Appendix D

Summary and Analysis of Bioaccumulation Data for the Baseline Ecological Risk Assessment

Halaco Superfund Site, Oxnard, California

Remedial Investigation

Prepared for

U.S. Environmental Protection Agency Region 9

September 2015

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EN0627151036SCO

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Acronyms and Abbreviations

BAF	bioaccumulation factor
BERA	baseline ecological risk assessment
COPEC	constituent of potential ecological concern
Halaco	Halaco Engineering Co.
HPCDD	heptachlorodibenzo-p-dioxin
mg/kg	milligrams(s) per kilogram
ng/kg	nanogram(s) per kilogram
OCDD	octachlorodibenzo-p-dioxin
OCDF	octachlorodibenzofuran
Site	Halaco Engineering Co. Superfund Site
TCDD	tetrachlorodibenzodioxin
TCDF	tetrachlorodibenzofuran

APPENDIX D

Summary and Analysis of Bioaccumulation Data

This appendix provides a summary and analysis of the bioaccumulation testing data that were collected as part of the "Tier 2" biological testing at the Halaco Engineering Co. Superfund Site (Halaco Site, or Site) in Oxnard, California. Tier 2 biological samples were collected during June 2011 to evaluate potential ecological risks and support the preparation of the Baseline Ecological Risk Assessment (BERA) at the Halaco Site.

D.1 Objectives

Biota and solid matrix samples were collected and analyzed from locations at and adjacent to the Halaco Site to quantify bioaccumulation and food-web transfer of site-associated contaminants. Biota samples consisted of whole-body fish, plus terrestrial and aquatic invertebrates. Biota samples were collocated with soil or sediment samples, as appropriate, so that bioaccumulation rates could be estimated.

D.2 Field and Laboratory Methods

Appendix A of the BERA provides a summary of the sampling locations as well as field and laboratory methods. The samples were collected during June 2011 as follows:

- Terrestrial invertebrate, aquatic invertebrate, and fish tissue samples were collected for laboratory analysis of metals and polychlorinated dibenzodioxins and polychlorinated dibenzofurans (also referred to as dioxins and furans).
- Soil and sediment samples (collocated with the tissue samples) were collected for laboratory analysis of metals, dioxins and furans, and other parameters.

Field-collected benthic invertebrate, terrestrial invertebrate, and fish samples were analyzed together with the collocated soil and sediment samples for the constituents of potential ecological concern (COPECs), which are metals and dioxins and furans. The samples were collected at locations expected to have low, intermediate, and high contaminant concentrations based on past sampling results. As discussed in Appendix A, sediment samples collected for bioassays were also analyzed for other constituents that may affect and help explain the response of the laboratory bioassay test organisms.

D.3 Data Analyses

Initial analysis of bioaccumulation data consisted of calculation of summary statistics of COPEC concentrations in tissues of biota collected (Tables D-1 and D-2). Data were pooled by multiple taxonomic levels (for example, all fish, bottom and water column fish, then specific fish species) to provide the greatest resolution and flexibility in the use of the data in the BERA. Biota chemistry data were then integrated with collocated soil or sediment chemistry data to determine bioaccumulation rates. Only samples in which COPECs were detected in both tissue and the collocated soil or sediment were included in these analyses. Bivariate scatterplots of soil or sediment concentrations (x axis) versus tissue concentrations (y axis) were created for each analyte (Attachments D-1 and D-2). Regression analyses were performed on natural – log transformed tissue and soil/sediment concentrations to determine if statistically significant linear associations existed (Tables D-3 and D-4). Bioaccumulation factors (BAFs; ratio of collocated biota and soil or sediment concentrations) were also calculated for each individual sample pair. Summary statistics were then calculated for all BAFs (Tables D-5 and D-6). As with the tissue data, regression analyses and BAF summary statistics were calculated for multiple taxonomic levels in order to provide the greatest resolution and flexibility in use of the data in the BERA.

D.4 Results

Biota samples collected for bioaccumulation analyses consisted of fish, benthic invertebrates, and terrestrial invertebrates (Appendix A, Table A-2). Both water-column (topsmelt) and bottom (tidewater gobies, staghorn sculpin, long-jawed mudsuckers, and goldfish/carp) fish were collected. Benthic invertebrate taxa included both insects and crustaceans. Terrestrial invertebrates consisted of insects and other arthropods and snails. Whereas two species (gobies and topsmelt) accounted for the majority (80 percent) of fish samples, no single taxa dominated the invertebrate samples (Appendix A, Table A-2).

Of the 18 metals measured in tissue, 11 (aluminum, barium, calcium, copper, iron, magnesium, manganese, mercury, potassium, sodium, and zinc) were above detection limits in at least one sample in each of the taxa collected (Appendix A, Tables A-10a and A-10b). Beryllium and cadmium were detected only in benthic and terrestrial invertebrates, respectively. Chromium and selenium were detected in fish and both terrestrial and benthic arthropods, but not in snails. Lead, nickel, and vanadium were detected in terrestrial and benthic invertebrates, but not in fish. Few dioxin and furan congeners were detected in biota, with no detections observed in fish and only limited detections in terrestrial and benthic invertebrates (Appendix A, Tables A-11).

Cross plots (Attachment D-1) and scatterplots (Attachment D-2) of tissue COPEC concentrations versus concentrations in soil or sediment were prepared to show the associations between media and tissue. These plots generally show a poor association between media and tissue. The general lack of association between concentrations in sediment and soil and that in tissue of resident biota is supported by the results of the regression analyses (Tables D-3 and D-4). Whereas only a single statistically significant regression was obtained for any analyte in sediment (zinc and waterboatmen; Table D-3), no statistically significant relationships were observed for soil (Table D-4). In addition, due to the limited number of detects for dioxins and furans, no regression analyses could be performed for these analytes.

Due to the lack of statistically significant linear regressions, BAFs were calculated for all metals in soil and sediment (Table D-5). BAFs were also calculated for the few dioxin and furan congeners detected in both sediment or soil and biota (Table D-6). An evaluation of the median BAFs for metals indicates that over half (170 of 309) are less than 1 and over 66 percent (212 of 309) are less than 2 (Table D-5). Mean BAFs for dioxins and furans were all less than 1.2 (Table D-6).

D.5 Conclusions

Overall, the analysis of the site-specific bioaccumulation data for the Halaco Site suggests that metals and dioxins and furans in sediment and soil are not highly bioavailable and not readily accumulated by biota. Poor associations between concentrations in soil or sediment and that in biota negates the application of site-specific regression models. Therefore, it is recommended that measured concentrations be used to estimate exposure at locations where these samples were collected. Exposure estimation at other locations should use the median analyte-specific BAF.

Tables

TABLE D-1

Summary Statistics for Detected Concentrations of Metals in Biota (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	n	mean	std	min	median	p90	max
Sediment	Aluminum	Arthropods	12	2231	5475.57	84	263	4400	19200
Sediment	Aluminum	Fish	9	212.33	95.47	91	208	365	365
Soil	Aluminum	Arthropods	9	5086.44	4092.46	805	2586	11692	11692
Soil	Aluminum	Mollusc	3	975	582.06	388	985	1552	1552
Sediment	Barium	Arthropods	10	80.9	90.03	16	59.5	209	329
Sediment	Barium	Fish	4	18.5	9.00	11	16	31	31
Soil	Barium	Arthropods	8	177.13	130.05	64	137	451	451
Soil	Barium	Mollusc	3	153	87.89	88	118	253	253
Sediment	Beryllium	Arthropods	1	2		2	2	2	2
Soil	Cadmium	Arthropods	1	3		3	3	3	3
Soil	Cadmium	Mollusc	3	5	0.00	5	5	5	5
Sediment	Calcium	Arthropods	13	58822.85	70095.18	1019	14900	157000	211000
Sediment	Calcium	Fish	29	34429.97	10674.28	10311	34900	50000	61682
Soil	Calcium	Arthropods	9	67960.11	56537.85	4737	53200	186090	186090
Soil	Calcium	Mollusc	3	26193	14219.56	16379	19700	42500	42500
Sediment	Chromium	Arthropods	4	13.25	8.85	4	12	25	25
Sediment	Chromium	Fish	6	7.5	1.38	6	7.5	9	9
Soil	Chromium	Arthropods	6	16.5	14.68	5	10.5	42	42
Sediment	Copper	Arthropods	13	158.08	155.32	14	91	404	501
Sediment	Copper	Fish	5	11.4	1.82	9	11	14	14
Soil	Copper	Arthropods	9	317.56	260.35	64	329	865	865
Soil	Copper	Mollusc	3	122.67	72.45	60	106	202	202
Sediment	Iron	Arthropods	13	518.85	553.20	86	307	922	2100
Sediment	Iron	Fish	29	187.69	87.37	81	151	351	367
Soil	Iron	Arthropods	9	2867.11	1462.72	489	3120	4699	4699
Soil	Iron	Mollusc	3	2013.33	1081.03	982	1920	3138	3138
Sediment	Lead	Arthropods	3	13	9.17	5	11	23	23
Soil	Lead	Arthropods	8	15.88	9.82	6	14.5	33	33
Soil	Lead	Mollusc	1	4		4	4	4	4
Sediment	Magnesium	Arthropods	13	3124.92	2251.00	635	2500	6580	7650
Sediment	Magnesium	Fish	29	1630.79	411.83	547	1598	2270	2449
Soil	Magnesium	Arthropods	9	4913.44	1407.75	2545	4737	7068	7068
Soil	Magnesium	Mollusc	3	4844.33	533.69	4443	4640	5450	5450
Sediment	Manganese	Arthropods	13	367.54	453.52	51	162	941	1640
Sediment	Manganese	Fish	29	41.41	22.15	14	35	63	140
Soil	Manganese	Arthropods	9	119	53.74	69	95	225	225
Soil	Manganese	Mollusc	3	77.33	28.59	46	84	102	102
Sediment	Mercury	Arthropods	2	0.033	0.00	0.032	0.0325	0.033	0.033
Sediment	Mercury	Fish	16	0.017	0.00	0.009	0.0175	0.02	0.021
Soil	Mercury	Arthropods	9	0.101	0.05	0.056	0.067	0.199	0.199
Soil	Mercury	Mollusc	2	0.068	0.03	0.045	0.068	0.091	0.091
Sediment	Nickel	Arthropods	1	22		22	22	22	22
Soil	Nickel	Arthropods	2	18	4.24	15	18	21	21
Sediment	Potassium	Arthropods	13	7340.08	2706.78	4023	6580	10400	13500
Sediment	Potassium	Fish	29	10301.59	3011.26	2867	10100	14400	17617
Soil	Potassium	Arthropods	9	9244.33	2978.20	5030	9211	13910	13910
Soil	Potassium	Mollusc	3	6038	851.70	5270	5890	6954	6954
Sediment	Selenium	Arthropods	4	6.5	2.65	3	7	9	9
Sediment	Selenium	Fish	21	6.71	0.90	5	7	8	8
Soil	Selenium	Arthropods	2	5.5	2.12	4	5.5	7	7
Sediment	Sodium	Arthropods	13	5937.69	2662.18	2970	5000	9850	10300
Sediment	Sodium	Fish	29	3483.38	785.38	996	3420	4460	5093
Soil	Sodium	Arthropods	9	8352.33	2860.10	4549	8233	11992	11992
Soil	Sodium	Mollusc	3	6453	957.40	5350	6940	7069	7069
Sediment	Vanadium	Arthropods	1	7		7	7	7	7
Soil	Vanadium	Arthropods	6	7.33	1.51	5	8	9	9
Soil	Vanadium	Mollusc	1	6		6	6	6	6
Sediment	Zinc	Arthropods	13	193.15	147.22	52	142	462	464
Sediment	Zinc	Fish	29	144.66	62.61	69	136	239	359
Soil	Zinc	Arthropods	9	280.11	123.15	95	317	432	432
Soil	Zinc	Mollusc	3	175	19.29	161	167	197	197

TABLE D-2

Summary of Dioxins and Furans Detected in Biota (ng/kg, wet weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Sample Contents/Taxa	Sample ID	Analyte	Media	Wet Weight Tissue Concentration (ng/kg)
waterboatmen	BI-NEL-007-A	OCDD	sediment	23
waterboatmen (duplicate)	BI-NEL-107-A	OCDD	sediment	5.3
waterboatmen	BI-NEL-007-A	Total TCDD	sediment	3.3
waterboatmen	BI-NEL-021-A	Total TCDD	sediment	1.1
waterboatmen (duplicate)	BI-NEL-107-A	Total TCDD	sediment	2.3
waterboatmen	BI-NEL-007-A	Total TCDF	sediment	29
waterboatmen	BI-NEL-009-A	Total TCDF	sediment	3.3
waterboatmen (duplicate)	BI-NEL-107-A	Total TCDF	sediment	5.8
snails	TI-NNL-002-A	1,2,3,4,6,7,8-HpCDD	soil	11
beach hoppers, sow bugs, beetles	TI-NEL-028-A	OCDD	soil	11
snails	TI-NNL-002-A	OCDD	soil	120
snails	TI-NNL-002-A	Total HpCDD	soil	18

TABLE D-3

Summary of Regression Models for Sediment-biota Bioaccumulation. Sediment and tissue concentrations are natural-log transformed (mg/kg dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	_P_	_RSQ_
Sediment	Aluminum	Arthropods	All	All	1.512	-1.014	0.659	12	0.170	0.180
Sediment	Aluminum	Arthropods	Benthic Invertebrates	All	1.512	-1.014	0.659	12	0.170	0.180
Sediment	Aluminum	Arthropods	Benthic Invertebrates	crayfish	0.891	3.516	0.198	5	0.652	0.077
Sediment	Aluminum	Arthropods	Benthic Invertebrates	mixed insects	0.523	8.754	-0.353	3	0.755	0.141
Sediment	Aluminum	Arthropods	Benthic Invertebrates	waterboatmen	0.774	-5.763	1.244	4	0.059	0.886
Sediment	Aluminum	Fish	All	All	0.393	3.403	0.191	9	0.063	0.410
Sediment	Aluminum	Fish	Bottom Fish	All	0.393	3.403	0.191	9	0.063	0.410
Sediment	Aluminum	Fish	Bottom Fish	carp/goldfish		2.922	0.217	2		1.000
Sediment	Aluminum	Fish	Bottom Fish	Gobies	0.428	3.869	0.150	7	0.265	0.240
Sediment	Barium	Arthropods	All	All	0.729	1.733	0.351	10	0.138	0.253
Sediment	Barium	Arthropods	Benthic Invertebrates	All	0.729	1.733	0.351	10	0.138	0.253
Sediment	Barium	Arthropods	Benthic Invertebrates	crayfish	0.502	0.995	0.395	5	0.186	0.493
Sediment	Barium	Arthropods	Benthic Invertebrates	mixed insects		3.738	0.000	1		
Sediment	Barium	Arthropods	Benthic Invertebrates	waterboatmen	0.662	2.110	0.389	4	0.264	0.542
Sediment	Barium	Fish	All	All	0.259	3.869	-0.197	4	0.112	0.788
Sediment	Barium	Fish	Bottom Fish	All	0.259	3.869	-0.197	4	0.112	0.788
Sediment	Barium	Fish	Bottom Fish	carp/goldfish		3.434	0.000	1		
Sediment	Barium	Fish	Bottom Fish	Gobies	0.302	3.362	-0.119	3	0.553	0.418
Sediment	Beryllium	Arthropods	All	All		0.693	0.000	1		
Sediment	Beryllium	Arthropods	Benthic Invertebrates	All		0.693	0.000	1		
Sediment	Beryllium	Arthropods	Benthic Invertebrates	waterboatmen		0.693	0.000	1		
Sediment	Calcium	Arthropods	All	All	1.886	15.019	-0.518	13	0.372	0.073
Sediment	Calcium	Arthropods	Benthic Invertebrates	All	1.886	15.019	-0.518	13	0.372	0.073
Sediment	Calcium	Arthropods	Benthic Invertebrates	crayfish	0.343	12.955	-0.116	5	0.508	0.157
Sediment	Calcium	Arthropods	Benthic Invertebrates	dragonflies/damselflies		6.927	0.000	1		
Sediment	Calcium	Arthropods	Benthic Invertebrates	mixed insects	0.312	22.500	-1.432	3	0.083	0.983
Sediment	Calcium	Arthropods	Benthic Invertebrates	waterboatmen	0.121	3.068	0.684	4	0.218	0.612
Sediment	Calcium	Fish	All	All	0.358	9.796	0.060	29	0.243	0.050
Sediment	Calcium	Fish	Bottom Fish	All	0.377	9.192	0.117	19	0.113	0.141
Sediment	Calcium	Fish	Bottom Fish	carp/goldfish	0.794	7.857	0.249	4	0.597	0.162
Sediment	Calcium	Fish	Bottom Fish	Gobies	0.262	9.564	0.087	13	0.167	0.166
Sediment	Calcium	Fish	Bottom Fish	Long-jawed mudsuckers		9.831	0.000	1		
Sediment	Calcium	Fish	Bottom Fish	Staghorn sculpin		10.494	0.000	1		
Sediment	Calcium	Fish	Water Column Fish	All	0.315	10.568	-0.013	10	0.854	0.004
Sediment	Calcium	Fish	Water Column Fish	topsmelt	0.315	10.568	-0.013	10	0.854	0.004
Sediment	Chromium	Arthropods	All	All	0.937	2.162	0.043	4	0.927	0.005
Sediment	Chromium	Arthropods	Benthic Invertebrates	All	0.937	2.162	0.043	4	0.927	0.005
Sediment	Chromium	Arthropods	Benthic Invertebrates	crayfish		1.386	0.000	1		
Sediment	Chromium	Arthropods	Benthic Invertebrates	waterboatmen	0.410	1.515	0.242	3	0.430	0.609
Sediment	Chromium	Fish	All	All	0.174	1.840	0.077	6	0.257	0.304
Sediment	Chromium	Fish	Bottom Fish	All	0.174	1.840	0.077	6	0.257	0.304

