	3.23	0.0446	0.0451	0.000937	0.416	0.290	0.707	0.00208	0.032	0.16	0.065	0.013
Molybdenum	2.27 ^a	1.68	0.356	0.159	0.0425	0.217	1.15	1.41	0.00416	0.26	2.6	0.016	0.0016
Selenium	1.17 ^a	20.3	0.169	0.136	0.0219	2.61	0.898	3.53	0.0104	0.20	0.33	0.052	0.032
Thallium	0.0155 ^a	0.581	0.0271	0.00820	0.000291	0.0749	0.0650	0.140	0.000413	0.074	0.74	0.0056	0.00056
Vanadium	0.335 ^a	19.0	0.231	0.272	0.00628	2.45	1.73	4.19	0.0123	0.21	2.1	0.059	0.0059
Zinc	72.6	4,590	194	373	1.36	591	2290	2880	8.50	160	320	0.053	0.027

Note: Data used to develop this scenario are presented in Table K-93a.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL as the mean concentration.

Table K-94. Food-web model exposure results for moose exposed to mean CoPC concentrations at road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	167	1,510	285	77.7	3.13	194	634	831	2.45	1.9	19	1.3	0.13
Antimony	0.131	0.775	0.118	0.114	0.00246	0.0998	0.736	0.839	0.00247	0.66	--	0.0037	--
Arsenic (arsenate)	0.552	2.55	0.452	0.115	0.0103	0.328	0.958	1.30	0.00382	0.40	1.6	0.0096	0.0024
Arsenic (arsenite)	0.552	2.55	0.452	0.115	0.0103	0.328	0.958	1.30	0.00382	0.13	1.3	0.029	0.0029
Barium	80.9	1210	119	101	1.52	155	665	822	2.42	5.1	20	0.48	0.12
Cadmium	0.0889	2.89	0.239	2.46	0.00167	0.372	14.4	14.8	0.0437	1.0	10	0.044	0.0044
Chromium	0.9	5.05	4.88	0.575	0.0169	0.651	6.48	7.14	0.0211	3.3	69	0.0064	0.00031
Cobalt	0.166	5.81	0.698	1.69	0.00311	0.748	10.3	11.0	0.0325	0.50	2.0	0.065	0.016
Lead	0.455	121	5.88	4.95	0.00853	15.6	32.5	48.0	0.142	11	90	0.013	0.0016
Mercury	0.0233	0.19	0.0412	0.0441	0.000436	0.0245	0.282	0.307	0.000906	0.032	0.16	0.028	0.0057
Molybdenum	0.613	1.14	0.533	0.309	0.0115	0.147	2.13	2.29	0.00676	0.26	2.6	0.026	0.0026
Selenium	0.147	0.725	0.16	0.14	0.00275	0.0934	0.915	1.01	0.00298	0.20	0.33	0.015	0.0090
Thallium	0.0562	0.156	0.0412	0.0081	0.00105	0.0201	0.0735	0.0947	0.000279	0.074	0.74	0.0038	0.00038
Vanadium	0.45	7.95	0.83	0.355	0.00843	1.02	2.59	3.62	0.0107	0.21	2.1	0.051	0.0051
Zinc	7.16	582	59.4	193	0.134	75.0	1160	1230	3.64	160	320	0.023	0.011

Note: Data used to develop this scenario are presented in Table K-95a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-94a. Moose EPC calculation for mean and 95% UCL CoPC concentrations at road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
										field rep average	0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 U
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	U
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	U
										field reps - both non-detects (minimum value)	0.089 U
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4

Table K-94a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample						
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526

Table K-94a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample						
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 U
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 U

Table K-94a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
										road site mean	0.455
										road site 95% UCL	1.10
Tundra Soil											
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
										field rep average	449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
										survey station mean	385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
										field rep average	34.6
										survey station mean	119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
										survey station mean	16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 <i>J</i>
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 <i>J</i>
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 <i>J</i>
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 <i>J</i>

Table K-94a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 <i>J</i>
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 <i>J</i>
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 <i>J</i>
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 <i>J</i>
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 <i>J</i>
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 <i>J</i>
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 <i>J</i>
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 <i>J</i>
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 <i>U</i>
										road site mean	121 <i>J</i>
										road site 95% UCL	173
Herbaceous Plant											
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquaticus</i>	Whole Plant	mg/kg dry		14.3
PHASE2RA	OR-R	7/1/2004	SE0051	0	0	<i>Carex</i>	<i>aquaticus</i>	Whole Plant	mg/kg dry		8.27
PHASE2RA	TP3	6/20/2004	SE0018-D	1	0	<i>Carex</i>	<i>aquaticus</i>	Whole Plant	mg/kg dry	5.01	
PHASE2RA	TP3	6/20/2004	SE0018-D	2	0	<i>Carex</i>	<i>aquaticus</i>	Whole Plant	mg/kg dry	1.96	
										field rep average	3.49
PHASE2RA	TP4	6/17/2004	SE0011	0	0	<i>Carex</i>	<i>aquaticus</i>	Whole Plant	mg/kg dry		21.1
PHASE2RA	TT3-0010	6/18/2004	SE0013	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.06
PHASE2RA	TT3-0100	6/20/2004	SE0022	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.91
PHASE2RA	TT3-1000	6/20/2004	SE0021	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.18
PHASE2RA	TT8-0010	6/19/2004	SE0017	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.89
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.17	
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.4	
										field rep average	1.29
PHASE2RA	TT8-1000	6/19/2004	SE0014	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.34
										road site mean	5.88
										road site 95% UCL	13.8
Shrub											
PHASE2RA	AC-R	6/23/2004	WI0018	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		10.9
PHASE2RA	ARC-R	7/1/2004	WI0028	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		11.8
FUGDST01	HR03-01W	8/19/2001	HR-03-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		16.5
FUGDST01	HR03-02W	8/21/2001	HR-03-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		3.94
FUGDST01	HR03-03W	8/24/2001	HR-03-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.431
PHASE2RA	OR-R	7/1/2004	WI0026-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	3.88	
PHASE2RA	OR-R	7/1/2004	WI0026-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	5.85	
										field rep average	4.87
PHASE2RA	TT3-0010	6/18/2004	WI0007	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		7.74
PHASE2RA	TT3-0100	6/20/2004	BR0004	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		1.91

Table K-94a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT3-0100	6/20/2004	WI0011	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.48
PHASE2RA	TT3-1000	6/20/2004	BR0003	0	0	<i>Betula</i>	<i>nana</i>	Leaves	µg/g dry		0.58
PHASE2RA	TT8-0010	6/19/2004	WI0010	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		2.91
PHASE2RA	TT8-0100	6/19/2004	WI0009	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.79
PHASE2RA	TT8-1000	6/19/2004	WI0008	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.47
										road site mean	4.95
										road site 95% UCL	9.21

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

CoPC - chemical of potential concern

EPC - exposure point concentration

J - estimated value

U - undetected; value reported is half the detection limit

Table K-95. Food-web model exposure results for moose exposed to 95% UCL CoPC concentrations at road site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	178	2,660 ^a	1,050	156 ^a	3.34	343	1580	1930	5.68	1.9	19	3.0	0.30
Antimony	0.215	0.883	0.236	0.224	0.00403	0.114	1.45	1.57	0.00462	0.66	--	0.0070	--
Arsenic (arsenate)	0.674	3.51	1.16	0.233	0.0126	0.452	2.10	2.56	0.00755	0.40	1.6	0.019	0.0047
Arsenic (arsenite)	0.674	3.51	1.16	0.233	0.0126	0.452	2.10	2.56	0.00755	0.13	1.3	0.058	0.0058
Barium	136	1,750	197	154	2.56	225	1020	1250	3.68	5.1	20	0.72	0.18
Cadmium	0.124	3.85	0.484	3.53	0.00233	0.496	20.8	21.3	0.0628	1.0	10	0.063	0.0063
Chromium	2.67	9.69 ^a	13.1	0.967	0.0501	1.25	14.0	15.3	0.0452	3.3	69	0.014	0.00066
Cobalt	0.259	7.13	1.83	2.60	0.00486	0.918	16.3	17.2	0.0507	0.50	2.0	0.10	0.025
Lead	1.10	173	13.8	9.21	0.0206	22.3	62.3	84.6	0.250	11	90	0.023	0.0028
Mercury	0.0297	0.223	0.0508	0.0497	0.000557	0.0288	0.321	0.350	0.00103	0.032	0.16	0.032	0.0065
Molybdenum	1.07	1.37	0.733	0.376	0.0200	0.176	2.65	2.85	0.00839	0.26	2.6	0.032	0.0032
Selenium	0.675	0.880	0.293	0.181	0.0126	0.113	1.24	1.36	0.00402	0.20	0.33	0.020	0.012
Thallium	0.296	0.246	0.153	0.0182	0.00555	0.0317	0.204	0.241	0.000712	0.074	0.74	0.0096	0.00096
Vanadium	0.545	10.4	1.81	0.472	0.0102	1.34	3.90	5.25	0.0155	0.21	2.1	0.074	0.0074
Zinc	13.5	799	72.4	231	0.253	103	1390	1490	4.40	160	320	0.027	0.014

Note: Data used to develop this scenario are presented in Table K-95a.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL as the mean concentration.

Table K-96. Food-web model exposure results for moose exposed to mean CoPC concentrations at mine site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	191	5,150	10.4	13.2	3.57	664	83.3	751	2.21	1.9	19	1.2	0.12
Antimony	0.063	2.82	0.0368	0.047	0.00118	0.363	0.296	0.660	0.00195	0.66	--	0.0030	--
Arsenic (arsenate)	0.482	6.77	0.0367	0.03	0.00903	0.872	0.198	1.08	0.00318	0.40	1.6	0.0080	0.0020
Arsenic (arsenite)	0.482	6.77	0.0367	0.03	0.00903	0.872	0.198	1.08	0.00318	0.13	1.3	0.024	0.0024
Barium	135	3,200	75.0	44.7	2.53	412	307	722	2.13	5.1	20	0.42	0.11
Cadmium	0.0365	9.27	0.209	3.34	0.000684	1.19	19.5	20.7	0.0611	1.0	10	0.061	0.0061
Chromium	0.396	10.2	0.233	0.263	0.00742	1.32	1.67	3.00	0.00884	3.3	69	0.0027	0.00013
Cobalt	0.0125	4.65	0.0583	0.601	0.000234	0.599	3.52	4.12	0.0122	0.50	2.0	0.024	0.0061
Lead	0.369	552	2.40	1.61	0.00692	71.1	10.9	81.9	0.242	11	90	0.022	0.0027
Mercury	0.0179	0.360	0.0307	0.0473	0.000335	0.0464	0.294	0.340	0.00100	0.032	0.16	0.031	0.0063
Molybdenum	0.23	8.09	0.810	0.411	0.00431	1.04	2.90	3.95	0.0117	0.26	2.6	0.045	0.0045
Selenium	0.348	1.63	0.139	0.05	0.00651	0.210	0.379	0.596	0.00176	0.20	0.33	0.0088	0.0053
Thallium	0.0575	0.860	0.00878	0.00513	0.00108	0.111	0.0354	0.147	0.000434	0.074	0.74	0.0059	0.00059
Vanadium	0.633	18.4	0.256	0.225	0.0119	2.36	1.47	3.85	0.0113	0.21	2.1	0.054	0.0054
Zinc	1.48	1,500	65.3	182	0.0277	193	1100	1290	3.81	160	320	0.024	0.012

Note: Data used to develop this scenario are presented in Table K-97a.

For Al and Cr in tundra soil no mine data available, so "whole site" data used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-96a. Moose EPC calculation for mean and 95% UCL CoPC concentrations at mine site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
TECK03	ARC-U	10/10/2003	03-4782	0	0	NA	NA	NA	µg/L unfiltered		0.09 <i>U</i>
										mine site mean	0.369 <i>J</i>
										mine site 95% UCL	0.650
Tundra Soil											
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
PHASE2RA	TT6_0100	6/21/2004	TS-0023	0	0	NA	NA	NA	mg/kg dry		281
PHASE2RA	TT6_1000	6/21/2004	TS-0022	0	0	NA	NA	NA	mg/kg dry		145
PHASE2RA	TT6_2000	6/22/2004	TS-0026	0	0	NA	NA	NA	mg/kg dry		102
PHASE2RA	TT7_0010	6/22/2004	TS-0025	0	0	NA	NA	NA	mg/kg dry		2,630
PHASE2RA	TT7_1000	6/22/2004	TS-0024	0	0	NA	NA	NA	mg/kg dry		201
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	1	0	NA	NA	NA	mg/kg dry	197	
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	2	0	NA	NA	NA	mg/kg dry	111	
										field rep average	154
										mine site mean	552
										mine site 95% UCL	1,220
Herbaceous Plant											
PHASE2RA	TT6-0010	6/25/2004	SE0042	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		0.71
PHASE2RA	TT6-0100	6/21/2004	SE0024	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
PHASE2RA	TT6-0100	6/21/2004	SE0025	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		1.32
PHASE2RA	TT6-1000	6/21/2004	SE0023	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.3 <i>U</i>
PHASE2RA	TT6-2000	6/22/2004	SE0028	0	0	<i>Carex</i>	<i>podocarpa</i>	Blades	mg/kg dry		1.1
PHASE2RA	TT7-0010	6/22/2004	SE0027	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		2.24
PHASE2RA	TT7-1000	6/22/2004	SE0026	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		5.67
PHASE2RA	TT7-2000	7/4/2004	SE0061	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		1.95
PHASE2RA	TT7-2000	7/4/2004	SE0062	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		7.96
										mine site mean	2.40
										mine site 95% UCL	5.10
Shrub											
PHASE2RA	TT6-0010	6/25/2004	WI0024	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		1.12
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	1.17	
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry	0.97	
										field rep average	1.07
PHASE2RA	TT6-1000	6/21/2004	WI0012	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.41
PHASE2RA	TT6-2000	6/22/2004	WI0017	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	µg/g dry		0.37

Table K-96a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT7-0010	6/22/2004	W10016	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		6.89
PHASE2RA	TT7-1000	6/22/2004	W10015	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.52
PHASE2RA	TT7-2000	7/4/2004	W10029	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.4
PHASE2RA	TT7-2000	7/4/2004	W10030	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.09
										mine site mean	1.61
										mine site 95% UCL	4.97

Note: Field replicates are averaged first then included in the calculation of the site mean.
 95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value
U - undetected; value reported is half the detection limit

Table K-97. Food-web model exposure results for moose exposed to 95% UCL CoPC concentrations at mine site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV			Year-Round Hazard Quotient	
	Water ^a (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
														NOAEL
Aluminum	208	7,150	12.8	25.7	3.90	920	157	1080	3.19	1.9	19	1.7	0.17	
Antimony	0.063	8.87	0.0460	0.0699	0.00118	1.14	0.435	1.58	0.00466	0.66	--	0.0071	--	
Arsenic (arsenate)	0.482	9.72	0.0469	0.03 ^a	0.00903	1.25	0.204	1.47	0.00432	0.40	1.6	0.011	0.0027	
Arsenic (arsenite)	0.482	9.72	0.0469	0.03 ^a	0.00903	1.25	0.204	1.47	0.00432	0.13	1.3	0.033	0.0033	
Barium	140	6,950 ^a	92.0	82.4	2.62	895	537	1430	4.23	5.1	20	0.83	0.21	
Cadmium	0.0365	29.0	0.300	4.18	0.000684	3.73	24.4	28.1	0.0830	1.0	10	0.083	0.0083	
Chromium	0.396	14.7	0.264	0.324	0.00742	1.89	2.05	3.95	0.0116	3.3	69	0.0035	0.00017	
Cobalt	0.015	6.40	0.0794	1.27	0.000281	0.825	7.43	8.25	0.0243	0.50	2.0	0.049	0.012	
Lead	0.65	1,220	5.10	4.97	0.0122	158	32.1	190	0.560	11	90	0.051	0.0062	
Mercury	0.0179	0.929	0.0363	0.0522	0.000335	0.120	0.326	0.446	0.00131	0.032	0.16	0.041	0.0082	
Molybdenum	0.24	21.4	1.12	0.757	0.00450	2.76	5.11	7.87	0.0232	0.26	2.6	0.089	0.0089	
Selenium	0.355	2.17	0.330	0.05 ^a	0.00665	0.279	0.503	0.789	0.00233	0.20	0.33	0.012	0.0071	
Thallium	0.09	1.39	0.0165	0.00713	0.00169	0.179	0.052	0.232	0.000686	0.074	0.74	0.0093	0.00093	
Vanadium	0.93	24.9	0.288	0.256	0.0174	3.21	1.67	4.90	0.0144	0.21	2.1	0.069	0.0069	
Zinc	1.79	6,770 ^a	91.2	238	0.0335	872	1440	2310	6.82	160	320	0.043	0.021	

Note: Data used to develop this scenario are presented in Table K-97a.

For Al and Cr in tundra soil no mine data available, so "whole site" data used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

UCL - upper confidence limit

^a Maximum concentration used in place of the 95 percent UCL as the mean concentration.

Table K-98. Food-web model exposure results for moose exposed to mean CoPC concentrations at whole site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	159	5,150	103	43.4	2.99	664	318	985	2.90	1.9	19	1.5	0.15
Antimony	0.154	3.29	0.120	0.0860	0.00289	0.424	0.575	1.00	0.00296	0.66	--	0.0045	--
Arsenic (arsenate)	0.533	10.0	0.205	0.0715	0.00999	1.29	0.547	1.85	0.00545	0.40	1.6	0.014	0.0034
Arsenic (arsenite)	0.533	10.0	0.205	0.0715	0.00999	1.29	0.547	1.85	0.00545	0.13	1.3	0.042	0.0042
Barium	80.9	1,150	70.8	63.6	1.52	148	414	563	1.66	5.1	20	0.33	0.083
Cadmium	0.0901	13.5	0.251	2.98	0.00169	1.73	17.4	19.1	0.0565	1.0	10	0.056	0.0056
Chromium	0.823	10.2	1.97	0.379	0.0154	1.32	3.47	4.80	0.0142	3.3	69	0.0043	0.00021
Cobalt	0.278	8.23	1.02	1.12	0.00521	1.06	7.13	8.19	0.0242	0.50	2.0	0.048	0.012
Lead	0.454	704	5.34	5.24	0.00851	90.7	33.8	125	0.367	11	90	0.033	0.0041
Mercury	0.0255	0.405	0.0377	0.0438	0.000477	0.0522	0.278	0.331	0.000976	0.032	0.16	0.031	0.0061
Molybdenum	0.600	2.02	0.503	0.282	0.0112	0.260	1.96	2.23	0.00658	0.26	2.6	0.025	0.0025
Selenium	0.202	3.99	0.142	0.104	0.00378	0.514	0.694	1.21	0.00357	0.20	0.33	0.018	0.011
Thallium	0.0513	0.316	0.0198	0.00588	0.000961	0.0407	0.0469	0.0885	0.000261	0.074	0.74	0.0035	0.00035
Vanadium	0.442	11.9	0.412	0.279	0.00829	1.53	1.88	3.42	0.0101	0.21	2.1	0.048	0.0048
Zinc	7.97	2,240	76.2	229	0.149	288	1380	1670	4.92	160	320	0.031	0.015

Note: Data used to develop this scenario are presented in Table K-99a.

"Whole site" data set comprises all data from port, road, and mine investigation units.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-98a. Moose EPC calculation for mean and 95% UCL CoPC concentrations at whole site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
PHASE1RA	TP1-1000	7/19/2003	SW0032	0	0	NA	NA	NA	µg/L unfiltered		1.06
TECK03	NHDowRd	6/11/2003	03-2455	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	6/27/2003	03-2874	0	0	NA	NA	NA	µg/L unfiltered		0.169
TECK03	NHDowRd	7/12/2003	03-3258	0	0	NA	NA	NA	µg/L unfiltered		0.100 <i>U</i>
TECK03	NHDowRd	8/10/2003	03-3853	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	NHDowRd	10/6/2003	03-4746	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
PHASE1RA	TP2-1000	7/19/2003	SW0029	1	0	NA	NA	NA	µg/L unfiltered	0.68	
PHASE1RA	TP2-1000	7/19/2003	SW0029	2	0	NA	NA	NA	µg/L unfiltered	0.65	
										field rep average	0.67
TECK03	AufDowRd	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.538
TECK03	AufDowRd	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufDowRd	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.619
TECK03	AufDowRd	7/12/2003	03-3269	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufDowRd	8/11/2003	03-3843	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufNFUp	5/23/2003	03-1993	0	0	NA	NA	NA	µg/L unfiltered		0.2 <i>U</i>
TECK03	AufNFUp	6/11/2003	03-2449	0	0	NA	NA	NA	µg/L unfiltered		0.273
TECK03	AufNFUp	6/27/2003	03-2887	0	0	NA	NA	NA	µg/L unfiltered		0.248
TECK03	AufNFUp	7/12/2003	03-3275	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufNFUp	8/10/2003	03-3847	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufNFUp	10/6/2003	03-4752	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufRoad	5/23/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.4 <i>U</i>
TECK03	AufRoad	6/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.429
TECK03	AufRoad	6/27/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.281
TECK03	AufRoad	7/12/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufRoad	8/11/2003	03-1990	0	0	NA	NA	NA	µg/L unfiltered		0.39
TECK03	AufRoad	9/22/2003	03-4618	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	AufRoad	10/6/2003	03-4750-D	1	0	NA	NA	NA	µg/L unfiltered	0.0885	<i>U</i>
TECK03	AufRoad	10/6/2003	03-4750-D	2	0	NA	NA	NA	µg/L unfiltered	0.401	<i>U</i>
										field reps - both non-detects (minimum value)	0.089 <i>U</i>
TECK03	AufSFUp	6/11/2003	03-2451	0	0	NA	NA	NA	µg/L unfiltered		0.685
TECK03	AufSFUp	6/27/2003	03-2884	0	0	NA	NA	NA	µg/L unfiltered		0.259
TECK03	AufSFUp	7/12/2003	03-3273	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	AufSFUp	8/10/2003	03-3849	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	AufSFUp	10/6/2003	03-4751	0	0	NA	NA	NA	µg/L unfiltered		0.22

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample						
TECK03	NHNFUp	6/11/2003	03-2459	0	0	NA	NA	NA	µg/L unfiltered		0.272
TECK03	NHNFUp	6/27/2003	03-2878	0	0	NA	NA	NA	µg/L unfiltered		0.371
TECK03	NHNFUp	7/12/2003	03-3267	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHNFUp	8/10/2003	03-3857	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHNFUp	10/6/2003	03-4748	0	0	NA	NA	NA	µg/L unfiltered		0.22
TECK03	NHRoad	5/23/2003	03-1983	0	0	NA	NA	NA	µg/L unfiltered		0.78
TECK03	NHRoad	6/11/2003	03-2453	0	0	NA	NA	NA	µg/L unfiltered		1.4
TECK03	NHRoad	6/27/2003	03-2875	0	0	NA	NA	NA	µg/L unfiltered		0.394
TECK03	NHRoad	7/12/2003	03-3261	0	0	NA	NA	NA	µg/L unfiltered		0.391
TECK03	NHRoad	8/10/2003	03-3851	0	0	NA	NA	NA	µg/L unfiltered		0.2
TECK03	NHRoad	9/22/2003	03-4617	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHRoad	10/6/2003	03-4749	0	0	NA	NA	NA	µg/L unfiltered		0.72
TECK03	NHSFUp	5/23/2003	03-1985	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	NHSFUp	6/11/2003	03-2461	0	0	NA	NA	NA	µg/L unfiltered		0.231
TECK03	NHSFUp	6/27/2003	03-2879	0	0	NA	NA	NA	µg/L unfiltered		0.146
TECK03	NHSFUp	7/12/2003	03-3265	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	NHSFUp	8/10/2003	03-3859	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	NHSFUp	10/6/2003	03-4747	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	5/22/2003	03-1973	0	0	NA	NA	NA	µg/L unfiltered		0.4
TECK03	OmiDowRd	6/11/2003	03-2465	0	0	NA	NA	NA	µg/L unfiltered		1.14
TECK03	OmiDowRd	6/28/2003	03-2872	0	0	NA	NA	NA	µg/L unfiltered		0.27
TECK03	OmiDowRd	7/13/2003	03-3277	0	0	NA	NA	NA	µg/L unfiltered		0.458
TECK03	OmiDowRd	8/10/2003	03-3863	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiDowRd	10/6/2003	03-4755	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	5/22/2003	03-1967	0	0	NA	NA	NA	µg/L unfiltered		0.411
TECK03	OmiNFUp	6/11/2003	03-2470	0	0	NA	NA	NA	µg/L unfiltered		0.56
TECK03	OmiNFUp	6/28/2003	03-2893	0	0	NA	NA	NA	µg/L unfiltered		0.236
TECK03	OmiNFUp	7/13/2003	03-3283	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiNFUp	8/10/2003	03-3867	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiNFUp	10/6/2003	03-4759	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	5/22/2003	03-1971	0	0	NA	NA	NA	µg/L unfiltered		0.5
TECK03	OmiRoad	6/11/2003	03-2463	0	0	NA	NA	NA	µg/L unfiltered		2.55
TECK03	OmiRoad	6/28/2003	03-2889	0	0	NA	NA	NA	µg/L unfiltered		0.124
TECK03	OmiRoad	7/13/2003	03-3279	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiRoad	8/10/2003	03-3861	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	9/22/2003	03-4620	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiRoad	10/6/2003	03-4757	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample						
TECK03	OmiSFUp	5/22/2003	03-1969	0	0	NA	NA	NA	µg/L unfiltered		0.2 U
TECK03	OmiSFUp	6/11/2003	03-2472	0	0	NA	NA	NA	µg/L unfiltered		0.328
TECK03	OmiSFUp	6/28/2003	03-2891	0	0	NA	NA	NA	µg/L unfiltered		0.101
TECK03	OmiSFUp	7/13/2003	03-3281	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	OmiSFUp	8/10/2003	03-3869	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	OmiSFUp	10/6/2003	03-4758	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	5/23/2003	03-1997	0	0	NA	NA	NA	µg/L unfiltered		0.526
TECK03	StrDowRd	6/11/2003	03-2476	0	0	NA	NA	NA	µg/L unfiltered		7.34
TECK03	StrDowRd	6/27/2003	03-2897	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	StrDowRd	7/13/2003	03-3291	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrDowRd	8/10/2003	03-3873	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrDowRd	10/6/2003	03-4753	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	5/23/2003	03-1996	0	0	NA	NA	NA	µg/L unfiltered		0.843
TECK03	StrRoad	6/11/2003	03-2474	0	0	NA	NA	NA	µg/L unfiltered		7.17
TECK03	StrRoad	6/27/2003	03-2895	0	0	NA	NA	NA	µg/L unfiltered		0.18
TECK03	StrRoad	7/13/2003	03-3295	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrRoad	8/10/2003	03-3871	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrRoad	9/22/2003	03-4619	0	0	NA	NA	NA	µg/L unfiltered		0.49
TECK03	StrRoad	10/6/2003	03-4756	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	5/23/2003	03-2000	0	0	NA	NA	NA	µg/L unfiltered		0.519
TECK03	StrUpRd	6/11/2003	03-2479	0	0	NA	NA	NA	µg/L unfiltered		3.7
TECK03	StrUpRd	6/27/2003	03-2899	0	0	NA	NA	NA	µg/L unfiltered		0.326
TECK03	StrUpRd	7/13/2003	03-3297	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	StrUpRd	8/10/2003	03-3877	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	StrUpRd	10/6/2003	03-4754	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	5/22/2003	03-1965	0	0	NA	NA	NA	µg/L unfiltered		1.32
TECK03	TutDowRd	6/11/2003	03-2483	0	0	NA	NA	NA	µg/L unfiltered		0.242
TECK03	TutDowRd	6/28/2003	03-2901	0	0	NA	NA	NA	µg/L unfiltered		0.049 U
TECK03	TutDowRd	7/13/2003	03-3285	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutDowRd	8/10/2003	03-3881	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutDowRd	10/6/2003	03-4741	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	5/22/2003	03-1963	0	0	NA	NA	NA	µg/L unfiltered		0.505
TECK03	TutRoad	6/11/2003	03-2481	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	6/28/2003	03-2903	0	0	NA	NA	NA	µg/L unfiltered		0.191
TECK03	TutRoad	7/13/2003	03-3287	0	0	NA	NA	NA	µg/L unfiltered		0.1 U
TECK03	TutRoad	8/10/2003	03-3879	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U
TECK03	TutRoad	9/22/2003	03-4621	0	0	NA	NA	NA	µg/L unfiltered		0.0885 U