TABLE D-3

Summary of Regression Models for Sediment-biota Bioaccumulation. Sediment and tissue concentrations are natural-log transformed (mg/kg dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	_P_	_RSQ_
Sediment	Chromium	Fish	Bottom Fish	carp/goldfish		1.607	0.123	2		1.000
Sediment	Chromium	Fish	Bottom Fish	Gobies	0.160	0.244	1.132	4	0.338	0.438
Sediment	Copper	Arthropods	All	All	1.051	2.842	0.270	13	0.180	0.157
Sediment	Copper	Arthropods	Benthic Invertebrates	All	1.051	2.842	0.270	13	0.180	0.157
Sediment	Copper	Arthropods	Benthic Invertebrates	crayfish	0.869	3.782	0.222	5	0.494	0.167
Sediment	Copper	Arthropods	Benthic Invertebrates	dragonflies/damselflies		2.639	0.000	1		
Sediment	Copper	Arthropods	Benthic Invertebrates	mixed insects	1.014	6.286	-0.376	3	0.880	0.035
Sediment	Copper	Arthropods	Benthic Invertebrates	waterboatmen	0.433	3.485	0.234	4	0.178	0.676
Sediment	Copper	Fish	All	All	0.153	2.584	-0.038	5	0.327	0.312
Sediment	Copper	Fish	Bottom Fish	All	0.147	2.304	0.013	4	0.837	0.027
Sediment	Copper	Fish	Bottom Fish	carp/goldfish		2.398	0.000	1		
Sediment	Copper	Fish	Bottom Fish	Gobies		1.689	0.175	2		1.000
Sediment	Copper	Fish	Bottom Fish	Staghorn sculpin		2.197	0.000	1		
Sediment	Copper	Fish	Water Column Fish	All		2.639	0.000	1		
Sediment	Copper	Fish	Water Column Fish	topsmelt		2.639	0.000	1		
Sediment	Iron	Arthropods	All	All	0.939	-7.545	1.406	13	0.165	0.167
Sediment	Iron	Arthropods	Benthic Invertebrates	All	0.939	-7.545	1.406	13	0.165	0.167
Sediment	Iron	Arthropods	Benthic Invertebrates	crayfish	0.766	16.667	-1.177	5	0.531	0.142
Sediment	Iron	Arthropods	Benthic Invertebrates	dragonflies/damselflies		4.605	0.000	1		
Sediment	Iron	Arthropods	Benthic Invertebrates	mixed insects	0.022	32.678	-2.986	3	0.018	0.999
Sediment	Iron	Arthropods	Benthic Invertebrates	waterboatmen	0.418	29.759	-2.330	4	0.254	0.557
Sediment	Iron	Fish	All	All	0.457	5.315	-0.020	29	0.901	0.001
Sediment	Iron	Fish	Bottom Fish	All	0.508	5.741	-0.064	19	0.784	0.005
Sediment	Iron	Fish	Bottom Fish	carp/goldfish	0.535	11.982	-0.752	4	0.403	0.356
Sediment	Iron	Fish	Bottom Fish	Gobies	0.493	3.258	0.213	13	0.433	0.057
Sediment	Iron	Fish	Bottom Fish	Long-jawed mudsuckers		4.585	0.000	1		
Sediment	Iron	Fish	Bottom Fish	Staghorn sculpin		4.625	0.000	1		
Sediment	Iron	Fish	Water Column Fish	All	0.392	4.962	0.016	10	0.947	0.001
Sediment	Iron	Fish	Water Column Fish	topsmelt	0.392	4.962	0.016	10	0.947	0.001
Sediment	Lead	Arthropods	All	All	0.522	-0.014	0.495	3	0.321	0.766
Sediment	Lead	Arthropods	Benthic Invertebrates	All	0.522	-0.014	0.495	3	0.321	0.766
Sediment	Lead	Arthropods	Benthic Invertebrates	waterboatmen	0.522	-0.014	0.495	3	0.321	0.766
Sediment	Magnesium	Arthropods	All	All	0.741	2.744	0.531	13	0.067	0.272
Sediment	Magnesium	Arthropods	Benthic Invertebrates	All	0.741	2.744	0.531	13	0.067	0.272
Sediment	Magnesium	Arthropods	Benthic Invertebrates	crayfish	0.292	4.927	0.365	5	0.118	0.611
Sediment	Magnesium	Arthropods	Benthic Invertebrates	dragonflies/damselflies		6.454	0.000	1		
Sediment	Magnesium	Arthropods	Benthic Invertebrates	mixed insects	0.494	6.857	-0.001	3	0.999	0.000
Sediment	Magnesium	Arthropods	Benthic Invertebrates	waterboatmen	0.445	3.588	0.452	4	0.221	0.607
Sediment	Magnesium	Fish	All	All	0.307	7.565	-0.025	29	0.660	0.007
Sediment	Magnesium	Fish	Bottom Fish	All	0.339	7.333	-0.004	19	0.960	0.000
Sediment	Magnesium	Fish	Bottom Fish	carp/goldfish	0.741	7.567	-0.042	4	0.917	0.007

TABLE D-3

Summary of Regression Models for Sediment-biota Bioaccumulation. Sediment and tissue concentrations are natural-log transformed (mg/kg dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	_P_	_RSQ_
Sediment	Magnesium	Fish	Bottom Fish	Gobies	0.181	7.056	0.038	13	0.458	0.051
Sediment	Magnesium	Fish	Bottom Fish	Long-jawed mudsuckers		6.704	0.000	1		
Sediment	Magnesium	Fish	Bottom Fish	Staghorn sculpin		7.281	0.000	1		
Sediment	Magnesium	Fish	Water Column Fish	All	0.223	7.116	0.046	10	0.609	0.034
Sediment	Magnesium	Fish	Water Column Fish	topsmelt	0.223	7.116	0.046	10	0.609	0.034
Sediment	Manganese	Arthropods	All	All	1.056	4.013	0.209	13	0.583	0.028
Sediment	Manganese	Arthropods	Benthic Invertebrates	All	1.056	4.013	0.209	13	0.583	0.028
Sediment	Manganese	Arthropods	Benthic Invertebrates	crayfish	0.850	11.174	-0.749	5	0.269	0.379
Sediment	Manganese	Arthropods	Benthic Invertebrates	dragonflies/damselflies		4.369	0.000	1		
Sediment	Manganese	Arthropods	Benthic Invertebrates	mixed insects	0.796	6.501	-0.293	3	0.786	0.108
Sediment	Manganese	Arthropods	Benthic Invertebrates	waterboatmen	0.383	1.226	0.602	4	0.078	0.850
Sediment	Manganese	Fish	All	All	0.409	3.214	0.078	29	0.293	0.041
Sediment	Manganese	Fish	Bottom Fish	All	0.499	3.057	0.102	19	0.376	0.046
Sediment	Manganese	Fish	Bottom Fish	carp/goldfish	0.222	2.805	0.141	4	0.281	0.518
Sediment	Manganese	Fish	Bottom Fish	Gobies	0.455	3.129	0.115	13	0.366	0.075
Sediment	Manganese	Fish	Bottom Fish	Long-jawed mudsuckers		2.639	0.000	1		
Sediment	Manganese	Fish	Bottom Fish	Staghorn sculpin		2.890	0.000	1		
Sediment	Manganese	Fish	Water Column Fish	All	0.176	3.387	0.049	10	0.440	0.076
Sediment	Manganese	Fish	Water Column Fish	topsmelt	0.176	3.387	0.049	10	0.440	0.076
Sediment	Mercury	Fish	All	All		-3.963	0.000	1		
Sediment	Mercury	Fish	Water Column Fish	All		-3.963	0.000	1		
Sediment	Mercury	Fish	Water Column Fish	topsmelt		-3.963	0.000	1		
Sediment	Nickel	Arthropods	All	All		3.091	0.000	1		
Sediment	Nickel	Arthropods	Benthic Invertebrates	All		3.091	0.000	1		
Sediment	Nickel	Arthropods	Benthic Invertebrates	waterboatmen		3.091	0.000	1		
Sediment	Potassium	Arthropods	All	All	0.368	8.406	0.056	13	0.755	0.009
Sediment	Potassium	Arthropods	Benthic Invertebrates	All	0.368	8.406	0.056	13	0.755	0.009
Sediment	Potassium	Arthropods	Benthic Invertebrates	crayfish	0.334	11.722	-0.359	5	0.318	0.322
Sediment	Potassium	Arthropods	Benthic Invertebrates	dragonflies/damselflies		8.510	0.000	1		
Sediment	Potassium	Arthropods	Benthic Invertebrates	mixed insects	0.481	7.817	0.097	3	0.919	0.016
Sediment	Potassium	Arthropods	Benthic Invertebrates	waterboatmen	0.270	4.122	0.575	4	0.698	0.091
Sediment	Potassium	Fish	All	All	0.430	9.123	0.003	20	0.986	0.000
Sediment	Potassium	Fish	Bottom Fish	All	0.428	8.843	0.050	15	0.775	0.007
Sediment	Potassium	Fish	Bottom Fish	carp/goldfish	0.509	-2.207	1.524	3	0.308	0.783
Sediment	Potassium	Fish	Bottom Fish	Gobies	0.246	10.649	-0.168	10	0.191	0.204
Sediment	Potassium	Fish	Bottom Fish	Long-jawed mudsuckers		9.190	0.000	1		
Sediment	Potassium	Fish	Bottom Fish	Staghorn sculpin		9.115	0.000	1		
Sediment	Potassium	Fish	Water Column Fish	All	0.360	11.039	-0.283	5	0.385	0.255
Sediment	Potassium	Fish	Water Column Fish	topsmelt	0.360	11.039	-0.283	5	0.385	0.255
Sediment	Selenium	Arthropods	All	All		3.005	-2.750	2		1.000
Sediment	Selenium	Arthropods	Benthic Invertebrates	All		3.005	-2.750	2		1.000

TABLE D-3

Summary of Regression Models for Sediment-biota Bioaccumulation. Sediment and tissue concentrations are natural-log transformed (mg/kg dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	_P_	_RSQ_
Sediment	Selenium	Arthropods	Benthic Invertebrates	crayfish		3.005	-2.750	2		1.000
Sediment	Selenium	Fish	All	All	0.141	2.025	-0.143	7	0.229	0.273
Sediment	Selenium	Fish	Bottom Fish	All	0.145	2.099	-0.195	5	0.189	0.489
Sediment	Selenium	Fish	Bottom Fish	Gobies	0.068	2.032	-0.063	4	0.440	0.314
Sediment	Selenium	Fish	Bottom Fish	Staghorn sculpin		1.609	0.000	1		
Sediment	Selenium	Fish	Water Column Fish	All		1.613	0.380	2		1.000
Sediment	Selenium	Fish	Water Column Fish	topsmelt		1.613	0.380	2		1.000
Sediment	Sodium	Arthropods	All	All	0.459	10.054	-0.188	13	0.588	0.027
Sediment	Sodium	Arthropods	Benthic Invertebrates	All	0.459	10.054	-0.188	13	0.588	0.027
Sediment	Sodium	Arthropods	Benthic Invertebrates	crayfish	0.209	13.745	-0.612	5	0.104	0.641
Sediment	Sodium	Arthropods	Benthic Invertebrates	dragonflies/damselflies		8.211	0.000	1		
Sediment	Sodium	Arthropods	Benthic Invertebrates	mixed insects	0.382	5.960	0.293	3	0.788	0.107
Sediment	Sodium	Arthropods	Benthic Invertebrates	waterboatmen	0.476	10.753	-0.292	4	0.711	0.083
Sediment	Sodium	Fish	All	All	0.298	8.306	-0.024	29	0.713	0.005
Sediment	Sodium	Fish	Bottom Fish	All	0.355	8.307	-0.020	19	0.836	0.003
Sediment	Sodium	Fish	Bottom Fish	carp/goldfish	0.837	4.592	0.453	4	0.738	0.068
Sediment	Sodium	Fish	Bottom Fish	Gobies	0.194	8.693	-0.064	13	0.368	0.074
Sediment	Sodium	Fish	Bottom Fish	Long-jawed mudsuckers		8.299	0.000	1		
Sediment	Sodium	Fish	Bottom Fish	Staghorn sculpin		8.094	0.000	1		
Sediment	Sodium	Fish	Water Column Fish	All	0.165	8.309	-0.031	10	0.600	0.036
Sediment	Sodium	Fish	Water Column Fish	topsmelt	0.165	8.309	-0.031	10	0.600	0.036
Sediment	Vanadium	Arthropods	All	All		1.946	0.000	1		
Sediment	Vanadium	Arthropods	Benthic Invertebrates	All		1.946	0.000	1		
Sediment	Vanadium	Arthropods	Benthic Invertebrates	waterboatmen		1.946	0.000	1		
Sediment	Zinc	Arthropods	All	All	0.825	4.544	0.066	13	0.752	0.009
Sediment	Zinc	Arthropods	Benthic Invertebrates	All	0.825	4.544	0.066	13	0.752	0.009
Sediment	Zinc	Arthropods	Benthic Invertebrates	crayfish	0.669	4.050	0.082	5	0.824	0.019
Sediment	Zinc	Arthropods	Benthic Invertebrates	dragonflies/damselflies		3.951	0.000	1		
Sediment	Zinc	Arthropods	Benthic Invertebrates	mixed insects	0.766	7.864	-0.446	3	0.743	0.154
Sediment	Zinc	Arthropods	Benthic Invertebrates	waterboatmen	0.108	4.885	0.159	4	0.047	0.908
Sediment	Zinc	Fish	All	All	0.375	4.890	0.003	29	0.951	0.000
Sediment	Zinc	Fish	Bottom Fish	All	0.427	4.786	0.018	19	0.767	0.005
Sediment	Zinc	Fish	Bottom Fish	carp/goldfish	0.778	6.033	-0.116	4	0.640	0.130
Sediment	Zinc	Fish	Bottom Fish	Gobies	0.174	4.682	0.026	13	0.411	0.062
Sediment	Zinc	Fish	Bottom Fish	Long-jawed mudsuckers		4.635	0.000	1		
Sediment	Zinc	Fish	Bottom Fish	Staghorn sculpin		4.234	0.000	1		
Sediment	Zinc	Fish	Water Column Fish	All	0.289	4.978	-0.008	10	0.911	0.002
Sediment	Zinc	Fish	Water Column Fish	topsmelt	0.289	4.978	-0.008	10	0.911	0.002

TABLE D-4

Summary of Regression Models for Soil-biota Bioaccumulation. Soil and tissue concentrations are natural-log transformed (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	p-value	r-square
Soil	Aluminum	Arthropods	All	All	0.821	4.004	0.455	9	0.102	0.336
Soil	Aluminum	Arthropods	Terrestrial Inverts	All	0.821	4.004	0.455	9	0.102	0.336
Soil	Aluminum	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		72.239	-7.005	2		1.000
Soil	Aluminum	Arthropods	Terrestrial Inverts	mixed insects		-285.880	32.541	2		1.000
Soil	Aluminum	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		7.858	0.000	1		
Soil	Aluminum	Arthropods	Terrestrial Inverts	spiders/beetles		-3.977	1.355	2		1.000
Soil	Aluminum	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		9.367	0.000	1		
Soil	Aluminum	Arthropods	Terrestrial Inverts	spiders/cricket		8.905	0.000	1		
Soil	Aluminum	Mollusc	All	All	0.392	1.013	0.682	3	0.257	0.846
Soil	Aluminum	Mollusc	Terrestrial Inverts	All	0.392	1.013	0.682	3	0.257	0.846
Soil	Aluminum	Mollusc	Terrestrial Inverts	snails	0.392	1.013	0.682	3	0.257	0.846
Soil	Barium	Arthropods	All	All	0.730	4.943	0.005	8	0.981	0.000
Soil	Barium	Arthropods	Terrestrial Inverts	All	0.730	4.943	0.005	8	0.981	0.000
Soil	Barium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		5.462	-0.259	2		1.000
Soil	Barium	Arthropods	Terrestrial Inverts	mixed insects		-13.818	4.135	2		1.000
Soil	Barium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		4.718	0.000	1		
Soil	Barium	Arthropods	Terrestrial Inverts	spiders/beetles		5.226	0.000	1		
Soil	Barium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		5.598	0.000	1		
Soil	Barium	Arthropods	Terrestrial Inverts	spiders/cricket		4.663	0.000	1		
Soil	Barium	Mollusc	All	All	0.766	4.657	0.066	3	0.931	0.012
Soil	Barium	Mollusc	Terrestrial Inverts	All	0.766	4.657	0.066	3	0.931	0.012
Soil	Barium	Mollusc	Terrestrial Inverts	snails	0.766	4.657	0.066	3	0.931	0.012
Soil	Cadmium	Arthropods	All	All		1.099	0.000	1		
Soil	Cadmium	Arthropods	Terrestrial Inverts	All		1.099	0.000	1		
Soil	Cadmium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		1.099	0.000	1		
Soil	Cadmium	Mollusc	All	All		1.609	0.000	2		
Soil	Cadmium	Mollusc	Terrestrial Inverts	All		1.609	0.000	2		
Soil	Cadmium	Mollusc	Terrestrial Inverts	snails		1.609	0.000	2		
Soil	Calcium	Arthropods	All	All	1.126	15.503	-0.545	9	0.427	0.092
Soil	Calcium	Arthropods	Terrestrial Inverts	All	1.126	15.503	-0.545	9	0.427	0.092
Soil	Calcium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		3.235	0.860	2		1.000
Soil	Calcium	Arthropods	Terrestrial Inverts	mixed insects		-10.785	2.616	2		1.000
Soil	Calcium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		11.578	0.000	1		
Soil	Calcium	Arthropods	Terrestrial Inverts	spiders/beetles		27.100	-2.074	2		1.000
Soil	Calcium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		11.539	0.000	1		
Soil	Calcium	Arthropods	Terrestrial Inverts	spiders/cricket		9.953	0.000	1		
Soil	Calcium	Mollusc	All	All	0.126	24.684	-1.731	3	0.113	0.969
Soil	Calcium	Mollusc	Terrestrial Inverts	All	0.126	24.684	-1.731	3	0.113	0.969
Soil	Calcium	Mollusc	Terrestrial Inverts	snails	0.126	24.684	-1.731	3	0.113	0.969
Soil	Chromium	Arthropods	All	All	0.934	1.587	0.263	6	0.538	0.102
Soil	Chromium	Arthropods	Terrestrial Inverts	All	0.934	1.587	0.263	6	0.538	0.102

TABLE D-4

Summary of Regression Models for Soil-biota Bioaccumulation. Soil and tissue concentrations are natural-log transformed (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	p-value	r-square
Soil	Chromium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		3.254	-0.536	2		1.000
Soil	Chromium	Arthropods	Terrestrial Inverts	mixed insects		-6.065	3.131	2		1.000
Soil	Chromium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		3.219	0.000	1		
Soil	Chromium	Arthropods	Terrestrial Inverts	spiders/cricket		2.708	0.000	1		
Soil	Copper	Arthropods	All	All	0.855	4.359	0.239	9	0.161	0.260
Soil	Copper	Arthropods	Terrestrial Inverts	All	0.855	4.359	0.239	9	0.161	0.260
Soil	Copper	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		4.257	-0.023	2		1.000
Soil	Copper	Arthropods	Terrestrial Inverts	mixed insects		5.549	0.087	2		1.000
Soil	Copper	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		4.997	0.000	1		
Soil	Copper	Arthropods	Terrestrial Inverts	spiders/beetles		0.086	1.165	2		1.000
Soil	Copper	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		6.763	0.000	1		
Soil	Copper	Arthropods	Terrestrial Inverts	spiders/cricket		5.900	0.000	1		
Soil	Copper	Mollusc	All	All	0.362	6.204	-0.687	3	0.277	0.822
Soil	Copper	Mollusc	Terrestrial Inverts	All	0.362	6.204	-0.687	3	0.277	0.822
Soil	Copper	Mollusc	Terrestrial Inverts	snails	0.362	6.204	-0.687	3	0.277	0.822
Soil	Iron	Arthropods	All	All	0.747	4.293	0.386	9	0.404	0.101
Soil	Iron	Arthropods	Terrestrial Inverts	All	0.747	4.293	0.386	9	0.404	0.101
Soil	Iron	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		20.527	-1.257	2		1.000
Soil	Iron	Arthropods	Terrestrial Inverts	mixed insects		-0.873	0.959	2		1.000
Soil	Iron	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		8.389	0.000	1		
Soil	Iron	Arthropods	Terrestrial Inverts	spiders/beetles		95.020	-10.189	2		1.000
Soil	Iron	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		8.271	0.000	1		
Soil	Iron	Arthropods	Terrestrial Inverts	spiders/cricket		7.141	0.000	1		
Soil	Iron	Mollusc	All	All	0.436	-2.285	1.044	3	0.355	0.720
Soil	Iron	Mollusc	Terrestrial Inverts	All	0.436	-2.285	1.044	3	0.355	0.720
Soil	Iron	Mollusc	Terrestrial Inverts	snails	0.436	-2.285	1.044	3	0.355	0.720
Soil	Lead	Arthropods	All	All	0.581	1.723	0.275	8	0.130	0.339
Soil	Lead	Arthropods	Terrestrial Inverts	All	0.581	1.723	0.275	8	0.130	0.339
Soil	Lead	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		1.164	0.272	2		1.000
Soil	Lead	Arthropods	Terrestrial Inverts	mixed insects		-3.824	2.483	2		1.000
Soil	Lead	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		2.197	0.000	1		
Soil	Lead	Arthropods	Terrestrial Inverts	spiders/beetles		2.996	0.000	1		
Soil	Lead	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		3.497	0.000	1		
Soil	Lead	Arthropods	Terrestrial Inverts	spiders/cricket		3.091	0.000	1		
Soil	Lead	Mollusc	All	All		1.386	0.000	1		
Soil	Lead	Mollusc	Terrestrial Inverts	All		1.386	0.000	1		
Soil	Lead	Mollusc	Terrestrial Inverts	snails		1.386	0.000	1		
Soil	Magnesium	Arthropods	All	All	0.329	8.749	-0.035	9	0.786	0.011
Soil	Magnesium	Arthropods	Terrestrial Inverts	All	0.329	8.749	-0.035	9	0.786	0.011
Soil	Magnesium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		7.294	0.126	2		1.000
Soil	Magnesium	Arthropods	Terrestrial Inverts	mixed insects		4.071	0.567	2		1.000

TABLE D-4

Summary of Regression Models for Soil-biota Bioaccumulation. Soil and tissue concentrations are natural-log transformed (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	p-value	r-square
Soil	Magnesium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		8.561	0.000	1		
Soil	Magnesium	Arthropods	Terrestrial Inverts	spiders/beetles		-18.470	3.399	2		1.000
Soil	Magnesium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		8.814	0.000	1		
Soil	Magnesium	Arthropods	Terrestrial Inverts	spiders/cricket		8.205	0.000	1		
Soil	Magnesium	Mollusc	All	All	0.140	8.127	0.046	3	0.745	0.152
Soil	Magnesium	Mollusc	Terrestrial Inverts	All	0.140	8.127	0.046	3	0.745	0.152
Soil	Magnesium	Mollusc	Terrestrial Inverts	snails	0.140	8.127	0.046	3	0.745	0.152
Soil	Manganese	Arthropods	All	All	0.442	4.459	0.043	9	0.812	0.009
Soil	Manganese	Arthropods	Terrestrial Inverts	All	0.442	4.459	0.043	9	0.812	0.009
Soil	Manganese	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		13.542	-1.591	2		1.000
Soil	Manganese	Arthropods	Terrestrial Inverts	mixed insects		10.818	-1.110	2		1.000
Soil	Manganese	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		4.419	0.000	1		
Soil	Manganese	Arthropods	Terrestrial Inverts	spiders/beetles		87.388	-15.654	2		1.000
Soil	Manganese	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		5.416	0.000	1		
Soil	Manganese	Arthropods	Terrestrial Inverts	spiders/cricket		4.736	0.000	1		
Soil	Manganese	Mollusc	All	All	0.163	1.963	0.463	3	0.180	0.922
Soil	Manganese	Mollusc	Terrestrial Inverts	All	0.163	1.963	0.463	3	0.180	0.922
Soil	Manganese	Mollusc	Terrestrial Inverts	snails	0.163	1.963	0.463	3	0.180	0.922
Soil	Mercury	Mollusc	All	All		-3.101	0.000	1		
Soil	Mercury	Mollusc	Terrestrial Inverts	All		-3.101	0.000	1		
Soil	Mercury	Mollusc	Terrestrial Inverts	snails		-3.101	0.000	1		
Soil	Nickel	Arthropods	All	All		3.875	-0.344	2		1.000
Soil	Nickel	Arthropods	Terrestrial Inverts	All		3.875	-0.344	2		1.000
Soil	Nickel	Arthropods	Terrestrial Inverts	mixed insects		3.045	0.000	1		
Soil	Nickel	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		2.708	0.000	1		
Soil	Potassium	Arthropods	All	All	0.335	9.958	-0.132	7	0.356	0.171
Soil	Potassium	Arthropods	Terrestrial Inverts	All	0.335	9.958	-0.132	7	0.356	0.171
Soil	Potassium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		14.190	-0.691	2		1.000
Soil	Potassium	Arthropods	Terrestrial Inverts	mixed insects		7.610	0.230	2		1.000
Soil	Potassium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		9.225	0.000	1		
Soil	Potassium	Arthropods	Terrestrial Inverts	spiders/beetles		9.244	0.000	1		
Soil	Potassium	Arthropods	Terrestrial Inverts	spiders/cricket		9.128	0.000	1		
Soil	Potassium	Mollusc	All	All		19.911	-1.391	2		1.000
Soil	Potassium	Mollusc	Terrestrial Inverts	All		19.911	-1.391	2		1.000
Soil	Potassium	Mollusc	Terrestrial Inverts	snails		19.911	-1.391	2		1.000
Soil	Sodium	Arthropods	All	All	0.390	8.990	-0.002	9	0.982	0.000
Soil	Sodium	Arthropods	Terrestrial Inverts	All	0.390	8.990	-0.002	9	0.982	0.000
Soil	Sodium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		10.915	-0.206	2		1.000
Soil	Sodium	Arthropods	Terrestrial Inverts	mixed insects		3.777	0.990	2		1.000
Soil	Sodium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		8.745	0.000	1		
Soil	Sodium	Arthropods	Terrestrial Inverts	spiders/beetles		9.451	-0.135	2		1.000

TABLE D-4

Summary of Regression Models for Soil-biota Bioaccumulation. Soil and tissue concentrations are natural-log transformed (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	_RMSE_	Intercept	Slope	n	p-value	r-square
Soil	Sodium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		9.307	0.000	1		
Soil	Sodium	Arthropods	Terrestrial Inverts	spiders/cricket		8.554	0.000	1		
Soil	Sodium	Mollusc	All	All	0.126	10.660	-0.343	3	0.389	0.672
Soil	Sodium	Mollusc	Terrestrial Inverts	All	0.126	10.660	-0.343	3	0.389	0.672
Soil	Sodium	Mollusc	Terrestrial Inverts	snails	0.126	10.660	-0.343	3	0.389	0.672
Soil	Vanadium	Arthropods	All	All	0.234	1.276	0.191	6	0.498	0.122
Soil	Vanadium	Arthropods	Terrestrial Inverts	All	0.234	1.276	0.191	6	0.498	0.122
Soil	Vanadium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		19.563	-5.466	2		1.000
Soil	Vanadium	Arthropods	Terrestrial Inverts	mixed insects		-14.262	4.245	2		1.000
Soil	Vanadium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		2.079	0.000	1		
Soil	Vanadium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		2.079	0.000	1		
Soil	Vanadium	Mollusc	All	All		1.792	0.000	1		
Soil	Vanadium	Mollusc	Terrestrial Inverts	All		1.792	0.000	1		
Soil	Vanadium	Mollusc	Terrestrial Inverts	snails		1.792	0.000	1		
Soil	Zinc	Arthropods	All	All	0.565	4.563	0.184	9	0.276	0.166
Soil	Zinc	Arthropods	Terrestrial Inverts	All	0.565	4.563	0.184	9	0.276	0.166
Soil	Zinc	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles		4.409	0.033	2		1.000
Soil	Zinc	Arthropods	Terrestrial Inverts	mixed insects		5.717	0.010	2		1.000
Soil	Zinc	Arthropods	Terrestrial Inverts	sow bugs/mixed insects		5.268	0.000	1		
Soil	Zinc	Arthropods	Terrestrial Inverts	spiders/beetles		9.045	-0.592	2		1.000
Soil	Zinc	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers		6.068	0.000	1		
Soil	Zinc	Arthropods	Terrestrial Inverts	spiders/cricket		5.886	0.000	1		
Soil	Zinc	Mollusc	All	All	0.114	4.866	0.081	3	0.542	0.434
Soil	Zinc	Mollusc	Terrestrial Inverts	All	0.114	4.866	0.081	3	0.542	0.434
Soil	Zinc	Mollusc	Terrestrial Inverts	snails	0.114	4.866	0.081	3	0.542	0.434

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Sediment	Aluminum	Arthropods	Benthic Invertebrates		12	0.023	0.034	0.001	0.011	0.041	0.121
Sediment	Aluminum	Arthropods	Benthic Invertebrates	crayfish	5	0.010	0.009	0.001	0.008	0.023	0.023
Sediment	Aluminum	Arthropods	Benthic Invertebrates	mixed insects	3	0.003	0.002	0.001	0.002	0.005	0.005
Sediment	Aluminum	Arthropods	Benthic Invertebrates	waterboatmen	4	0.054	0.045	0.025	0.034	0.121	0.121
Sediment	Aluminum	Arthropods			12	0.023	0.034	0.001	0.011	0.041	0.121
Sediment	Aluminum	Fish	Bottom Fish		9	0.022	0.023	0.002	0.020	0.061	0.061
Sediment	Aluminum	Fish	Bottom Fish	Gobies	7	0.019	0.019	0.002	0.020	0.057	0.057
Sediment	Aluminum	Fish	Bottom Fish	carp/goldfish	2	0.032	0.041	0.003	0.032	0.061	0.061
Sediment	Aluminum	Fish			9	0.022	0.023	0.002	0.020	0.061	0.061
Sediment	Barium	Arthropods	Benthic Invertebrates		10	0.122	0.124	0.023	0.086	0.344	0.349
Sediment	Barium	Arthropods	Benthic Invertebrates	crayfish	5	0.059	0.046	0.023	0.029	0.110	0.110
Sediment	Barium	Arthropods	Benthic Invertebrates	mixed insects	1	0.063		0.063	0.063	0.063	0.063
Sediment	Barium	Arthropods	Benthic Invertebrates	waterboatmen	4	0.214	0.155	0.036	0.236	0.349	0.349
Sediment	Barium	Arthropods			10	0.122	0.124	0.023	0.086	0.344	0.349
Sediment	Barium	Fish	Bottom Fish		4	0.538	0.959	0.004	0.086	1.975	1.975
Sediment	Barium	Fish	Bottom Fish	Gobies	3	0.059	0.047	0.004	0.086	0.086	0.086
Sediment	Barium	Fish	Bottom Fish	carp/goldfish	1	1.975		1.975	1.975	1.975	1.975
Sediment	Barium	Fish			4	0.538	0.959	0.004	0.086	1.975	1.975
Sediment	Beryllium	Arthropods	Benthic Invertebrates		1	0.194		0.194	0.194	0.194	0.194
Sediment	Beryllium	Arthropods	Benthic Invertebrates	waterboatmen	1	0.194		0.194	0.194	0.194	0.194
Sediment	Beryllium	Arthropods			1	0.194		0.194	0.194	0.194	0.194
Sediment	Calcium	Arthropods	Benthic Invertebrates		13	4.239	6.851	0.012	1.220	17.881	20.721
Sediment	Calcium	Arthropods	Benthic Invertebrates	crayfish	5	9.183	9.341	1.142	3.857	20.721	20.721
Sediment	Calcium	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.012		0.012	0.012	0.012	0.012
Sediment	Calcium	Arthropods	Benthic Invertebrates	mixed insects	3	1.549	2.624	0.024	0.046	4.579	4.579
Sediment	Calcium	Arthropods	Benthic Invertebrates	waterboatmen	4	1.134	0.129	0.992	1.140	1.263	1.263
Sediment	Calcium	Arthropods			13	4.239	6.851	0.012	1.220	17.881	20.721
Sediment	Calcium	Fish	Bottom Fish		19	2.519	2.484	0.221	1.516	7.261	8.117
Sediment	Calcium	Fish	Bottom Fish	Gobies	13	2.657	2.362	0.231	1.853	5.902	7.261
Sediment	Calcium	Fish	Bottom Fish	Long-jawed mudsuckers	1	1.398		1.398	1.398	1.398	1.398
Sediment	Calcium	Fish	Bottom Fish	Staghorn sculpin	1	0.221		0.221	0.221	0.221	0.221
Sediment	Calcium	Fish	Bottom Fish	carp/goldfish	4	2.925	3.496	0.693	1.444	8.117	8.117
Sediment	Calcium	Fish	Water Column Fish		10	4.113	4.234	0.201	2.902	10.373	10.643
Sediment	Calcium	Fish	Water Column Fish	topsmelt	10	4.113	4.234	0.201	2.902	10.373	10.643
Sediment	Calcium	Fish			29	3.069	3.213	0.201	1.516	8.117	10.643
Sediment	Chromium	Arthropods	Benthic Invertebrates		4	0.128	0.175	0.012	0.057	0.388	0.388
Sediment	Chromium	Arthropods	Benthic Invertebrates	crayfish	1	0.012		0.012	0.012	0.012	0.012
Sediment	Chromium	Arthropods	Benthic Invertebrates	waterboatmen	3	0.167	0.192	0.041	0.073	0.388	0.388
Sediment	Chromium	Arthropods			4	0.128	0.175	0.012	0.057	0.388	0.388
Sediment	Chromium	Fish	Bottom Fish		6	1.286	0.623	0.074	1.401	1.778	1.778
Sediment	Chromium	Fish	Bottom Fish	Gobies	4	1.577	0.206	1.373	1.580	1.778	1.778