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
TECK03	TutRoad	10/8/2003	03-4770	0	0	NA	NA	NA	µg/L unfiltered		0.379 <i>U</i>
TECK03	TutUpRd	5/22/2003	03-1961	0	0	NA	NA	NA	µg/L unfiltered		0.414
TECK03	TutUpRd	6/11/2003	03-2487	0	0	NA	NA	NA	µg/L unfiltered		0.253
TECK03	TutUpRd	6/28/2003	03-2905	0	0	NA	NA	NA	µg/L unfiltered		0.304
TECK03	TutUpRd	7/13/2003	03-3289	0	0	NA	NA	NA	µg/L unfiltered		0.1 <i>U</i>
TECK03	TutUpRd	8/10/2003	03-3885	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	TutUpRd	10/6/2003	03-4742	0	0	NA	NA	NA	µg/L unfiltered		0.0885 <i>U</i>
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
TECK03	ARC-U	10/10/2003	03-4782	0	0	NA	NA	NA	µg/L unfiltered		0.09 <i>U</i>
										whole site mean	0.454 <i>J</i>
										whole site 95% UCL	1.05
Tundra Soil											
PSCHAR	CAG-D33	7/3/2002	CAG-D-33	0	0	NA	NA	NA	mg/kg dry		353 <i>J</i>
PSCHAR	CAG-F35	7/3/2002	CAG-F-35	0	0	NA	NA	NA	mg/kg dry		10100 <i>J</i>
PSCHAR	CAG-J35	7/3/2002	CAG-J-35	0	0	NA	NA	NA	mg/kg dry		1510 <i>J</i>
PSCHAR	CIT1-0NA	6/29/2002	C1T1-0N-A	0	0	NA	NA	NA	mg/kg dry		460
PSCHAR	CIT1-10N	6/29/2002	C1T1-10-N	0	0	NA	NA	NA	mg/kg dry		71.8
PSCHAR	CIT1-50N	6/29/2002	C1T1-50-N	0	0	NA	NA	NA	mg/kg dry		16.5 <i>U</i>
PSCHAR	CIT1250N	6/29/2002	C1T1-250-N	1	0	NA	NA	NA	mg/kg dry		36.5
PSCHAR	CIT1500N	6/29/2002	C1T1-500-N	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	CIT2-0NA	6/29/2002	C1T2-0N-A	0	0	NA	NA	NA	mg/kg dry		4170
PSCHAR	CIT2-10N	6/29/2002	C1T2-10-N	0	0	NA	NA	NA	mg/kg dry		16000
PSCHAR	CIT2-50N	6/29/2002	C1T2-50-N	0	0	NA	NA	NA	mg/kg dry		643
PSCHAR	CIT2250N	6/29/2002	C1T2-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT2500N	6/29/2002	C1T2-500-N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	CIT3-0NA	6/29/2002	C1T3-0N-A	0	0	NA	NA	NA	mg/kg dry		149
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	1	0	NA	NA	NA	mg/kg dry	10.5	<i>U</i>
PSCHAR	CIT3-10N	6/29/2002	C1T3-10-N	2	0	NA	NA	NA	mg/kg dry	13	<i>U</i>
										field reps - both non-detects (minimum value)	10.5 <i>U</i>
PSCHAR	CIT3-50N	6/29/2002	C1T3-50-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3250N	6/29/2002	C1T3-250-N	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT3500N	6/29/2002	C1T3-500-N	0	0	NA	NA	NA	mg/kg dry		21.7
PSCHAR	CIT4-0WA	6/29/2002	C1T4-0W-A	0	0	NA	NA	NA	mg/kg dry		21
PSCHAR	CIT4-10W	6/29/2002	C1T4-10-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4-50W	6/29/2002	C1T4-50-W	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	CIT4250W	6/29/2002	C1T4-250-W	0	0	NA	NA	NA	mg/kg dry		26.2
PSCHAR	CIT4500W	6/29/2002	C1T4-500-W	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	CVT1-50S	6/29/2002	CVT1-50-S	0	0	NA	NA	NA	mg/kg dry		354
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	1	0	NA	NA	NA	mg/kg dry	23.5	
PSCHAR	CVT1250N	6/29/2002	CVT1-250-N	2	0	NA	NA	NA	mg/kg dry	14.6	<i>U</i>
field rep average											19.1
PSCHAR	CVT1500N	6/29/2002	CVT1-500-N	0	0	NA	NA	NA	mg/kg dry		23.9
PSCHAR	CVT2-10N	6/30/2002	CVT2-10-N	0	0	NA	NA	NA	mg/kg dry		75.4
PSCHAR	CVT2-10S	6/30/2002	CVT2-10-S	0	0	NA	NA	NA	mg/kg dry		1610
PSCHAR	CVT2-50N	6/30/2002	CVT2-50-N	0	0	NA	NA	NA	mg/kg dry		42.4
PSCHAR	CVT2-50S	6/30/2002	CVT2-50-S	0	0	NA	NA	NA	mg/kg dry		144
PSCHAR	CVT2250N	6/30/2002	CVT2-250-N	0	0	NA	NA	NA	mg/kg dry		138
PSCHAR	CVT2500N	6/30/2002	CVT2-500-N	0	0	NA	NA	NA	mg/kg dry		33.7
PSCHAR	CVT3-10N	6/30/2002	CVT3-10-N	0	0	NA	NA	NA	mg/kg dry		4340
PSCHAR	CVT3-10S	6/30/2002	CVT3-10-S	0	0	NA	NA	NA	mg/kg dry		51
PSCHAR	CVT3-50N	6/30/2002	CVT3-50-N	0	0	NA	NA	NA	mg/kg dry		913
PSCHAR	CVT3-50S	6/30/2002	CVT3-50-S	0	0	NA	NA	NA	mg/kg dry		1880
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	1	0	NA	NA	NA	mg/kg dry	79.8	
PSCHAR	CVT3250N	6/30/2002	CVT3-250-N	2	0	NA	NA	NA	mg/kg dry	2780	<i>J</i>
field rep average											1430 <i>J</i>
PSCHAR	CVT3500N	6/30/2002	CVT3-500-N	0	0	NA	NA	NA	mg/kg dry		34.9
PSCHAR	CVT4-10N	6/30/2002	CVT4-10-N	0	0	NA	NA	NA	mg/kg dry		2570
PSCHAR	CVT4-10S	6/30/2002	CVT4-10-S	0	0	NA	NA	NA	mg/kg dry		985
PSCHAR	CVT4-50N	6/30/2002	CVT4-50-N	0	0	NA	NA	NA	mg/kg dry		671
PSCHAR	CVT4-50S	6/30/2002	CVT4-50-S	0	0	NA	NA	NA	mg/kg dry		692 <i>J</i>
PSCHAR	CVT4250N	6/30/2002	CVT4-250-N	0	0	NA	NA	NA	mg/kg dry		80
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	1	0	NA	NA	NA	mg/kg dry	16	<i>U</i>
PSCHAR	CVT4500N	6/30/2002	CVT4-500-N	2	0	NA	NA	NA	mg/kg dry	17	<i>UU</i>
field reps - both non-detects (minimum value)											16 <i>U</i>
PSCHAR	CVT5-10N	6/30/2002	CVT5-10-N	0	0	NA	NA	NA	mg/kg dry		167
PSCHAR	CVT5-10S	6/30/2002	CVT5-10-S	0	0	NA	NA	NA	mg/kg dry		2600
PSCHAR	CVT5-50N	6/30/2002	CVT5-50-N	0	0	NA	NA	NA	mg/kg dry		857
PSCHAR	CVT5-50S	6/30/2002	CVT5-50-S	0	0	NA	NA	NA	mg/kg dry		808
PSCHAR	CVT5250N	6/30/2002	CVT5-250-N	0	0	NA	NA	NA	mg/kg dry		700
PSCHAR	CVT5500N	6/30/2002	CVT5-500-N	0	0	NA	NA	NA	mg/kg dry		29.7
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	1	0	NA	NA	NA	mg/kg dry	2500	
PSCHAR	CVT6-10N	6/30/2002	CVT6-10-N	2	0	NA	NA	NA	mg/kg dry	14900	<i>J</i>
field rep average											8700 <i>J</i>
PSCHAR	CVT6-50N	6/30/2002	CVT6-50-N	0	0	NA	NA	NA	mg/kg dry		434

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration	
PSCHAR	CVT6-50S	6/30/2002	CVT6-50-S	0	0	NA	NA	NA	mg/kg dry		1070	
PSCHAR	CVT6250N	6/30/2002	CVT6-250-N	0	0	NA	NA	NA	mg/kg dry		72	
PSCHAR	CVT6500N	6/30/2002	CVT6-500-N	0	0	NA	NA	NA	mg/kg dry		181	
PSCHAR	CVT7-10N	7/3/2002	CVT7-10-N	0	0	NA	NA	NA	mg/kg dry		5580	
PSCHAR	CVT7-50N	7/3/2002	CVT7-50-N	0	0	NA	NA	NA	mg/kg dry		1280	
PSCHAR	CVT7250N	7/3/2002	CVT7-250-N	0	0	NA	NA	NA	mg/kg dry		2890	
PSCHAR	CVT7500N	7/3/2002	CVT7-500-N	0	0	NA	NA	NA	mg/kg dry		13 U	
PSCHAR	CVT8-10N	7/3/2002	CVT8-10-N	0	0	NA	NA	NA	mg/kg dry		1400	
PSCHAR	CVT8-50N	7/3/2002	CVT8-50-N	0	0	NA	NA	NA	mg/kg dry		27.6	
PSCHAR	CVT8250S	7/3/2002	CVT8-250-S	0	0	NA	NA	NA	mg/kg dry		29.4	
PSCHAR	CVT8500N	7/3/2002	CVT8-500-N	0	0	NA	NA	NA	mg/kg dry		100	
PSCHAR	CVT8500S	7/3/2002	CVT8-500-S	0	0	NA	NA	NA	mg/kg dry		9.5 U	
PSCHAR	CVT9250N	7/3/2002	CVT9-250N	0	0	NA	NA	NA	mg/kg dry		76.2	
PHASE2RA	NLF	7/2/2004	TS-0059	0	0	NA	NA	NA	mg/kg dry		22.3	
PHASE2RA	NLK	6/30/2004	TS-0054	0	0	NA	NA	NA	mg/kg dry		156	
PSCHAR	PG-A1	8/23/2002	PG-A1	1	0	NA	NA	NA	mg/kg dry	15.5	U	
PSCHAR	PG-A1	8/23/2002	PG-A1	2	0	NA	NA	NA	mg/kg dry	15	U	
											field reps - both non-detects (minimum value)	15 U
PSCHAR	PG-A1S	8/23/2002	PG-A1-S	0	0	NA	NA	NA	mg/kg dry		12.5 U	
PSCHAR	PG-A3	7/27/2002	PG-A3	0	0	NA	NA	NA	mg/kg dry		228	
PSCHAR	PG-A5	7/27/2002	PG-A5	0	0	NA	NA	NA	mg/kg dry		10 U	
PSCHAR	PG-A6S	7/27/2002	PG-A6S	0	0	NA	NA	NA	mg/kg dry		8.5 U	
PSCHAR	PG-B6	7/27/2002	PG-B6	0	0	NA	NA	NA	mg/kg dry		22 U	
PSCHAR	PG-B7	7/27/2002	PG-B7	0	0	NA	NA	NA	mg/kg dry		12 U	
PSCHAR	PG-B8S	7/27/2002	PG-B8-S	0	0	NA	NA	NA	mg/kg dry		7 U	
PSCHAR	PG-C2	8/23/2002	PG-C2	0	0	NA	NA	NA	mg/kg dry		24.5 U	
PSCHAR	PG-C4	8/23/2002	PG-C4	0	0	NA	NA	NA	mg/kg dry		60.7	
PSCHAR	PG-C5	7/9/2002	PG-C5	0	0	NA	NA	NA	mg/kg dry		29.5 UU	
PSCHAR	PG-C6	7/27/2002	PG-C6	0	0	NA	NA	NA	mg/kg dry		47	
PSCHAR	PG-C7	7/27/2002	PG-C7	0	0	NA	NA	NA	mg/kg dry		31.1	
PSCHAR	PG-C8	7/27/2002	PG-C8	1	0	NA	NA	NA	mg/kg dry	346		
PSCHAR	PG-C8	7/27/2002	PG-C8	2	0	NA	NA	NA	mg/kg dry	299		
											field rep average	323
PSCHAR	PG-C9	7/27/2002	PG-C9	0	0	NA	NA	NA	mg/kg dry		317	
PSCHAR	PG-C9S	7/27/2002	PG-C9S	1	0	NA	NA	NA	mg/kg dry	18.2		
PSCHAR	PG-C9S	7/27/2002	PG-C9S	2	0	NA	NA	NA	mg/kg dry	7	U	
											field rep average	12.6

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-D4	7/9/2002	PG-D4	0	0	NA	NA	NA	mg/kg dry		18.5 <i>UJ</i>
PSCHAR	PG-D5	7/9/2002	PG-D5	0	0	NA	NA	NA	mg/kg dry		26.5 <i>UJ</i>
PSCHAR	PG-D6	7/10/2002	PG-D6	0	0	NA	NA	NA	mg/kg dry		15.5 <i>UJ</i>
PSCHAR	PG-D6D	7/10/2002	PGD-D6	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	PG-D7	7/27/2002	PG-D7	0	0	NA	NA	NA	mg/kg dry		164
PSCHAR	PG-D8	7/27/2002	PG-D8	0	0	NA	NA	NA	mg/kg dry		127
PSCHAR	PG-E1	8/23/2002	PG-E1	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-E10	7/10/2002	PG-E10	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	PG-E3	7/31/2002	PG-E3	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-E4	7/9/2002	PG-E4	0	0	NA	NA	NA	mg/kg dry		21 <i>UJ</i>
PSCHAR	PG-E5	7/26/2002	PG-E5	0	0	NA	NA	NA	mg/kg dry		50.2
PSCHAR	PG-E5S	7/26/2002	PG-E5-S	0	0	NA	NA	NA	mg/kg dry		23
PSCHAR	PG-F10	7/10/2002	PG-F10	0	0	NA	NA	NA	mg/kg dry		12 <i>UJ</i>
PSCHAR	PG-F4	7/31/2002	PG-F4	0	0	NA	NA	NA	mg/kg dry		67.2
PSCHAR	PG-F5	7/9/2002	PG-F5	0	0	NA	NA	NA	mg/kg dry		13.5 <i>UJ</i>
PSCHAR	PG-F9	7/10/2002	PG-F9	0	0	NA	NA	NA	mg/kg dry		17.5 <i>UJ</i>
PSCHAR	PG-G10	8/10/2002	PG-G-10	0	0	NA	NA	NA	mg/kg dry		26.3 <i>J</i>
PSCHAR	PG-G12	8/20/2002	PG-G12	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G2	8/23/2002	PG-G2	0	0	NA	NA	NA	mg/kg dry		23 <i>U</i>
PSCHAR	PG-G4	7/31/2002	PG-G4	0	0	NA	NA	NA	mg/kg dry		25.8
PSCHAR	PG-G5	7/31/2002	PG-G5	0	0	NA	NA	NA	mg/kg dry		21.4
PSCHAR	PG-G8	7/10/2002	PG-G8	0	0	NA	NA	NA	mg/kg dry		97.8 <i>J</i>
PSCHAR	PG-G8D	7/10/2002	PGD-G8	0	0	NA	NA	NA	mg/kg dry		44.5
PSCHAR	PG-G9	7/10/2002	PG-G9	1	0	NA	NA	NA	mg/kg dry	11	<i>UJ</i>
PSCHAR	PG-G9	7/10/2002	PG-G9	2	0	NA	NA	NA	mg/kg dry	12	<i>U</i>
field reps - both non-detects (minimum value)											
											11 <i>UJ</i>
PSCHAR	PG-H13	8/11/2002	PG-H-13	0	0	NA	NA	NA	mg/kg dry		14 <i>UJ</i>
PSCHAR	PG-H7	7/10/2002	PG-H7	0	0	NA	NA	NA	mg/kg dry		14.5 <i>UJ</i>
PSCHAR	PG-H7D	7/10/2002	PGD-H7	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-H8	7/10/2002	PG-H8	0	0	NA	NA	NA	mg/kg dry		7 <i>UJ</i>
PSCHAR	PG-H8D	7/10/2002	PGD-H8	0	0	NA	NA	NA	mg/kg dry		10.5 <i>U</i>
PSCHAR	PG-I1	8/15/2002	PG-I-1	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I11	8/11/2002	PG-I-11	1	0	NA	NA	NA	mg/kg dry	18	<i>UJ</i>
PSCHAR	PG-I11	8/11/2002	PG-I-11	2	0	NA	NA	NA	mg/kg dry	21	<i>UJ</i>
field reps - both non-detects (minimum value)											
											18 <i>UJ</i>
PSCHAR	PG-I1S	8/15/2002	PG-I-1-S	0	0	NA	NA	NA	mg/kg dry		17
PSCHAR	PG-I3	8/16/2002	PG-I-3	0	0	NA	NA	NA	mg/kg dry		85.7

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	PG-I7	7/10/2002	PG-I-7	0	0	NA	NA	NA	mg/kg dry		18 <i>UJ</i>
PSCHAR	PG-I9	8/10/2002	PG-I-9	0	0	NA	NA	NA	mg/kg dry		110 <i>J</i>
PSCHAR	PG-J12	8/11/2002	PG-J-12	0	0	NA	NA	NA	mg/kg dry		29 <i>UJ</i>
PSCHAR	PG-J5	8/16/2002	PG-J5	0	0	NA	NA	NA	mg/kg dry		43
PSCHAR	PG-K10	8/20/2002	PG-K-10	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-K10S	8/20/2002	PG-K-10-S	0	0	NA	NA	NA	mg/kg dry		19.1
PSCHAR	PG-K2	7/31/2002	PG-K-2	0	0	NA	NA	NA	mg/kg dry		130
PSCHAR	PG-K4	8/16/2002	PG-K4	0	0	NA	NA	NA	mg/kg dry		94
PSCHAR	PG-K6	8/20/2002	PG-K-6	0	0	NA	NA	NA	mg/kg dry		16 <i>U</i>
PSCHAR	PG-K8	8/20/2002	PG-K-8	0	0	NA	NA	NA	mg/kg dry		46.3
PSCHAR	PG-M1	8/15/2002	PG-M-1	0	0	NA	NA	NA	mg/kg dry		41
PSCHAR	PG-M3	7/31/2002	PG-M-3	0	0	NA	NA	NA	mg/kg dry		7.05 <i>U</i>
PSCHAR	PG-M5	7/31/2002	PG-M-5	0	0	NA	NA	NA	mg/kg dry		16.2 <i>U</i>
PSCHAR	PG-M7	8/20/2002	PG-M7	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	PG-M9	8/20/2002	PG-M9	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	PG-O2	7/28/2002	PG-O2	0	0	NA	NA	NA	mg/kg dry		34.6
PSCHAR	PG-O4	7/28/2002	PG-O4	0	0	NA	NA	NA	mg/kg dry		10 <i>U</i>
PSCHAR	PG-O6	7/28/2002	PG-O6	0	0	NA	NA	NA	mg/kg dry		14 <i>U</i>
PSCHAR	PG-P1	7/28/2002	PG-P1	0	0	NA	NA	NA	mg/kg dry		8.5 <i>U</i>
PSCHAR	PG-P3	7/28/2002	PG-P3	0	0	NA	NA	NA	mg/kg dry		33.4
PHASE2RA	PLNL	6/29/2004	TS-0053	0	0	NA	NA	NA	mg/kg dry		532
PSCHAR	RAT1-10E	6/27/2002	RAT1-10E	0	0	NA	NA	NA	mg/kg dry		97
PSCHAR	RAT1-50E	6/27/2002	RAT1-50E	0	0	NA	NA	NA	mg/kg dry		46.1
PSCHAR	RAT1250E	6/27/2002	RAT1-250E	0	0	NA	NA	NA	mg/kg dry		15 <i>U</i>
PSCHAR	RAT1500E	6/27/2002	RAT1-500E	0	0	NA	NA	NA	mg/kg dry		32.3
PSCHAR	RAT2-10E	6/27/2002	RAT2-10E	0	0	NA	NA	NA	mg/kg dry		71.2
PSCHAR	RAT2-50E	6/27/2002	RAT2-50E	0	0	NA	NA	NA	mg/kg dry		18 <i>U</i>
PSCHAR	RAT2250E	6/27/2002	RAT2-250E	1	0	NA	NA	NA	mg/kg dry		39.2
PSCHAR	RAT2500E	6/27/2002	RAT2-500E	0	0	NA	NA	NA	mg/kg dry		25.9
PSCHAR	RAT3-10E	6/27/2002	RAT3-10E	0	0	NA	NA	NA	mg/kg dry		627
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	1	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
PSCHAR	RAT3-50E	6/27/2002	RAT3-50E	2	0	NA	NA	NA	mg/kg dry	18	<i>U</i>
field reps - both non-detects (minimum value)											
PSCHAR	RAT3250E	6/27/2002	RAT3-250E	0	0	NA	NA	NA	mg/kg dry		24.3
PSCHAR	RAT3500E	6/27/2002	RAT3-500E	0	0	NA	NA	NA	mg/kg dry		11 <i>U</i>
PSCHAR	RAT4-10E	6/27/2002	RAT4-10E	0	0	NA	NA	NA	mg/kg dry		109
PSCHAR	RAT4-10W	7/2/2002	RAT4-10-W	0	0	NA	NA	NA	mg/kg dry		493

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	RAT4-50E	6/27/2002	RAT4-50E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4250E	6/27/2002	RAT4-250E	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	RAT4500E	6/27/2002	RAT4-500E	0	0	NA	NA	NA	mg/kg dry		19 <i>U</i>
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	1	0	NA	NA	NA	mg/kg dry	115	
PSCHAR	RAT5-10N	6/27/2002	RAT5-10N	2	0	NA	NA	NA	mg/kg dry	23.7	
									field rep average		69.4
PSCHAR	RAT5-50N	6/27/2002	RAT5-50N	0	0	NA	NA	NA	mg/kg dry		27.7
PSCHAR	RAT5250N	6/27/2002	RAT5-250N	0	0	NA	NA	NA	mg/kg dry		12 <i>U</i>
PSCHAR	RAT5500N	6/27/2002	RAT5-500N	0	0	NA	NA	NA	mg/kg dry		82.6
PSCHAR	ROT1-0S	7/3/2002	ROT1-0S	0	0	NA	NA	NA	mg/kg dry		2090
PSCHAR	ROT1-10N	7/3/2002	ROT1-10N	0	0	NA	NA	NA	mg/kg dry		871
PSCHAR	ROT1-10S	7/3/2002	ROT1-10-S	0	0	NA	NA	NA	mg/kg dry		1890
PSCHAR	ROT1-50N	7/3/2002	ROT1-50N	0	0	NA	NA	NA	mg/kg dry		717
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	1	0	NA	NA	NA	mg/kg dry	24.5	<i>U</i>
PSCHAR	ROT1-50S	7/3/2002	ROT1-50-S	2	0	NA	NA	NA	mg/kg dry	217	<i>J</i>
									field rep average		121 <i>J</i>
PSCHAR	ROT1250S	7/3/2002	ROT1-250S	0	0	NA	NA	NA	mg/kg dry		266
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	1	0	NA	NA	NA	mg/kg dry	155	
PSCHAR	ROT1500S	7/3/2002	ROT1-500-S	2	0	NA	NA	NA	mg/kg dry	410	<i>J</i>
									field rep average		283 <i>J</i>
PSCHAR	ROT2-0NA	7/4/2002	ROT2-0NA	0	0	NA	NA	NA	mg/kg dry		4940
PSCHAR	ROT2-0SA	7/4/2002	ROT2-0SA	0	0	NA	NA	NA	mg/kg dry		489 <i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	1	0	NA	NA	NA	mg/kg dry	114	<i>J</i>
PSCHAR	ROT2-10N	7/4/2002	ROT2-10N	2	0	NA	NA	NA	mg/kg dry	149	<i>J</i>
									field rep average		132 <i>J</i>
PSCHAR	ROT2-10S	7/5/2002	ROT2-10-S	0	0	NA	NA	NA	mg/kg dry		411
PSCHAR	ROT2-50N	7/4/2002	ROT2-50N	0	0	NA	NA	NA	mg/kg dry		119 <i>J</i>
PSCHAR	ROT2-50S	7/5/2002	ROT2-50-S	0	0	NA	NA	NA	mg/kg dry		497
PSCHAR	ROT2250S	7/5/2002	ROT2-250-S	0	0	NA	NA	NA	mg/kg dry		27 <i>U</i>
PSCHAR	ROT2500S	7/5/2002	ROT2-500-S	0	0	NA	NA	NA	mg/kg dry		27.4
PSCHAR	ROT3-0NA	7/4/2002	ROT3-0NA	0	0	NA	NA	NA	mg/kg dry		2870 <i>J</i>
PSCHAR	ROT3-0SA	7/4/2002	ROT3-0SA	0	0	NA	NA	NA	mg/kg dry		2340
PSCHAR	ROT3-10N	7/4/2002	ROT3-10N	0	0	NA	NA	NA	mg/kg dry		1580
PSCHAR	ROT3-10S	7/5/2002	ROT3-10-S	0	0	NA	NA	NA	mg/kg dry		2420
PSCHAR	ROT3-50N	7/4/2002	ROT3-50N	0	0	NA	NA	NA	mg/kg dry		1150
PSCHAR	ROT3-50S	7/5/2002	ROT3-50-S	0	0	NA	NA	NA	mg/kg dry		316
PSCHAR	ROT3250S	7/5/2002	ROT3-250-S	0	0	NA	NA	NA	mg/kg dry		81.2

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PSCHAR	ROT3500S	7/5/2002	ROT3-500-S	0	0	NA	NA	NA	mg/kg dry		17.5 <i>U</i>
PSCHAR	ROT4-0NA	7/4/2002	ROT4-0NA	0	0	NA	NA	NA	mg/kg dry		1990
PSCHAR	ROT4-0SA	7/4/2002	ROT4-0SA	0	0	NA	NA	NA	mg/kg dry		2020
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	1	0	NA	NA	NA	mg/kg dry	1170	
PSCHAR	ROT4-10N	7/4/2002	ROT4-10N	2	0	NA	NA	NA	mg/kg dry	1250	
field rep average											1210
PSCHAR	ROT4-10S	7/5/2002	ROT4-10-S	0	0	NA	NA	NA	mg/kg dry		2870
PSCHAR	ROT4-50N	7/4/2002	ROT4-50N	0	0	NA	NA	NA	mg/kg dry		420
PSCHAR	ROT4-50S	7/5/2002	ROT4-50-S	0	0	NA	NA	NA	mg/kg dry		40.2
PSCHAR	ROT4250S	7/5/2002	ROT4-250-S	0	0	NA	NA	NA	mg/kg dry		431
PSCHAR	ROT4500S	7/5/2002	ROT4-500-S	0	0	NA	NA	NA	mg/kg dry		123
PSCHAR	ROT5-0NA	7/4/2002	ROT5-0NA	0	0	NA	NA	NA	mg/kg dry		3060
PSCHAR	ROT5-0SA	7/4/2002	ROT5-0SA	0	0	NA	NA	NA	mg/kg dry		1470
PSCHAR	ROT5-10N	7/4/2002	ROT5-10N	0	0	NA	NA	NA	mg/kg dry		739
PSCHAR	ROT5-50N	7/4/2002	ROT5-50N	0	0	NA	NA	NA	mg/kg dry		7480
PSCHAR	ROT6-0NA	7/4/2002	ROT6-0NA	0	0	NA	NA	NA	mg/kg dry		7770
PSCHAR	ROT6-0SA	7/4/2002	ROT6-0SA	0	0	NA	NA	NA	mg/kg dry		2710
PSCHAR	ROT6-10N	7/4/2002	ROT6-10N	0	0	NA	NA	NA	mg/kg dry		1010
PSCHAR	ROT6-50N	7/4/2002	ROT6-50N	0	0	NA	NA	NA	mg/kg dry		8480
PSCHAR	ROT7-50S	7/5/2002	ROT7-50-S	0	0	NA	NA	NA	mg/kg dry		937
PSCHAR	ROT7250S	7/5/2002	ROT7-250-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT7500S	7/5/2002	ROT7-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT8500S	7/5/2002	ROT8-500-S	0	0	NA	NA	NA	mg/kg dry		11.5 <i>U</i>
PSCHAR	ROT9-50N	7/5/2002	ROT9-50N	0	0	NA	NA	NA	mg/kg dry		2260
PSCHAR	ROT9-50S	7/5/2002	ROT9-50-S	0	0	NA	NA	NA	mg/kg dry		103
PSCHAR	ROT9250S	7/5/2002	ROT9-250-S	0	0	NA	NA	NA	mg/kg dry		79.1
PSCHAR	ROT9500S	7/5/2002	ROT9-500-S	0	0	NA	NA	NA	mg/kg dry		22.9
PHASE2RA	TP1-0100	6/17/2004	TS-0009	0	0	NA	NA	NA	mg/kg dry		909
PHASE2RA	TP1-1000	6/17/2004	TS-0008	0	0	NA	NA	NA	mg/kg dry		347
PHASE1RA	TT1-0010	7/17/2003	TS0013	0	0	NA	NA	NA	mg/kg dry		10400
PHASE1RA	TT1-0100	7/17/2003	TS0012	0	0	NA	NA	NA	mg/kg dry		3600
PHASE1RA	TT1-1000	7/19/2003	TS0015	0	0	NA	NA	NA	mg/kg dry		343
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry	661	<i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry	856	
survey station mean											759 <i>J</i>