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Sediment	Chromium	Fish	Bottom Fish	carp/goldfish	2	0.704	0.891	0.074	0.704	1.333	1.333
Sediment	Chromium	Fish			6	1.286	0.623	0.074	1.401	1.778	1.778
Sediment	Copper	Arthropods	Benthic Invertebrates		13	0.397	0.504	0.012	0.105	1.161	1.510
Sediment	Copper	Arthropods	Benthic Invertebrates	crayfish	5	0.442	0.460	0.035	0.295	1.161	1.161
Sediment	Copper	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.223		0.223	0.223	0.223	0.223
Sediment	Copper	Arthropods	Benthic Invertebrates	mixed insects	3	0.038	0.027	0.012	0.037	0.065	0.065
Sediment	Copper	Arthropods	Benthic Invertebrates	waterboatmen	4	0.655	0.708	0.044	0.533	1.510	1.510
Sediment	Copper	Arthropods			13	0.397	0.504	0.012	0.105	1.161	1.510
Sediment	Copper	Fish	Bottom Fish		4	0.109	0.076	0.007	0.119	0.191	0.191
Sediment	Copper	Fish	Bottom Fish	Gobies	2	0.159	0.045	0.127	0.159	0.191	0.191
Sediment	Copper	Fish	Bottom Fish	Staghorn sculpin	1	0.110		0.110	0.110	0.110	0.110
Sediment	Copper	Fish	Bottom Fish	carp/goldfish	1	0.007		0.007	0.007	0.007	0.007
Sediment	Copper	Fish	Water Column Fish		1	6.667		6.667	6.667	6.667	6.667
Sediment	Copper	Fish	Water Column Fish	topsmelt	1	6.667		6.667	6.667	6.667	6.667
Sediment	Copper	Fish			5	1.420	2.934	0.007	0.127	6.667	6.667
Sediment	Iron	Arthropods	Benthic Invertebrates		13	0.037	0.036	0.007	0.030	0.080	0.133
Sediment	Iron	Arthropods	Benthic Invertebrates	crayfish	5	0.031	0.029	0.011	0.024	0.080	0.080
Sediment	Iron	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.008		0.008	0.008	0.008	0.008
Sediment	Iron	Arthropods	Benthic Invertebrates	mixed insects	3	0.018	0.012	0.007	0.016	0.030	0.030
Sediment	Iron	Arthropods	Benthic Invertebrates	waterboatmen	4	0.065	0.047	0.032	0.047	0.133	0.133
Sediment	Iron	Arthropods			13	0.037	0.036	0.007	0.030	0.080	0.133
Sediment	Iron	Fish	Bottom Fish		19	0.021	0.019	0.005	0.015	0.063	0.075
Sediment	Iron	Fish	Bottom Fish	Gobies	13	0.022	0.015	0.005	0.017	0.037	0.063
Sediment	Iron	Fish	Bottom Fish	Long-jawed mudsuckers	1	0.005		0.005	0.005	0.005	0.005
Sediment	Iron	Fish	Bottom Fish	Staghorn sculpin	1	0.006		0.006	0.006	0.006	0.006
Sediment	Iron	Fish	Bottom Fish	carp/goldfish	4	0.029	0.031	0.012	0.014	0.075	0.075
Sediment	Iron	Fish	Water Column Fish		10	0.027	0.017	0.009	0.026	0.052	0.062
Sediment	Iron	Fish	Water Column Fish	topsmelt	10	0.027	0.017	0.009	0.026	0.052	0.062
Sediment	Iron	Fish			29	0.023	0.018	0.005	0.016	0.062	0.075
Sediment	Lead	Arthropods	Benthic Invertebrates		3	0.104	0.076	0.040	0.084	0.189	0.189
Sediment	Lead	Arthropods	Benthic Invertebrates	waterboatmen	3	0.104	0.076	0.040	0.084	0.189	0.189
Sediment	Lead	Arthropods			3	0.104	0.076	0.040	0.084	0.189	0.189
Sediment	Magnesium	Arthropods	Benthic Invertebrates		13	0.246	0.208	0.039	0.181	0.503	0.802
Sediment	Magnesium	Arthropods	Benthic Invertebrates	crayfish	5	0.400	0.256	0.181	0.282	0.802	0.802
Sediment	Magnesium	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.129		0.129	0.129	0.129	0.129
Sediment	Magnesium	Arthropods	Benthic Invertebrates	mixed insects	3	0.092	0.055	0.039	0.089	0.149	0.149
Sediment	Magnesium	Arthropods	Benthic Invertebrates	waterboatmen	4	0.197	0.116	0.073	0.183	0.348	0.348
Sediment	Magnesium	Arthropods			13	0.246	0.208	0.039	0.181	0.503	0.802
Sediment	Magnesium	Fish	Bottom Fish		19	0.452	0.485	0.030	0.262	1.258	1.616
Sediment	Magnesium	Fish	Bottom Fish	Gobies	13	0.493	0.436	0.030	0.272	1.112	1.258
Sediment	Magnesium	Fish	Bottom Fish	Long-jawed mudsuckers	1	0.104		0.104	0.104	0.104	0.104

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Sediment	Magnesium	Fish	Bottom Fish	Staghorn sculpin	1	0.153		0.153	0.153	0.153	0.153
Sediment	Magnesium	Fish	Bottom Fish	carp/goldfish	4	0.480	0.758	0.090	0.106	1.616	1.616
Sediment	Magnesium	Fish	Water Column Fish		10	0.995	0.682	0.239	1.047	1.923	2.077
Sediment	Magnesium	Fish	Water Column Fish	topsmelt	10	0.995	0.682	0.239	1.047	1.923	2.077
Sediment	Magnesium	Fish			29	0.639	0.608	0.030	0.306	1.616	2.077
Sediment	Manganese	Arthropods	Benthic Invertebrates		13	0.722	1.401	0.049	0.328	0.905	5.307
Sediment	Manganese	Arthropods	Benthic Invertebrates	crayfish	5	1.495	2.154	0.073	0.725	5.307	5.307
Sediment	Manganese	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.194		0.194	0.194	0.194	0.194
Sediment	Manganese	Arthropods	Benthic Invertebrates	mixed insects	3	0.201	0.166	0.049	0.175	0.379	0.379
Sediment	Manganese	Arthropods	Benthic Invertebrates	waterboatmen	4	0.278	0.140	0.114	0.278	0.443	0.443
Sediment	Manganese	Arthropods			13	0.722	1.401	0.049	0.328	0.905	5.307
Sediment	Manganese	Fish	Bottom Fish		19	0.224	0.247	0.023	0.133	0.612	0.902
Sediment	Manganese	Fish	Bottom Fish	Gobies	13	0.267	0.271	0.023	0.152	0.612	0.902
Sediment	Manganese	Fish	Bottom Fish	Long-jawed mudsuckers	1	0.055		0.055	0.055	0.055	0.055
Sediment	Manganese	Fish	Bottom Fish	Staghorn sculpin	1	0.042		0.042	0.042	0.042	0.042
Sediment	Manganese	Fish	Bottom Fish	carp/goldfish	4	0.174	0.204	0.034	0.094	0.474	0.474
Sediment	Manganese	Fish	Water Column Fish		10	0.388	0.279	0.082	0.430	0.730	0.813
Sediment	Manganese	Fish	Water Column Fish	topsmelt	10	0.388	0.279	0.082	0.430	0.730	0.813
Sediment	Manganese	Fish			29	0.281	0.266	0.023	0.139	0.647	0.902
Sediment	Mercury	Fish	Water Column Fish		1	0.633		0.633	0.633	0.633	0.633
Sediment	Mercury	Fish	Water Column Fish	topsmelt	1	0.633		0.633	0.633	0.633	0.633
Sediment	Mercury	Fish			1	0.633		0.633	0.633	0.633	0.633
Sediment	Nickel	Arthropods	Benthic Invertebrates		1	0.139		0.139	0.139	0.139	0.139
Sediment	Nickel	Arthropods	Benthic Invertebrates	waterboatmen	1	0.139		0.139	0.139	0.139	0.139
Sediment	Nickel	Arthropods			1	0.139		0.139	0.139	0.139	0.139
Sediment	Potassium	Arthropods	Benthic Invertebrates		13	3.851	3.657	1.322	2.420	5.099	15.169
Sediment	Potassium	Arthropods	Benthic Invertebrates	crayfish	5	5.807	5.379	1.716	4.507	15.169	15.169
Sediment	Potassium	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	2.420		2.420	2.420	2.420	2.420
Sediment	Potassium	Arthropods	Benthic Invertebrates	mixed insects	3	3.850	1.686	1.932	4.520	5.099	5.099
Sediment	Potassium	Arthropods	Benthic Invertebrates	waterboatmen	4	1.763	0.387	1.322	1.786	2.157	2.157
Sediment	Potassium	Arthropods			13	3.851	3.657	1.322	2.420	5.099	15.169
Sediment	Potassium	Fish	Bottom Fish		15	6.142	5.720	1.918	3.518	14.045	22.009
Sediment	Potassium	Fish	Bottom Fish	Gobies	10	7.195	6.698	1.918	4.083	18.027	22.009
Sediment	Potassium	Fish	Bottom Fish	Long-jawed mudsuckers	1	2.008		2.008	2.008	2.008	2.008
Sediment	Potassium	Fish	Bottom Fish	Staghorn sculpin	1	2.404		2.404	2.404	2.404	2.404
Sediment	Potassium	Fish	Bottom Fish	carp/goldfish	3	5.255	2.212	3.221	4.934	7.610	7.610
Sediment	Potassium	Fish	Water Column Fish		5	5.319	5.429	1.415	3.089	14.756	14.756
Sediment	Potassium	Fish	Water Column Fish	topsmelt	5	5.319	5.429	1.415	3.089	14.756	14.756
Sediment	Potassium	Fish			20	5.936	5.518	1.415	3.370	14.401	22.009
Sediment	Selenium	Arthropods	Benthic Invertebrates		2	3.607	2.980	1.500	3.607	5.714	5.714
Sediment	Selenium	Arthropods	Benthic Invertebrates	crayfish	2	3.607	2.980	1.500	3.607	5.714	5.714

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Sediment	Selenium	Arthropods			2	3.607	2.980	1.500	3.607	5.714	5.714
Sediment	Selenium	Fish	Bottom Fish		5	3.063	2.008	0.962	2.917	5.714	5.714
Sediment	Selenium	Fish	Bottom Fish	Gobies	4	3.588	1.881	1.346	3.646	5.714	5.714
Sediment	Selenium	Fish	Bottom Fish	Staghorn sculpin	1	0.962		0.962	0.962	0.962	0.962
Sediment	Selenium	Fish	Water Column Fish		2	3.333	0.589	2.917	3.333	3.750	3.750
Sediment	Selenium	Fish	Water Column Fish	topsmelt	2	3.333	0.589	2.917	3.333	3.750	3.750
Sediment	Selenium	Fish			7	3.140	1.663	0.962	2.917	5.714	5.714
Sediment	Sodium	Arthropods	Benthic Invertebrates		13	2.881	1.942	0.887	2.304	6.303	7.036
Sediment	Sodium	Arthropods	Benthic Invertebrates	crayfish	5	3.731	2.184	1.195	3.962	7.036	7.036
Sediment	Sodium	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.887		0.887	0.887	0.887	0.887
Sediment	Sodium	Arthropods	Benthic Invertebrates	mixed insects	3	1.878	0.588	1.207	2.121	2.304	2.304
Sediment	Sodium	Arthropods	Benthic Invertebrates	waterboatmen	4	3.070	2.217	1.421	2.279	6.303	6.303
Sediment	Sodium	Arthropods			13	2.881	1.942	0.887	2.304	6.303	7.036
Sediment	Sodium	Fish	Bottom Fish		19	2.042	1.288	0.188	2.347	4.066	4.215
Sediment	Sodium	Fish	Bottom Fish	Gobies	13	2.115	1.268	0.194	2.515	3.279	4.215
Sediment	Sodium	Fish	Bottom Fish	Long-jawed mudsuckers	1	2.956		2.956	2.956	2.956	2.956
Sediment	Sodium	Fish	Bottom Fish	Staghorn sculpin	1	0.188		0.188	0.188	0.188	0.188
Sediment	Sodium	Fish	Bottom Fish	carp/goldfish	4	2.040	1.438	0.711	1.691	4.066	4.066
Sediment	Sodium	Fish	Water Column Fish		10	1.974	1.259	0.165	2.374	3.366	3.549
Sediment	Sodium	Fish	Water Column Fish	topsmelt	10	1.974	1.259	0.165	2.374	3.366	3.549
Sediment	Sodium	Fish			29	2.019	1.255	0.165	2.347	3.549	4.215
Sediment	Vanadium	Arthropods	Benthic Invertebrates		1	0.056		0.056	0.056	0.056	0.056
Sediment	Vanadium	Arthropods	Benthic Invertebrates	waterboatmen	1	0.056		0.056	0.056	0.056	0.056
Sediment	Vanadium	Arthropods			1	0.056		0.056	0.056	0.056	0.056
Sediment	Zinc	Arthropods	Benthic Invertebrates		13	0.497	0.848	0.036	0.181	1.735	2.896
Sediment	Zinc	Arthropods	Benthic Invertebrates	crayfish	5	0.167	0.168	0.036	0.066	0.418	0.418
Sediment	Zinc	Arthropods	Benthic Invertebrates	dragonflies/damselflies	1	0.248		0.248	0.248	0.248	0.248
Sediment	Zinc	Arthropods	Benthic Invertebrates	mixed insects	3	0.128	0.096	0.037	0.119	0.228	0.228
Sediment	Zinc	Arthropods	Benthic Invertebrates	waterboatmen	4	1.248	1.321	0.180	0.958	2.896	2.896
Sediment	Zinc	Arthropods			13	0.497	0.848	0.036	0.181	1.735	2.896
Sediment	Zinc	Fish	Bottom Fish		19	2.674	4.789	0.037	0.525	7.517	19.617
Sediment	Zinc	Fish	Bottom Fish	Gobies	13	2.267	2.828	0.037	0.718	6.612	7.517
Sediment	Zinc	Fish	Bottom Fish	Long-jawed mudsuckers	1	0.972		0.972	0.972	0.972	0.972
Sediment	Zinc	Fish	Bottom Fish	Staghorn sculpin	1	0.279		0.279	0.279	0.279	0.279
Sediment	Zinc	Fish	Bottom Fish	carp/goldfish	4	5.020	9.732	0.123	0.170	19.617	19.617
Sediment	Zinc	Fish	Water Column Fish		10	5.533	4.894	0.436	5.763	11.892	14.122
Sediment	Zinc	Fish	Water Column Fish	topsmelt	10	5.533	4.894	0.436	5.763	11.892	14.122
Sediment	Zinc	Fish			29	3.660	4.935	0.037	0.842	9.662	19.617
Soil	Aluminum	Arthropods	Terrestrial Inverts		9	0.560	0.563	0.074	0.308	1.759	1.759
Soil	Aluminum	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.177	0.078	0.121	0.177	0.232	0.232
Soil	Aluminum	Arthropods	Terrestrial Inverts	mixed insects	2	0.762	0.642	0.308	0.762	1.216	1.216