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE1RA	TT2-0100	7/17/2003	TS0010	0	0	NA	NA	NA	mg/kg dry	420	
PHASE2RA	TT2-0100	6/16/2004	TS-0007	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											414
PHASE1RA	TT2-1000	7/19/2003	TS0014	0	0	NA	NA	NA	mg/kg dry	12.1	<i>J</i>
PHASE2RA	TT2-1000	6/15/2004	TS-0005	0	0	NA	NA	NA	mg/kg dry	35.4	
survey station mean											23.8 <i>J</i>
PHASE2RA	TT2_0020	6/17/2004	TS-0010	0	0	NA	NA	NA	mg/kg dry		615
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1210
PHASE2RA	TT5_0020	6/12/2004	TS-0002	0	0	NA	NA	NA	mg/kg dry		2280
PHASE2RA	TT5_0100	6/16/2004	TS-0006	0	0	NA	NA	NA	mg/kg dry		1060
PHASE2RA	TT5_1000	6/13/2004	TS-0004	0	0	NA	NA	NA	mg/kg dry		8.62
PHASE2RA	TT5_2000	6/12/2004	TS-0001	0	0	NA	NA	NA	mg/kg dry		54.1
PHASE2RA	AC-R	7/1/2004	TS-0056	0	0	NA	NA	NA	mg/kg dry		175
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	1	0	NA	NA	NA	mg/kg dry	469	
PHASE2RA	ARC-R	7/1/2004	TS-0057-D	2	0	NA	NA	NA	mg/kg dry	429	
field rep average											449
SUPP	MI-104	7/21/2003	1008047	0	0	NA	NA	NA	mg/kg dry		21 <i>U</i>
SUPP	MI-107	7/21/2003	1008045	0	0	NA	NA	NA	mg/kg dry		13 <i>U</i>
SUPP	MI-108	7/21/2003	1008046	0	0	NA	NA	NA	mg/kg dry		48
PHASE2RA	OR-R	7/1/2004	TS-0055	0	0	NA	NA	NA	mg/kg dry		25.7
PHASE2RA	TP-4	6/17/2004	TS-0012	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TP3	6/20/2004	TS-0017	0	0	NA	NA	NA	mg/kg dry		55.7
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry	362	
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry	407	
survey station mean											385
PHASE1RA	TT3-0100	7/17/2003	TS0008	0	0	NA	NA	NA	mg/kg dry	203	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	1	0	NA	NA	NA	mg/kg dry	48.5	
PHASE2RA	TT3-0100	6/20/2004	TS-0019-D	2	0	NA	NA	NA	mg/kg dry	20.6	
field rep average											34.6
survey station mean											119
PHASE1RA	TT3-1000	7/21/2003	TS0027	0	0	NA	NA	NA	mg/kg dry	18.3	<i>J</i>
PHASE2RA	TT3-1000	6/20/2004	TS-0018	0	0	NA	NA	NA	mg/kg dry	13.8	
survey station mean											16.1 <i>J</i>
PHASE2RA	TT3_0020	6/20/2004	TS-0021	0	0	NA	NA	NA	mg/kg dry		346
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
PHASE2RA	TT8_0050	6/27/2004	TS-0052	0	0	NA	NA	NA	mg/kg dry		372 <i>J</i>
PHASE2RA	TT8_0100	6/19/2004	TS-0015	0	0	NA	NA	NA	mg/kg dry		189
PHASE2RA	TT8_0150	6/27/2004	TS-0051	0	0	NA	NA	NA	mg/kg dry		419 <i>J</i>
PHASE2RA	TT8_0200	6/27/2004	TS-0037	0	0	NA	NA	NA	mg/kg dry		76 <i>J</i>
PHASE2RA	TT8_0250	6/27/2004	TS-0050	0	0	NA	NA	NA	mg/kg dry		144 <i>J</i>

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field		Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
				Replicate	Subsample						
PHASE2RA	TT8_0300	6/27/2004	TS-0038	0	0	NA	NA	NA	mg/kg dry		53.6 <i>J</i>
PHASE2RA	TT8_0350	6/27/2004	TS-0049	0	0	NA	NA	NA	mg/kg dry		83.2 <i>J</i>
PHASE2RA	TT8_0400	6/27/2004	TS-0039	0	0	NA	NA	NA	mg/kg dry		67.8 <i>J</i>
PHASE2RA	TT8_0450	6/27/2004	TS-0048	0	0	NA	NA	NA	mg/kg dry		20.1 <i>J</i>
PHASE2RA	TT8_0500	6/27/2004	TS-0040	0	0	NA	NA	NA	mg/kg dry		52.8 <i>J</i>
PHASE2RA	TT8_0550	6/27/2004	TS-0047	0	0	NA	NA	NA	mg/kg dry		18.3 <i>J</i>
PHASE2RA	TT8_0600	6/27/2004	TS-0041	0	0	NA	NA	NA	mg/kg dry		26.6 <i>J</i>
PHASE2RA	TT8_0650	6/27/2004	TS-0046	0	0	NA	NA	NA	mg/kg dry		47.8 <i>J</i>
PHASE2RA	TT8_0700	6/27/2004	TS-0042	0	0	NA	NA	NA	mg/kg dry		35.2 <i>J</i>
PHASE2RA	TT8_0750	6/27/2004	TS-0045	0	0	NA	NA	NA	mg/kg dry		18.2 <i>J</i>
PHASE2RA	TT8_0800	6/27/2004	TS-0043	0	0	NA	NA	NA	mg/kg dry		12.8 <i>J</i>
PHASE2RA	TT8_0900	6/27/2004	TS-0044	0	0	NA	NA	NA	mg/kg dry		33.8 <i>J</i>
PHASE2RA	TT8_1000	6/19/2004	TS-0014	0	0	NA	NA	NA	mg/kg dry		4.23 <i>U</i>
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
PHASE2RA	TT6_0100	6/21/2004	TS-0023	0	0	NA	NA	NA	mg/kg dry		281
PHASE2RA	TT6_1000	6/21/2004	TS-0022	0	0	NA	NA	NA	mg/kg dry		145
PHASE2RA	TT6_2000	6/22/2004	TS-0026	0	0	NA	NA	NA	mg/kg dry		102
PHASE2RA	TT7_0010	6/22/2004	TS-0025	0	0	NA	NA	NA	mg/kg dry		2,630
PHASE2RA	TT7_1000	6/22/2004	TS-0024	0	0	NA	NA	NA	mg/kg dry		201
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	1	0	NA	NA	NA	mg/kg dry	197	
PHASE2RA	TT7_2000	7/4/2004	TS-0061-D	2	0	NA	NA	NA	mg/kg dry	111	
field rep average											154
whole site mean											704 <i>J</i>
whole site 95% UCL											1410
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	Sp	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
field rep average											3.3
PHASE2RA	PLNL	6/28/2004	SE0045	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.81
PHASE2RA	PLNL	6/28/2004	SE0046	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.76
PHASE2RA	TP1-0100	6/17/2004	SE0009	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		48.1
PHASE2RA	TP1-1000	6/17/2004	SE0008	0	0	<i>Carex</i>	Sp	Whole Plant	mg/kg dry		16.1
PHASE2RA	TT2-0010	6/17/2004	SE0010	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		5.63
PHASE2RA	TT2-0100	6/16/2004	SE0006	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.01
PHASE2RA	TT2-1000	6/16/2004	SE0005	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.16
PHASE2RA	TT5-0010	6/12/2004	SE0001	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		10.8
PHASE2RA	TT5-0100	6/15/2004	SE0004	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.33
PHASE2RA	TT5-1000	6/13/2004	SE0002-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		2.1
PHASE2RA	TT5-1000	6/16/2004	SE0002-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		1.57
PHASE2RA	TT5-2000	6/15/2004	SE0003	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		14.3
PHASE2RA	OR-R	7/1/2004	SE0051	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		8.27
PHASE2RA	TP3	6/20/2004	SE0018-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.01	
PHASE2RA	TP3	6/20/2004	SE0018-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.96	
field rep average											3.49
PHASE2RA	TP4	6/17/2004	SE0011	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		21.1
PHASE2RA	TT3-0010	6/18/2004	SE0013	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.06
PHASE2RA	TT3-0100	6/20/2004	SE0022	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.91
PHASE2RA	TT3-1000	6/20/2004	SE0021	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.18
PHASE2RA	TT8-0010	6/19/2004	SE0017	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.89
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	1	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.17	
PHASE2RA	TT8-0100	6/19/2004	SE0015-D	2	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry	1.4	
field rep average											1.29
PHASE2RA	TT8-1000	6/19/2004	SE0014	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.34
PHASE2RA	TT6-0010	6/25/2004	SE0042	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		0.71
PHASE2RA	TT6-0100	6/21/2004	SE0024	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		0.33
PHASE2RA	TT6-0100	6/21/2004	SE0025	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		1.32
PHASE2RA	TT6-1000	6/21/2004	SE0023	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.3 U
PHASE2RA	TT6-2000	6/22/2004	SE0028	0	0	<i>Carex</i>	<i>podocarpa</i>	Blades	mg/kg dry		1.1
PHASE2RA	TT7-0010	6/22/2004	SE0027	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		2.24
PHASE2RA	TT7-1000	6/22/2004	SE0026	0	0	<i>Carex</i>	<i>scirpoidea</i>	Blades	mg/kg dry		5.67
PHASE2RA	TT7-2000	7/4/2004	SE0061	0	0	<i>Carex</i>	<i>microchaeta</i>	Leaves	mg/kg dry		1.95
PHASE2RA	TT7-2000	7/4/2004	SE0062	0	0	<i>Carex</i>	<i>scirpoidea</i>	Leaves	mg/kg dry		7.96
										whole site mean	5.34
										whole site 95% UCL	11.9
Shrub											
FUGDST01	HR02-01W	8/20/2001	HR-02-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		45.6
FUGDST01	HR02-02W	8/21/2001	HR-02-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.21
FUGDST01	HR02-03W	8/24/2001	HR-02-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.856
FUGDST01	PO-07W	8/23/2001	PO-07-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		11.4
FUGDST01	PO-13W	8/23/2001	PO-13-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.8
FUGDST01	PO-17W	8/23/2001	PO-17-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		15.6
PHASE2RA	TT2-0010	6/17/2004	WI0006	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		5.76
PHASE2RA	TT2-0100	6/16/2004	WI0005	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.89
PHASE2RA	TT2-1000	6/16/2004	WI0004	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.35
PHASE2RA	TT5-0010	6/12/2004	WI0001	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		6.64
PHASE2RA	TT5-0100	6/15/2004	WI0003	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		4.85

Table K-98a. (cont.)

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
PHASE2RA	TT5-1000	6/13/2004	BR0001	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		3.77
PHASE2RA	TT5-1000	6/13/2004	WI0002	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.07
PHASE2RA	TT5-2000	6/15/2004	BR0002	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		0.42
PHASE2RA	AC-R	6/23/2004	WI0018	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		10.9
PHASE2RA	ARC-R	7/1/2004	WI0028	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		11.8
FUGDST01	HR03-01W	8/19/2001	HR-03-01-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		16.5
FUGDST01	HR03-02W	8/21/2001	HR-03-02-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		3.94
FUGDST01	HR03-03W	8/24/2001	HR-03-03-W	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.431
PHASE2RA	OR-R	7/1/2004	WI0026-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	3.88	
PHASE2RA	OR-R	7/1/2004	WI0026-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	5.85	
field rep average											4.87
PHASE2RA	TT3-0010	6/18/2004	WI0007	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		7.74
PHASE2RA	TT3-0100	6/20/2004	BR0004	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		1.91
PHASE2RA	TT3-0100	6/20/2004	WI0011	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.48
PHASE2RA	TT3-1000	6/20/2004	BR0003	0	0	<i>Betula</i>	<i>nana</i>	Leaves	μg/g dry		0.58
PHASE2RA	TT8-0010	6/19/2004	WI0010	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		2.91
PHASE2RA	TT8-0100	6/19/2004	WI0009	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.79
PHASE2RA	TT8-1000	6/19/2004	WI0008	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.47
PHASE2RA	TT6-0010	6/25/2004	WI0024	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.12
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	1	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	1.17	
PHASE2RA	TT6-0100	6/21/2004	WI0013-D	2	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry	0.97	
field rep average											1.07
PHASE2RA	TT6-1000	6/21/2004	WI0012	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.41
PHASE2RA	TT6-2000	6/22/2004	WI0017	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.37
PHASE2RA	TT7-0010	6/22/2004	WI0016	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		6.89
PHASE2RA	TT7-1000	6/22/2004	WI0015	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		0.52
PHASE2RA	TT7-2000	7/4/2004	WI0029	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.4
PHASE2RA	TT7-2000	7/4/2004	WI0030	0	0	<i>Salix</i>	<i>planifolia</i>	Leaves	μg/g dry		1.09
										whole site mean	5.24
										whole site 95% UCL	10.3

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

95% UCL values were calculated using the recommended method from U.S. EPA's ProUCL 3.0 software.

- CoPC - chemical of potential concern
- EPC - exposure point concentration
- J* - estimated value
- U* - undetected; value reported is half the detection limit

Table K-99. Food-web model exposure results for moose exposed to 95% UCL CoPC concentrations at whole site

Analyte	Concentration				Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Shrub (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	494	7,150	162	146	9.27	920	948	1880	5.54	1.9	19	2.9	0.29
Antimony	0.280	6.93	0.391	0.118	0.00526	0.893	0.936	1.83	0.00541	0.66	--	0.0082	--
Arsenic (arsenate)	0.618	12.9	0.875	0.128	0.0116	1.66	1.30	2.98	0.00878	0.40	1.6	0.022	0.0055
Arsenic (arsenite)	0.618	12.9	0.875	0.128	0.0116	1.66	1.30	2.98	0.00878	0.13	1.3	0.068	0.0068
Barium	118	1,690	90.4	85.0	2.22	218	551	771	2.28	5.1	20	0.45	0.11
Cadmium	0.125	24.3	0.350	4.06	0.00234	3.13	23.7	26.9	0.0793	1.0	10	0.079	0.0079
Chromium	2.10	14.7	9.33	0.681	0.0393	1.89	9.96	11.9	0.0351	3.3	69	0.011	0.00051
Cobalt	0.489	9.78	7.80	1.56	0.00916	1.26	14.1	15.3	0.0453	0.50	2.0	0.091	0.023
Lead	1.05	1,410	11.9	10.3	0.0197	182	67.1	249	0.735	11	90	0.067	0.0082
Mercury	0.0314	0.794	0.0414	0.0467	0.000588	0.102	0.297	0.400	0.00118	0.032	0.16	0.037	0.0074
Molybdenum	1.01	4.08	0.629	0.365	0.0189	0.525	2.52	3.06	0.00904	0.26	2.6	0.035	0.0035
Selenium	0.771	9.26	0.217	0.155	0.0144	1.19	1.04	2.24	0.00662	0.20	0.33	0.033	0.020
Thallium	0.250	0.500	0.106	0.00842	0.00469	0.0644	0.117	0.186	0.000550	0.074	0.74	0.0074	0.00074
Vanadium	0.531	14.3	1.02	0.321	0.00995	1.84	2.52	4.37	0.0129	0.21	2.1	0.061	0.0061
Zinc	15.8	4,040	122	266	0.296	521	1620	2140	6.32	160	320	0.039	0.020

Note: Data used to develop this scenario are presented in Table K-99a.

"Whole site" data set comprises all data from port, road, and mine investigation units.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

UCL - upper confidence limit

Table K-100. Food-web model exposure results for moose exposed to mean CoPC concentrations at the Reference Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	182	11100	10.6	3.41	1440	68.3	1510	4.45	1.9	19	2.3	0.23
Antimony	0.12	0.0767	0.0225	0.00225	0.00988	0.145	0.157	0.000463	0.66	--	0.00070	--
Arsenic (arsenate)	76.3	4.43	0.03	1.43	0.570	0.193	2.19	0.00647	0.40	1.6	0.016	0.0040
Arsenic (arsenite)	76.3	4.43	0.03	1.43	0.570	0.193	2.19	0.00647	0.13	1.3	0.050	0.0050
Barium	156	226	17.6	2.92	29.1	113	145	0.428	5.1	20	0.084	0.021
Cadmium	0.223	0.345	0.053	0.00419	0.0444	0.341	0.390	0.00115	1	10	0.0012	0.00012
Chromium	7.16	19.6	0.35	0.134	2.52	2.25	4.91	0.0145	3.3	69	0.0044	0.00021
Cobalt	4.39	6.83	0.205	0.0823	0.880	1.32	2.28	0.00673	0.5	2	0.013	0.0034
Lead	0.363	10.1	0.755	0.00681	1.30	4.86	6.17	0.0182	11	90	0.0017	0.00020
Mercury	0.05	0.05	0.0535	0.000937	0.00644	0.345	0.352	0.00104	0.032	0.16	0.032	0.0065
Molybdenum	0.08	0.773	0.088	0.00150	0.0996	0.567	0.668	0.00197	0.26	2.6	0.0076	0.00076
Selenium	0.2	1.1	0.05	0.00375	0.142	0.322	0.468	0.00138	0.2	0.33	0.0069	0.0042
Thallium	0.008	0.081	0.0025	0.000150	0.0104	0.0161	0.0267	0.0000787	0.074	0.74	0.0011	0.00011
Vanadium	0.4	25.2	0.2	0.00750	3.25	1.29	4.55	0.0134	0.21	2.1	0.064	0.0064
Zinc	22.9	92.2	35.4	0.429	11.9	228	240	0.709	160	320	0.0044	0.0022

Note: Phase2RA whole sedge/grass (CL-REF-1) and sediment, Phase1RA water and sediment.

Sediment concentrations are means of Phase2RA and Phase1RA data from reference lagoon. Assumes a diet of 100% herbaceous plants.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-100a. Moose EPC calculation for mean CoPC concentrations at the Reference Lagoon

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	RL-1-03	7/18/2003	SW0026	0	0	NA	NA	NA	mg/L unfiltered		0.00011
PHASE1RA	RL-2-03	7/18/2003	SW0027	0	0	NA	NA	NA	mg/L unfiltered		0.00013
PHASE1RA	RL-3-03	7/18/2003	SW0028	0	0	NA	NA	NA	mg/L unfiltered		0.00085
										Reference lagoon mean	0.000363
										µg/L	0.363
Tundra Soil											
PHASE1RA	RL-1-03	7/18/2003	SD0051	0	0	NA	NA	NA	mg/kg dry		6.39
PHASE1RA	RL-2-03	7/18/2003	SD0052	0	0	NA	NA	NA	mg/kg dry		11.8
PHASE1RA	RL-3-03	7/18/2003	SD0053	0	0	NA	NA	NA	mg/kg dry		10.3
PHASE2RA	CL-REF-1	7/2/2004	SD0004	0	0	NA	NA	NA	mg/kg dry		11.8
										Reference lagoon mean	10.1
Herbaceous Plant											
PHASE2RA	CL-REF-1	7/2/2004	SE0057	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.82
PHASE2RA	CL-REF-1	7/2/2004	SE0058	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.69
										Reference lagoon mean	0.755 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-101. Food-web model exposure results for moose exposed to mean CoPC concentrations at the Control Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	181.7	11100	21.4	3.41	1440	138	1580	4.65	1.9	19	2.4	0.24
Antimony	0.12	0.0767	0.0207	0.00225	0.00988	0.133	0.145	0.000428	0.66	--	0.00065	--
Arsenic (arsenate)	76.3	8.2	0.11	1.43	1.06	0.709	3.19	0.00942	0.40	1.6	0.024	0.0059
Arsenic (arsenite)	76.3	8.2	0.11	1.43	1.06	0.709	3.19	0.00942	0.13	1.3	0.072	0.0072
Barium	156	226	31.6	2.92	29.1	204	236	0.695	5.1	20	0.14	0.035
Cadmium	0.05	0.46	0.0913	0.000937	0.0593	0.588	0.648	0.00191	1	10	0.0019	0.00019
Chromium	7.16	19.6	0.4	0.134	2.52	2.58	5.24	0.0154	3.3	69	0.0047	0.00022
Cobalt	4.39	6.83	0.627	0.0823	0.880	4.04	5.00	0.0147	0.5	2	0.029	0.0074
Lead	0.17	9.65	1.45	0.00319	1.24	9.34	10.6	0.0312	11	90	0.0028	0.00035
Mercury	0.05	0.05	0.041	0.000937	0.00644	0.264	0.271	0.000801	0.032	0.16	0.025	0.0050
Molybdenum	0.08	0.773	0.35	0.00150	0.0996	2.25	2.36	0.00695	0.26	2.6	0.027	0.0027
Selenium	0.2	1.1	0.117	0.00375	0.142	0.751	0.897	0.00265	0.2	0.33	0.013	0.0080
Thallium	0.008	0.081	0.004	0.000150	0.0104	0.0258	0.0363	0.000107	0.074	0.74	0.0014	0.00014
Vanadium	0.4	25.2	0.2	0.00750	3.25	1.29	4.55	0.0134	0.21	2.1	0.064	0.0064
Zinc	19	79.3	43.8	0.356	10.2	282	293	0.863	160	320	0.0054	0.0027

Note: Phase2RA whole sedge/grass and sediment, PSCHAR sediment.

Whole sedge and grass plant data averaged for whole lagoon. Mean of sediment from Phase2 and PSCHAR used; some analytes missing for sediment in control lagoon (Al, Sb, Ba, Cr, Co, Hg, Mo, Se, Tl, V) for these, used mean of reference lagoon stations from Phase1 and Phase2. Assumes a diet of 100% herbaceous plants.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-102. Food-web model exposure results for moose exposed to mean CoPC concentrations at the Port Lagoon North

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	44.1	5590	9.7	0.826	719	62.5	783	2.31	1.9	19	1.2	0.12
Antimony	0.545	0.225	0.0385	0.0102	0.0290	0.248	0.287	0.000847	0.66	--	0.0013	--
Arsenic (arsenate)	26.7	7.05	0.08	0.499	0.908	0.515	1.92	0.00567	0.40	1.6	0.014	0.0035
Arsenic (arsenite)	26.7	7.05	0.08	0.499	0.908	0.515	1.92	0.00567	0.13	1.3	0.044	0.0044
Barium	412	252	17	7.71	32.5	109	150	0.442	5.1	20	0.087	0.022
Cadmium	0.0933	2.86	0.056	0.00175	0.369	0.361	0.731	0.00216	1	10	0.0022	0.00022
Chromium	1.84	10.3	0.25	0.0344	1.32	1.61	2.97	0.00875	3.3	69	0.0027	0.00013
Cobalt	1.32	5.49	0.09	0.0246	0.707	0.580	1.31	0.00387	0.5	2	0.0077	0.0019
Lead	1.90	92	1.29	0.0357	11.9	8.28	20.2	0.0595	11	90	0.0054	0.00066
Mercury	0.05	0.148	0.0355	0.000937	0.0191	0.229	0.249	0.000734	0.032	0.16	0.023	0.0046
Molybdenum	0.545	0.77	0.154	0.0102	0.0992	0.992	1.10	0.00325	0.26	2.6	0.012	0.0012
Selenium	0.45	0.8	0.125	0.00843	0.103	0.805	0.917	0.00270	0.2	0.33	0.014	0.0082
Thallium	0.029	0.0705	0.004	0.000544	0.00908	0.0258	0.0354	0.000104	0.074	0.74	0.0014	0.00014
Vanadium	0.325	21.1	0.2	0.00609	2.72	1.29	4.01	0.0118	0.21	2.1	0.056	0.0056
Zinc	21.0	556	45.1	0.393	71.7	290	363	1.07	160	320	0.0067	0.0033

Note: Phase2RA whole sedge and sediment (PLNL), Phase1RA sediment and water (PLNL and PLNN), PSCHAR sediment and water (all Port Lagoon North stations).

Whole sedge data averaged for all stations at the lagoon and all sedge/grass types. Sediment and water data averaged at a station, then data from all stations at the lagoon averaged to calculate lagoon-wide means. Assumes a diet of 100% herbaceous plants.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-102a. Moose EPC calculation for mean CoPC concentrations at the Port Lagoon North

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	PLNL	7/22/2003	SW0041	0	0	NA	NA	NA	µg/L unfiltered		1.54
PSCHAR	PLNN	9/17/2002	PLNN	0	0	NA	NA	NA	µg/L unfiltered	2.2	
PHASE1RA	PLNN	7/22/2003	SW0040	0	0	NA	NA	NA	µg/L unfiltered	1.54	
survey station mean											1.9
PSCHAR	PLNP	9/17/2002	PLNP	0	0	NA	NA	NA	µg/L unfiltered		2.3
Port lagoon north mean											1.90
Tundra Soil											
PSCHAR	PLNL	8/23/2002	PLNL	0	0	NA	NA	NA	mg/kg dry	302	
PHASE1RA	PLNL	7/22/2003	SD0076	0	0	NA	NA	NA	mg/kg dry	29.4	
PHASE2RA	PLNL	6/28/2004	SD0001	0	0	NA	NA	NA	mg/kg dry	481	
survey station mean											271
PSCHAR	PLNM	8/23/2002	PLNM	0	0	NA	NA	NA	mg/kg dry		77.0
PSCHAR	PLNN	9/17/2002	PLNN-SD	0	0	NA	NA	NA	mg/kg dry	8.6	
PHASE1RA	PLNN	7/22/2003	SD0075	0	0	NA	NA	NA	mg/kg dry	58.8	
survey station mean											33.7
PSCHAR	PLNO	8/23/2002	PLNO	0	0	NA	NA	NA	mg/kg dry		47.1
PSCHAR	PLNP	9/17/2002	PLNP-SD	0	0	NA	NA	NA	mg/kg dry		31.4
Port lagoon north mean											92
Herbaceous Plant											
PHASE2RA	PLNL	6/28/2004	SE0045	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.81
PHASE2RA	PLNL	6/28/2004	SE0046	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.76
Port lagoon north mean											1.29

Note: Inorganic media are averaged by survey station, then included in the calculation of the site mean.

CoPC - chemical of potential concern

EPC - exposure point concentration

Table K-103. Food-web model exposure results for moose exposed to mean CoPC concentrations at the North Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	24.9	8420	24.1	0.467	1080	155	1240	3.66	1.9	19	1.9	0.19
Antimony	0.2	0.085	0.027	0.00375	0.0109	0.174	0.189	0.000556	0.66	--	0.0008	--
Arsenic (arsenate)	4.8	5.95	0.245	0.0900	0.766	1.58	2.43	0.00718	0.40	1.6	0.018	0.0045
Arsenic (arsenite)	4.8	5.95	0.245	0.0900	0.766	1.58	2.43	0.00718	0.13	1.3	0.055	0.0055
Barium	114	270	19.2	2.13	34.8	124	161	0.474	5.1	20	0.093	0.024
Cadmium	0.15	0.996	0.129	0.00281	0.128	0.828	0.959	0.00283	1	10	0.0028	0.00028
Chromium	1.86	11.0	0.4	0.0349	1.42	2.58	4.03	0.0119	3.3	69	0.0036	0.00017
Cobalt	0.45	5.75	0.37	0.00843	0.740	2.38	3.13	0.00924	0.5	2	0.018	0.0046
Lead	0.885	60.7	2.62	0.0166	7.82	16.9	24.7	0.0729	11	90	0.0066	0.00081
Mercury	0.05	0.04	0.033	0.000937	0.00515	0.213	0.219	0.000645	0.032	0.16	0.020	0.0040
Molybdenum	0.34	0.855	0.171	0.00637	0.110	1.10	1.22	0.00359	0.26	2.6	0.014	0.0014
Selenium	0.3	0.75	0.2	0.00562	0.0966	1.29	1.39	0.00410	0.2	0.33	0.021	0.012
Thallium	0.007	0.051	0.007	0.000131	0.00657	0.0451	0.0518	0.000153	0.074	0.74	0.0021	0.00021
Vanadium	0.26	18.4	0.2	0.00487	2.36	1.29	3.66	0.0108	0.21	2.1	0.051	0.0051
Zinc	45.6	189	48.3	0.854	24.3	311	336	0.992	160	320	0.0062	0.0031

Note: Phase2RA whole sedge and sediment (NLF, NLK), Phase1RA sediment (NLF and NLK) and water (NLF, NLK), PSCHAR sediment and water (all North Lagoon stations).

Whole sedge data averaged for all stations at the lagoon and all sedge/grass types. Sediment and water data averaged for a station, then data from all stations at the lagoon averaged to calculate lagoon-wide means. Assumes a diet of 100% herbaceous plants.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-104. Food-web model exposure results for muskrat exposed to CoPC concentrations at ST-REF-3 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	17.3	3,620	261	0.00161	5.07	18.3	23.4	25.1	1.9	19	13	1.3
Antimony	0.01	0.03	0.05	0.00000929	0.0000420	0.00350	0.00355	0.00381	0.66	--	0.0058	--
Arsenic (arsenate)	0.1	8.1	2.93	0.00000929	0.0114	0.205	0.217	0.232	0.40	1.6	0.58	0.15
Arsenic (arsenite)	0.1	8.1	2.93	0.00000929	0.0114	0.205	0.217	0.232	0.13	1.3	1.8	0.18
Barium	169	177	50.6	0.0157	0.248	3.55	3.81	4.09	5.1	20	0.80	0.20
Cadmium	0.005	0.245	0.18	0.00000465	0.000343	0.0126	0.0130	0.0139	1.0	10	0.014	0.0014
Chromium	0.25	7.22	3.7	0.0000232	0.0101	0.259	0.269	0.289	3.3	69	0.088	0.0042
Cobalt	0.22	11	2.17	0.0000204	0.0154	0.152	0.167	0.180	0.50	2.0	0.36	0.090
Lead	0.02	9.5	1.28	0.00000186	0.0133	0.0897	0.103	0.111	11	90	0.010	0.0012
Mercury	0.05	0.0215	0.032	0.00000465	0.0000301	0.00224	0.00228	0.00244	0.032	0.16	0.076	0.015
Molybdenum	0.05	0.52	0.231	0.00000465	0.000729	0.0162	0.0169	0.0182	0.26	2.6	0.070	0.0070
Selenium	0.2	0.5	0.5	0.0000186	0.000701	0.0350	0.0358	0.0384	0.20	0.33	0.19	0.12
Thallium	0.003	0.041	0.023	0.000000279	0.0000575	0.00161	0.00167	0.00179	0.074	0.74	0.024	0.0024
Vanadium	0.2	10.7	0.65	0.0000186	0.0150	0.0455	0.0606	0.0650	0.21	2.1	0.31	0.031
Zinc	0.31	66.9	47.7	0.0000288	0.0938	3.34	3.44	3.69	160	320	0.023	0.012

Note: The following data were used to develop this scenario: PHASE1RA water (ST-REF-1); PHASE1RA sediment (ST-REF-3); PHASE2RA sediment ; and PHASE2RA whole sedge. Mean of PHASE1RA and PHASE2RA sediment data used (ST-REF-3). No PHASE1RA water data for ST-REF-3, so data from closest creek, ST-REF-1 used. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-104a. Muskrat EPC calculation for mean CoPC concentrations at ST-REF-3 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	ST-REF-1	7/20/2003	SW0035	0	0	NA	NA	NA	µg/L unfiltered		0.02 <i>J</i>
										ST-REF-3 site mean	0.02 <i>J</i>
Tundra Soil											
PHASE1RA	ST-REF-3	7/20/2003	SD0066	0	0	NA	NA	NA	mg/kg dry		9.17
PHASE2RA	ST-REF-3	7/5/2004	SD0012	0	0	NA	NA	NA	mg/kg dry		9.82
										ST-REF-3 site mean	9.5
Herbaceous Plant											
PHASE2RA	ST-REF-3	6/26/2004	SE0043	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		1.28
										ST-REF-3 site mean	1.28

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-105. Food-web model exposure results for muskrat exposed to CoPC concentrations at ST-REF-5 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	2,770	12,100	290	0.257	17.0	20.3	37.5	40.3	1.9	19	21	2.1
Antimony	0.08	0.05	0.06	0.00000743	0.0000701	0.00420	0.00428	0.00459	0.66	--	0.0070	--
Arsenic (arsenate)	2.2	3.5	0.32	0.000204	0.00490	0.0224	0.0275	0.0295	0.40	1.6	0.074	0.018
Arsenic (arsenite)	2.2	3.5	0.32	0.000204	0.00490	0.0224	0.0275	0.0295	0.13	1.3	0.23	0.023
Barium	222	483	73.3	0.0206	0.677	5.14	5.83	6.26	5.1	20	1.2	0.31
Cadmium	0.07	0.3	0.132	0.00000650	0.000420	0.00925	0.00968	0.0104	1.0	10	0.010	0.0010
Chromium	3.71	19.9	2.6	0.000345	0.0279	0.182	0.210	0.226	3.3	69	0.068	0.0033
Cobalt	2.72	8.74	1.13	0.000253	0.0122	0.0792	0.0917	0.0984	0.50	2.0	0.20	0.049
Lead	1.91	8.87	0.47	0.000177	0.0124	0.0329	0.0455	0.0489	11	90	0.0044	0.00054
Mercury	0.05	0.04	0.034	0.00000465	0.0000561	0.00238	0.00244	0.00262	0.032	0.16	0.082	0.016
Molybdenum	0.17	0.3	0.378	0.0000158	0.000420	0.0265	0.0269	0.0289	0.26	2.6	0.11	0.011
Selenium	0.2	0.7	0.05	0.0000186	0.000981	0.00350	0.00450	0.00483	0.20	0.33	0.024	0.015
Thallium	0.014	0.07	0.05	0.00000130	0.0000981	0.00350	0.00360	0.00387	0.074	0.74	0.052	0.0052
Vanadium	5.57	24.8	0.65	0.000518	0.0348	0.0455	0.0808	0.0867	0.21	2.1	0.41	0.041
Zinc	9.84	68.1	29.6	0.000914	0.0954	2.07	2.17	2.33	160	320	0.015	0.0073

Note: The following data were used to develop this scenario: PHASE1RA water (ST-REF-5); PHASE1RA sediment (ST-REF-5); and PHASE2RA whole sedge.

No PHASE2RA sediment data for station ST-REF-5 collected.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-106. Food-web model exposure results for muskrat exposed to CoPC concentrations at ST-REF-6 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	2,770	12,100	396	0.257	17.0	27.7	45.0	48.2	1.9	19	25	2.5
Antimony	0.08	0.05	0.05	0.00000743	0.0000701	0.00350	0.00358	0.00384	0.66	--	0.0058	--
Arsenic (arsenate)	2.2	3.5	1.08	0.000204	0.00490	0.0757	0.0808	0.0867	0.40	1.6	0.22	0.054
Arsenic (arsenite)	2.2	3.5	1.08	0.000204	0.00490	0.0757	0.0808	0.0867	0.13	1.3	0.67	0.067
Barium	222	483	64	0.0206	0.677	4.48	5.18	5.56	5.1	20	1.1	0.28
Cadmium	0.07	0.19	0.057	0.00000650	0.000266	0.00399	0.00427	0.00458	1.0	10	0.0046	0.00046
Chromium	3.71	19.9	4.1	0.000345	0.0279	0.287	0.316	0.339	3.3	69	0.10	0.0049
Cobalt	2.72	8.74	1.62	0.000253	0.0122	0.114	0.126	0.135	0.50	2.0	0.27	0.068
Lead	1.91	5.71	0.74	0.000177	0.00800	0.0519	0.0600	0.0644	11	90	0.0059	0.00072
Mercury	0.05	0.003	0.025	0.00000465	0.00000420	0.00175	0.00176	0.00189	0.032	0.16	0.059	0.012
Molybdenum	0.17	0.3	0.147	0.0000158	0.000420	0.0103	0.0107	0.0115	0.26	2.6	0.044	0.0044
Selenium	0.2	0.7	0.2	0.0000186	0.000981	0.0140	0.0150	0.0161	0.20	0.33	0.081	0.049
Thallium	0.014	0.07	0.009	0.00000130	0.0000981	0.000631	0.000730	0.000783	0.074	0.74	0.011	0.0011
Vanadium	5.57	24.8	0.85	0.000518	0.0348	0.0596	0.0948	0.102	0.21	2.1	0.48	0.048
Zinc	9.84	33.1	30	0.000914	0.0464	2.10	2.15	2.31	160	320	0.014	0.0072

Note: The following data were used to develop this scenario: PHASE1RA water (ST-REF-5); PHASE1RA sediment (other analytes, ST-REF-5); PHASE2RA sediment (Cd, Pb, Hg, Zn); and PHASE2RA whole sedge.

No PHASE1RA water data for station ST-REF-6.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-107. Food-web model exposure results for muskrat exposed to CoPC concentrations at Omikviorok River road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	96.3	9,520	1900	0.00895	13.3	133	146	157	1.9	19	83	8.3
Antimony	0.063	0.14	0.0515	0.0000585	0.000196	0.00361	0.00381	0.00409	0.66	--	0.0062	--
Arsenic (arsenate)	0.482	7.6	1.87	0.0000448	0.0107	0.131	0.142	0.152	0.40	1.6	0.38	0.095
Arsenic (arsenite)	0.482	7.6	1.87	0.0000448	0.0107	0.131	0.142	0.152	0.13	1.3	1.2	0.12
Barium	133	407	208	0.0124	0.570	14.6	15.2	16.3	5.1	20	3.2	0.81
Cadmium	0.0849	0.435	0.492	0.0000789	0.000610	0.0345	0.0351	0.0377	1.0	10	0.038	0.0038
Chromium	0.396	20.6	16.2	0.0000368	0.0289	1.14	1.16	1.25	3.3	69	0.38	0.018
Cobalt	0.1	13.5	2.96	0.0000929	0.0189	0.207	0.226	0.243	0.50	2.0	0.49	0.12
Lead	0.506	22.5	8.27	0.0000470	0.0315	0.579	0.611	0.656	11	90	0.060	0.0073
Mercury	0.0179	0.0315	0.042	0.0000166	0.0000441	0.00294	0.00299	0.00321	0.032	0.16	0.10	0.020
Molybdenum	0.69	0.49	0.238	0.0000641	0.000687	0.0167	0.0174	0.0187	0.26	2.6	0.072	0.0072
Selenium	0.0201	0.6	0.3	0.0000187	0.000841	0.0210	0.0219	0.0235	0.20	0.33	0.12	0.071
Thallium	0.0428	0.106	0.033	0.0000397	0.000149	0.00231	0.00246	0.00264	0.074	0.74	0.036	0.0036
Vanadium	0.335	24.9	4.8	0.0000311	0.0349	0.336	0.371	0.398	0.21	2.1	1.9	0.19
Zinc	6.46	108	59.4	0.000600	0.151	4.16	4.31	4.63	160	320	0.029	0.014

Note: The following data were used to develop this scenario: TECK03 water (mean of OmiRoad); PHASE1RA sediment; PHASE2RA sediment ; and PHASE2RA whole sedge.

Mean of PHASE1RA and PHASE2RA sediment used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-108. Food-web model exposure results for muskrat exposed to CoPC concentrations at Anxiety Ridge Creek road site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	7,200	307	0.0193	10.1	21.5	31.6	33.9	1.9	19	18	1.8
Antimony	0.063	0.42	0.04	0.0000585	0.000589	0.00280	0.00340	0.00364	0.66	--	0.0055	--
Arsenic (arsenate)	0.482	8.4	1.13	0.0000448	0.0118	0.0792	0.0910	0.0976	0.40	1.6	0.24	0.061
Arsenic (arsenite)	0.482	8.4	1.13	0.0000448	0.0118	0.0792	0.0910	0.0976	0.13	1.3	0.75	0.075
Barium	140	922	250	0.0130	1.29	17.5	18.8	20.2	5.1	20	4.0	1.0
Cadmium	0.0365	1.02	0.638	0.0000339	0.00142	0.0447	0.0461	0.0495	1.0	10	0.049	0.0049
Chromium	0.396	14.6	3.1	0.0000368	0.0205	0.217	0.238	0.255	3.3	69	0.077	0.0037
Cobalt	0.015	11.1	0.92	0.0000139	0.0156	0.0645	0.0800	0.0859	0.50	2.0	0.17	0.043
Lead	0.65	124	14.3	0.0000604	0.173	1.00	1.18	1.26	11	90	0.11	0.014
Mercury	0.0179	0.0625	0.06	0.0000166	0.0000876	0.00420	0.00429	0.00461	0.032	0.16	0.14	0.029
Molybdenum	0.22	1.62	0.309	0.0000204	0.00227	0.0217	0.0239	0.0257	0.26	2.6	0.099	0.0099
Selenium	0.355	1.5	0.3	0.0000330	0.00210	0.0210	0.0232	0.0248	0.20	0.33	0.12	0.075
Thallium	0.09	0.19	0.027	0.00000836	0.000266	0.00189	0.00217	0.00232	0.074	0.74	0.031	0.0031
Vanadium	0.335	20.5	0.7	0.0000311	0.0287	0.0490	0.0778	0.0835	0.21	2.1	0.40	0.040
Zinc	1.79	204	87.4	0.000166	0.285	6.12	6.41	6.88	160	320	0.043	0.021

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA sediment; PHASE2RA sediment; and PHASE2RA whole sedge. Mean for creek at road station (except sediment average of downstream from PHASE1RA and road station from PHASE2RA, and water from downstream location). Mean of PHASE1RA (ARC-D1) and PHASE2RA (ARC-R) sediment used. Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte
CoPC - chemical of potential concern
LOAEL - lowest-observed-adverse-effect level
NOAEL - no-observed-adverse-effect level
TRV - toxicity reference value

Table K-108a. Muskrat EPC calculation for mean CoPC concentrations at Anxiety Ridge Creek road site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	$\mu\text{g/L}$ unfiltered		0.65 <i>J</i>
										Anxiety Ridge Creek road site mean	0.65 <i>J</i>
Tundra Soil											
PHASE1RA	ARC-D1	7/22/2003	SD0072	0	0	NA	NA	NA	mg/kg dry		130
PHASE2RA	ARC-R	7/5/2004	SD0008	0	0	NA	NA	NA	mg/kg dry		117
										Anxiety Ridge Creek road site mean	124
Herbaceous Plant											
PHASE2RA	ARC-R	7/1/2004	SE0055	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		14.3
										Anxiety Ridge Creek road site mean	14.3

Note: CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-109. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP-REF-2 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	14.5	4,310	48.2	0.00135	6.04	3.38	9.42	10.1	1.9	19	5.3	0.53
Antimony	0.02	0.03	0.03	0.00000186	0.0000420	0.00210	0.00215	0.00230	0.66	--	0.0035	--
Arsenic (arsenate)	0.5	7	0.5	0.0000465	0.00981	0.0350	0.0449	0.0482	0.40	1.6	0.12	0.030
Arsenic (arsenite)	0.5	7	0.5	0.0000465	0.00981	0.0350	0.0449	0.0482	0.13	1.3	0.37	0.037
Barium	133	232	60.8	0.0124	0.325	4.26	4.60	4.93	5.1	20	0.97	0.25
Cadmium	0.005	0.35	0.026	0.000000465	0.000490	0.00182	0.00231	0.00248	1.0	10	0.0025	0.00025
Chromium	0.18	10.9	1.5	0.0000167	0.0153	0.105	0.120	0.129	3.3	69	0.039	0.0019
Cobalt	0.21	8.13	1.63	0.0000195	0.0114	0.114	0.126	0.135	0.50	2.0	0.27	0.067
Lead	0.06	7.48	0.4	0.00000558	0.0105	0.0280	0.0385	0.0413	11	90	0.0038	0.00046
Mercury	0.05	0.03	0.041	0.00000465	0.0000420	0.00287	0.00292	0.00313	0.032	0.16	0.098	0.020
Molybdenum	0.02	0.46	0.211	0.00000186	0.000645	0.0148	0.0154	0.0166	0.26	2.6	0.064	0.0064
Selenium	0.5	0.5	0.05	0.0000465	0.000701	0.00350	0.00425	0.00456	0.20	0.33	0.023	0.014
Thallium	0.003	0.056	0.01	0.000000279	0.0000785	0.000701	0.000779	0.000836	0.074	0.74	0.011	0.0011
Vanadium	0.17	14.9	0.3	0.0000158	0.0209	0.0210	0.0419	0.0450	0.21	2.1	0.21	0.021
Zinc	0.59	65.4	25.4	0.0000548	0.0916	1.78	1.87	2.01	160	320	0.013	0.0063

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-2); PHASE1RA sediment (TP-REF-2); PHASE2RA sediment; and PHASE2RA whole sedge. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-109a. Muskrat EPC calculation for mean CoPC concentrations at TP-REF-2 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP-REF-2	7/20/2003	SW0038	0	0	NA	NA	NA	μg/L unfiltered		0.06
										TP-REF-2 site mean	0.06
Tundra Soil											
PHASE1RA	TP-REF-2	7/20/2003	SD0070	0	0	NA	NA	NA	mg/kg dry		7.48
										TP-REF-2 site mean	7.48
Herbaceous Plant											
PHASE2RA	TP-REF-2	6/24/2004	SE0037	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		0.4
										TP-REF-2 site mean	0.4

Note: CoPC - chemical of potential concern
EPC - exposure point concentration

Table K-110. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP-REF-3 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	91.2	17,100	1300	0.00847	24.0	91.1	115	123	1.9	19	65	6.5
Antimony	0.1	0.05	0.095	0.0000929	0.0000701	0.00666	0.00674	0.00723	0.66	--	0.011	--
Arsenic (arsenate)	0.9	2.6	1.96	0.0000836	0.00364	0.137	0.141	0.151	0.40	1.6	0.38	0.095
Arsenic (arsenite)	0.9	2.6	1.96	0.0000836	0.00364	0.137	0.141	0.151	0.13	1.3	1.2	0.12
Barium	48.4	516	74.9	0.00450	0.723	5.25	5.98	6.41	5.1	20	1.3	0.32
Cadmium	0.06	0.27	0.081	0.0000558	0.000378	0.00568	0.00606	0.00650	1.0	10	0.0065	0.00065
Chromium	0.72	28	55	0.0000669	0.0392	3.85	3.89	4.18	3.3	69	1.3	0.061
Cobalt	0.19	8.01	1.72	0.0000177	0.0112	0.121	0.132	0.141	0.50	2.0	0.28	0.071
Lead	0.5	10.5	2.3	0.0000465	0.0147	0.161	0.176	0.189	11	90	0.017	0.0021
Mercury	0.05	0.04	0.03	0.00000465	0.0000561	0.00210	0.00216	0.00232	0.032	0.16	0.073	0.015
Molybdenum	0.22	0.48	0.9	0.0000204	0.000673	0.0631	0.0638	0.0684	0.26	2.6	0.26	0.026
Selenium	0.2	0.7	0.1	0.0000186	0.000981	0.00701	0.00801	0.00859	0.20	0.33	0.043	0.026
Thallium	0.04	0.174	0.13	0.00000372	0.000244	0.00911	0.00936	0.0100	0.074	0.74	0.14	0.014
Vanadium	2.41	36.5	7.6	0.000224	0.0511	0.533	0.584	0.626	0.21	2.1	3.0	0.30
Zinc	2.87	88.7	36.6	0.000267	0.124	2.56	2.69	2.89	160	320	0.018	0.0090

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-3); PHASE1RA sediment (TP-REF-3); and PHASE2RA whole sedge.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-111. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP-REF-5 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	170	11,700	714	0.0158	16.4	50.0	66.4	71.3	1.9	19	38	3.8
Antimony	0.05	0.03	0.075	0.0000465	0.0000420	0.00526	0.00530	0.00569	0.66	--	0.0086	--
Arsenic (arsenate)	0.5	3.1	9.36	0.0000465	0.00434	0.656	0.660	0.708	0.40	1.6	1.8	0.44
Arsenic (arsenite)	0.5	3.1	9.36	0.0000465	0.00434	0.656	0.660	0.708	0.13	1.3	5.4	0.54
Barium	93.5	508	117	0.00869	0.712	8.20	8.92	9.57	5.1	20	1.9	0.48
Cadmium	0.05	0.36	0.179	0.00000465	0.000504	0.0125	0.0131	0.0140	1.0	10	0.014	0.0014
Chromium	1.98	26.1	6.2	0.000184	0.0366	0.434	0.471	0.506	3.3	69	0.15	0.0073
Cobalt	0.7	11.7	4.56	0.0000650	0.0164	0.320	0.336	0.360	0.50	2.0	0.72	0.18
Lead	0.56	10.7	1.1	0.0000520	0.0150	0.0771	0.0921	0.0988	11	90	0.0090	0.0011
Mercury	0.05	0.06	0.033	0.00000465	0.0000841	0.00231	0.00240	0.00258	0.032	0.16	0.081	0.016
Molybdenum	0.05	0.38	0.38	0.00000465	0.000533	0.0266	0.0272	0.0291	0.26	2.6	0.11	0.011
Selenium	0.3	0.6	0.2	0.0000279	0.000841	0.0140	0.0149	0.0160	0.20	0.33	0.080	0.048
Thallium	0.003	0.139	0.049	0.000000279	0.000195	0.00343	0.00363	0.00389	0.074	0.74	0.053	0.0053
Vanadium	0.89	32.5	3.9	0.0000827	0.0455	0.273	0.319	0.342	0.21	2.1	1.6	0.16
Zinc	5.01	68.2	32	0.000466	0.0956	2.24	2.34	2.51	160	320	0.016	0.0078

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-5); PHASE1RA sediment (TP-REF-5); and PHASE2RA whole sedge.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-112. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP1-0100 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	4,290	68.1	0.00106	6.01	4.77	10.8	11.6	1.9	19	6.1	0.61
Antimony	0.2	9	0.74	0.0000186	0.0126	0.0519	0.0645	0.0692	0.66	--	0.10	--
Arsenic (arsenate)	0.6	7.5	0.43	0.0000558	0.0105	0.0301	0.0407	0.0437	0.40	1.6	0.11	0.027
Arsenic (arsenite)	0.6	7.5	0.43	0.0000558	0.0105	0.0301	0.0407	0.0437	0.13	1.3	0.34	0.034
Barium	70.3	498	21.4	0.00653	0.698	1.50	2.20	2.36	5.1	20	0.46	0.12
Cadmium	0.27	101	1.71	0.0000251	0.142	0.120	0.261	0.280	1.0	10	0.28	0.028
Chromium	0.44	13	6.8	0.0000409	0.0182	0.476	0.495	0.531	3.3	69	0.16	0.0077
Cobalt	0.88	24.1	2.23	0.0000818	0.0338	0.156	0.190	0.204	0.50	2.0	0.41	0.10
Lead	1.63	1,810	48.1	0.000151	2.54	3.37	5.91	6.34	11	90	0.58	0.070
Mercury	0.05	1.1	0.06	0.00000465	0.00154	0.00420	0.00575	0.00617	0.032	0.16	0.19	0.039
Molybdenum	0.09	2.43	0.261	0.00000836	0.00341	0.0183	0.0217	0.0233	0.26	2.6	0.090	0.0090
Selenium	0.2	3	0.3	0.0000186	0.00420	0.0210	0.0252	0.0271	0.20	0.33	0.14	0.082
Thallium	0.01	1.64	0.085	0.000000929	0.00230	0.00596	0.00825	0.00886	0.074	0.74	0.12	0.012
Vanadium	0.24	12.2	0.2	0.0000223	0.0171	0.0140	0.0311	0.0334	0.21	2.1	0.16	0.016
Zinc	99	21,900	351	0.00920	30.7	24.6	55.3	59.3	160	320	0.37	0.19

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-3); PHASE1RA sediment (TP-REF-3); and PHASE2RA whole sedge.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-113. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP1-1000 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	143	4,330	69.8	0.0133	6.07	4.89	11.0	11.8	1.9	19	6.2	0.62
Antimony	0.09	0.2	0.37	0.0000836	0.000280	0.0259	0.0262	0.0281	0.66	--	0.043	--
Arsenic (arsenate)	0.4	5.1	0.31	0.0000372	0.00715	0.0217	0.0289	0.0310	0.40	1.6	0.078	0.019
Arsenic (arsenite)	0.4	5.1	0.31	0.0000372	0.00715	0.0217	0.0289	0.0310	0.13	1.3	0.24	0.024
Barium	39.4	281	48.2	0.00366	0.394	3.38	3.77	4.05	5.1	20	0.79	0.20
Cadmium	0.06	0.94	0.735	0.00000558	0.00132	0.0515	0.0528	0.0567	1.0	10	0.057	0.0057
Chromium	1.56	9.71	3.1	0.000145	0.0136	0.217	0.231	0.248	3.3	69	0.075	0.0036
Cobalt	1.56	22.6	22.5	0.000145	0.0317	1.58	1.61	1.73	0.50	2.0	3.5	0.86
Lead	1.06	8.96	16.1	0.0000985	0.0126	1.13	1.14	1.22	11	90	0.11	0.014
Mercury	0.05	0.06	0.05	0.00000465	0.0000841	0.00350	0.00359	0.00385	0.032	0.16	0.12	0.024
Molybdenum	0.02	1.17	0.108	0.00000186	0.00164	0.00757	0.00921	0.00988	0.26	2.6	0.038	0.0038
Selenium	0.2	1.6	0.1	0.0000186	0.00224	0.00701	0.00927	0.00994	0.20	0.33	0.050	0.030
Thallium	0.003	0.021	0.02	0.000000279	0.0000294	0.00140	0.00143	0.00154	0.074	0.74	0.021	0.0021
Vanadium	0.28	15.1	0.2	0.0000260	0.0212	0.0140	0.0352	0.0378	0.21	2.1	0.18	0.018
Zinc	30.6	162	87.6	0.00284	0.227	6.14	6.37	6.83	160	320	0.043	0.021

Note: The following data were used to develop this scenario: PHASE1RA water; PHASE1RA sediment; and PHASE2RA whole sedge.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-114. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP3 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	75	1,920	225	0.00697	2.69	15.8	18.5	19.8	1.9	19	10	1.0
Antimony	0.03	0.26	0.17	0.00000279	0.000364	0.0119	0.0123	0.0132	0.66	--	0.020	--
Arsenic (arsenate)	0.5	3.5	0.28	0.0000465	0.00490	0.0196	0.0246	0.0264	0.40	1.6	0.066	0.016
Arsenic (arsenite)	0.5	3.5	0.28	0.0000465	0.00490	0.0196	0.0246	0.0264	0.13	1.3	0.20	0.020
Barium	46.8	388	70	0.00435	0.544	4.90	5.45	5.85	5.1	20	1.1	0.29
Cadmium	0.02	1.91	0.219	0.00000186	0.00268	0.0153	0.0180	0.0193	1.0	10	0.019	0.0019
Chromium	1.6	9.42	2.3	0.000149	0.0132	0.161	0.175	0.187	3.3	69	0.057	0.0027
Cobalt	0.13	7.56	1.14	0.0000121	0.0106	0.0799	0.0905	0.0971	0.50	2.0	0.19	0.049
Lead	0.44	93.2	3.49	0.0000409	0.131	0.245	0.375	0.403	11	90	0.037	0.0045
Mercury	0.05	0.11	0.07	0.00000465	0.000154	0.00490	0.00506	0.00543	0.032	0.16	0.17	0.034
Molybdenum	0.05	2	1.31	0.00000465	0.00280	0.0918	0.0946	0.101	0.26	2.6	0.39	0.039
Selenium	0.2	0.75	0.1	0.0000186	0.00105	0.00701	0.00808	0.00867	0.20	0.33	0.043	0.026
Thallium	0.003	0.023	0.017	0.000000279	0.0000322	0.00119	0.00122	0.00131	0.074	0.74	0.018	0.0018
Vanadium	0.31	28.3	1	0.0000288	0.0397	0.0701	0.110	0.118	0.21	2.1	0.56	0.056
Zinc	6.08	288	74.8	0.000565	0.404	5.24	5.65	6.06	160	320	0.038	0.019

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA sediment (TP2-0100); and PHASE2RA whole sedge.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-115. Food-web model exposure results for muskrat exposed to CoPC concentrations at TP4 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	75	1,920	190	0.00697	2.69	13.3	16.0	17.2	1.9	19	9.0	0.90
Antimony	0.03	0.26	0.51	0.0000279	0.000364	0.0357	0.0361	0.0387	0.66	--	0.059	--
Arsenic (arsenate)	0.5	3.5	0.88	0.0000465	0.00490	0.0617	0.0666	0.0715	0.40	1.6	0.18	0.045
Arsenic (arsenite)	0.5	3.5	0.88	0.0000465	0.00490	0.0617	0.0666	0.0715	0.13	1.3	0.55	0.055
Barium	46.8	388	289	0.00435	0.544	20.2	20.8	22.3	5.1	20	4.4	1.1
Cadmium	0.02	1.91	0.559	0.00000186	0.00268	0.0392	0.0418	0.0449	1.0	10	0.045	0.0045
Chromium	1.6	9.42	18.4	0.000149	0.0132	1.29	1.30	1.40	3.3	69	0.42	0.020
Cobalt	0.13	7.56	1.38	0.0000121	0.0106	0.0967	0.107	0.115	0.50	2.0	0.23	0.058
Lead	0.44	93.2	21.1	0.0000409	0.131	1.48	1.61	1.73	11	90	0.16	0.019
Mercury	0.05	0.11	0.05	0.00000465	0.000154	0.00350	0.00366	0.00393	0.032	0.16	0.12	0.025
Molybdenum	0.05	2	0.321	0.00000465	0.00280	0.0225	0.0253	0.0271	0.26	2.6	0.10	0.010
Selenium	0.2	0.75	0.1	0.0000186	0.00105	0.00701	0.00808	0.00867	0.20	0.33	0.043	0.026
Thallium	0.003	0.023	0.283	0.000000279	0.0000322	0.0198	0.0199	0.0213	0.074	0.74	0.29	0.029
Vanadium	0.31	28.3	0.5	0.0000288	0.0397	0.0350	0.0747	0.0802	0.21	2.1	0.38	0.038
Zinc	6.08	288	104	0.000565	0.404	7.29	7.69	8.25	160	320	0.052	0.026

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA sediment (TP2-0100); and PHASE2RA whole sedge.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-115a. Muskrat EPC calculation for mean CoPC concentrations at TP4 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
										TP4 site mean	0.44
Tundra Soil											
PHASE1RA	TP2-0100	7/19/2003	SD0060	0	0	NA	NA	NA	mg/kg dry		93.2
										TP4 site mean	93.2
Herbaceous Plant											
PHASE2RA	TP4	6/17/2004	SE0011	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		21.1
										TP4 site mean	21.1

Note: CoPC - chemical of potential concern
 EPC - exposure point concentration

Table K-116. Food-web model exposure results for muskrat exposed to mean CoPC concentrations at the Reference Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	182	11100	10.6	0.0169	15.6			0.743	16.4	17.6	1.9
Antimony	0.12	0.0767	0.0225	0.0000112	0.000107	0.00158	0.00170	0.00182	0.66	--	0.0028	--
Arsenic (arsenate)	76.3	4.43	0.03	0.00709	0.00620	0.00210	0.0154	0.0165	0.40	1.6	0.041	0.010
Arsenic (arsenite)	76.3	4.43	0.03	0.00709	0.00620	0.00210	0.0154	0.0165	0.13	1.3	0.13	0.013
Barium	156	226	17.6	0.0145	0.317	1.23	1.56	1.67	5.1	20	0.33	0.084
Cadmium	0.223	0.345	0.053	0.0000208	0.000483	0.00371	0.00422	0.00453	1	10	0.0045	0.0045
Chromium	7.16	19.6	0.35	0.000665	0.0275	0.0245	0.0527	0.0565	3.3	69	0.017	0.00082
Cobalt	4.39	6.83	0.205	0.000408	0.00958	0.0144	0.0243	0.0261	0.5	2	0.052	0.013
Lead	0.363	10.1	0.755	0.0000338	0.0141	0.0529	0.0671	0.0719	11	90	0.0065	0.00080
Mercury	0.05	0.05	0.0535	0.00000465	0.0000701	0.00375	0.00382	0.00410	0.032	0.16	0.13	0.026
Molybdenum	0.08	0.773	0.088	0.00000743	0.00108	0.00617	0.00726	0.00779	0.26	2.6	0.030	0.0030
Selenium	0.2	1.1	0.05	0.0000186	0.00154	0.00350	0.00506	0.00543	0.2	0.33	0.027	0.016
Thallium	0.008	0.081	0.0025	0.000000743	0.000114	0.000175	0.000289	0.000311	0.074	0.74	0.0042	0.00042
Vanadium	0.4	25.2	0.2	0.0000372	0.0354	0.0140	0.0494	0.0530	0.21	2.1	0.25	0.025
Zinc	22.9	92.2	35.4	0.00212	0.129	2.48	2.61	2.80	160	320	0.018	0.0088

Note: Phase2RA whole sedge/grass and sediment (CL-REF-1), Phase1RA water and sediment.