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Soil	Aluminum	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	1.759		1.759	1.759	1.759	1.759
Soil	Aluminum	Arthropods	Terrestrial Inverts	spiders/beetles	2	0.418	0.159	0.306	0.418	0.531	0.531
Soil	Aluminum	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.493		0.493	0.493	0.493	0.493
Soil	Aluminum	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.074		0.074	0.074	0.074	0.074
Soil	Aluminum	Arthropods			9	0.560	0.563	0.074	0.308	1.759	1.759
Soil	Aluminum	Mollusc	Terrestrial Inverts		3	0.201	0.074	0.120	0.219	0.264	0.264
Soil	Aluminum	Mollusc	Terrestrial Inverts	snails	3	0.201	0.074	0.120	0.219	0.264	0.264
Soil	Aluminum	Mollusc			3	0.201	0.074	0.120	0.219	0.264	0.264
Soil	Barium	Arthropods	Terrestrial Inverts		8	1.821	2.026	0.060	1.148	5.989	5.989
Soil	Barium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.455	0.048	0.421	0.455	0.489	0.489
Soil	Barium	Arthropods	Terrestrial Inverts	mixed insects	2	2.655	1.388	1.674	2.655	3.637	3.637
Soil	Barium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	5.989		5.989	5.989	5.989	5.989
Soil	Barium	Arthropods	Terrestrial Inverts	spiders/beetles	1	1.537		1.537	1.537	1.537	1.537
Soil	Barium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.758		0.758	0.758	0.758	0.758
Soil	Barium	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.060		0.060	0.060	0.060	0.060
Soil	Barium	Arthropods			8	1.821	2.026	0.060	1.148	5.989	5.989
Soil	Barium	Mollusc	Terrestrial Inverts		3	2.998	2.316	0.765	2.840	5.388	5.388
Soil	Barium	Mollusc	Terrestrial Inverts	snails	3	2.998	2.316	0.765	2.840	5.388	5.388
Soil	Barium	Mollusc			3	2.998	2.316	0.765	2.840	5.388	5.388
Soil	Cadmium	Arthropods	Terrestrial Inverts		1	3.371		3.371	3.371	3.371	3.371
Soil	Cadmium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	3.371		3.371	3.371	3.371	3.371
Soil	Cadmium	Arthropods			1	3.371		3.371	3.371	3.371	3.371
Soil	Cadmium	Mollusc	Terrestrial Inverts		2	6.837	1.045	6.098	6.837	7.576	7.576
Soil	Cadmium	Mollusc	Terrestrial Inverts	snails	2	6.837	1.045	6.098	6.837	7.576	7.576
Soil	Cadmium	Mollusc			2	6.837	1.045	6.098	6.837	7.576	7.576
Soil	Calcium	Arthropods	Terrestrial Inverts		9	12.844	12.336	0.592	7.288	35.948	35.948
Soil	Calcium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	7.154	0.189	7.020	7.154	7.288	7.288
Soil	Calcium	Arthropods	Terrestrial Inverts	mixed insects	2	20.876	11.662	12.630	20.876	29.122	29.122
Soil	Calcium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	35.948		35.948	35.948	35.948	35.948
Soil	Calcium	Arthropods	Terrestrial Inverts	spiders/beetles	2	3.214	3.709	0.592	3.214	5.837	5.837
Soil	Calcium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	16.265		16.265	16.265	16.265	16.265
Soil	Calcium	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.894		0.894	0.894	0.894	0.894
Soil	Calcium	Arthropods			9	12.844	12.336	0.592	7.288	35.948	35.948
Soil	Calcium	Mollusc	Terrestrial Inverts		3	6.508	5.526	3.011	3.635	12.879	12.879
Soil	Calcium	Mollusc	Terrestrial Inverts	snails	3	6.508	5.526	3.011	3.635	12.879	12.879
Soil	Calcium	Mollusc			3	6.508	5.526	3.011	3.635	12.879	12.879
Soil	Chromium	Arthropods	Terrestrial Inverts		6	0.640	0.640	0.063	0.440	1.834	1.834
Soil	Chromium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.312	0.113	0.233	0.312	0.392	0.392
Soil	Chromium	Arthropods	Terrestrial Inverts	mixed insects	2	1.161	0.952	0.488	1.161	1.834	1.834
Soil	Chromium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.831		0.831	0.831	0.831	0.831
Soil	Chromium	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.063		0.063	0.063	0.063	0.063

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Soil	Chromium	Arthropods			6	0.640	0.640	0.063	0.440	1.834	1.834
Soil	Copper	Arthropods	Terrestrial Inverts		9	10.058	19.359	0.151	2.113	59.200	59.200
Soil	Copper	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	1.348	0.632	0.901	1.348	1.796	1.796
Soil	Copper	Arthropods	Terrestrial Inverts	mixed insects	2	11.069	11.877	2.671	11.069	19.467	19.467
Soil	Copper	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	59.200		59.200	59.200	59.200	59.200
Soil	Copper	Arthropods	Terrestrial Inverts	spiders/beetles	2	2.359	0.348	2.113	2.359	2.605	2.605
Soil	Copper	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	1.620		1.620	1.620	1.620	1.620
Soil	Copper	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.151		0.151	0.151	0.151	0.151
Soil	Copper	Arthropods			9	10.058	19.359	0.151	2.113	59.200	59.200
Soil	Copper	Mollusc	Terrestrial Inverts		3	22.597	29.082	4.000	7.681	56.111	56.111
Soil	Copper	Mollusc	Terrestrial Inverts	snails	3	22.597	29.082	4.000	7.681	56.111	56.111
Soil	Copper	Mollusc			3	22.597	29.082	4.000	7.681	56.111	56.111
Soil	Iron	Arthropods	Terrestrial Inverts		9	0.377	0.322	0.080	0.280	1.113	1.113
Soil	Iron	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.179	0.039	0.152	0.179	0.207	0.207
Soil	Iron	Arthropods	Terrestrial Inverts	mixed insects	2	0.286	0.008	0.280	0.286	0.292	0.292
Soil	Iron	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	1.113		1.113	1.113	1.113	1.113
Soil	Iron	Arthropods	Terrestrial Inverts	spiders/beetles	2	0.273	0.273	0.080	0.273	0.466	0.466
Soil	Iron	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.619		0.619	0.619	0.619	0.619
Soil	Iron	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.181		0.181	0.181	0.181	0.181
Soil	Iron	Arthropods			9	0.377	0.322	0.080	0.280	1.113	1.113
Soil	Iron	Mollusc	Terrestrial Inverts		3	0.158	0.051	0.117	0.143	0.215	0.215
Soil	Iron	Mollusc	Terrestrial Inverts	snails	3	0.158	0.051	0.117	0.143	0.215	0.215
Soil	Iron	Mollusc			3	0.158	0.051	0.117	0.143	0.215	0.215
Soil	Lead	Arthropods	Terrestrial Inverts		8	0.945	0.963	0.073	0.613	3.103	3.103
Soil	Lead	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.402	0.281	0.203	0.402	0.600	0.600
Soil	Lead	Arthropods	Terrestrial Inverts	mixed insects	2	0.992	0.518	0.625	0.992	1.358	1.358
Soil	Lead	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	3.103		3.103	3.103	3.103	3.103
Soil	Lead	Arthropods	Terrestrial Inverts	spiders/beetles	1	1.015		1.015	1.015	1.015	1.015
Soil	Lead	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.582		0.582	0.582	0.582	0.582
Soil	Lead	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.073		0.073	0.073	0.073	0.073
Soil	Lead	Arthropods			8	0.945	0.963	0.073	0.613	3.103	3.103
Soil	Lead	Mollusc	Terrestrial Inverts		1	0.500		0.500	0.500	0.500	0.500
Soil	Lead	Mollusc	Terrestrial Inverts	snails	1	0.500		0.500	0.500	0.500	0.500
Soil	Lead	Mollusc			1	0.500		0.500	0.500	0.500	0.500
Soil	Magnesium	Arthropods	Terrestrial Inverts		9	1.667	1.629	0.135	1.340	5.693	5.693
Soil	Magnesium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.658	0.101	0.586	0.658	0.729	0.729
Soil	Magnesium	Arthropods	Terrestrial Inverts	mixed insects	2	1.773	0.380	1.504	1.773	2.042	2.042
Soil	Magnesium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	5.693		5.693	5.693	5.693	5.693
Soil	Magnesium	Arthropods	Terrestrial Inverts	spiders/beetles	2	1.486	0.537	1.107	1.486	1.866	1.866
Soil	Magnesium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	1.340		1.340	1.340	1.340	1.340
Soil	Magnesium	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.135		0.135	0.135	0.135	0.135

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Soil	Magnesium	Arthropods			9	1.667	1.629	0.135	1.340	5.693	5.693
Soil	Magnesium	Mollusc	Terrestrial Inverts		3	2.697	2.553	1.188	1.259	5.645	5.645
Soil	Magnesium	Mollusc	Terrestrial Inverts	snails	3	2.697	2.553	1.188	1.259	5.645	5.645
Soil	Magnesium	Mollusc			3	2.697	2.553	1.188	1.259	5.645	5.645
Soil	Manganese	Arthropods	Terrestrial Inverts		9	0.601	0.493	0.071	0.361	1.593	1.593
Soil	Manganese	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.241	0.060	0.198	0.241	0.284	0.284
Soil	Manganese	Arthropods	Terrestrial Inverts	mixed insects	2	0.718	0.539	0.337	0.718	1.099	1.099
Soil	Manganese	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	1.593		1.593	1.593	1.593	1.593
Soil	Manganese	Arthropods	Terrestrial Inverts	spiders/beetles	2	0.567	0.290	0.361	0.567	0.772	0.772
Soil	Manganese	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.692		0.692	0.692	0.692	0.692
Soil	Manganese	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.071		0.071	0.071	0.071	0.071
Soil	Manganese	Arthropods			9	0.601	0.493	0.071	0.361	1.593	1.593
Soil	Manganese	Mollusc	Terrestrial Inverts		3	0.517	0.258	0.321	0.421	0.810	0.810
Soil	Manganese	Mollusc	Terrestrial Inverts	snails	3	0.517	0.258	0.321	0.421	0.810	0.810
Soil	Manganese	Mollusc			3	0.517	0.258	0.321	0.421	0.810	0.810
Soil	Mercury	Mollusc	Terrestrial Inverts		1	2.250		2.250	2.250	2.250	2.250
Soil	Mercury	Mollusc	Terrestrial Inverts	snails	1	2.250		2.250	2.250	2.250	2.250
Soil	Mercury	Mollusc			1	2.250		2.250	2.250	2.250	2.250
Soil	Nickel	Arthropods	Terrestrial Inverts		2	1.189	0.970	0.503	1.189	1.875	1.875
Soil	Nickel	Arthropods	Terrestrial Inverts	mixed insects	1	1.875		1.875	1.875	1.875	1.875
Soil	Nickel	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.503		0.503	0.503	0.503	0.503
Soil	Nickel	Arthropods			2	1.189	0.970	0.503	1.189	1.875	1.875
Soil	Potassium	Arthropods	Terrestrial Inverts		7	12.685	11.022	1.378	9.789	27.432	27.432
Soil	Potassium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	1.665	0.406	1.378	1.665	1.953	1.953
Soil	Potassium	Arthropods	Terrestrial Inverts	mixed insects	2	12.100	11.415	4.028	12.100	20.171	20.171
Soil	Potassium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	27.432		27.432	27.432	27.432	27.432
Soil	Potassium	Arthropods	Terrestrial Inverts	spiders/beetles	1	24.042		24.042	24.042	24.042	24.042
Soil	Potassium	Arthropods	Terrestrial Inverts	spiders/cricket	1	9.789		9.789	9.789	9.789	9.789
Soil	Potassium	Arthropods			7	12.685	11.022	1.378	9.789	27.432	27.432
Soil	Potassium	Mollusc	Terrestrial Inverts		2	2.145	0.430	1.841	2.145	2.449	2.449
Soil	Potassium	Mollusc	Terrestrial Inverts	snails	2	2.145	0.430	1.841	2.145	2.449	2.449
Soil	Potassium	Mollusc			2	2.145	0.430	1.841	2.145	2.449	2.449
Soil	Sodium	Arthropods	Terrestrial Inverts		9	21.950	20.858	1.631	13.271	54.121	54.121
Soil	Sodium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	4.103	0.934	3.443	4.103	4.764	4.764
Soil	Sodium	Arthropods	Terrestrial Inverts	mixed insects	2	41.291	0.115	41.210	41.291	41.372	41.372
Soil	Sodium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	54.121		54.121	54.121	54.121	54.121
Soil	Sodium	Arthropods	Terrestrial Inverts	spiders/beetles	2	18.868	23.498	2.252	18.868	35.483	35.483
Soil	Sodium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	13.271		13.271	13.271	13.271	13.271
Soil	Sodium	Arthropods	Terrestrial Inverts	spiders/cricket	1	1.631		1.631	1.631	1.631	1.631
Soil	Sodium	Arthropods			9	21.950	20.858	1.631	13.271	54.121	54.121
Soil	Sodium	Mollusc	Terrestrial Inverts		3	27.653	12.786	14.779	27.831	40.349	40.349

TABLE D-5

Summary of Statistics for Metals BAFs (mg/kg, dry weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

Media	Analyte	Taxa2	BiotaType	Taxa1	n	mean	std	min	median	p90	max
Soil	Sodium	Mollusc	Terrestrial Inverts	snails	3	27.653	12.786	14.779	27.831	40.349	40.349
Soil	Sodium	Mollusc			3	27.653	12.786	14.779	27.831	40.349	40.349
Soil	Vanadium	Arthropods	Terrestrial Inverts		6	0.200	0.078	0.111	0.187	0.327	0.327
Soil	Vanadium	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.257	0.098	0.187	0.257	0.327	0.327
Soil	Vanadium	Arthropods	Terrestrial Inverts	mixed insects	2	0.162	0.035	0.137	0.162	0.186	0.186
Soil	Vanadium	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	0.250		0.250	0.250	0.250	0.250
Soil	Vanadium	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.111		0.111	0.111	0.111	0.111
Soil	Vanadium	Arthropods			6	0.200	0.078	0.111	0.187	0.327	0.327
Soil	Vanadium	Mollusc	Terrestrial Inverts		1	0.317		0.317	0.317	0.317	0.317
Soil	Vanadium	Mollusc	Terrestrial Inverts	snails	1	0.317		0.317	0.317	0.317	0.317
Soil	Vanadium	Mollusc			1	0.317		0.317	0.317	0.317	0.317
Soil	Zinc	Arthropods	Terrestrial Inverts		9	2.593	3.286	0.194	1.195	10.778	10.778
Soil	Zinc	Arthropods	Terrestrial Inverts	beach hoppers, sow bugs, beetles	2	0.839	0.504	0.483	0.839	1.195	1.195
Soil	Zinc	Arthropods	Terrestrial Inverts	mixed insects	2	3.146	1.380	2.170	3.146	4.122	4.122
Soil	Zinc	Arthropods	Terrestrial Inverts	sow bugs/mixed insects	1	10.778		10.778	10.778	10.778	10.778
Soil	Zinc	Arthropods	Terrestrial Inverts	spiders/beetles	2	1.703	0.748	1.174	1.703	2.232	2.232
Soil	Zinc	Arthropods	Terrestrial Inverts	spiders/beetles/beach hoppers	1	0.991		0.991	0.991	0.991	0.991
Soil	Zinc	Arthropods	Terrestrial Inverts	spiders/cricket	1	0.194		0.194	0.194	0.194	0.194
Soil	Zinc	Arthropods			9	2.593	3.286	0.194	1.195	10.778	10.778
Soil	Zinc	Mollusc	Terrestrial Inverts		3	5.878	5.090	2.760	3.122	11.752	11.752
Soil	Zinc	Mollusc	Terrestrial Inverts	snails	3	5.878	5.090	2.760	3.122	11.752	11.752
Soil	Zinc	Mollusc			3	5.878	5.090	2.760	3.122	11.752	11.752

TABLE D-6

Summary of Statistics for PCDD/PCDF BAFs (ng/kg, wet weight)