Sediment concentrations are means of Phase2RA and Phase1RA data from reference lagoons (no control lagoon data).

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-117. Food-web model exposure results for muskrat exposed to mean CoPC concentrations at the Control Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	182	11100	21.4	0.0169	15.6	1.50	17.1	18.4	1.9	19	9.7	0.97
Antimony	0.12	0.0767	0.0207	0.0000112	0.000107	0.00145	0.00157	0.00168	0.66	--	0.0025	--
Arsenic (arsenate)	76.3	8.2	0.11	0.00709	0.0115	0.00771	0.0263	0.0282	0.40	1.6	0.071	0.018
Arsenic (arsenite)	76.3	8.2	0.11	0.00709	0.0115	0.00771	0.0263	0.0282	0.13	1.3	0.22	0.022
Barium	156	226	31.6	0.0145	0.317	2.21	2.55	2.73	5.1	20	0.54	0.14
Cadmium	0.05	0.46	0.0913	0.00000465	0.000645	0.00640	0.00705	0.00756	1	10	0.0076	0.00076
Chromium	7.16	19.6	0.4	0.000665	0.0275	0.0280	0.0562	0.0603	3.3	69	0.018	0.00087
Cobalt	4.39	6.83	0.627	0.000408	0.00958	0.0439	0.0539	0.0578	0.5	2	0.12	0.029
Lead	0.17	9.65	1.45	0.0000158	0.0135	0.102	0.115	0.124	11	90	0.011	0.0014
Mercury	0.05	0.05	0.041	0.00000465	0.0000701	0.00287	0.00295	0.00316	0.032	0.16	0.10	0.020
Molybdenum	0.08	0.773	0.35	0.00000743	0.00108	0.0245	0.0256	0.0275	0.26	2.6	0.11	0.011
Selenium	0.2	1.1	0.117	0.0000186	0.00154	0.00817	0.00973	0.0104	0.2	0.33	0.052	0.032
Thallium	0.008	0.081	0.004	0.000000743	0.000114	0.000280	0.000395	0.000423	0.074	0.74	0.0057	0.00057
Vanadium	0.4	25.2	0.2	0.0000372	0.0354	0.0140	0.0494	0.0530	0.21	2.1	0.25	0.025
Zinc	19	79.3	43.8	0.00177	0.111	3.07	3.18	3.41	160	320	0.021	0.011

Note: Phase2RA whole sedge/grass and sediment, PSCHAR sediment.

Whole sedge and grass plant data averaged for whole lagoon. Mean of sediment from Phase2 and PSCHAR used; some analytes missing for sediment in control lagoon (Al, Sb, Ba, Cr, Co, Hg, Mo, Se, Tl, V) for these, used mean of reference lagoon stations from Phase1 and Phase2.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

TableK-117a. Muskrat EPC calculation for mean CoPC concentrations at the Control Lagoon

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PSCHAR	CLS	9/17/2002	CLS	1	0	NA	NA	NA	mg/L unfiltered		0.000095
PSCHAR	CLT	9/17/2002	CLT	0	0	NA	NA	NA	mg/L unfiltered		0.00024
										control lagoon mean	0.000168
										µg/L	0.17
Tundra Soil											
PSCHAR	CLQ	8/18/2002	CLQ	0	0	NA	NA	NA	mg/kg dry		11
PSCHAR	CLR	8/18/2002	CLR	0	0	NA	NA	NA	mg/kg dry		7.7
PSCHAR	CLS	9/17/2002	CLS-SD	1	0	NA	NA	NA	mg/kg dry	8.6	
PSCHAR	CLS	9/17/2002	CLS-SD	2	0	NA	NA	NA	mg/kg dry	11.0	U
										field rep average	9.8
PSCHAR	CLT	9/17/2002	CLT-SD	0	0	NA	NA	NA	mg/kg dry		14
PSCHAR	CLU	8/18/2002	CLU	0	0	NA	NA	NA	mg/kg dry		8.0
PHASE2RA	CL-REF-2	7/3/2004	SD0005-D	1	0	NA	NA	NA	mg/kg dry	8.25	
PHASE2RA	CL-REF-2	7/3/2004	SD0005-D	2	0	NA	NA	NA	mg/kg dry	10.4	
										field rep average	9.3
PHASE2RA	CL-REF-3	7/4/2004	SD0007	0	0	NA	NA	NA	mg/kg dry		7.75
										control lagoon mean	9.65
Herbaceous Plant											
PHASE2RA	CL-REF-2	7/3/2004	SE0060	0	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry		3.28
PHASE2RA	CL-REF3b	7/4/2004	SE0063	0	0	<i>Eriophorum</i>	<i>angustifolium</i>	Whole Plant	mg/kg dry		0.45
PHASE2RA	CL-REF3b	7/4/2004	TH0002	0	0	<i>Deschampsia</i>	<i>beringensis</i>	Whole Plant	mg/kg dry		0.62
										control lagoon mean	1.45

Note: Field replicates are averaged first then included in the calculation of the site mean.
 CoPC - chemical of potential concern
 EPC - exposure point concentration
 U - undetected; value reported is half the detection limit

Table K-118. Food-web model exposure results for muskrat exposed to mean CoPC concentrations at the Port Lagoon North

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	44.1	5590	9.7	0.00409	7.83	0.680	8.51	9.13	1.9	19	4.8	0.48
Antimony	0.545	0.225	0.0385	0.0000506	0.000315	0.00270	0.00306	0.00329	0.66	--	0.0050	--
Arsenic (arsenate)	26.7	7.05	0.08	0.00248	0.00988	0.00561	0.0180	0.0193	0.40	1.6	0.048	0.012
Arsenic (arsenite)	26.7	7.05	0.08	0.00248	0.00988	0.00561	0.0180	0.0193	0.13	1.3	0.15	0.015
Barium	412	252	17	0.0382	0.353	1.19	1.58	1.70	5.1	20	0.33	0.085
Cadmium	0.0933	2.86	0.056	0.00000867	0.00401	0.00392	0.00794	0.00852	1	10	0.0085	0.00085
Chromium	1.84	10.3	0.25	0.000171	0.0144	0.0175	0.0321	0.0344	3.3	69	0.010	0.00050
Cobalt	1.32	5.49	0.09	0.000122	0.00769	0.00631	0.0141	0.0152	0.5	2	0.030	0.0076
Lead	1.90	92	1.29	0.000177	0.129	0.0900	0.219	0.235	11	90	0.021	0.0026
Mercury	0.05	0.148	0.0355	0.00000465	0.000207	0.00249	0.00270	0.00290	0.032	0.16	0.091	0.018
Molybdenum	0.545	0.77	0.154	0.0000506	0.00108	0.0108	0.0119	0.0128	0.26	2.6	0.049	0.0049
Selenium	0.45	0.8	0.125	0.0000418	0.00112	0.00876	0.00992	0.0106	0.2	0.33	0.053	0.032
Thallium	0.029	0.0705	0.004	0.00000269	0.0000988	0.000280	0.000382	0.000410	0.074	0.74	0.0055	0.00055
Vanadium	0.325	21.1	0.2	0.0000302	0.0296	0.0140	0.0436	0.0468	0.21	2.1	0.22	0.022
Zinc	21.0	556	45.1	0.00195	0.780	3.16	3.94	4.23	160	320	0.026	0.013

Note: Phase2RA whole sedge and sediment (PLNL), Phase1RA sediment and water (PLNL and PLNN), PSCHAR sediment and water (all Port Lagoon North stations).

Whole sedge data averaged for all stations at the lagoon and all sedge/grass types. Sediment and water data averaged at a station, then data from all stations at the lagoon averaged to calculate lagoon-wide means.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-119. Food-web model exposure results for muskrat exposed to mean CoPC concentrations at the North Lagoon

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	24.9	8420	24.1	0.00231	11.8	1.69	13.5	14.5	1.9	19	7.6	0.76
Antimony	0.2	0.085	0.027	0.0000186	0.000119	0.00189	0.00203	0.00218	0.66	--	0.0033	--
Arsenic (arsenate)	4.8	5.95	0.245	0.000446	0.00834	0.0172	0.0260	0.0278	0.40	1.6	0.070	0.017
Arsenic (arsenite)	4.8	5.95	0.245	0.000446	0.00834	0.0172	0.0260	0.0278	0.13	1.3	0.21	0.021
Barium	114	270	19.2	0.0105	0.378	1.35	1.73	1.86	5.1	20	0.36	0.093
Cadmium	0.15	0.996	0.129	0.0000139	0.00140	0.00900	0.0104	0.0112	1	10	0.011	0.0011
Chromium	1.86	11.0	0.4	0.000173	0.0154	0.0280	0.0436	0.0468	3.3	69	0.014	0.00068
Cobalt	0.45	5.75	0.37	0.0000418	0.00805	0.0259	0.0340	0.0365	0.5	2	0.073	0.018
Lead	0.885	60.7	2.62	0.0000822	0.0850	0.184	0.269	0.288	11	90	0.026	0.0032
Mercury	0.05	0.04	0.033	0.00000465	0.0000561	0.00231	0.00237	0.00255	0.032	0.16	0.080	0.016
Molybdenum	0.34	0.855	0.171	0.0000316	0.00120	0.0120	0.0132	0.0142	0.26	2.6	0.055	0.0055
Selenium	0.3	0.75	0.2	0.0000279	0.00105	0.0140	0.0151	0.0162	0.2	0.33	0.081	0.049
Thallium	0.007	0.051	0.007	0.000000650	0.0000715	0.000490	0.000563	0.000604	0.074	0.74	0.0082	0.00082
Vanadium	0.26	18.4	0.2	0.0000242	0.0257	0.0140	0.0398	0.0427	0.21	2.1	0.20	0.020
Zinc	45.6	189	48.3	0.00423	0.265	3.38	3.65	3.92	160	320	0.024	0.012

Note: Phase2RA whole sedge and sediment (NLF, NLK), Phase1RA sediment (NLF and NLK) and water (NLF, NLK), PSCHAR sediment and water (all North Lagoon stations).

Whole sedge data averaged for all stations at the lagoon and all sedge/grass types. Sediment and water data averaged for a station, then data from all stations at the lagoon averaged to calculate lagoon-wide means.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value
- UCL - upper confidence limit

Table K-119a. Muskrat EPC calculation for mean CoPC concentrations at the North Lagoon

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	NLF	7/18/2003	SW0025	0	0	NA	NA	NA	µg/L unfiltered		0.43
PHASE1RA	NLK	7/18/2003	SW0023	1	0	NA	NA	NA	µg/L unfiltered	0.58	
PHASE1RA	NLK	7/18/2003	SW0023	2	0	NA	NA	NA	µg/L unfiltered	0.55	
										field rep average	0.57
PSCHAR	NLH	9/17/2002	NLH	0	0	NA	NA	NA	µg/L unfiltered		0.64
PSCHAR	NLJ	9/17/2002	NLJ	0	0	NA	NA	NA	µg/L unfiltered		1.9
										North lagoon mean	0.884
Tundra Soil											
PSCHAR	NLF	8/23/2002	NLF	1	0	NA	NA	NA	mg/kg dry	13	
PSCHAR	NLF	8/23/2002	NLF	2	0	NA	NA	NA	mg/kg dry	10.5	U
										field rep average	11.8
PHASE1RA	NLF	7/18/2003	SD0050	0	0	NA	NA	NA	mg/kg dry	5.86	
PHASE2RA	NLF	7/2/2004	SD0003	0	0	NA	NA	NA	mg/kg dry	14.9	
										survey station mean	10.84
PSCHAR	NLG	8/23/2002	NLG	0	0	NA	NA	NA	mg/kg dry		11
PSCHAR	NLH	9/17/2002	NLH-SD	0	0	NA	NA	NA	mg/kg dry		30.3
PSCHAR	NLJ	9/17/2002	NLJ-SD	0	0	NA	NA	NA	mg/kg dry		215
PSCHAR	NLK	8/23/2002	NLK	0	0	NA	NA	NA	mg/kg dry	64.2	
PHASE1RA	NLK	7/18/2003	SD0048	1	0	NA	NA	NA	mg/kg dry	35	
PHASE1RA	NLK	7/18/2003	SD0048	2	0	NA	NA	NA	mg/kg dry	21.2	
										field rep average	28.1
PHASE2RA	NLK	6/30/2004	SD0002	0	0	NA	NA	NA	mg/kg dry	17.9	
										survey station mean	36.7
										North lagoon mean	60.8
Herbaceous Plant											
PHASE2RA	NLF	7/2/2004	TH0001	0	0	<i>Deschampsia</i>	<i>caespitosa</i>	Whole Plant	mg/kg dry		1.94
PHASE2RA	NLK	6/30/2004	SE0049-D	1	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	5.17	
PHASE2RA	NLK	6/30/2004	SE0049-D	2	0	<i>Carex</i>	<i>aquatilis</i>	Whole Plant	mg/kg dry	1.4	
										field rep average	3.3
										North lagoon mean	2.61

Note: Field replicates are averaged first then included in the calculation of the survey station mean. Tundra soil are averaged by survey station, then included in the calculation of the site mean.

CoPC - chemical of potential concern

EPC - exposure point concentration

U - undetected; value reported is half the detection limit

Table K-120. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TS-REF-5 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	91.2	11,300	5.6	0.0000958	1.24	0.0115	1.25	196	1.9	19	100	10
Antimony	0.1	0.22	0.003	0.00000105	0.0000242	0.00000615	0.0000305	0.00476	0.66	--	0.0072	--
Arsenic (arsenate)	0.9	3.5	0.05	0.000000945	0.000385	0.000103	0.000488	0.0763	0.40	1.6	0.19	0.048
Arsenic (arsenite)	0.9	3.5	0.05	0.000000945	0.000385	0.000103	0.000488	0.0763	0.13	1.3	0.59	0.059
Barium	48.4	383	5.63	0.0000508	0.0421	0.0115	0.0537	8.39	5.1	20	1.6	0.42
Cadmium	0.06	0.293	0.96	0.000000630	0.0000322	0.00197	0.00200	0.313	1.0	10	0.31	0.031
Chromium	0.72	19.7	0.3	0.000000756	0.00217	0.000615	0.00278	0.435	3.3	69	0.13	0.0063
Cobalt	0.19	15.3	0.029	0.000000200	0.00168	0.0000595	0.00174	0.272	0.50	2.0	0.54	0.14
Lead	0.5	13.4	0.15	0.000000525	0.00148	0.000308	0.00179	0.279	11	90	0.025	0.0031
Mercury	0.05	0.105	0.09	0.0000000525	0.0000116	0.000185	0.000196	0.0306	0.032	0.16	0.96	0.19
Molybdenum	0.22	0.805	0.324	0.000000231	0.0000885	0.000664	0.000753	0.118	0.26	2.6	0.45	0.045
Selenium	0.2	0.55	0.65	0.000000210	0.0000605	0.00133	0.00139	0.218	0.20	0.33	1.1	0.66
Thallium	0.04	0.0575	0.002	0.0000000420	0.00000633	0.00000410	0.0000105	0.00164	0.074	0.74	0.022	0.0022
Vanadium	2.41	12.7	0.2	0.00000253	0.00140	0.000410	0.00181	0.282	0.21	2.1	1.3	0.13
Zinc	2.87	57.4	214	0.00000301	0.00631	0.439	0.445	69.5	160	320	0.43	0.22

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-3); PHASE1RA soil (TS-REF-5); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-120a. Tundra shrew EPC calculation for mean CoPC concentrations at TS-REF-5 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP-REF-3	7/20/2003	SW0036	0	0	NA	NA	NA	µg/L unfiltered		0.5
										TS-REF-5 site mean	0.5
Tundra Soil											
PHASE1RA	TS-REF-5	7/20/2003	TS0020	0	0	NA	NA	NA	mg/kg dry		23.3
PHASE2RA	TS-REF-5	6/23/2004	TS-0028	0	0	NA	NA	NA	mg/kg dry		3.58
										TS-REF-5 site mean	13.4
Soil Invertebrates											
PHASE2RA	TS-REF-5	7/5/2004	SI0018	0	0	NA	NA	NA	mg/kg dry		0.15 <i>J</i>
										TS-REF-5 site mean	0.15 <i>J</i>

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-121. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT5-0010 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	6,940	95.1	0.0000120	0.763	0.195	0.958	150	1.9	19	79	7.9
Antimony	0.2	2.75	0.14	0.00000210	0.000303	0.000286	0.000589	0.0920	0.66	--	0.14	--
Arsenic (arsenate)	0.6	8	0.195	0.00000630	0.000880	0.000400	0.00128	0.200	0.40	1.6	0.50	0.13
Arsenic (arsenite)	0.6	8	0.195	0.00000630	0.000880	0.000400	0.00128	0.200	0.13	1.3	1.5	0.15
Barium	70.3	1,200	25.9	0.0000738	0.132	0.0530	0.185	28.9	5.1	20	5.7	1.4
Cadmium	0.27	20.6	11.7	0.00000284	0.00227	0.0239	0.0262	4.09	1.0	10	4.1	0.41
Chromium	0.44	17.9	0.45	0.00000462	0.00197	0.000923	0.00289	4.452	3.3	69	0.14	0.0065
Cobalt	0.88	18.6	0.139	0.00000924	0.00205	0.000284	0.00233	0.364	0.50	2.0	0.73	0.18
Lead	1.63	1,210	16.7	0.00000171	0.133	0.0341	0.167	26.1	11	90	2.4	0.29
Mercury	0.05	1.75	0.15	0.000000525	0.000193	0.000308	0.000500	0.0781	0.032	0.16	2.4	0.49
Molybdenum	0.09	0.89	0.276	0.000000945	0.0000979	0.000565	0.000663	0.104	0.26	2.6	0.40	0.040
Selenium	0.2	1.5	1	0.000000210	0.000165	0.00205	0.00222	0.346	0.20	0.33	1.7	1.0
Thallium	0.01	0.455	0.038	0.000000105	0.0000501	0.0000779	0.000128	0.0200	0.074	0.74	0.27	0.027
Vanadium	0.24	11.6	0.4	0.000000252	0.00128	0.000820	0.00210	0.328	0.21	2.1	1.6	0.16
Zinc	99	4,330	419	0.000104	0.476	0.858	1.33	208	160	320	1.3	0.65

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE2RA soil; TT1-0010 soil for Al & Cr; and PHASE2RA invertebrates.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-122. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT5-0100 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	1,820	136	0.0000120	0.200	0.280	0.480	75.0	1.9	19	39	3.9
Antimony	0.2	2.46	0.081	0.00000210	0.000271	0.000166	0.000437	0.0683	0.66	--	0.10	--
Arsenic (arsenate)	0.6	5.3	0.17	0.000000630	0.000583	0.000349	0.000932	0.146	0.40	1.6	0.36	0.091
Arsenic (arsenite)	0.6	5.3	0.17	0.000000630	0.000583	0.000349	0.000932	0.146	0.13	1.3	1.1	0.11
Barium	70.3	1,200	46.5	0.0000738	0.132	0.0952	0.227	35.5	5.1	20	7.0	1.8
Cadmium	0.27	24	3.14	0.000000284	0.00264	0.00644	0.00908	1.42	1.0	10	1.4	0.14
Chromium	0.44	5.15	0.45	0.000000462	0.000567	0.000923	0.00149	0.233	3.3	69	0.071	0.0034
Cobalt	0.88	8.18	0.166	0.000000924	0.000900	0.000339	0.00124	0.194	0.50	2.0	0.39	0.097
Lead	1.63	1,060	16.2	0.00000171	0.117	0.0332	0.150	23.4	11	90	2.1	0.26
Mercury	0.05	0.25	0.115	0.0000000525	0.0000275	0.000236	0.000263	0.0411	0.032	0.16	1.3	0.26
Molybdenum	0.09	0.84	0.415	0.0000000945	0.0000924	0.000850	0.000942	0.147	0.26	2.6	0.57	0.057
Selenium	0.2	1.9	0.4	0.000000210	0.000209	0.000820	0.00103	0.161	0.20	0.33	0.80	0.49
Thallium	0.01	0.368	0.0235	0.0000000105	0.0000405	0.0000482	0.0000887	0.0139	0.074	0.74	0.19	0.019
Vanadium	0.24	8.25	0.4	0.000000252	0.000908	0.000820	0.00173	0.270	0.21	2.1	1.3	0.13
Zinc	99	5,120	291	0.000104	0.563	0.597	1.16	181	160	320	1.1	0.57

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE2RA soil; TT1-0100 soil for Al & Cr; and PHASE2RA invertebrates.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-123. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT5-1000 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	143	548	19.3	0.000150	0.0603	0.0396	0.100	15.6	1.9	19	8.2	0.82
Antimony	0.09	0.83	0.019	0.000000945	0.0000913	0.0000390	0.000130	0.0204	0.66	--	0.031	--
Arsenic (arsenate)	0.4	1.8	0.105	0.000000420	0.000198	0.000215	0.000414	0.0646	0.40	1.6	0.16	0.040
Arsenic (arsenite)	0.4	1.8	0.105	0.000000420	0.000198	0.000215	0.000414	0.0646	0.13	1.3	0.50	0.050
Barium	39.4	15.3	5.78	0.0000414	0.00168	0.0118	0.0136	2.12	5.1	20	0.42	0.11
Cadmium	0.06	4.08	2.53	0.000000630	0.000449	0.00520	0.00564	0.882	1.0	10	0.88	0.088
Chromium	1.56	1.85	0.2	0.00000164	0.000204	0.000410	0.000615	0.0961	3.3	69	0.029	0.0014
Cobalt	1.56	6.82	0.054	0.00000164	0.000750	0.000111	0.000863	0.135	0.50	2.0	0.27	0.067
Lead	1.06	8.62	2.79	0.00000111	0.000948	0.00572	0.00667	1.04	11	90	0.095	0.012
Mercury	0.05	0.33	0.15	0.000000525	0.0000363	0.000308	0.000344	0.0537	0.032	0.16	1.7	0.34
Molybdenum	0.02	1.16	0.289	0.000000210	0.000128	0.000591	0.000719	0.112	0.26	2.6	0.43	0.043
Selenium	0.2	0.9	0.75	0.000000210	0.0000990	0.00154	0.00164	0.256	0.20	0.33	1.3	0.77
Thallium	0.003	0.072	0.0085	0.0000000315	0.00000792	0.0000174	0.0000253	0.00396	0.074	0.74	0.054	0.0054
Vanadium	0.28	4.64	0.4	0.000000294	0.000510	0.000820	0.00133	0.208	0.21	2.1	0.99	0.099
Zinc	30.6	38.9	302	0.0000321	0.00428	0.618	0.622	97.2	160	320	0.61	0.30

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE2RA soil; TT1-1000 soil for Al & Cr; and PHASE2RA invertebrates.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-124. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT5-2000 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)		NOAEL	LOAEL
												Hazard Quotient	Hazard Quotient
Aluminum	143	548	14.1	0.000150	0.0603	0.0289	0.0893	14.0	1.9	19	7.3	0.73	
Antimony	0.09	0.56	0.009	0.000000945	0.0000616	0.0000185	0.0000801	0.0125	0.66	--	0.019	--	
Arsenic (arsenate)	0.4	0.5	0.2	0.000000420	0.0000550	0.000410	0.000465	0.0727	0.40	1.6	0.18	0.045	
Arsenic (arsenite)	0.4	0.5	0.2	0.000000420	0.0000550	0.000410	0.000465	0.0727	0.13	1.3	0.56	0.056	
Barium	39.4	96	4.61	0.0000414	0.0106	0.00945	0.0201	3.13	5.1	20	0.61	0.16	
Cadmium	0.06	1.31	3.53	0.000000630	0.000144	0.00724	0.00738	1.15	1.0	10	1.2	0.12	
Chromium	1.56	1.85	0.3	0.00000164	0.000204	0.000615	0.000820	0.128	3.3	69	0.039	0.0019	
Cobalt	1.56	1.97	0.059	0.00000164	0.000217	0.000121	0.000339	0.0530	0.50	2.0	0.11	0.027	
Lead	1.06	54.1	1.77	0.00000111	0.00595	0.00363	0.00958	1.50	11	90	0.14	0.017	
Mercury	0.05	0.27	0.13	0.000000525	0.0000297	0.000267	0.000296	0.0463	0.032	0.16	1.4	0.29	
Molybdenum	0.02	0.8	0.243	0.000000210	0.0000880	0.000498	0.000586	0.0916	0.26	2.6	0.35	0.035	
Selenium	0.2	0.5	0.9	0.000000210	0.0000550	0.00185	0.00190	0.297	0.20	0.33	1.5	0.90	
Thallium	0.003	0.036	0.003	0.0000000315	0.00000396	0.00000615	0.0000101	0.00158	0.074	0.74	0.021	0.0021	
Vanadium	0.28	0.98	0.4	0.000000294	0.000108	0.000820	0.000928	0.145	0.21	2.1	0.69	0.069	
Zinc	30.6	286	539	0.0000321	0.0315	1.10	1.14	178	160	320	1.1	0.55	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE2RA soil; TT1-1000 soil for Al & Cr; and PHASE2RA invertebrates.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-125. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT2-0010 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	6,000	202	0.0000120	0.660	0.414	1.07	168	1.9	19	88	8.8
Antimony	0.2	2.2	0.063	0.000000210	0.000241	0.000129	0.000371	0.0579	0.66	--	0.088	--
Arsenic (arsenate)	0.6	6.45	0.17	0.000000630	0.000710	0.000349	0.00106	0.165	0.40	1.6	0.41	0.10
Arsenic (arsenite)	0.6	6.45	0.17	0.000000630	0.000710	0.000349	0.00106	0.165	0.13	1.3	1.3	0.13
Barium	70.3	2,070	45.3	0.0000738	0.227	0.0929	0.320	50.0	5.1	20	9.8	2.5
Cadmium	0.27	16.4	7.13	0.000000284	0.00180	0.0146	0.0164	2.56	1.0	10	2.6	0.26
Chromium	0.44	9.9	0.56	0.000000462	0.00109	0.00115	0.00224	0.350	3.3	69	0.11	0.0051
Cobalt	0.88	9.75	0.139	0.000000924	0.00107	0.000285	0.00136	0.212	0.50	2.0	0.42	0.11
Lead	1.63	759	6.38	0.00000171	0.0835	0.0131	0.0966	15.1	11	90	1.4	0.17
Mercury	0.05	0.455	0.11	0.0000000525	0.0000501	0.000226	0.000276	0.0431	0.032	0.16	1.3	0.27
Molybdenum	0.09	0.77	0.287	0.0000000945	0.0000847	0.000588	0.000673	0.105	0.26	2.6	0.40	0.040
Selenium	0.2	1.25	0.2	0.000000210	0.000138	0.000410	0.000548	0.0856	0.20	0.33	0.43	0.26
Thallium	0.01	0.366	0.015	0.0000000105	0.0000403	0.0000308	0.0000710	0.0111	0.074	0.74	0.15	0.015
Vanadium	0.24	12	0.41	0.000000252	0.00132	0.000841	0.00216	0.338	0.21	2.1	1.6	0.16
Zinc	99	3,460	407	0.000104	0.381	0.834	1.22	190	160	320	1.2	0.59

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT2-0100); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-125a. Tundra shrew EPC calculation for mean CoPC concentrations at TT2-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
										TT2-0010 site mean	1.63
Tundra Soil											
PHASE1RA	TT2-0010	7/17/2003	TS0011	0	0	NA	NA	NA	mg/kg dry		661 <i>J</i>
PHASE2RA	TT2-0010	6/17/2004	TS-0011	0	0	NA	NA	NA	mg/kg dry		856
										TT2-0010 site mean	759 <i>J</i>
Soil Invertebrates											
PHASE2RA	TT2-0010	6/24/2004	SI0011	0	0	NA	NA	NA	mg/kg dry		6.38 <i>J</i>
										TT2-0010 site mean	6.38 <i>J</i>

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-126. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT2-0100 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	11.4	3,060	47.6	0.0000120	0.337	0.0976	0.434	67.8	1.9	19	3.6	3.6
Antimony	0.2	2.04	0.021	0.000000210	0.000224	0.0000431	0.000267	0.0417	0.66	--	0.063	--
Arsenic (arsenate)	0.6	3.95	0.1	0.000000630	0.000435	0.000205	0.000640	0.100	0.40	1.6	0.25	0.063
Arsenic (arsenite)	0.6	3.95	0.1	0.000000630	0.000435	0.000205	0.000640	0.100	0.13	1.3	0.77	0.077
Barium	70.3	890	17.5	0.0000738	0.0978	0.0359	0.134	20.9	5.1	20	4.1	1.0
Cadmium	0.27	9.89	3.09	0.000000284	0.00109	0.00633	0.00742	1.16	1.0	10	1.2	0.12
Chromium	0.44	6.02	0.4	0.000000462	0.000662	0.000820	0.00148	0.232	3.3	69	0.070	0.0034
Cobalt	0.88	6.88	0.066	0.000000924	0.000756	0.000135	0.000892	0.139	0.50	2.0	0.28	0.070
Lead	1.63	414	2.88	0.00000171	0.0455	0.00590	0.0514	8.03	11	90	0.73	0.089
Mercury	0.05	0.37	0.1	0.0000000525	0.0000407	0.000205	0.000246	0.0384	0.032	0.16	1.2	0.24
Molybdenum	0.09	0.79	0.279	0.0000000945	0.0000869	0.000572	0.000659	0.103	0.26	2.6	0.40	0.040
Selenium	0.2	1.1	0.6	0.000000210	0.000121	0.00123	0.00135	0.211	0.20	0.33	1.1	0.64
Thallium	0.01	0.19	0.007	0.0000000105	0.0000209	0.0000144	0.0000353	0.00551	0.074	0.74	0.074	0.0074
Vanadium	0.24	7.31	0.4	0.000000252	0.000804	0.000820	0.00162	0.254	0.21	2.1	1.2	0.12
Zinc	99	1,970	236	0.000104	0.217	0.484	0.701	109	160	320	0.68	0.34

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT2-0100); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-127. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT2-1000 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	143	405	17.4	0.000150	0.0446	0.0357	0.0804	12.6	1.9	19	6.6	0.66
Antimony	0.09	0.28	0.003	0.000000945	0.0000308	0.00000615	0.000037	0.00579	0.66	--	0.0088	--
Arsenic (arsenate)	0.4	0.95	0.07	0.000000420	0.000105	0.000144	0.000248	0.0388	0.40	1.6	0.097	0.024
Arsenic (arsenite)	0.4	0.95	0.07	0.000000420	0.000105	0.000144	0.000248	0.0388	0.13	1.3	0.30	0.030
Barium	39.4	146	6.89	0.0000414	0.0160	0.0141	0.0302	4.71	5.1	20	0.92	0.24
Cadmium	0.06	0.915	1.14	0.000000630	0.000101	0.00234	0.00244	0.381	1.0	10	0.38	0.038
Chromium	1.56	1.03	0.2	0.00000164	0.000113	0.000410	0.000525	0.0820	3.3	69	0.025	0.0012
Cobalt	1.56	5.99	0.062	0.00000164	0.000659	0.000127	0.000788	0.123	0.50	2.0	0.25	0.062
Lead	1.06	23.8	1.05	0.00000111	0.00261	0.00215	0.00477	0.745	11	90	0.068	0.0083
Mercury	0.05	0.23	0.1	0.000000525	0.0000253	0.000205	0.000230	0.0360	0.032	0.16	1.1	0.22
Molybdenum	0.02	0.855	0.325	0.000000210	0.0000941	0.000666	0.000760	0.119	0.26	2.6	0.46	0.046
Selenium	0.2	0.5	0.9	0.000000210	0.0000550	0.00185	0.00190	0.297	0.20	0.33	1.5	0.90
Thallium	0.003	0.0375	0.002	0.0000000315	0.00000413	0.00000410	0.00000823	0.00129	0.074	0.74	0.017	0.0017
Vanadium	0.28	2.23	0.4	0.000000294	0.000245	0.000820	0.00107	0.166	0.21	2.1	0.79	0.079
Zinc	30.6	327	232	0.0000321	0.0360	0.476	0.512	79.9	160	320	0.50	0.25

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA soil (TT2-1000); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-128. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT3-0010 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	75	2,660	151	0.0000788	0.293	0.310	0.602	94.1	1.9	19	50	5.0
Antimony	0.03	0.925	0.037	0.000000315	0.000102	0.0000759	0.000178	0.0278	0.66	--	0.042	--
Arsenic (arsenate)	0.5	5.3	0.25	0.000000525	0.000583	0.000513	0.00110	0.171	0.40	1.6	0.43	0.11
Arsenic (arsenite)	0.5	5.3	0.25	0.000000525	0.000583	0.000513	0.00110	0.171	0.13	1.3	1.3	0.13
Barium	46.8	2,280	71.8	0.0000491	0.251	0.147	0.398	62.2	5.1	20	12	3.1
Cadmium	0.02	7.07	4.31	0.000000210	0.000778	0.00884	0.00961	1.50	1.0	10	1.5	0.15
Chromium	1.6	9.69	0.3	0.00000168	0.00107	0.000615	0.00168	0.263	3.3	69	0.080	0.0038
Cobalt	0.13	8.33	0.134	0.000000137	0.000916	0.000275	0.00119	0.186	0.50	2.0	0.37	0.093
Lead	0.44	385	4.3	0.000000462	0.0423	0.00882	0.0511	7.99	11	90	0.73	0.089
Mercury	0.05	0.285	0.21	0.0000000525	0.0000314	0.000431	0.000462	0.0722	0.032	0.16	2.3	0.45
Molybdenum	0.05	1.08	0.274	0.0000000525	0.000118	0.000562	0.000680	0.106	0.26	2.6	0.41	0.041
Selenium	0.2	1	0.2	0.000000210	0.000110	0.000410	0.000520	0.0813	0.20	0.33	0.41	0.25
Thallium	0.003	0.296	0.014	0.00000000315	0.0000325	0.0000287	0.0000612	0.00956	0.074	0.74	0.13	0.013
Vanadium	0.31	14.2	0.49	0.000000326	0.00156	0.00100	0.00257	0.401	0.21	2.1	1.9	0.19
Zinc	6.08	1,350	205	0.00000638	0.149	0.420	0.569	88.9	160	320	0.56	0.28

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0010); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-128a. Tundra shrew EPC calculation for mean CoPC concentrations at TT3-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
										TT3-0010 site mean	0.44
Tundra Soil											
PHASE1RA	TT3-0010	7/17/2003	TS0009	0	0	NA	NA	NA	mg/kg dry		362
PHASE2RA	TT3-0010	6/18/2004	TS-0013	0	0	NA	NA	NA	mg/kg dry		407
										TT3-0010 site mean	385
Soil Invertebrates											
PHASE2RA	TT3-0010	7/1/2004	SI0014	0	0	NA	NA	NA	mg/kg dry		4.3 <i>J</i>
										TT3-0010 site mean	4.3 <i>J</i>

Note: CoPC - chemical of potential concern
EPC - exposure point concentration
J - estimated value

Table K-129. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT3-0100 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	75	1,510	79.8	0.0000788	0.166	0.164	0.330	51.5	1.9	19	27	2.7
Antimony	0.03	0.915	0.018	0.000000315	0.000101	0.0000369	0.000138	0.0215	0.66	--	0.033	--
Arsenic (arsenate)	0.5	2.2	0.14	0.000000525	0.000242	0.000287	0.000530	0.0827	0.40	1.6	0.21	0.052
Arsenic (arsenite)	0.5	2.2	0.14	0.000000525	0.000242	0.000287	0.000530	0.0827	0.13	1.3	0.64	0.064
Barium	46.8	694	29.9	0.0000491	0.0763	0.0613	0.138	21.5	5.1	20	4.2	1.1
Cadmium	0.02	2.06	4.51	0.000000210	0.000226	0.00925	0.00947	1.48	1.0	10	1.5	0.15
Chromium	1.6	3.93	0.3	0.00000168	0.000432	0.000615	0.00105	0.164	3.3	69	0.050	0.0024
Cobalt	0.13	2.69	0.161	0.000000137	0.000296	0.000330	0.000626	0.0978	0.50	2.0	0.20	0.049
Lead	0.44	119	3.08	0.000000462	0.0131	0.00631	0.0194	3.03	11	90	0.28	0.034
Mercury	0.05	0.12	0.24	0.0000000525	0.0000132	0.000492	0.000505	0.0789	0.032	0.16	2.5	0.49
Molybdenum	0.05	0.475	0.225	0.0000000525	0.0000523	0.000461	0.000514	0.0802	0.26	2.6	0.31	0.031
Selenium	0.2	0.45	0.2	0.000000210	0.0000495	0.000410	0.000460	0.0718	0.20	0.33	0.36	0.22
Thallium	0.003	0.0885	0.019	0.00000000315	0.00000974	0.0000390	0.0000487	0.00761	0.074	0.74	0.10	0.010
Vanadium	0.31	4.98	0.2	0.000000326	0.000547	0.000410	0.000958	0.150	0.21	2.1	0.71	0.071
Zinc	6.08	465	235	0.00000638	0.0511	0.482	0.533	83.3	160	320	0.52	0.26

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0100); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-130. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT3-1000 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
													NOAEL (mg/kg-day)
Aluminum	177	358	12.5	0.000186	0.0394	0.0256	0.0652	10.2	1.9	19	5.4	0.54	
Antimony	0.02	0.365	0.003	0.000000210	0.0000402	0.00000615	0.0000463	0.00724	0.66	--	0.011	--	
Arsenic (arsenate)	1.3	0.75	0.06	0.00000137	0.0000825	0.000123	0.000207	0.0323	0.40	1.6	0.081	0.020	
Arsenic (arsenite)	1.3	0.75	0.06	0.00000137	0.0000825	0.000123	0.000207	0.0323	0.13	1.3	0.25	0.025	
Barium	73.6	131	6.82	0.0000773	0.0144	0.0140	0.0285	4.45	5.1	20	0.87	0.22	
Cadmium	0.06	0.549	1.05	0.000000630	0.0000604	0.00215	0.00221	0.346	1.0	10	0.35	0.035	
Chromium	5.24	1.54	0.3	0.00000550	0.000169	0.000615	0.000790	0.123	3.3	69	0.037	0.0018	
Cobalt	0.48	0.615	0.031	0.000000504	0.0000677	0.0000636	0.000132	0.0206	0.50	2.0	0.041	0.010	
Lead	0.67	16.1	0.45	0.000000704	0.00177	0.000923	0.00269	0.420	11	90	0.038	0.0047	
Mercury	0.05	0.145	0.07	0.0000000525	0.0000160	0.000144	0.000160	0.0249	0.032	0.16	0.78	0.16	
Molybdenum	0.08	0.793	0.447	0.0000000840	0.0000872	0.000916	0.00100	0.157	0.26	2.6	0.60	0.060	
Selenium	0.2	0.4	0.2	0.000000210	0.0000440	0.000410	0.000454	0.0710	0.20	0.33	0.35	0.22	
Thallium	0.005	0.049	0.004	0.0000000525	0.00000539	0.00000820	0.0000136	0.00212	0.074	0.74	0.029	0.0029	
Vanadium	0.64	1.45	0.2	0.000000672	0.000160	0.000410	0.000570	0.0891	0.21	2.1	0.42	0.042	
Zinc	11	78.4	171	0.0000116	0.00862	0.351	0.359	56.1	160	320	0.35	0.18	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-1000); PHASE1RA soil (TT3-1000); PHASE2RA soil; and PHASE2RA invertebrates.

Mean of PHASE1RA and PHASE2RA tundra soil used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-131. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT6-0010 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL	LOAEL
											Hazard Quotient	Hazard Quotient
Aluminum	208	2,660	58	0.000218	0.293	0.119	0.412	64.3	1.9	19	34	3.4
Antimony	0.063	1.92	0.017	0.000000662	0.000211	0.0000349	0.000246	0.0385	0.66	--	0.058	--
Arsenic (arsenate)	0.482	9.1	0.12	0.000000506	0.00100	0.000246	0.00125	0.195	0.40	1.6	0.49	0.12
Arsenic (arsenite)	0.482	9.1	0.12	0.000000506	0.00100	0.000246	0.00125	0.195	0.13	1.3	1.5	0.15
Barium	140	6,950	52.5	0.000147	0.765	0.108	0.872	136	5.1	20	27	6.8
Cadmium	0.0365	5.47	5.98	0.000000383	0.000602	0.0123	0.0129	2.01	1.0	10	2.0	0.20
Chromium	0.396	9.69	0.3	0.000000416	0.00107	0.000615	0.00168	0.263	3.3	69	0.080	0.0038
Cobalt	0.015	9.11	0.07	0.0000000158	0.00100	0.000144	0.00115	0.179	0.50	2.0	0.36	0.090
Lead	0.65	349	2.07	0.000000683	0.0384	0.00424	0.0426	6.66	11	90	0.61	0.074
Mercury	0.0179	0.25	0.07	0.0000000188	0.0000275	0.000144	0.000171	0.0267	0.032	0.16	0.84	0.17
Molybdenum	0.22	1.95	0.229	0.000000231	0.000215	0.000469	0.000684	0.107	0.26	2.6	0.41	0.041
Selenium	0.355	1.5	0.2	0.000000373	0.000165	0.000410	0.000575	0.0899	0.20	0.33	0.45	0.27
Thallium	0.09	1.29	0.015	0.0000000945	0.000142	0.0000308	0.000173	0.0270	0.074	0.74	0.36	0.036
Vanadium	0.335	19.7	0.2	0.000000352	0.00217	0.000410	0.00258	0.403	0.21	2.1	1.9	0.19
Zinc	1.79	1,020	249	0.00000188	0.112	0.510	0.623	97.3	160	320	0.61	0.30

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); TT3-0010 soil for Al & Cr; PHASE2RA soil; and PHASE2RA invertebrates.

No pond water data collected near mine, so Anxiety Ridge Creek downstream data used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-131a. Tundra shrew EPC calculation for mean CoPC concentrations at TT6-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
										TT6-0010 site mean	0.65 <i>J</i>
Tundra Soil											
PHASE2RA	TT6_0010	6/25/2004	TS-0035	0	0	NA	NA	NA	mg/kg dry		349
										TT6-0010 site mean	349
Soil Invertebrates											
PHASE2RA	TT6-0010	7/4/2004	SI0017	0	0	NA	NA	NA	mg/kg dry		2.07 <i>J</i>
										TT6-0010 site mean	2.07 <i>J</i>

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-132. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT6-0100 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	1,510	78.3	0.000218	0.166	0.161	0.327	51.1	1.9	19	27	2.7
Antimony	0.063	2.03	0.027	0.000000662	0.000223	0.0000554	0.000279	0.0435	0.66	--	0.066	--
Arsenic (arsenate)	0.482	4.9	0.13	0.000000506	0.000539	0.000267	0.000806	0.126	0.40	1.6	0.31	0.079
Arsenic (arsenite)	0.482	4.9	0.13	0.000000506	0.000539	0.000267	0.000806	0.126	0.13	1.3	0.97	0.097
Barium	140	6,360	108	0.000147	0.700	0.221	0.921	144	5.1	20	28	7.2
Cadmium	0.0365	5.06	13	0.000000383	0.000557	0.0267	0.0272	4.25	1.0	10	4.3	0.43
Chromium	0.396	3.93	0.3	0.000000416	0.000432	0.000615	0.00105	0.164	3.3	69	0.050	0.0024
Cobalt	0.015	3.3	0.087	0.000000158	0.000363	0.000178	0.000541	0.0846	0.50	2.0	0.17	0.042
Lead	0.65	281	10.1	0.000000683	0.0309	0.0207	0.0516	8.06	11	90	0.73	0.090
Mercury	0.0179	0.27	0.12	0.000000188	0.0000297	0.000246	0.000276	0.0431	0.032	0.16	1.3	0.27
Molybdenum	0.22	2.47	0.335	0.000000231	0.000272	0.000687	0.000959	0.150	0.26	2.6	0.58	0.058
Selenium	0.355	0.9	0.2	0.000000373	0.0000990	0.000410	0.000509	0.0796	0.20	0.33	0.40	0.24
Thallium	0.09	0.755	0.02	0.0000000945	0.0000831	0.0000410	0.000124	0.0194	0.074	0.74	0.26	0.026
Vanadium	0.335	7.51	0.2	0.000000352	0.000826	0.000410	0.00124	0.193	0.21	2.1	0.92	0.092
Zinc	1.79	764	310	0.00000188	0.0840	0.636	0.720	112	160	320	0.70	0.35

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); TT3-0100 soil for Al & Cr; PHASE2RA soil; and PHASE2RA invertebrates.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-133. Food-web model exposure results for tundra shrew exposed to CoPC concentrations at TT6-1000 site

Analyte	Concentration			Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Soil Inverts. (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	358	15.6	0.000218	0.0394	0.0320	0.0716	11.2	1.9	19	5.9	0.59
Antimony	0.063	1.22	0.016	0.000000662	0.000134	0.0000328	0.000167	0.0261	0.66	--	0.040	--
Arsenic (arsenate)	0.482	2.9	0.06	0.000000506	0.000319	0.000123	0.000443	0.0691	0.40	1.6	0.17	0.043
Arsenic (arsenite)	0.482	2.9	0.06	0.000000506	0.000319	0.000123	0.000443	0.0691	0.13	1.3	0.53	0.053
Barium	140	1290	12.7	0.000147	0.142	0.0260	0.168	26.3	5.1	20	5.1	1.3
Cadmium	0.0365	6.11	5.8	0.000000383	0.000672	0.0119	0.0126	1.96	1.0	10	2.0	0.20
Chromium	0.396	1.54	0.3	0.000000416	0.000169	0.000615	0.000785	0.123	3.3	69	0.037	0.0018
Cobalt	0.015	1.87	0.024	0.000000158	0.000206	0.0000492	0.000255	0.0398	0.50	2.0	0.080	0.020
Lead	0.65	145	1.31	0.000000683	0.0160	0.00269	0.0186	2.91	11	90	0.26	0.032
Mercury	0.0179	0.22	0.05	0.000000188	0.0000242	0.000103	0.000127	0.0198	0.032	0.16	0.62	0.12
Molybdenum	0.22	2.09	0.827	0.000000231	0.000230	0.00170	0.00193	0.301	0.26	2.6	1.2	0.12
Selenium	0.355	1.6	0.2	0.000000373	0.000176	0.000410	0.000586	0.0916	0.20	0.33	0.46	0.28
Thallium	0.09	0.38	0.014	0.0000000945	0.0000418	0.0000287	0.0000706	0.0110	0.074	0.74	0.15	0.015
Vanadium	0.335	16	0.2	0.000000352	0.00176	0.000410	0.00217	0.339	0.21	2.1	1.6	0.16
Zinc	1.79	592	224	0.00000188	0.0651	0.459	0.524	81.9	160	320	0.51	0.26

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); TT3-1000 soil for Al & Cr; PHASE2RA soil; and PHASE2RA invertebrates.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-134. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TS-REF-5 site

Analyte	Concentration					Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
	Aluminum	91.2	11,300	8.25	109	713	0.000576	2.30			0.412	2.72	57.8	1.9
Antimony	0.1	0.22	0.0285	0.0575	0.15	0.00000632	0.0000449	0.000306	0.000352	0.00748	0.66	--	0.011	--
Arsenic (arsenate)	0.9	3.5	0.03	0.165	0.3	0.00000569	0.000714	0.000427	0.00115	0.0244	0.40	1.6	0.061	0.015
Arsenic (arsenite)	0.9	3.5	0.03	0.165	0.3	0.00000569	0.000714	0.000427	0.00115	0.0244	0.13	1.3	0.19	0.019
Barium	48.4	383	30.2	36	119	0.000306	0.0780	0.296	0.375	7.97	5.1	20	1.6	0.40
Cadmium	0.06	0.293	0.053	0.213	0.34	0.00000379	0.0000597	0.000640	0.000700	0.0149	1.0	10	0.015	0.0015
Chromium	0.72	19.7	0.4	0.2	2.96	0.00000455	0.00402	0.00440	0.00842	0.179	3.3	69	0.054	0.0026
Cobalt	0.19	15.3	0.045	0.12	0.758	0.00000120	0.00312	0.000717	0.00383	0.0816	0.50	2.0	0.16	0.041
Lead	0.5	13.4	0.49	6.71	7.71	0.00000316	0.00274	0.00987	0.0126	0.268	11	90	0.024	0.0030
Mercury	0.05	0.105	0.0315	0.0445	0.067	0.000000316	0.0000214	0.000288	0.000310	0.00660	0.032	0.16	0.21	0.041
Molybdenum	0.22	0.805	0.486	0.163	0.14	0.00000139	0.000164	0.00384	0.00401	0.0853	0.26	2.6	0.33	0.033
Selenium	0.2	0.55	0.05	0.125	0.1	0.00000126	0.000112	0.000478	0.000591	0.0126	0.20	0.33	0.063	0.038
Thallium	0.04	0.0575	0.0025	0.0165	0.02	0.000000253	0.0000117	0.0000346	0.0000466	0.000992	0.074	0.74	0.013	0.0013
Vanadium	2.41	12.7	0.25	0.35	1.73	0.0000152	0.00259	0.00280	0.00540	0.115	0.21	2.1	0.55	0.055
Zinc	2.87	57.4	33.3	46.9	64	0.0000181	0.0117	0.301	0.313	6.66	160	320	0.042	0.021

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-3); PHASE1RA soil (TS-REF-5); PHASE2RA soil; PHASE1RA moss (TS-REF-8); PHASE2RA lichen; and PHASE2RA sedge blades.

Tundra soil average for PHASE1RA and PHASE2RA used (TS-REF-5). Sedge and lichen samples averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-135. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TS-REF-7 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient		
	Water (µg/L)	Soil/ Sediment (mg/kg dw)		Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	14.5	468	6.8	49.4	174	0.0000916	0.0954	0.147	0.242	5.16	1.9	19	2.7	0.27	
Antimony	0.02	0.18	0.02	0.035	0.09	0.000000126	0.0000367	0.000206	0.000243	0.00517	0.66	--	0.0078	--	
Arsenic (arsenate)	0.5	0.35	0.03	0.095	0.2	0.00000316	0.0000714	0.000355	0.000429	0.00913	0.40	1.6	0.023	0.0057	
Arsenic (arsenite)	0.5	0.35	0.03	0.095	0.2	0.00000316	0.0000714	0.000355	0.000429	0.00913	0.13	1.3	0.070	0.0070	
Barium	133	195	28.3	28.3	103	0.000840	0.0398	0.272	0.313	6.66	5.1	20	1.3	0.33	
Cadmium	0.005	0.273	0.032	0.12	0.38	0.000000316	0.0000557	0.000457	0.000513	0.0109	1.0	10	0.011	0.0011	
Chromium	0.18	1.57	0.4	0.2	1.37	0.00000114	0.000320	0.00373	0.00405	0.0861	3.3	69	0.026	0.0012	
Cobalt	0.21	6.02	0.06	0.23	2.03	0.00000133	0.00123	0.00142	0.00265	0.0563	0.50	2.0	0.11	0.028	
Lead	0.06	6.88	0.28	2.86	9.64	0.000000379	0.00140	0.00745	0.00886	0.188	11	90	0.017	0.0021	
Mercury	0.05	0.09	0.029	0.0585	0.047	0.000000316	0.0000184	0.000267	0.000285	0.00607	0.032	0.16	0.19	0.038	
Molybdenum	0.02	2.01	0.651	0.5	0.3	0.000000126	0.000409	0.00532	0.00573	0.122	0.26	2.6	0.47	0.047	
Selenium	0.5	0.25	0.05	0.125	0.1	0.00000316	0.0000510	0.000478	0.000532	0.0113	0.20	0.33	0.057	0.034	
Thallium	0.003	0.027	0.001	0.007	0.04	0.0000000190	0.00000551	0.0000276	0.0000331	0.000705	0.074	0.74	0.0095	0.00095	
Vanadium	0.17	1.1	0.3	0.3	0.61	0.00000107	0.000224	0.00268	0.00291	0.0618	0.21	2.1	0.29	0.029	
Zinc	0.59	50.4	37.9	33.1	47.9	0.00000373	0.0103	0.324	0.335	7.12	160	320	0.044	0.022	

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-2); PHASE1RA soil (TS-REF-7); PHASE2RA soil; PHASE1RA moss (TS-REF-7); PHASE2RA lichen; and PHASE2RA sedge blades.