Baseline Ecological Risk Assessment, Halaco Site, Oxnard, California

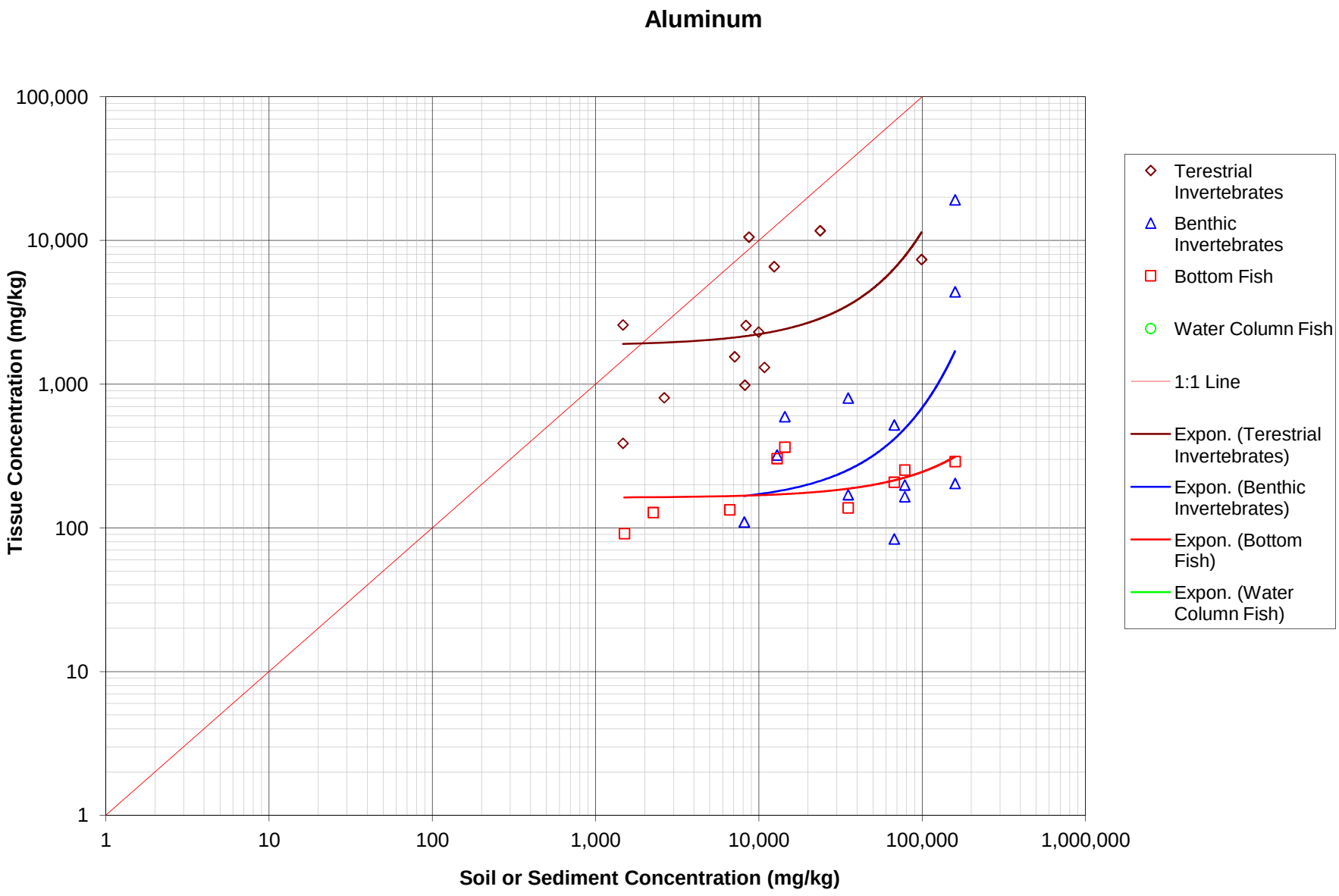
Taxa	Analyte	n	mean	std	min	max
benthic invertebrate	OCDD	2	1.18	1.04	0.44	1.92
benthic invertebrate	Total TCDD	3	0.68	0.47	0.16	1.10
benthic invertebrate	Total TCDF	3	1.12	0.70	0.32	1.61
soil invertebrate	1,2,3,4,6,7,8-HpCDD	1	0.85	.	0.85	0.85
soil invertebrate	OCDD	2	0.46	0.21	0.31	0.61
soil invertebrate	Total HpCDD	1	0.24	.	0.24	0.24

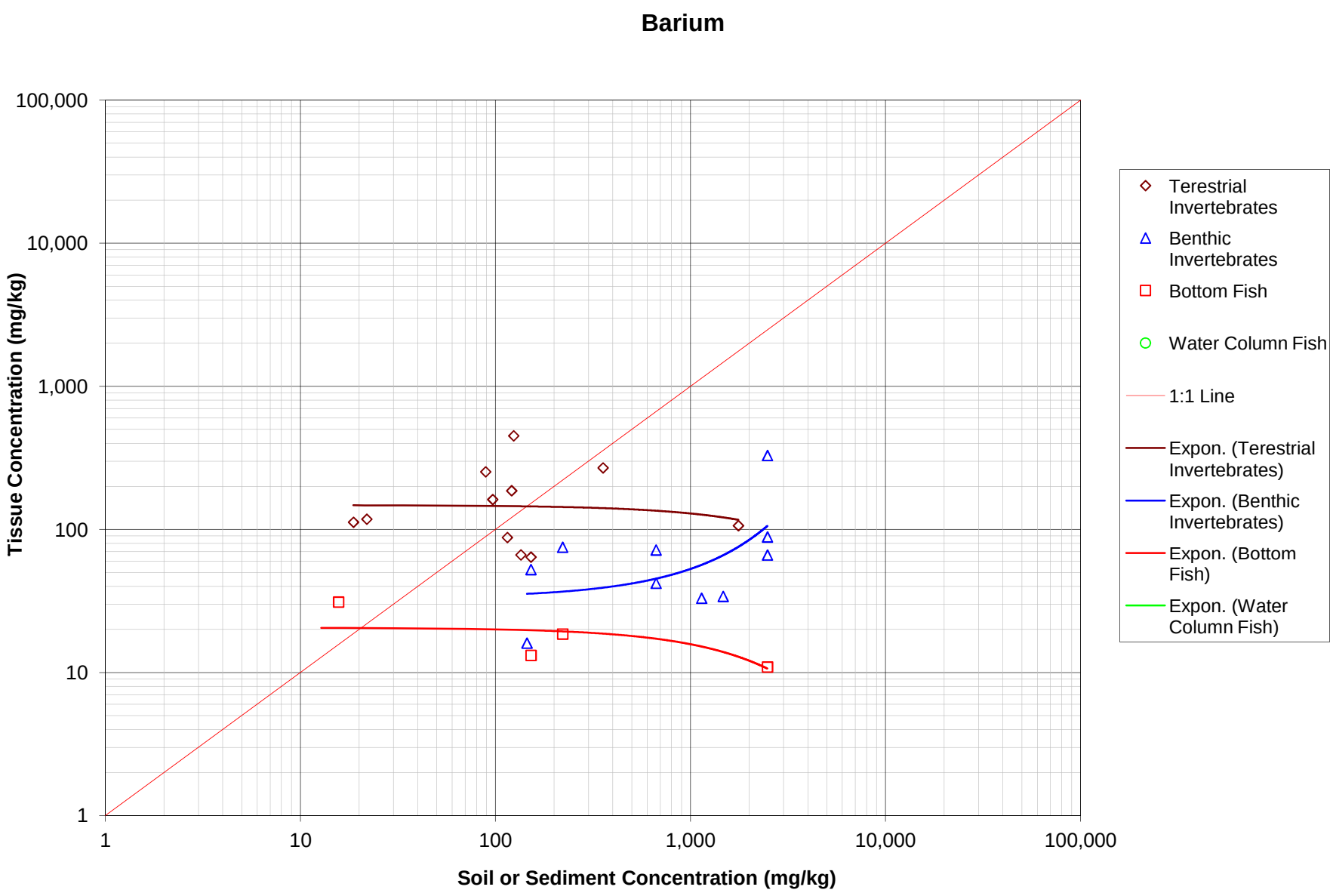
Attachment D-1
Cross Plots of Tissue versus Solid Matrix Concentrations

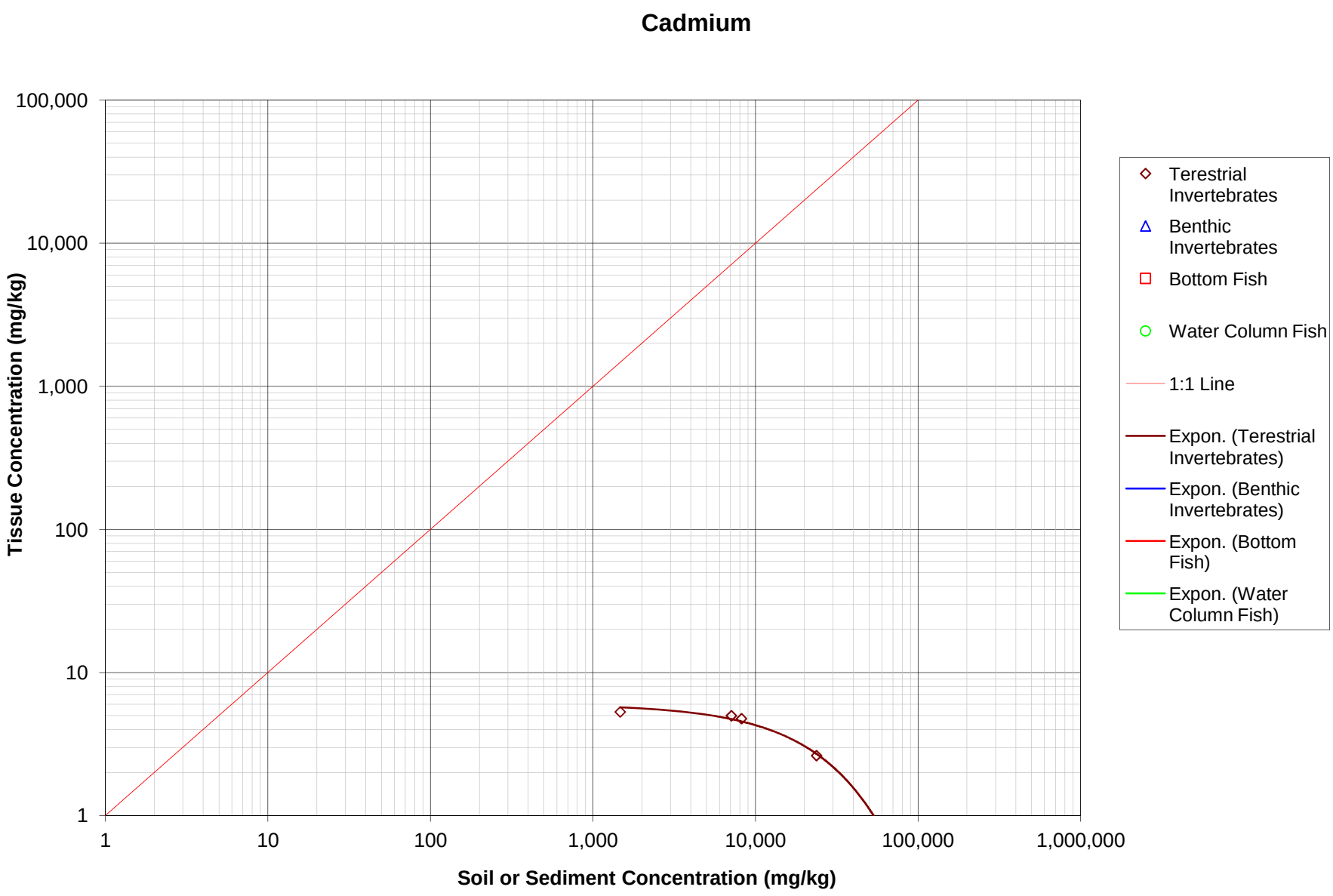
Attachment D-1
Cross Plots of Tissue versus Solid Matrix Concentrations

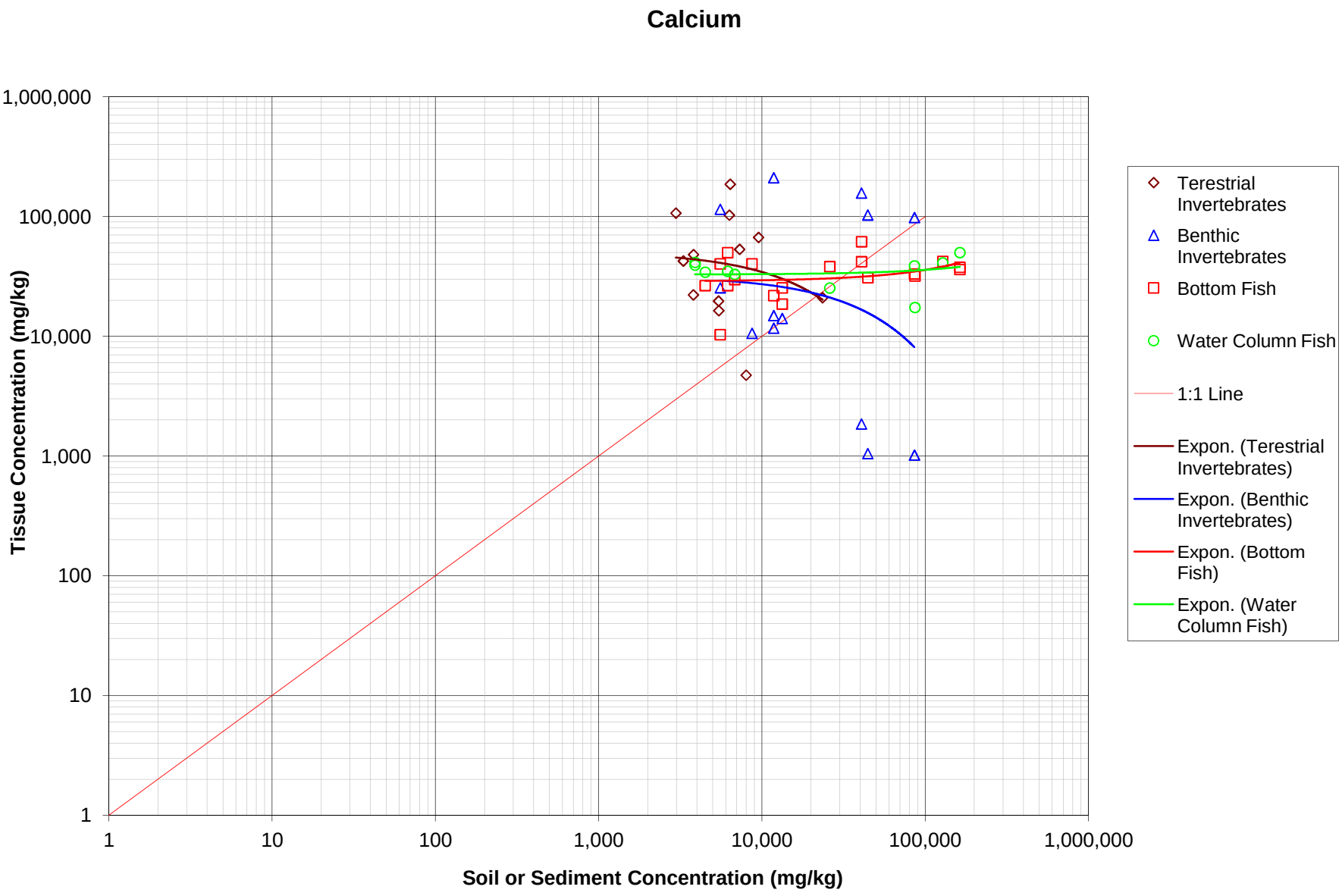
This attachment includes the following plots:

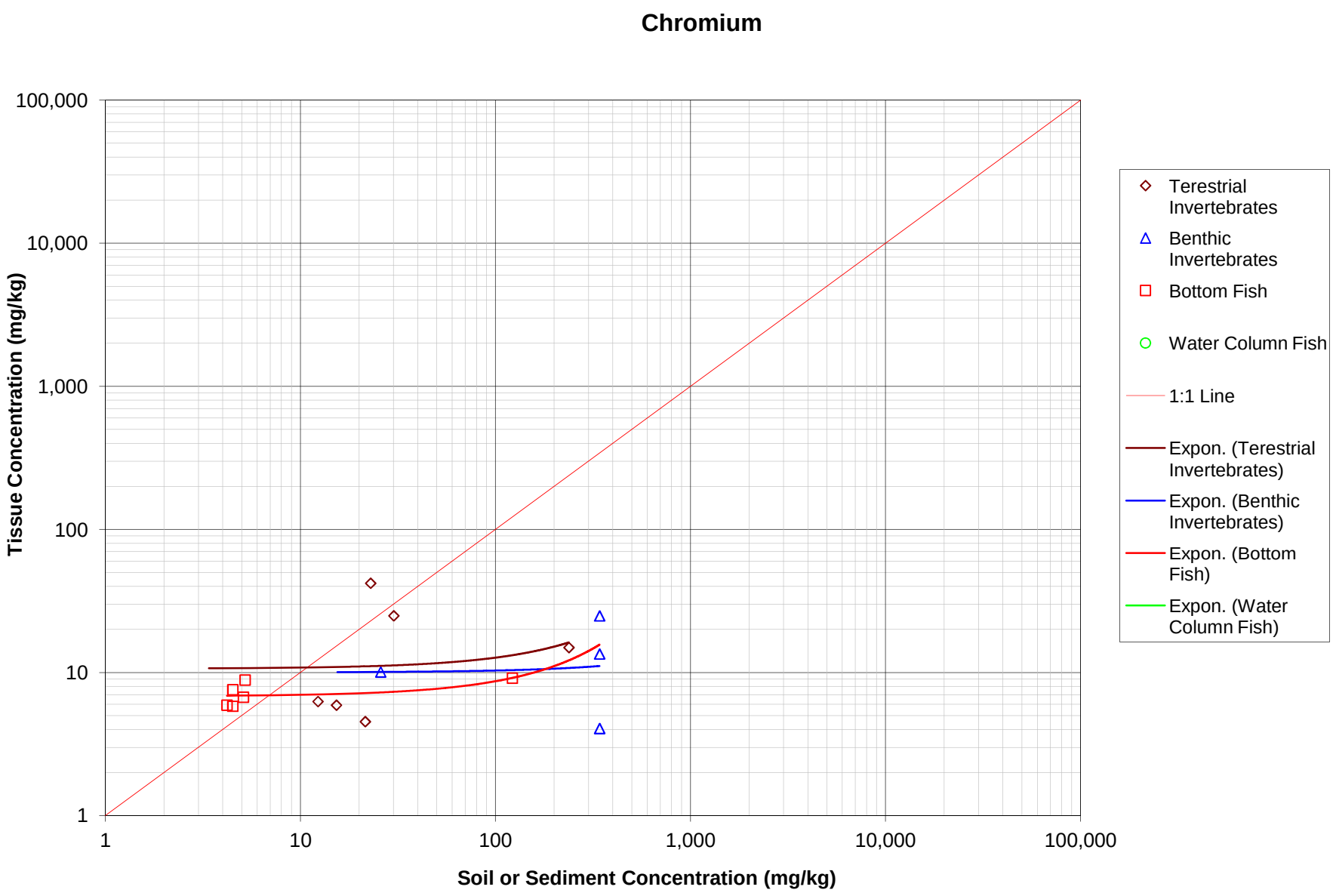
- Aluminum
- Barium
- Cadmium
- Calcium
- Chromium
- Copper
- Iron
- Lead
- Magnesium
- Manganese
- Nickel
- Potassium
- Selenium
- Sodium
- Vanadium
- Zinc

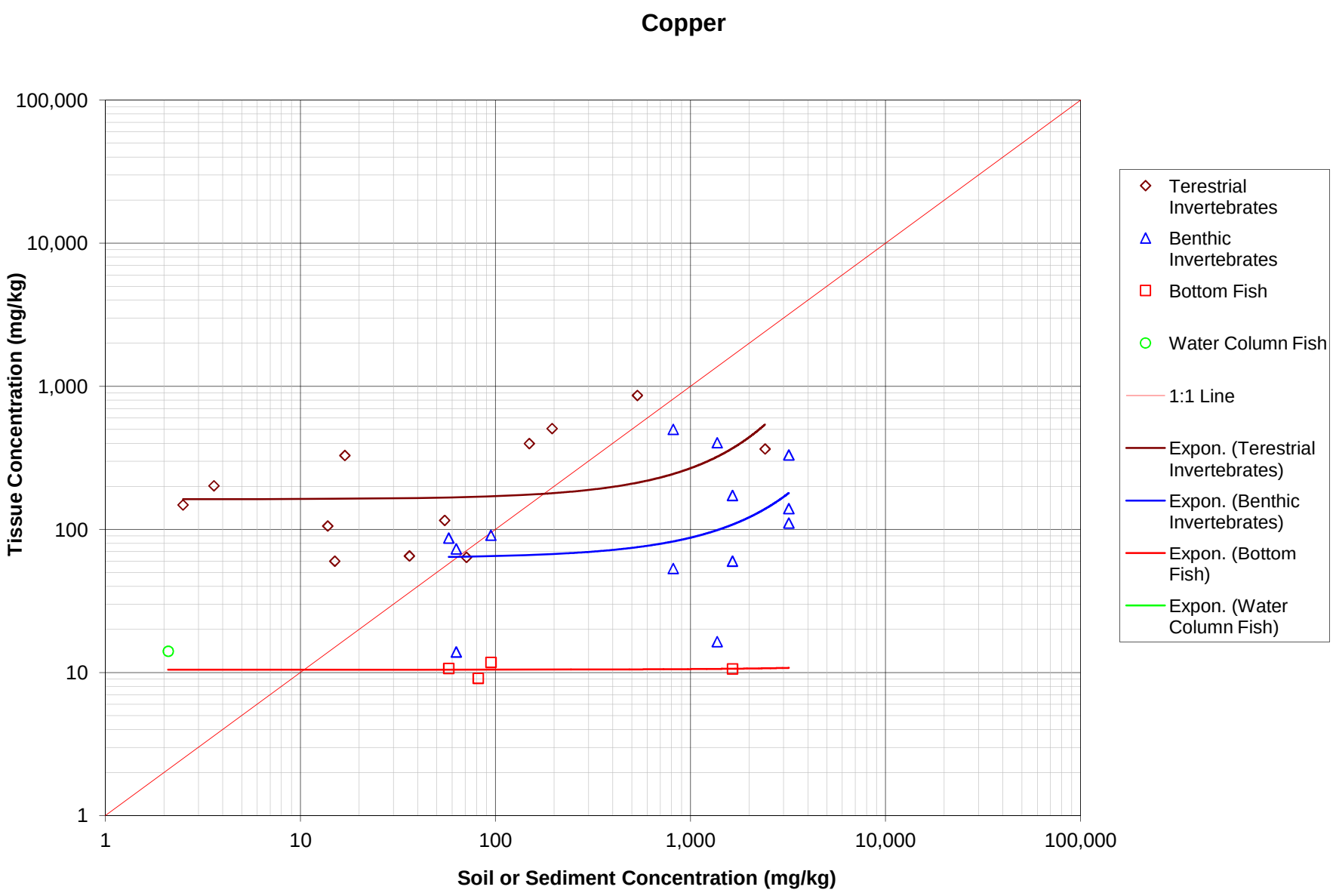

Aluminum
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
1,000,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

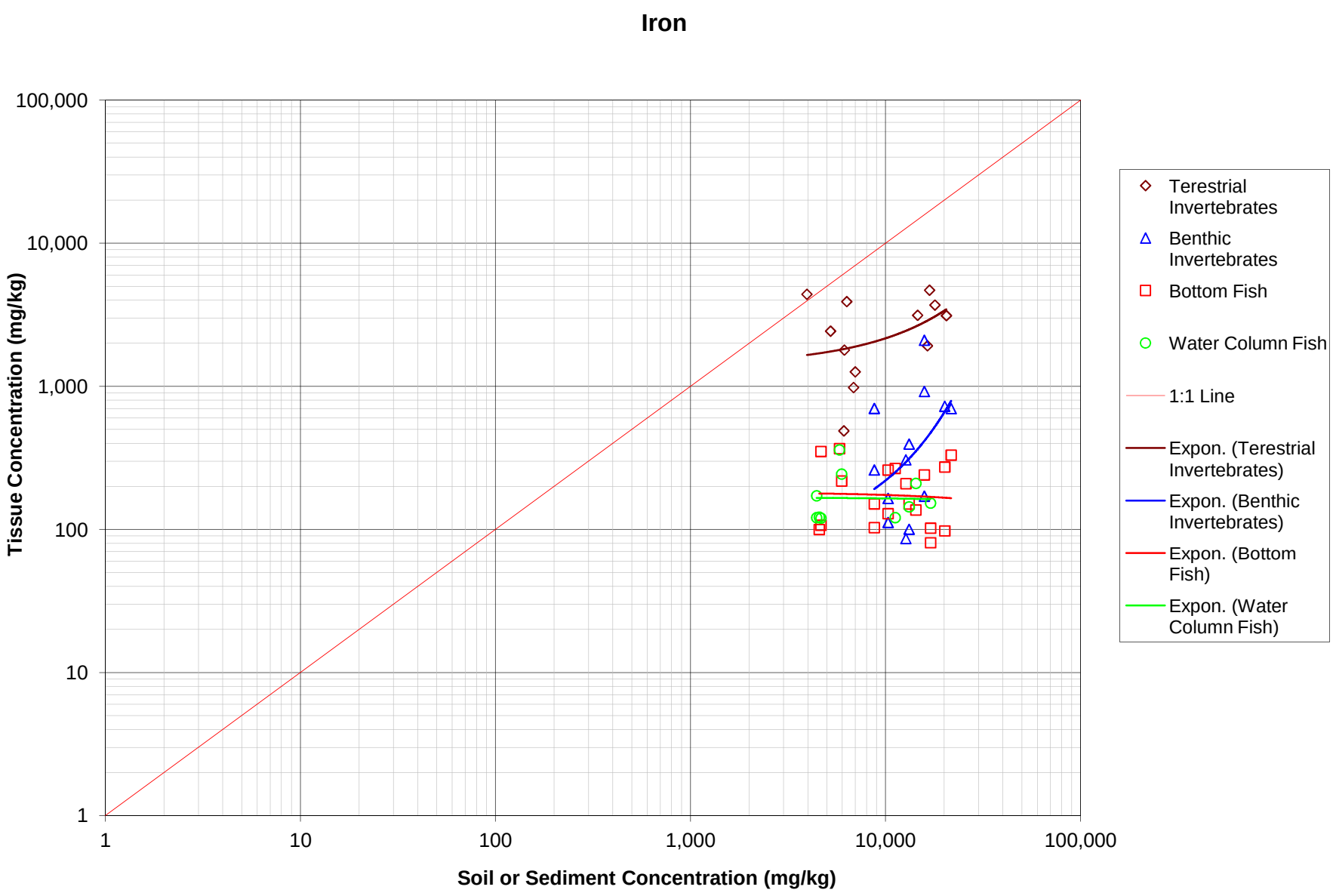

Barium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

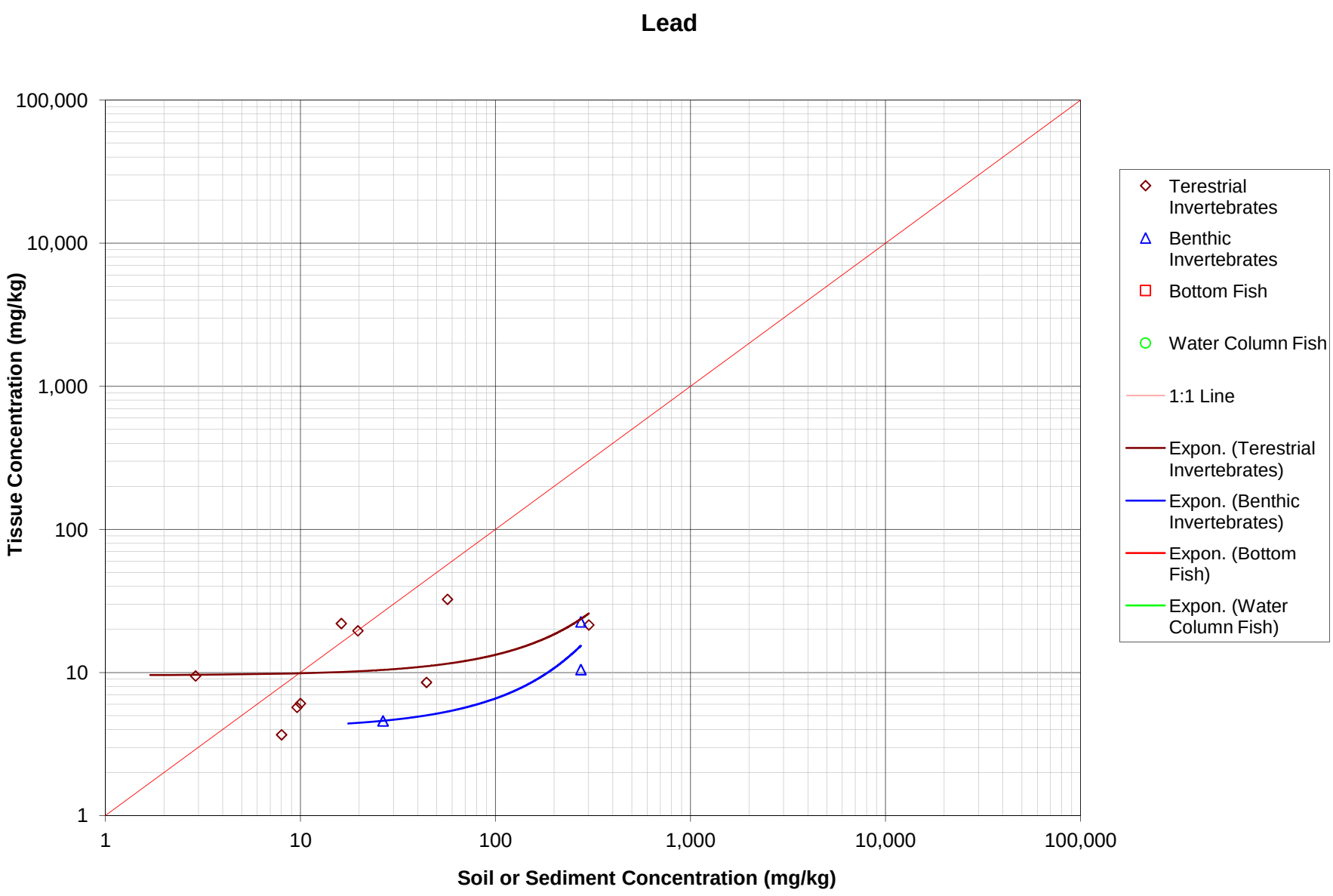

Cadmium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
1,000,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

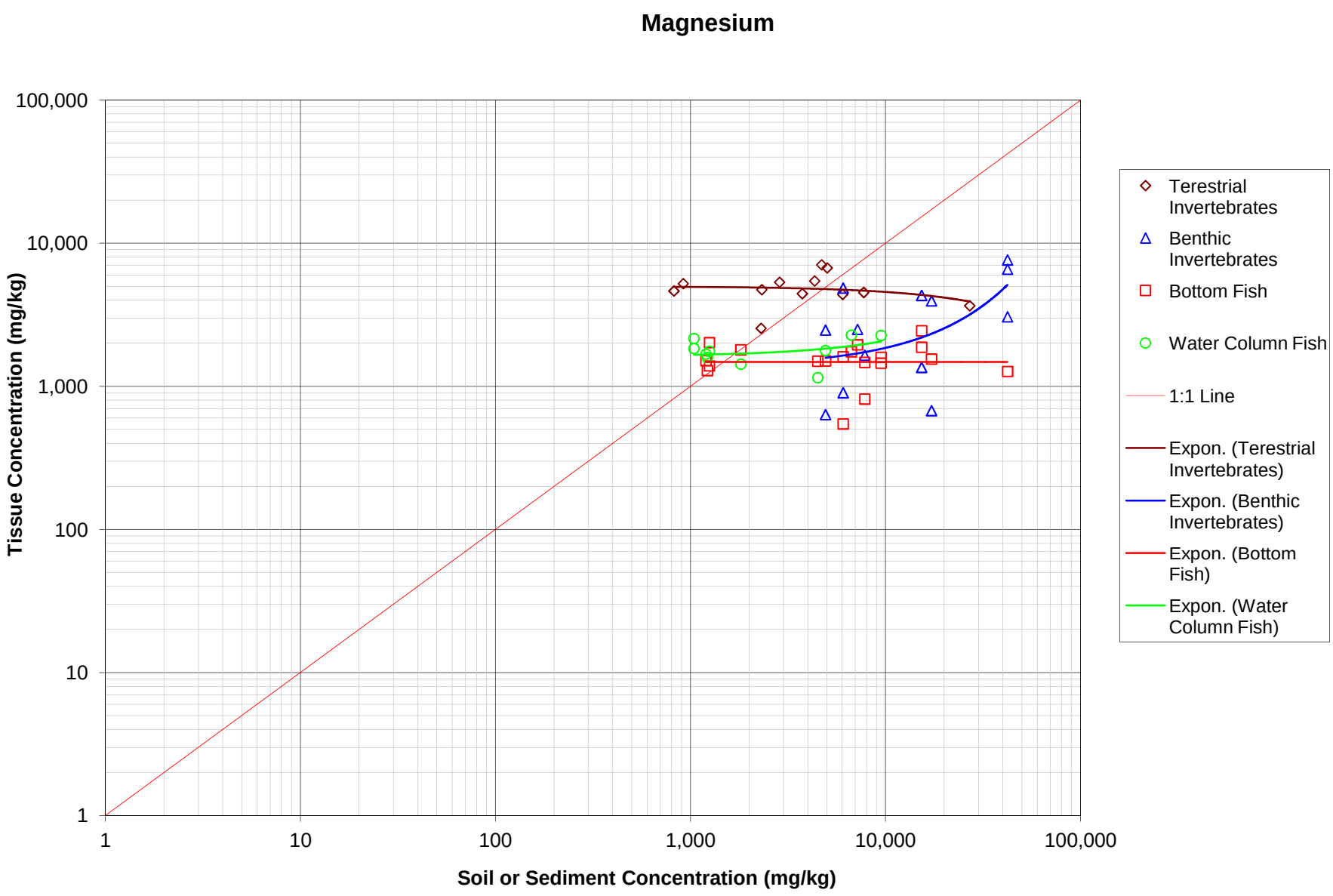

Calcium
Tissue Concentration (mg/kg)
1,000,000
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
1,000,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