Tundra soil average for PHASE1RA and PHASE2RA used (TS-REF-7). Sedge and lichen samples averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-136. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TS-REF-11 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL	LOAEL
													Hazard Quotient	Hazard Quotient
Aluminum	170	368	6.8	40.5	175	0.00107	0.0751	0.144	0.220	4.67	1.9	19	2.5	0.25
Antimony	0.05	0.3	0.02	0.04	0.07	0.00000316	0.0000612	0.000200	0.000261	0.00556	0.66	--	0.0084	--
Arsenic (arsenate)	0.5	3.2	0.05	0.07	0.2	0.00000316	0.000653	0.000497	0.00115	0.0245	0.40	1.6	0.061	0.015
Arsenic (arsenite)	0.5	3.2	0.05	0.07	0.2	0.00000316	0.000653	0.000497	0.00115	0.0245	0.13	1.3	0.19	0.019
Barium	93.5	293	16.7	14.9	51.2	0.000591	0.0598	0.156	0.216	4.60	5.1	20	0.90	0.23
Cadmium	0.05	0.414	0.025	0.094	0.26	0.00000316	0.0000844	0.000342	0.000426	0.00907	1.0	10	0.0091	0.00091
Chromium	1.98	1.77	0.3	0.2	1.29	0.0000125	0.000361	0.00293	0.00330	0.0702	3.3	69	0.021	0.0010
Cobalt	0.7	7.81	0.08	0.075	0.288	0.00000442	0.00159	0.000766	0.00236	0.0503	0.50	2.0	0.10	0.025
Lead	0.56	12.7	0.39	1.77	6.64	0.00000354	0.00259	0.00656	0.00915	0.195	11	90	0.018	0.0022
Mercury	0.05	0.12	0.036	0.0405	0.058	0.000000316	0.0000245	0.000317	0.000342	0.00728	0.032	0.16	0.23	0.045
Molybdenum	0.05	0.348	0.236	0.00925	0.25	0.000000316	0.0000710	0.00192	0.00199	0.0423	0.26	2.6	0.16	0.016
Selenium	0.3	0.5	0.3	0.075	0.1	0.00000190	0.000102	0.00237	0.00247	0.0526	0.20	0.33	0.26	0.16
Thallium	0.003	0.105	0.001	0.0125	0.019	0.0000000190	0.0000214	0.0000210	0.0000425	0.000904	0.074	0.74	0.012	0.0012
Vanadium	0.89	11	0.3	0.3	0.67	0.00000562	0.00224	0.00271	0.00496	0.105	0.21	2.1	0.50	0.050
Zinc	5.01	56.4	25.6	24.6	55	0.0000316	0.0115	0.230	0.241	5.13	160	320	0.032	0.016

Note: The following data were used to develop this scenario: PHASE1RA water (TP-REF-5); PHASE1RA soil (TS-REF-10) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TS-REF-10); PHASE2RA lichen; and PHASE2RA sedge blades.
 Sedge and lichen samples averaged at station.
 Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-136a. Tundra vole EPC calculation for mean CoPC concentrations at TS-REF-11 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP-REF-5	7/20/2003	SW0033	0	0	NA	NA	NA	µg/L unfiltered		0.56
										TS-REF-11 site mean	0.56
Tundra Soil											
PHASE2RA	TS-REF11	6/25/2004	TS-0034	0	0	NA	NA	NA	mg/kg dry		12.7
										TS-REF-11 site mean	12.7
Herbaceous Plant											
PHASE2RA	TS-REF11	6/25/2004	SE0041	0	0	<i>Carex</i>	<i>bigelowii</i>	Blades	mg/kg dry		0.39
										TS-REF-11 site mean	0.4
Lichen											
PHASE2RA	TS-REF11	6/25/2004	LI0032	0	0	<i>Cladina</i>	<i>sp.</i>	Whole Plant	mg/kg dry		1.96
PHASE2RA	TS-REF11	6/25/2004	LI0033	0	0	<i>Peltigera</i>	<i>sp.</i>	Whole Plant	mg/kg dry		1.58
										TS-REF-11 site mean	1.77
Moss											
PHASE1RA	TS-REF10	7/20/2003	MS0009	0	0	NA	NA	NA	µg/g dry		6.64
										TS-REF-11 site mean	6.64

Note: CoPC - chemical of potential concern
EPC - exposure point concentration

Table K-137. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT5-0010 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	11.4	6,940	93.8	967	4460	0.0000720	1.42	3.02	4.44	94.4	1.9	19	50	5.0
Antimony	0.2	2.75	0.22	1.18	4.58	0.00000126	0.000561	0.00413	0.00469	0.0998	0.66	--	0.15	--
Arsenic (arsenate)	0.6	8	0.13	1.34	4.7	0.00000379	0.00163	0.00356	0.00520	0.111	0.40	1.6	0.28	0.069
Arsenic (arsenite)	0.6	8	0.13	1.34	4.7	0.00000379	0.00163	0.00356	0.00520	0.111	0.13	1.3	0.85	0.085
Barium	70.3	1,200	85.8	460	885	0.000444	0.245	1.23	1.47	31.3	5.1	20	6.1	1.6
Cadmium	0.27	20.6	0.567	4.43	37.2	0.00000171	0.00420	0.0220	0.0262	0.558	1.0	10	0.56	0.056
Chromium	0.44	17.9	0.65	3.8	16.3	0.00000278	0.00365	0.0135	0.0172	0.365	3.3	69	0.11	0.0053
Cobalt	0.88	18.6	0.159	1.28	9.35	0.00000556	0.00379	0.00573	0.00953	0.203	0.50	2.0	0.41	0.10
Lead	1.63	1,210	10.8	161	1720	0.0000103	0.247	0.882	1.13	24.0	11	90	2.2	0.27
Mercury	0.05	1.75	0.05	0.143	1.04	0.000000316	0.000357	0.000885	0.00124	0.0264	0.032	0.16	0.83	0.17
Molybdenum	0.09	0.89	0.239	0.356	0.88	0.000000569	0.000182	0.00235	0.00254	0.0539	0.26	2.6	0.21	0.021
Selenium	0.2	1.5	0.1	0.3	0.7	0.00000126	0.000306	0.00119	0.00150	0.0318	0.20	0.33	0.16	0.097
Thallium	0.01	0.455	0.01	0.072	0.601	0.0000000632	0.0000928	0.000362	0.000455	0.00969	0.074	0.74	0.13	0.013
Vanadium	0.24	11.6	0.2	2.8	8.08	0.00000152	0.00237	0.00615	0.00852	0.181	0.21	2.1	0.86	0.086
Zinc	99	4,330	209	594	8120	0.000625	0.883	5.30	6.18	132	160	320	0.82	0.41

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT1-0010) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT1-0100); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-138a. Tundra vole EPC calculation for mean CoPC concentrations at TT5-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP1-0100	7/22/2003	SW0039	0	0	NA	NA	NA	µg/L unfiltered		1.63
										TT5-0010 site mean	1.63
Tundra Soil											
PHASE2RA	TT5_0010	6/12/2004	TS-0003	0	0	NA	NA	NA	mg/kg dry		1,210
										TT5-0010 site mean	1,210
Herbaceous Plant											
PHASE2RA	TT5-0010	6/12/2004	SE0001	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		10.8
										TT5-0010 site mean	10.8
Lichen											
PHASE2RA	TT5-0010	7/1/2004	LI0038	0	0	<i>Peltigera</i>	<i>sp.</i>	Whole Plant	mg/kg dry		161
										TT5-0010 site mean	161
Moss											
PHASE1RA	TT1-0100	7/17/2003	MS0005	0	0	NA	NA	NA	µg/g dry		1,720
										TT5-0010 site mean	1,720

Note: CoPC - chemical of potential concern
EPC - exposure point concentration

Table K-138. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT5-0100 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Normalized Exposure (mg/kg-day)												
Aluminum	11.4	1,820	26.1	566	4460	0.0000720	0.371	2.34	2.71	57.6	1.9	19	30	3.0
Antimony	0.2	2.46	0.17	2.48	4.58	0.00000126	0.000502	0.00430	0.00480	0.102	0.66	--	0.15	--
Arsenic (arsenate)	0.6	5.3	0.04	1.1	4.7	0.00000379	0.00108	0.00277	0.00386	0.0820	0.40	1.6	0.21	0.051
Arsenic (arsenite)	0.6	5.3	0.04	1.1	4.7	0.00000379	0.00108	0.00277	0.00386	0.0820	0.13	1.3	0.63	0.063
Barium	70.3	1,200	39.7	350	885	0.000444	0.245	0.828	1.07	22.8	5.1	20	4.5	1.1
Cadmium	0.27	24	0.104	4	37.2	0.00000171	0.00489	0.0183	0.0232	0.494	1.0	10	0.49	0.049
Chromium	0.44	5.15	0.3	2.1	16.3	0.00000278	0.00105	0.0101	0.0112	0.238	3.3	69	0.072	0.0034
Cobalt	0.88	8.18	0.046	0.94	9.35	0.00000556	0.00167	0.00472	0.00640	0.136	0.50	2.0	0.27	0.068
Lead	1.63	1,060	2.33	179	1720	0.0000103	0.216	0.825	1.04	22.1	11	90	2.0	0.25
Mercury	0.05	0.25	0.03	0.09	1.04	0.000000316	0.0000510	0.000710	0.000761	0.0162	0.032	0.16	0.51	0.10
Molybdenum	0.09	0.84	0.172	0.304	0.88	0.000000569	0.000171	0.00182	0.00199	0.0423	0.26	2.6	0.16	0.016
Selenium	0.2	1.9	0.1	0.4	0.7	0.00000126	0.000388	0.00123	0.00162	0.0345	0.20	0.33	0.17	0.10
Thallium	0.01	0.368	0.001	0.044	0.601	0.0000000632	0.0000751	0.000282	0.000357	0.00759	0.074	0.74	0.10	0.010
Vanadium	0.24	8.25	0.2	1.4	8.08	0.00000152	0.00168	0.00556	0.00724	0.154	0.21	2.1	0.73	0.073
Zinc	99	5,120	67.7	572	8120	0.000625	1.04	4.21	5.26	112	160	320	0.70	0.35

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT1-0100) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT1-0100); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-139. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT5-1000 site

Analyte	Concentration					Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
Aluminum	143	548	8.4	354	393	0.000903	0.112	0.382	0.494	10.5	1.9	19	5.5	0.55	
Antimony	0.09	0.83	0.12	0.61	0.91	0.00000569	0.000169	0.00156	0.00173	0.0369	0.66	--	0.056	--	
Arsenic (arsenate)	0.4	1.8	0.04	0.68	0.5	0.00000253	0.000367	0.000807	0.00118	0.0250	0.40	1.6	0.063	0.016	
Arsenic (arsenite)	0.4	1.8	0.04	0.68	0.5	0.00000253	0.000367	0.000807	0.00118	0.0250	0.13	1.3	0.19	0.019	
Barium	39.4	15.3	24.5	94.6	115	0.000249	0.00312	0.276	0.279	5.95	5.1	20	1.2	0.30	
Cadmium	0.06	4.08	0.083	2.99	4.52	0.00000379	0.000832	0.00383	0.00466	0.0991	1.0	10	0.099	0.0099	
Chromium	1.56	1.85	0.25	0.6	3.14	0.00000985	0.000377	0.00350	0.00389	0.0827	3.3	69	0.025	0.0012	
Cobalt	1.56	6.82	0.039	0.585	0.933	0.00000985	0.00139	0.000943	0.00234	0.0499	0.50	2.0	0.10	0.025	
Lead	1.06	8.62	1.84	99	172	0.00000670	0.00176	0.129	0.131	2.79	11	90	0.25	0.031	
Mercury	0.05	0.33	0.04	0.12	0.14	0.00000316	0.0000673	0.000416	0.000484	0.0103	0.032	0.16	0.32	0.064	
Molybdenum	0.02	1.16	0.441	0.583	0.23	0.000000126	0.000237	0.00371	0.00395	0.0841	0.26	2.6	0.32	0.032	
Selenium	0.2	0.9	0.1	0.3	0.1	0.00000126	0.000184	0.000935	0.00112	0.0238	0.20	0.33	0.12	0.072	
Thallium	0.003	0.072	0.003	0.048	0.108	0.000000190	0.0000147	0.0000892	0.000104	0.00221	0.074	0.74	0.030	0.0030	
Vanadium	0.28	4.64	0.25	0.8	0.98	0.00000177	0.000946	0.00267	0.00362	0.0769	0.21	2.1	0.37	0.037	
Zinc	30.6	38.9	69.5	531	869	0.000193	0.00793	1.13	1.13	24.1	160	320	0.15	0.075	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA soil (TT1-1000) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT1-1000); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-140. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT5-2000 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL	LOAEL
													Hazard Quotient	Hazard Quotient
Aluminum	143	548	2.5	190	393	0.000903	0.112	0.267	0.380	8.07	1.9	19	4.2	0.42
Antimony	0.09	0.56	0.04	0.3	0.91	0.00000569	0.000114	0.000820	0.000935	0.0199	0.66	--	0.030	--
Arsenic (arsenate)	0.4	0.5	0.04	0.3	0.5	0.00000253	0.000102	0.000646	0.000750	0.0160	0.40	1.6	0.040	0.010
Arsenic (arsenite)	0.4	0.5	0.04	0.3	0.5	0.00000253	0.000102	0.000646	0.000750	0.0160	0.13	1.3	0.12	0.012
Barium	39.4	96	18.6	31	115	0.000249	0.0196	0.204	0.224	4.77	5.1	20	0.93	0.24
Cadmium	0.06	1.31	0.036	1.51	4.52	0.000000379	0.000267	0.00284	0.00311	0.0661	1.0	10	0.066	0.0066
Chromium	1.56	1.85	0.2	0.4	3.14	0.00000985	0.000377	0.00303	0.00342	0.0728	3.3	69	0.022	0.0011
Cobalt	1.56	1.97	0.016	0.268	0.933	0.00000985	0.000402	0.000633	0.00104	0.0222	0.50	2.0	0.044	0.011
Lead	1.06	54.1	0.33	52.6	172	0.00000670	0.0110	0.0980	0.109	2.32	11	90	0.21	0.026
Mercury	0.05	0.27	0.04	0.05	0.14	0.000000316	0.0000551	0.000387	0.000442	0.00941	0.032	0.16	0.29	0.059
Molybdenum	0.02	0.8	0.618	0.075	0.23	0.000000126	0.000163	0.00486	0.00502	0.107	0.26	2.6	0.41	0.041
Selenium	0.2	0.5	0.1	0.2	0.1	0.00000126	0.000102	0.000892	0.000996	0.0212	0.20	0.33	0.11	0.064
Thallium	0.003	0.036	0.009	0.024	0.108	0.0000000190	0.00000734	0.000125	0.000132	0.00281	0.074	0.74	0.038	0.0038
Vanadium	0.28	0.98	0.3	0.3	0.98	0.00000177	0.000200	0.00284	0.00304	0.0647	0.21	2.1	0.31	0.031
Zinc	30.6	286	72.8	278	869	0.000193	0.0583	1.04	1.10	23.5	160	320	0.15	0.073

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA soil (TT1-1000) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT1-1000); PHASE2RA lichen; and PHASE2RA sedge blades.
Peltigera and Cladina lichens averaged, sedge species averaged at station.
Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-141. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT2-0010 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL	LOAEL
													Hazard Quotient	Hazard Quotient
Aluminum	11.4	6,000	69.2	2200	6630	0.0000720	1.22	4.28	5.50	117	1.9	19	62	6.2
Antimony	0.2	2.2	0.19	1.3	1.37	0.00000126	0.000448	0.00259	0.00304	0.0646	0.66	--	0.098	--
Arsenic (arsenate)	0.6	6.45	0.08	1.86	6	0.00000379	0.00132	0.00395	0.00527	0.112	0.40	1.6	0.28	0.070
Arsenic (arsenite)	0.6	6.45	0.08	1.86	6	0.00000379	0.00132	0.00395	0.00527	0.112	0.13	1.3	0.86	0.086
Barium	70.3	2,070	85	850	1890	0.000444	0.421	1.81	2.24	47.6	5.1	20	9.3	2.4
Cadmium	0.27	16.4	0.256	4.6	15	0.00000171	0.00333	0.0103	0.0136	0.290	1.0	10	0.29	0.029
Chromium	0.44	9.9	0.7	12.7	25	0.00000278	0.00202	0.0214	0.0234	0.498	3.3	69	0.15	0.0072
Cobalt	0.88	9.75	0.133	2.47	7.69	0.00000556	0.00199	0.00533	0.00733	0.156	0.50	2.0	0.31	0.078
Lead	1.63	759	5.63	170	506	0.0000103	0.155	0.330	0.485	10.3	11	90	0.94	0.11
Mercury	0.05	0.455	0.05	0.14	0.455	0.000000316	0.0000928	0.000635	0.000728	0.0155	0.032	0.16	0.48	0.097
Molybdenum	0.09	0.77	0.322	0.423	1	0.000000569	0.000157	0.00307	0.00322	0.0686	0.26	2.6	0.26	0.026
Selenium	0.2	1.25	0.1	0.5	0.6	0.00000126	0.000255	0.00123	0.00149	0.0317	0.20	0.33	0.16	0.096
Thallium	0.01	0.366	0.007	0.11	0.333	0.000000632	0.0000746	0.000242	0.000316	0.00673	0.074	0.74	0.091	0.0091
Vanadium	0.24	12	0.2	5.9	12	0.00000152	0.00245	0.00914	0.0116	0.246	0.21	2.1	1.2	0.12
Zinc	99	3,460	89.4	780	2910	0.000625	0.706	2.25	2.96	62.9	160	320	0.39	0.20

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT2-0010); PHASE2RA soil; PHASE1RA moss; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-142. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT2-0100 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient		
	Water (µg/L)	Soil/ Sediment (mg/kg dw)		Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Water	Sediment												
Aluminum	11.4	3,060	17.4	579	2970	0.0000720	0.624	1.64	2.27	48.2	1.9	19	25	2.5	
Antimony	0.2	2.04	0.21	0.56	1.23	0.0000126	0.000415	0.00237	0.00278	0.0592	0.66	--	0.090	--	
Arsenic (arsenate)	0.6	3.95	0.04	0.81	2.4	0.00000379	0.000806	0.00167	0.00248	0.0527	0.40	1.6	0.13	0.033	
Arsenic (arsenite)	0.6	3.95	0.04	0.81	2.4	0.00000379	0.000806	0.00167	0.00248	0.0527	0.13	1.3	0.41	0.041	
Barium	70.3	890	30.7	309	773	0.000444	0.181	0.695	0.876	18.6	5.1	20	3.7	0.93	
Cadmium	0.27	9.89	0.05	1.78	6.16	0.00000171	0.00202	0.00376	0.00577	0.123	1.0	10	0.12	0.012	
Chromium	0.44	6.02	0.4	2	11.3	0.00000278	0.00123	0.00871	0.00994	0.212	3.3	69	0.064	0.0031	
Cobalt	0.88	6.88	0.028	0.844	3.54	0.00000556	0.00140	0.00208	0.00348	0.0741	0.50	2.0	0.15	0.037	
Lead	1.63	414	1.01	57.1	326	0.0000103	0.0843	0.171	0.255	5.42	11	90	0.49	0.060	
Mercury	0.05	0.37	0.03	0.08	0.215	0.000000316	0.0000755	0.000355	0.000431	0.00916	0.032	0.16	0.29	0.057	
Molybdenum	0.09	0.79	0.345	0.25	0.69	0.000000569	0.000161	0.00304	0.00320	0.0681	0.26	2.6	0.26	0.026	
Selenium	0.2	1.1	0.1	0.2	0.3	0.00000126	0.000224	0.000977	0.00120	0.0256	0.20	0.33	0.13	0.078	
Thallium	0.01	0.19	0.001	0.03	0.153	0.000000632	0.0000388	0.0000854	0.000124	0.00264	0.074	0.74	0.036	0.0036	
Vanadium	0.24	7.31	0.2	1.3	5.18	0.00000152	0.00149	0.00428	0.00578	0.123	0.21	2.1	0.59	0.059	
Zinc	99	1,970	78.4	292	1340	0.000625	0.402	1.29	1.70	36.1	160	320	0.23	0.11	

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-0100); PHASE1RA soil (TT2-0100); PHASE2RA soil; PHASE1RA moss; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-143. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT2-1000 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	143	405	7	166	511	0.000903	0.0826	0.341	0.425	9.04	1.9	19	4.8	0.48
Antimony	0.09	0.28	0.13	0.25	0.29	0.00000569	0.0000571	0.00122	0.00128	0.0273	0.66	--	0.041	--
Arsenic (arsenate)	0.4	0.95	0.12	0.29	0.5	0.00000253	0.000194	0.00125	0.00145	0.0308	0.40	1.6	0.077	0.019
Arsenic (arsenite)	0.4	0.95	0.12	0.29	0.5	0.00000253	0.000194	0.00125	0.00145	0.0308	0.13	1.3	0.24	0.024
Barium	39.4	146	20	38.5	84.6	0.000249	0.0297	0.205	0.235	5.00	5.1	20	0.98	0.25
Cadmium	0.06	0.915	0.021	0.573	1.1	0.000000379	0.000187	0.000871	0.00106	0.0225	1.0	10	0.023	0.0023
Chromium	1.56	1.03	0.2	0.5	3.04	0.0000985	0.000210	0.00303	0.00325	0.0692	3.3	69	0.021	0.0010
Cobalt	1.56	5.99	0.033	0.249	0.598	0.0000985	0.00122	0.000612	0.00184	0.0392	0.50	2.0	0.078	0.020
Lead	1.06	23.8	0.16	18.6	41.7	0.00000670	0.00484	0.0268	0.0317	0.674	11	90	0.061	0.0075
Mercury	0.05	0.23	0.03	0.07	0.098	0.000000316	0.0000469	0.000301	0.000348	0.00741	0.032	0.16	0.23	0.046
Molybdenum	0.02	0.855	0.379	0.244	0.26	0.000000126	0.000174	0.00311	0.00329	0.0699	0.26	2.6	0.27	0.027
Selenium	0.2	0.5	0.1	0.1	0.1	0.00000126	0.000102	0.000850	0.000953	0.0203	0.20	0.33	0.10	0.061
Thallium	0.003	0.0375	0.001	0.012	0.034	0.0000000190	0.00000765	0.0000272	0.0000349	0.000742	0.074	0.74	0.010	0.0010
Vanadium	0.28	2.23	0.2	0.2	1.14	0.00000177	0.000455	0.00210	0.00256	0.0544	0.21	2.1	0.26	0.026
Zinc	30.6	327	52.5	137	251	0.000193	0.0667	0.566	0.633	13.5	160	320	0.084	0.042

Note: The following data were used to develop this scenario: PHASE1RA water (TP1-1000); PHASE1RA soil (TT2-1000); PHASE2RA soil; PHASE1RA moss; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-144. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT8-0010 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient		
	Water (µg/L)	Soil/ Sediment		Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)	(mg/kg dw)												
Aluminum	75	2,660	104	2430	3210	0.000474	0.543	3.19	3.73	79.5	1.9	19	42	4.2	
Antimony	0.03	1.07	0.16	0.99	0.99	0.00000190	0.000218	0.00207	0.00228	0.0486	0.66	--	0.074	--	
Arsenic (arsenate)	0.5	4.1	0.11	1.74	2.7	0.00000316	0.000836	0.00273	0.00357	0.0759	0.40	1.6	0.19	0.047	
Arsenic (arsenite)	0.5	4.1	0.11	1.74	2.7	0.00000316	0.000836	0.00273	0.00357	0.0759	0.13	1.3	0.58	0.058	
Barium	46.8	1,900	109	1480	2530	0.000296	0.388	2.54	2.93	62.2	5.1	20	12	3.1	
Cadmium	0.02	4.72	0.164	3.68	7.41	0.00000126	0.000963	0.00597	0.00693	0.147	1.0	10	0.15	0.015	
Chromium	1.6	9.69	4.5	16.9	19.5	0.0000101	0.00198	0.0499	0.0519	1.10	3.3	69	0.33	0.016	
Cobalt	0.13	6.5	0.209	3.68	5.61	0.00000821	0.00133	0.00555	0.00687	0.146	0.50	2.0	0.29	0.073	
Lead	0.44	226	4.89	140	241	0.00000278	0.0461	0.199	0.245	5.22	11	90	0.47	0.058	
Mercury	0.05	0.13	0.04	0.12	0.18	0.00000316	0.000265	0.000433	0.000460	0.00979	0.032	0.16	0.31	0.061	
Molybdenum	0.05	0.93	0.816	0.626	0.88	0.00000316	0.000190	0.00688	0.00707	0.150	0.26	2.6	0.58	0.058	
Selenium	0.2	1.4	0.3	0.5	0.6	0.00000126	0.000286	0.00276	0.00305	0.0649	0.20	0.33	0.32	0.20	
Thallium	0.003	0.245	0.007	0.108	0.265	0.000000190	0.0000500	0.000212	0.000262	0.00557	0.074	0.74	0.075	0.0075	
Vanadium	0.31	15.9	0.2	9.8	12.3	0.00000196	0.00324	0.0109	0.0142	0.301	0.21	2.1	1.4	0.14	
Zinc	6.08	976	51	627	1110	0.0000384	0.199	1.13	1.33	28.2	160	320	0.18	0.088	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0010) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT3-0010); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

-- - appropriate TRV not found for analyte

CoPC - chemical of potential concern

LOAEL - lowest-observed-adverse-effect level

NOAEL - no-observed-adverse-effect level

TRV - toxicity reference value

Table K-144a. Tundra vole EPC calculation for mean CoPC concentrations at TT8-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
PHASE1RA	TP2-0100	7/19/2003	SW0031	0	0	NA	NA	NA	µg/L unfiltered		0.44
										TT8-0010 site mean	0.44
Tundra Soil											
PHASE2RA	TT8_0010	6/19/2004	TS-0016	0	0	NA	NA	NA	mg/kg dry		226
										TT8-0010 site mean	226
Herbaceous Plant											
PHASE2RA	TT8-0010	6/19/2004	SE0017	0	0	<i>Eriophorum</i>	<i>vaginatum</i>	Blades	mg/kg dry		4.89
										TT8-0010 site mean	4.89
Lichen											
PHASE2RA	TT8-0010	6/19/2004	LI0015	0	0	<i>Peltigera</i>	<i>sp.</i>	Whole Plant	mg/kg dry		140
										TT8-0010 site mean	140
Moss											
PHASE1RA	TT3-0010	7/17/2003	MS0002	0	0	NA	NA	NA	µg/g dry		241
										TT8-0010 site mean	241

Note: CoPC - chemical of potential concern
EPC - exposure point concentration

Table K-145. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT8-0100 site

Analyte	Concentration					Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	NOAEL (mg/kg-day)			LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
Aluminum	75	1,510	23.5	1530	1440	0.000474	0.308	1.44	1.75	37.2	1.9	19	20	2.0	
Antimony	0.03	1.25	0.04	0.69	0.72	0.00000190	0.000255	0.000905	0.00116	0.0247	0.66	--	0.037	--	
Arsenic (arsenate)	0.5	3	0.04	1.1	1.5	0.00000316	0.000612	0.00141	0.00203	0.0431	0.40	1.6	0.11	0.027	
Arsenic (arsenite)	0.5	3	0.04	1.1	1.5	0.00000316	0.000612	0.00141	0.00203	0.0431	0.13	1.3	0.33	0.033	
Barium	46.8	1,470	70.8	611	1150	0.000296	0.300	1.29	1.59	33.8	5.1	20	6.6	1.7	
Cadmium	0.02	3.83	0.071	2.14	3.24	0.00000126	0.000781	0.00283	0.00361	0.0768	1.0	10	0.077	0.0077	
Chromium	1.6	3.93	0.4	6.2	10.5	0.0000101	0.000802	0.0102	0.0110	0.233	3.3	69	0.071	0.0034	
Cobalt	0.13	5.48	0.061	2.1	2.88	0.000000821	0.00112	0.00258	0.00370	0.0787	0.50	2.0	0.16	0.039	
Lead	0.44	189	1.3	111	148	0.00000278	0.0385	0.120	0.159	3.37	11	90	0.31	0.037	
Mercury	0.05	0.2	0.04	0.09	0.107	0.000000316	0.0000408	0.000390	0.000431	0.00916	0.032	0.16	0.29	0.057	
Molybdenum	0.05	1.16	0.767	0.463	0.61	0.000000316	0.000237	0.00632	0.00656	0.140	0.26	2.6	0.54	0.054	
Selenium	0.2	1.8	0.1	0.4	0.3	0.00000126	0.000367	0.00106	0.00143	0.0304	0.20	0.33	0.15	0.092	
Thallium	0.003	0.214	0.001	0.072	0.149	0.000000190	0.0000436	0.000102	0.000145	0.00309	0.074	0.74	0.042	0.0042	
Vanadium	0.31	11.2	0.2	5.9	7.25	0.00000196	0.00228	0.00712	0.00940	0.200	0.21	2.1	0.95	0.095	
Zinc	6.08	908	35.7	397	595	0.0000384	0.185	0.695	0.880	18.7	160	320	0.12	0.058	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0100) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT3-0100); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-146. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT8-1000 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	177	358	6.9	245	275	0.00112	0.073	0.274	0.348	7.40	1.9	19	3.9	0.39
Antimony	0.02	0.42	0.04	0.305	0.25	0.00000126	0.0000857	0.000542	0.000628	0.0134	0.66	--	0.020	--
Arsenic (arsenate)	1.3	0.8	0.04	1.09	0.4	0.00000821	0.000163	0.000939	0.00111	0.0236	0.40	1.6	0.059	0.015
Arsenic (arsenite)	1.3	0.8	0.04	1.09	0.4	0.00000821	0.000163	0.000939	0.00111	0.0236	0.13	1.3	0.18	0.018
Barium	73.6	275	32.3	90.8	193	0.000465	0.0561	0.368	0.424	9.02	5.1	20	1.8	0.45
Cadmium	0.06	0.408	0.034	0.515	0.81	0.000000379	0.0000832	0.000823	0.000907	0.0193	1.0	10	0.019	0.0019
Chromium	5.24	1.54	0.2	0.7	4.71	0.0000331	0.000314	0.00383	0.00418	0.0888	3.3	69	0.027	0.0013
Cobalt	0.48	3.57	0.019	1.52	0.469	0.00000303	0.000728	0.000990	0.00172	0.0366	0.50	2.0	0.073	0.018
Lead	0.67	4.23	0.34	19.4	29.5	0.00000423	0.000863	0.0234	0.0242	0.515	11	90	0.047	0.0057
Mercury	0.05	0.15	0.01	0.075	0.082	0.000000316	0.0000306	0.000143	0.000174	0.00370	0.032	0.16	0.12	0.023
Molybdenum	0.08	1.68	0.44	0.414	0.5	0.000000505	0.000343	0.00375	0.00410	0.0872	0.26	2.6	0.34	0.034
Selenium	0.2	0.6	0.1	0.2	0.1	0.00000126	0.000122	0.000892	0.00102	0.0216	0.20	0.33	0.11	0.066
Thallium	0.005	0.02	0.01	0.061	0.053	0.0000000316	0.00000408	0.000125	0.000129	0.00275	0.074	0.74	0.037	0.0037
Vanadium	0.64	4.8	0.2	0.95	1.3	0.00000404	0.000979	0.00249	0.00347	0.0738	0.21	2.1	0.35	0.035
Zinc	11	89.3	48.4	110	135	0.0000695	0.0182	0.474	0.492	10.5	160	320	0.065	0.033

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-1000); PHASE1RA soil (TT3-1000) for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT3-1000); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-147. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT3-0010 site

Analyte	Concentration					Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	NOAEL (mg/kg-day)			LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
Aluminum	75	2,660	72	773	3210	0.000474	0.543	2.24	2.79	59.3	1.9	19	31	3.1	
Antimony	0.03	0.925	0.13	1.29	0.99	0.000000190	0.000189	0.00196	0.00215	0.0458	0.66	--	0.069	--	
Arsenic (arsenate)	0.5	5.3	0.09	1.47	2.7	0.00000316	0.00108	0.00246	0.00354	0.0754	0.40	1.6	0.19	0.047	
Arsenic (arsenite)	0.5	5.3	0.09	1.47	2.7	0.00000316	0.00108	0.00246	0.00354	0.0754	0.13	1.3	0.58	0.058	
Barium	46.8	2,280	84.3	815	2530	0.000296	0.465	2.07	2.53	53.9	5.1	20	11	2.7	
Cadmium	0.02	7.07	0.138	2.37	7.41	0.00000126	0.00144	0.00521	0.00665	0.142	1.0	10	0.14	0.014	
Chromium	1.6	9.69	3.3	2.8	19.5	0.0000101	0.00198	0.0347	0.0367	0.781	3.3	69	0.24	0.011	
Cobalt	0.13	8.33	0.162	1.76	5.61	0.000000821	0.00170	0.00437	0.00607	0.129	0.50	2.0	0.26	0.065	
Lead	0.44	385	4.06	72.1	241	0.00000278	0.0784	0.164	0.243	5.16	11	90	0.47	0.057	
Mercury	0.05	0.285	0.03	0.08	0.18	0.000000316	0.0000581	0.000340	0.000398	0.00848	0.032	0.16	0.26	0.053	
Molybdenum	0.05	1.08	0.177	0.821	0.88	0.000000316	0.000219	0.00208	0.00230	0.0489	0.26	2.6	0.19	0.019	
Selenium	0.2	1	0.1	0.2	0.6	0.00000126	0.000204	0.00110	0.00131	0.0279	0.20	0.33	0.14	0.084	
Thallium	0.003	0.296	0.032	0.071	0.265	0.0000000190	0.0000603	0.000388	0.000448	0.00953	0.074	0.74	0.13	0.013	
Vanadium	0.31	14.2	0.2	3.6	12.3	0.00000196	0.00290	0.00829	0.0112	0.238	0.21	2.1	1.1	0.11	
Zinc	6.08	1,350	40.4	209	1110	0.0000384	0.275	0.869	1.14	24.4	160	320	0.15	0.076	

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0010); PHASE2RA soil; PHASE1RA moss; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-148. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT3-0100 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	75	1,510	17.9	424	1440	0.000474	0.308	0.929	1.24	26.3	1.9	19	14	1.4
Antimony	0.03	0.915	0.02	0.46	0.72	0.000000190	0.000187	0.000654	0.000841	0.0179	0.66	--	0.027	--
Arsenic (arsenate)	0.5	2.2	0.04	0.42	1.5	0.00000316	0.000449	0.00112	0.00157	0.0335	0.40	1.6	0.084	0.021
Arsenic (arsenite)	0.5	2.2	0.04	0.42	1.5	0.00000316	0.000449	0.00112	0.00157	0.0335	0.13	1.3	0.26	0.026
Barium	46.8	694	44.5	406	1150	0.000296	0.142	1.00	1.14	24.3	5.1	20	4.8	1.2
Cadmium	0.02	2.06	0.052	1.11	3.24	0.000000126	0.000419	0.00225	0.00267	0.0567	1.0	10	0.057	0.0057
Chromium	1.6	3.93	0.2	0.55	10.5	0.0000101	0.000802	0.00622	0.00704	0.150	3.3	69	0.045	0.0022
Cobalt	0.13	2.69	0.048	0.93	2.88	0.000000821	0.000549	0.00199	0.00254	0.0539	0.50	2.0	0.11	0.027
Lead	0.44	119	0.91	34.3	148	0.00000278	0.0242	0.0844	0.109	2.31	11	90	0.21	0.026
Mercury	0.05	0.12	0.04	0.064	0.107	0.000000316	0.0000245	0.000379	0.000403	0.00858	0.032	0.16	0.27	0.054
Molybdenum	0.05	0.475	0.551	0.584	0.61	0.000000316	0.0000969	0.00472	0.00482	0.103	0.26	2.6	0.39	0.039
Selenium	0.2	0.45	0.1	0.1	0.3	0.00000126	0.0000918	0.000935	0.00103	0.0219	0.20	0.33	0.11	0.066
Thallium	0.003	0.0885	0.001	0.058	0.149	0.0000000190	0.0000180	0.0000956	0.000114	0.00242	0.074	0.74	0.033	0.0033
Vanadium	0.31	4.98	0.2	1.4	7.25	0.00000196	0.00101	0.00520	0.00622	0.132	0.21	2.1	0.63	0.063
Zinc	6.08	465	41.3	119	595	0.0000384	0.0947	0.619	0.714	15.2	160	320	0.095	0.047

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-0100); PHASE1RA soil (TT3-0100); PHASE2RA soil; PHASE1RA moss; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-149. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT3-1000 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	177	358	5.4	161	275	0.00112	0.0730	0.226	0.300	6.39	1.9	19	3.4	0.34
Antimony	0.02	0.365	0.02	0.24	0.25	0.00000126	0.0000744	0.000361	0.000436	0.00927	0.66	--	0.014	--
Arsenic (arsenate)	1.3	0.75	0.04	0.32	0.4	0.00000821	0.000153	0.000612	0.000773	0.0164	0.40	1.6	0.041	0.010
Arsenic (arsenite)	1.3	0.75	0.04	0.32	0.4	0.00000821	0.000153	0.000612	0.000773	0.0164	0.13	1.3	0.13	0.013
Barium	73.6	131	34	97.1	193	0.000465	0.0267	0.383	0.410	8.73	5.1	20	1.7	0.44
Cadmium	0.06	0.549	0.02	0.533	0.81	0.000000379	0.000112	0.000723	0.000836	0.0178	1.0	10	0.018	0.0018
Chromium	5.24	1.54	0.2	0.45	4.71	0.0000331	0.000314	0.00372	0.00407	0.0866	3.3	69	0.026	0.0013
Cobalt	0.48	0.615	0.076	0.239	0.469	0.00000303	0.000125	0.000882	0.00101	0.0215	0.50	2.0	0.043	0.011
Lead	0.67	16.1	0.18	15.2	29.5	0.00000423	0.00327	0.0204	0.0236	0.503	11	90	0.046	0.0056
Mercury	0.05	0.145	0.03	0.045	0.082	0.000000316	0.0000296	0.000283	0.000313	0.00667	0.032	0.16	0.21	0.042
Molybdenum	0.08	0.793	0.403	0.319	0.5	0.000000505	0.000162	0.00343	0.00359	0.0764	0.26	2.6	0.29	0.029
Selenium	0.2	0.4	0.1	0.1	0.1	0.00000126	0.0000816	0.00085	0.000933	0.0198	0.20	0.33	0.099	0.060
Thallium	0.005	0.049	0.001	0.0265	0.053	0.0000000316	0.00000999	0.0000414	0.0000515	0.00109	0.074	0.74	0.015	0.0015
Vanadium	0.64	1.45	0.3	0.5	1.3	0.00000404	0.000296	0.00306	0.00336	0.0715	0.21	2.1	0.34	0.034
Zinc	11	78.4	51.3	88.2	135	0.0000695	0.0160	0.487	0.503	10.7	160	320	0.067	0.033

Note: The following data were used to develop this scenario: PHASE1RA water (TP2-1000); PHASE1RA soil (TT3-1000); PHASE2RA soil; PHASE1RA moss; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-150. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT6-0010 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient		
	Water (µg/L)	Soil/ Sediment (mg/kg dw)		Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		Water	Sediment												
Aluminum	208	2,660	13.1	2930	39100	0.00131	0.543	18.0	18.5	394	1.9	19	210	21	
Antimony	0.063	1.92	0.03	0.84	0.99	0.00000398	0.000392	0.00101	0.00140	0.0298	0.66	--	0.045	--	
Arsenic (arsenate)	0.482	9.1	0.03	1.85	10.1	0.00000304	0.00186	0.00530	0.00716	0.152	0.40	1.6	0.38	0.095	
Arsenic (arsenite)	0.482	9.1	0.03	1.85	10.1	0.00000304	0.00186	0.00530	0.00716	0.152	0.13	1.3	1.2	0.12	
Barium	140	6,950	128	2840	2530	0.000884	1.42	3.26	4.68	99.5	5.1	20	20	5.0	
Cadmium	0.0365	5.47	0.121	2.62	10.3	0.00000231	0.00112	0.00641	0.00753	0.160	1.0	10	0.16	0.016	
Chromium	0.396	9.69	0.2	13	19.5	0.00000250	0.00198	0.0153	0.0173	0.368	3.3	69	0.11	0.0053	
Cobalt	0.015	9.11	0.09	2.36	5.61	0.000000948	0.00186	0.00407	0.00593	0.126	0.50	2.0	0.25	0.063	
Lead	0.65	349	0.71	110	336	0.00000411	0.0712	0.195	0.266	5.66	11	90	0.51	0.063	
Mercury	0.0179	0.25	0.04	0.106	0.18	0.00000113	0.0000510	0.000427	0.000479	0.0102	0.032	0.16	0.32	0.064	
Molybdenum	0.22	1.95	0.463	0.476	0.88	0.00000139	0.000398	0.00412	0.00452	0.0961	0.26	2.6	0.37	0.037	
Selenium	0.355	1.5	0.3	0.3	0.6	0.00000224	0.000306	0.00268	0.00299	0.0635	0.20	0.33	0.32	0.19	
Thallium	0.09	1.29	0.004	0.202	0.265	0.000000569	0.000263	0.000229	0.000492	0.0105	0.074	0.74	0.14	0.014	
Vanadium	0.335	19.7	0.3	8.5	12.3	0.00000212	0.00402	0.0111	0.0152	0.322	0.21	2.1	1.5	0.15	
Zinc	1.79	1,020	58.9	334	1440	0.0000113	0.208	1.20	1.41	30.0	160	320	0.19	0.094	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; PHASE1RA moss (TT3-0010) for Sb, Ba, Cr, Co, Hg, Mo, Se, TI, V; FUGDST01 for Al, As, Cd, Pb, and Zn in moss (HR-06-01); PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station. No pond water data collected near mine, so Anxiety Ridge Creek downstream data used.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-151. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT6-0100 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	208	1,510	11.2	1120	14500	0.00131	0.308	6.72	7.03	150	1.9	19	79	7.9
Antimony	0.063	2.03	0.03	1.04	0.72	0.00000398	0.000414	0.000977	0.00139	0.0296	0.66	--	0.045	--
Arsenic (arsenate)	0.482	4.9	0.03	1.39	5.03	0.00000304	0.000999	0.00296	0.00396	0.0842	0.40	1.6	0.21	0.053
Arsenic (arsenite)	0.482	4.9	0.03	1.39	5.03	0.00000304	0.000999	0.00296	0.00396	0.0842	0.13	1.3	0.65	0.065
Barium	140	6,360	67.6	1840	1150	0.000884	1.30	1.78	3.08	65.6	5.1	20	13	3.3
Cadmium	0.0365	5.06	0.0875	3.56	10.9	0.00000231	0.00103	0.00681	0.00784	0.167	1.0	10	0.17	0.017
Chromium	0.396	3.93	0.2	3.1	10.5	0.00000250	0.000802	0.00731	0.00811	0.173	3.3	69	0.052	0.0025
Cobalt	0.015	3.3	0.0225	1.08	2.88	0.000000948	0.000673	0.00185	0.00253	0.0538	0.50	2.0	0.11	0.027
Lead	0.65	281	0.825	143	463	0.00000411	0.0573	0.264	0.321	6.83	11	90	0.62	0.076
Mercury	0.0179	0.27	0.0215	0.108	0.107	0.000000113	0.0000551	0.000256	0.000311	0.00662	0.032	0.16	0.21	0.041
Molybdenum	0.22	2.47	1.44	0.389	0.61	0.00000139	0.000504	0.0114	0.0119	0.253	0.26	2.6	0.97	0.097
Selenium	0.355	0.9	0.075	0.3	0.3	0.00000224	0.000184	0.000829	0.00101	0.0216	0.20	0.33	0.11	0.065
Thallium	0.09	0.755	0.0045	0.187	0.149	0.000000569	0.000154	0.000177	0.000332	0.00705	0.074	0.74	0.095	0.0095
Vanadium	0.335	7.51	0.25	2.5	7.25	0.00000212	0.00153	0.00605	0.00759	0.161	0.21	2.1	0.77	0.077
Zinc	1.79	764	50.2	406	1200	0.0000113	0.156	1.07	1.22	26.0	160	320	0.16	0.081

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; FUGDST01 for Al, As, Cd, Pb, and Zn in moss (HR-06-02); PHASE1RA moss (TT3-0100) for Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V; PHASE2RA lichen; and PHASE2RA sedge blades. Peltigera and Cladina lichens averaged, sedge species averaged at station. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-152. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT6-1000 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	208	358	2.8	156	2440	0.00131	0.0730	1.12	1.20	25.5	1.9	19	13	1.3
Antimony	0.063	1.22	0.03	0.96	0.25	0.00000398	0.000249	0.000744	0.000993	0.0211	0.66	--	0.032	--
Arsenic (arsenate)	0.482	2.9	0.03	1.11	2.93	0.00000304	0.000591	0.00194	0.00254	0.0540	0.40	1.6	0.14	0.034
Arsenic (arsenite)	0.482	2.9	0.03	1.11	2.93	0.00000304	0.000591	0.00194	0.00254	0.0540	0.13	1.3	0.42	0.042
Barium	140	1290	33.6	483	193	0.000884	0.263	0.544	0.808	17.2	5.1	20	3.4	0.86
Cadmium	0.0365	6.11	0.038	3.45	14.1	0.00000231	0.00125	0.00775	0.00899	0.191	1.0	10	0.19	0.019
Chromium	0.396	1.54	0.3	0.45	4.71	0.00000250	0.000314	0.00449	0.00480	0.102	3.3	69	0.031	0.0015
Cobalt	0.015	1.87	0.03	0.325	0.469	0.000000948	0.000381	0.000567	0.000948	0.0202	0.50	2.0	0.040	0.010
Lead	0.65	145	0.3	115	648	0.00000411	0.0296	0.327	0.356	7.58	11	90	0.69	0.084
Mercury	0.0179	0.22	0.025	0.0975	0.082	0.000000113	0.0000449	0.000267	0.000312	0.00665	0.032	0.16	0.21	0.042
Molybdenum	0.22	2.09	0.454	0.271	0.5	0.00000139	0.000426	0.00380	0.00423	0.0899	0.26	2.6	0.35	0.035
Selenium	0.355	1.6	0.4	0.2	0.1	0.00000224	0.000326	0.00319	0.00352	0.0748	0.20	0.33	0.37	0.23
Thallium	0.09	0.38	0.002	0.132	0.053	0.000000569	0.0000775	0.0000939	0.000172	0.00366	0.074	0.74	0.049	0.0049
Vanadium	0.335	16	0.3	0.45	1.3	0.00000212	0.00326	0.00304	0.00630	0.134	0.21	2.1	0.64	0.064
Zinc	1.79	592	33	361	1450	0.0000113	0.121	1.02	1.14	24.3	160	320	0.15	0.076

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; FUGDST01 for Al, As, Cd, Pb, Zn in moss (HR-06-03); PHASE1RA moss (TT3-1000) for Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V; PHASE2RA lichen; and PHASE2RA sedge blades.
Peltigera and Cladina lichens averaged, sedge species averaged at station.
Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-153. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT6-2000 site

Analyte	Concentration					Daily Exposure			Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)			NOAEL (mg/kg-day)	LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	358	8.6	142	650	0.00131	0.0730	0.402	0.477	10.1	1.9	19	5.3	0.53
Antimony	0.063	1.1	0.07	0.61	0.25	0.00000398	0.000224	0.000901	0.00113	0.0239	0.66	--	0.036	--
Arsenic (arsenate)	0.482	2.4	0.03	0.595	1.18	0.00000304	0.000489	0.000984	0.00148	0.0314	0.40	1.6	0.079	0.020
Arsenic (arsenite)	0.482	2.4	0.03	0.595	1.18	0.00000304	0.000489	0.000984	0.00148	0.0314	0.13	1.3	0.24	0.024
Barium	140	1,330	66.7	194	193	0.000884	0.271	0.674	0.946	20.1	5.1	20	3.9	1.0
Cadmium	0.0365	3.14	0.398	1.56	4.61	0.00000231	0.000640	0.00567	0.00631	0.134	1.0	10	0.13	0.013
Chromium	0.396	1.54	0.2	0.45	4.71	0.00000250	0.000314	0.00372	0.00404	0.0859	3.3	69	0.026	0.0012
Cobalt	0.015	2.87	0.09	0.235	0.469	0.000000948	0.000585	0.000987	0.00157	0.0335	0.50	2.0	0.067	0.017
Lead	0.65	102	1.1	61.3	182	0.00000411	0.0208	0.112	0.133	2.82	11	90	0.26	0.031
Mercury	0.0179	0.24	0.03	0.0735	0.082	0.000000113	0.0000489	0.000296	0.000345	0.00733	0.032	0.16	0.23	0.046
Molybdenum	0.22	1.56	0.134	0.212	0.5	0.00000139	0.000318	0.00133	0.00165	0.0350	0.26	2.6	0.13	0.013
Selenium	0.355	0.8	0.05	0.25	0.1	0.00000224	0.000163	0.000531	0.000697	0.0148	0.20	0.33	0.074	0.045
Thallium	0.09	0.152	0.007	0.0715	0.053	0.000000569	0.0000310	0.000106	0.000138	0.00294	0.074	0.74	0.040	0.0040
Vanadium	0.335	6.68	0.2	0.4	1.3	0.00000212	0.00136	0.00225	0.00362	0.0769	0.21	2.1	0.37	0.037
Zinc	1.79	307	71.4	152	433	0.0000113	0.0626	0.795	0.857	18.2	160	320	0.11	0.057

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; FUGDST01 for Al, As, Cd, Pb, Zn in moss (HR-06-04); PHASE1RA moss (TT3-1000) for Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V; PHASE2RA lichen; and PHASE2RA sedge blades. Peltigera and Cladina lichens averaged, sedge species averaged at station. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-154. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT7-0010 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
Aluminum	208	2,660	12.5	469	39100	0.00131	0.543	16.9	17.5	371	1.9	19	200	20
Antimony	0.063	11.1	0.05	10.1	0.99	0.000000398	0.00226	0.00509	0.00736	0.157	0.66	--	0.24	--
Arsenic (arsenate)	0.482	13.9	0.08	6.89	10.1	0.00000304	0.00283	0.00783	0.0107	0.227	0.40	1.6	0.57	0.14
Arsenic (arsenite)	0.482	13.9	0.08	6.89	10.1	0.00000304	0.00283	0.00783	0.0107	0.227	0.13	1.3	1.7	0.17
Barium	140	5,520	77	2240	2530	0.000884	1.13	2.62	3.74	79.6	5.1	20	16	4.0
Cadmium	0.0365	36.3	0.403	19.1	10.3	0.000000231	0.00740	0.0156	0.0230	0.489	1.0	10	0.49	0.049
Chromium	0.396	9.69	0.2	3	19.5	0.00000250	0.00198	0.0111	0.0131	0.278	3.3	69	0.084	0.0040
Cobalt	0.015	4.39	0.11	1.37	5.61	0.0000000948	0.000895	0.00381	0.00470	0.100	0.50	2.0	0.20	0.050
Lead	0.65	2,630	2.24	1530	336	0.00000411	0.536	0.810	1.35	28.6	11	90	2.6	0.32
Mercury	0.0179	1.14	0.022	0.711	0.18	0.000000113	0.000233	0.000547	0.000779	0.0166	0.032	0.16	0.52	0.10
Molybdenum	0.22	5.97	0.556	1.78	0.88	0.00000139	0.00122	0.00538	0.00660	0.140	0.26	2.6	0.54	0.054
Selenium	0.355	3	0.05	1	0.6	0.00000224	0.000612	0.00106	0.00168	0.0357	0.20	0.33	0.18	0.11
Thallium	0.09	2.28	0.035	1.49	0.265	0.000000569	0.000465	0.00101	0.00148	0.0315	0.074	0.74	0.43	0.043
Vanadium	0.335	21.6	0.3	4.2	12.3	0.00000212	0.00441	0.00931	0.0137	0.292	0.21	2.1	1.4	0.14
Zinc	1.79	6,770	166	2740	1440	0.0000113	1.38	3.05	4.43	94.2	160	320	0.59	0.29

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; FUGDST01 for Al, As, Cd, Pb, Zn in moss (HR-06-01); PHASE1RA moss (TT3-0010) for Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V; PHASE2RA lichen; and PHASE2RA sedge blades. Peltigera and Cladina lichens averaged, sedge species averaged at station. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-154a. Tundra vole EPC calculation for mean CoPC concentrations at TT7-0010 site

Survey	Survey station	Date	Sample ID	Field Replicate	Subsample	Genus	Species	Organ	Units	Original data/ intermediate calculation	Lead Concentration
Water											
TECK03	ARC-D	10/10/2003	03-4781	0	0	NA	NA	NA	µg/L unfiltered		0.65 <i>J</i>
										TT7-0010 site mean	0.65 <i>J</i>
Tundra Soil											
PHASE2RA	TT7_0010	6/22/2004	TS-0025	0	0	NA	NA	NA	mg/kg dry		2,630
										TT7-0010 site mean	2,630
Herbaceous Plant											
PHASE2RA	TT7-0010	6/22/2004	SE0027	0	0	<i>Carex</i>	<i>microchaeta</i>	Blades	mg/kg dry		2.24
										TT7-0010 site mean	2.24
Lichen											
PHASE2RA	TT7-0010	6/22/2004	LI0025	0	0	<i>Cladina</i>	<i>sp.</i>	Whole Plant	mg/kg dry		1,530
										TT7-0010 site mean	1,530
Moss											
FUGDST01	HR06-01M	8/20/2001	HR-06-01-M	0	0	NA	NA	NA	µg/g dry		336
										TT7-0010 site mean	336

Note:
 CoPC - chemical of potential concern
 EPC - exposure point concentration
J - estimated value

Table K-155. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT7-1000 site

Analyte	Concentration					Daily Exposure				TRV			Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	NOAEL (mg/kg- day)	LOAEL (mg/kg- day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient
		(mg/kg dw)												
Aluminum	208	358	12.2	494	2440	0.00131	0.0730	1.34	1.41	30.1	1.9	19	16	1.6
Antimony	0.063	1.39	0.04	3.8	0.25	0.00000398	0.000283	0.00203	0.00231	0.0492	0.66	--	0.074	--
Arsenic (arsenate)	0.482	8.3	0.03	2.6	2.93	0.00000304	0.00169	0.00258	0.00427	0.0910	0.40	1.6	0.23	0.057
Arsenic (arsenite)	0.482	8.3	0.03	2.6	2.93	0.00000304	0.00169	0.00258	0.00427	0.0910	0.13	1.3	0.70	0.070
Barium	140	451	78.4	900	193	0.000884	0.0920	1.06	1.16	24.6	5.1	20	4.8	1.2
Cadmium	0.0365	4.11	0.172	9.06	14.1	0.00000231	0.000838	0.0112	0.0120	0.255	1.0	10	0.26	0.026
Chromium	0.396	1.54	0.3	1.8	4.71	0.00000250	0.000314	0.00506	0.00538	0.114	3.3	69	0.035	0.0017
Cobalt	0.015	5.35	0.04	0.58	0.469	0.000000948	0.00109	0.000752	0.00184	0.0392	0.50	2.0	0.078	0.020
Lead	0.65	201	5.67	594	648	0.00000411	0.0410	0.571	0.612	13.0	11	90	1.2	0.14
Mercury	0.0179	0.17	0.036	0.254	0.082	0.000000113	0.0000347	0.000418	0.000453	0.00964	0.032	0.16	0.30	0.060
Molybdenum	0.22	27.1	0.888	1.15	0.5	0.00000139	0.00553	0.00749	0.0130	0.277	0.26	2.6	1.1	0.11
Selenium	0.355	1.6	0.05	0.6	0.1	0.00000224	0.000326	0.000680	0.00101	0.0215	0.20	0.33	0.11	0.065
Thallium	0.09	0.532	0.006	0.698	0.053	0.000000569	0.000109	0.000365	0.000474	0.0101	0.074	0.74	0.14	0.014
Vanadium	0.335	29.2	0.3	1.3	1.3	0.00000212	0.00596	0.00340	0.00936	0.199	0.21	2.1	0.95	0.095
Zinc	1.79	506	43.4	996	1450	0.0000113	0.103	1.37	1.47	31.4	160	320	0.20	0.098

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; FUGDST01 for Al, As, Cd, Pb, Zn in moss (HR-06-03); PHASE1RA moss (TT3-1000) for Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V; PHASE2RA lichen; and PHASE2RA sedge blades.

Peltigera and Cladina lichens averaged, sedge species averaged at station.

Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value

Table K-156. Food-web model exposure results for tundra vole exposed to CoPC concentrations at TT7-2000 site

Analyte	Concentration					Daily Exposure				Total Daily Intake (mg/day)	BW Normalized Exposure (mg/kg-day)	TRV		Year-Round Hazard Quotient	
	Water (µg/L)	Soil/ Sediment (mg/kg dw)	Herb. Plant (mg/kg dw)	Lichen (mg/kg dw)	Moss (mg/kg dw)	Water (mg/day)	Soil/Sediment (mg/day)	Food (mg/day)	NOAEL (mg/kg-day)			LOAEL (mg/kg-day)	NOAEL Hazard Quotient	LOAEL Hazard Quotient	
Aluminum	208	358	11.1	559	650	0.00131	0.0730	0.598	0.673	14.3	1.9	19	7.5	0.75	
Antimony	0.063	0.97	0.0255	3.68	0.25	0.00000398	0.000198	0.00186	0.00206	0.0439	0.66	--	0.067	--	
Arsenic (arsenate)	0.482	5.9	0.035	3.07	1.18	0.00000304	0.00120	0.00207	0.00328	0.0698	0.40	1.6	0.17	0.044	
Arsenic (arsenite)	0.482	5.9	0.035	3.07	1.18	0.00000304	0.00120	0.00207	0.00328	0.0698	0.13	1.3	0.54	0.054	
Barium	140	469	78	1,110	193	0.000884	0.0957	1.15	1.25	26.5	5.1	20	5.2	1.3	
Cadmium	0.0365	4.71	0.288	9.96	4.61	0.00000231	0.000961	0.00839	0.00935	0.199	1.0	10	0.20	0.020	
Chromium	0.396	1.54	0.25	1.9	4.71	0.00000250	0.000314	0.00472	0.00504	0.107	3.3	69	0.032	0.0016	
Cobalt	0.015	5.65	0.06	0.87	0.469	0.000000948	0.00115	0.00103	0.00218	0.0464	0.50	2.0	0.093	0.023	
Lead	0.65	154	4.96	492	182	0.00000411	0.0314	0.324	0.356	7.57	11	90	0.69	0.084	
Mercury	0.0179	0.233	0.04	0.297	0.082	0.000000113	0.0000475	0.000467	0.000515	0.0109	0.032	0.16	0.34	0.068	
Molybdenum	0.22	15.5	0.965	1.67	0.5	0.00000139	0.00316	0.00830	0.0115	0.244	0.26	2.6	0.94	0.094	
Selenium	0.355	2	0.125	0.7	0.1	0.00000224	0.000408	0.00130	0.00171	0.0363	0.20	0.33	0.18	0.11	
Thallium	0.09	0.63	0.008	0.599	0.053	0.000000569	0.000128	0.000338	0.000467	0.00994	0.074	0.74	0.13	0.013	
Vanadium	0.335	27.8	0.2	2.8	1.3	0.00000212	0.00567	0.00327	0.00894	0.190	0.21	2.1	0.91	0.091	
Zinc	1.79	519	57.5	1260	433	0.0000113	0.106	1.16	1.26	26.9	160	320	0.17	0.084	

Note: The following data were used to develop this scenario: TECK03 water (ARC-D); PHASE1RA soil for Al and Cr; PHASE2RA soil; FUGDST01 for Al, As, Cd, Pb, Zn in moss (HR-06-04); PHASE1RA moss (TT3-1000) for Sb, Ba, Cr, Co, Hg, Mo, Se, Ti, V; PHASE2RA lichen; and PHASE2RA sedge blades. Peltigera and Cladina lichens averaged, sedge species averaged at station. Hazard quotients greater than 1.0 are boxed.

- - appropriate TRV not found for analyte
- CoPC - chemical of potential concern
- LOAEL - lowest-observed-adverse-effect level
- NOAEL - no-observed-adverse-effect level
- TRV - toxicity reference value