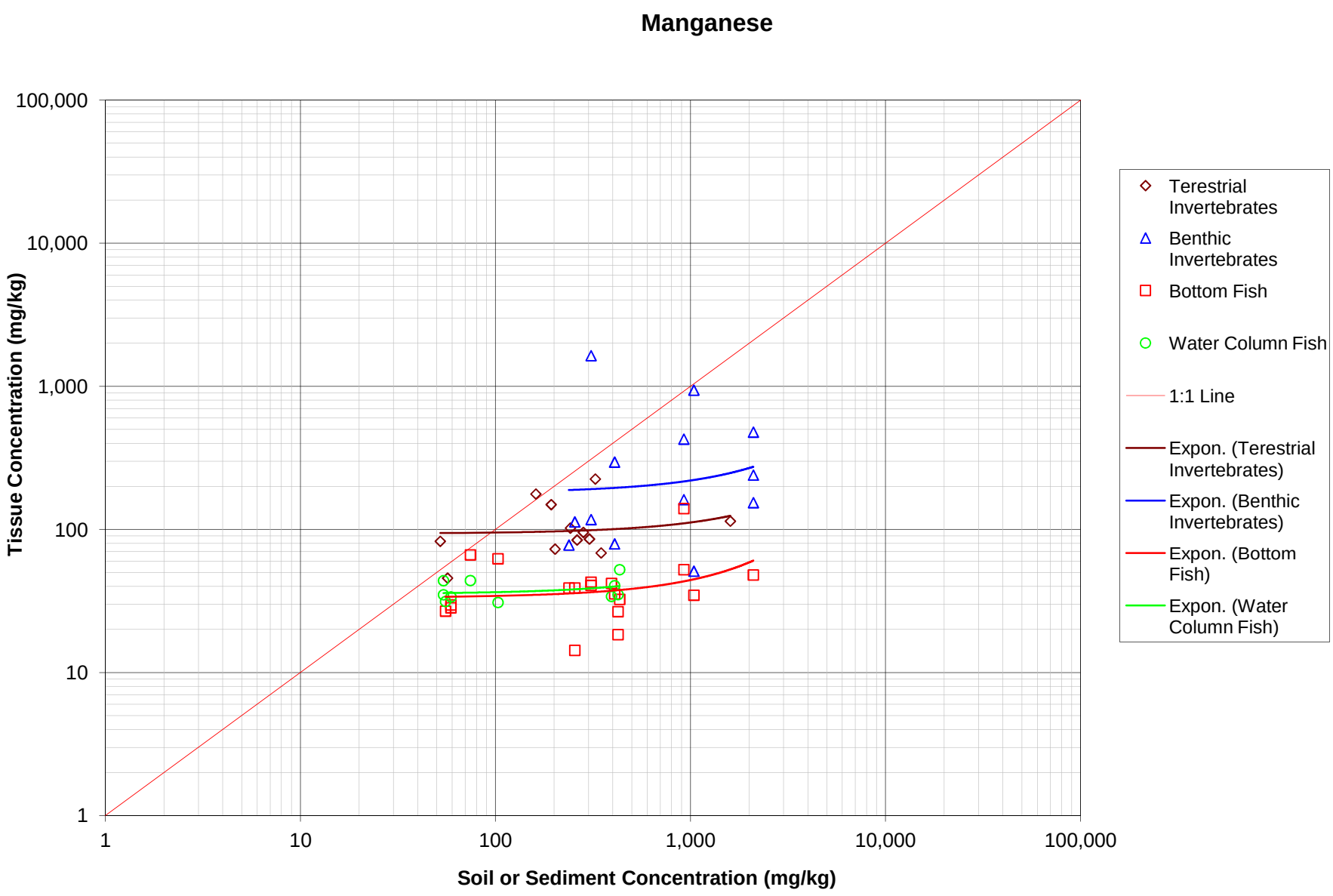

Chromium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

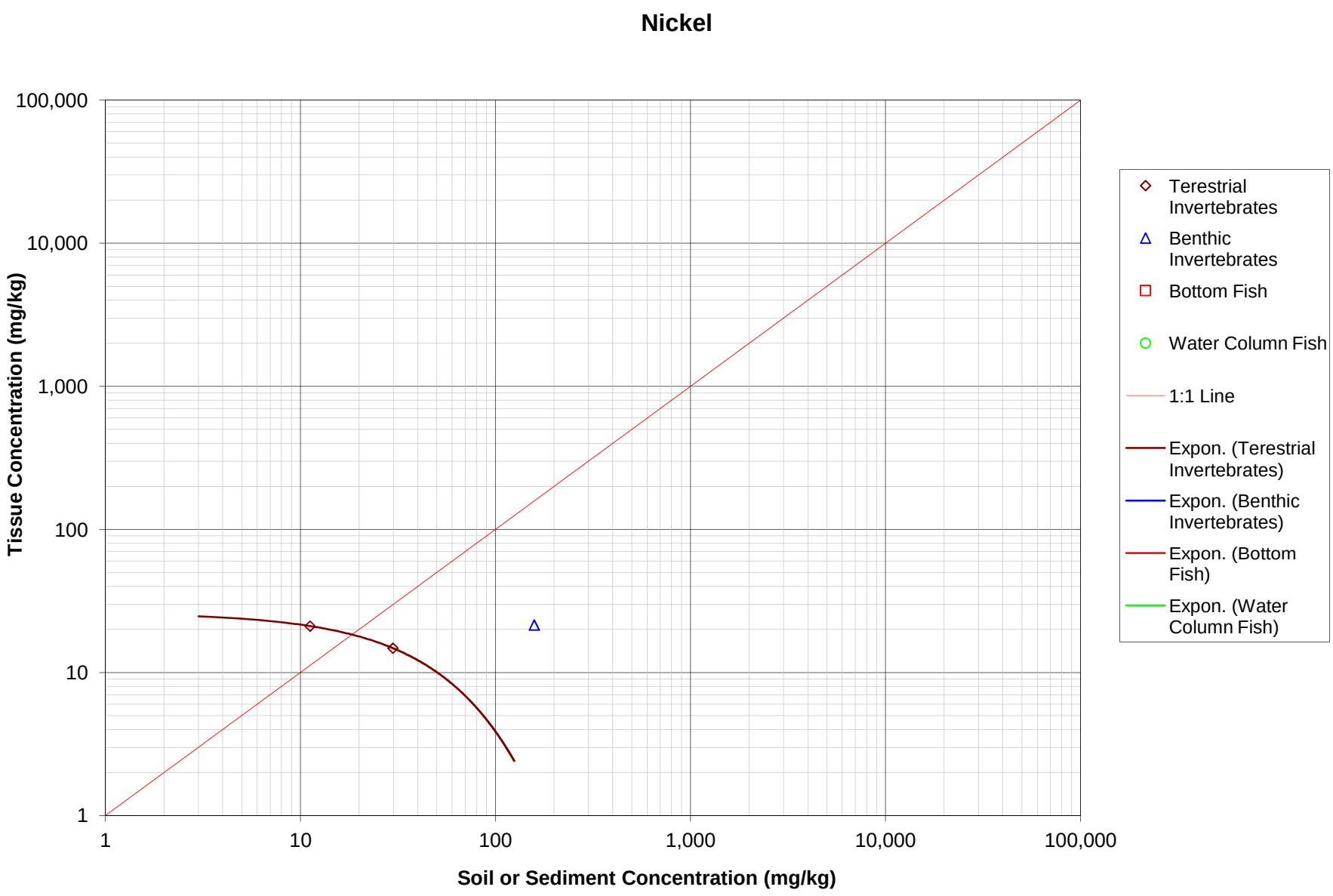

Copper
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

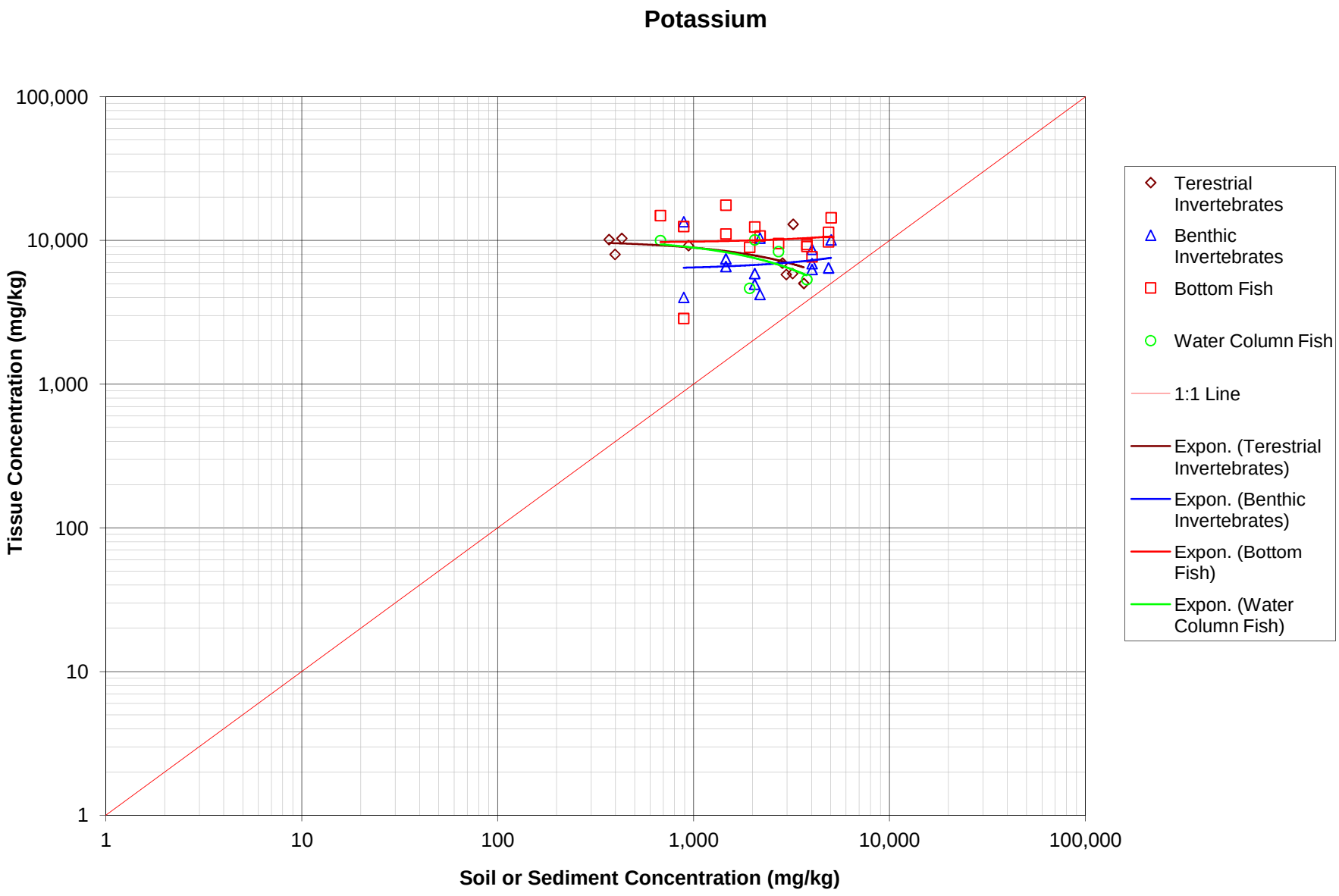

Iron
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

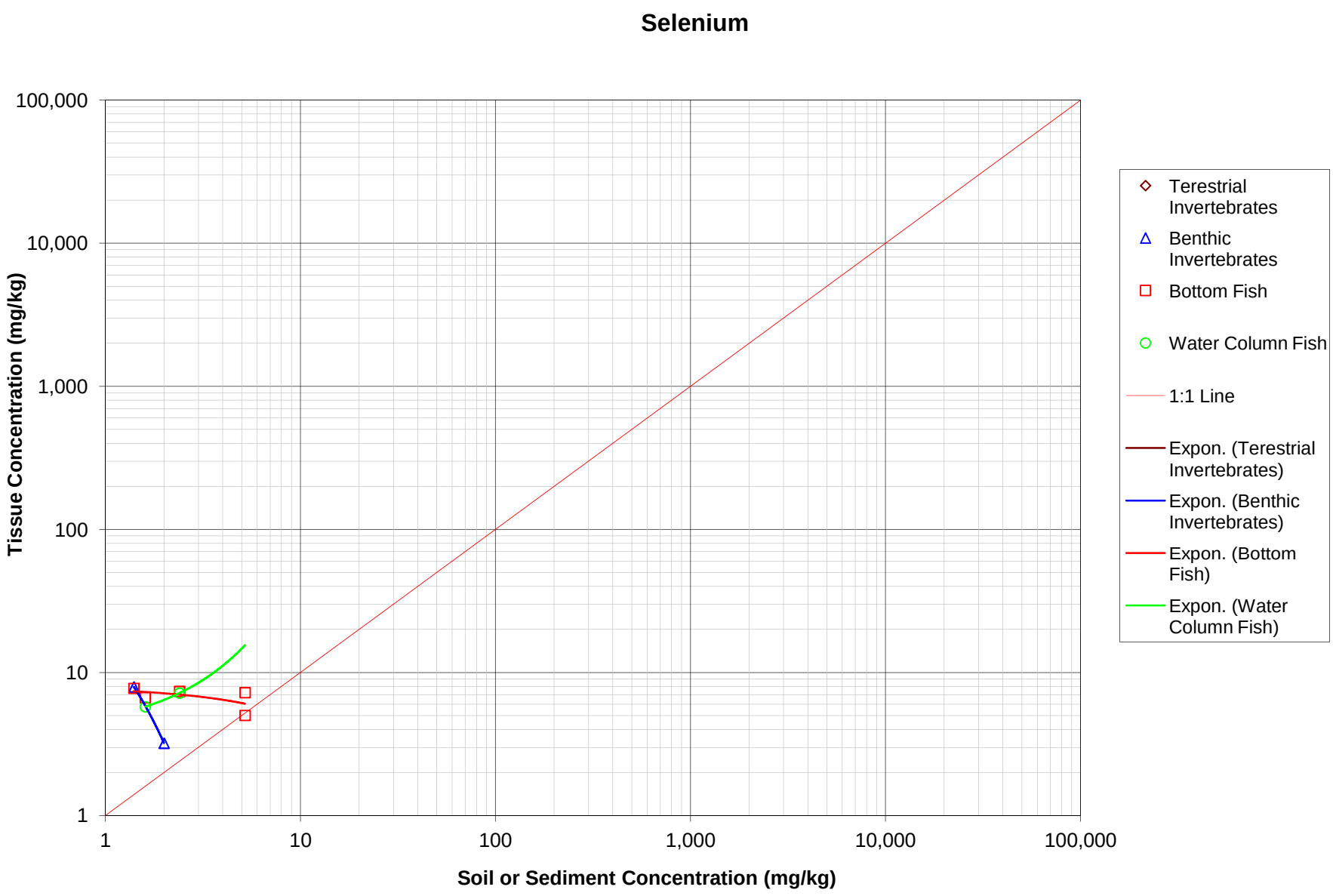

Lead
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

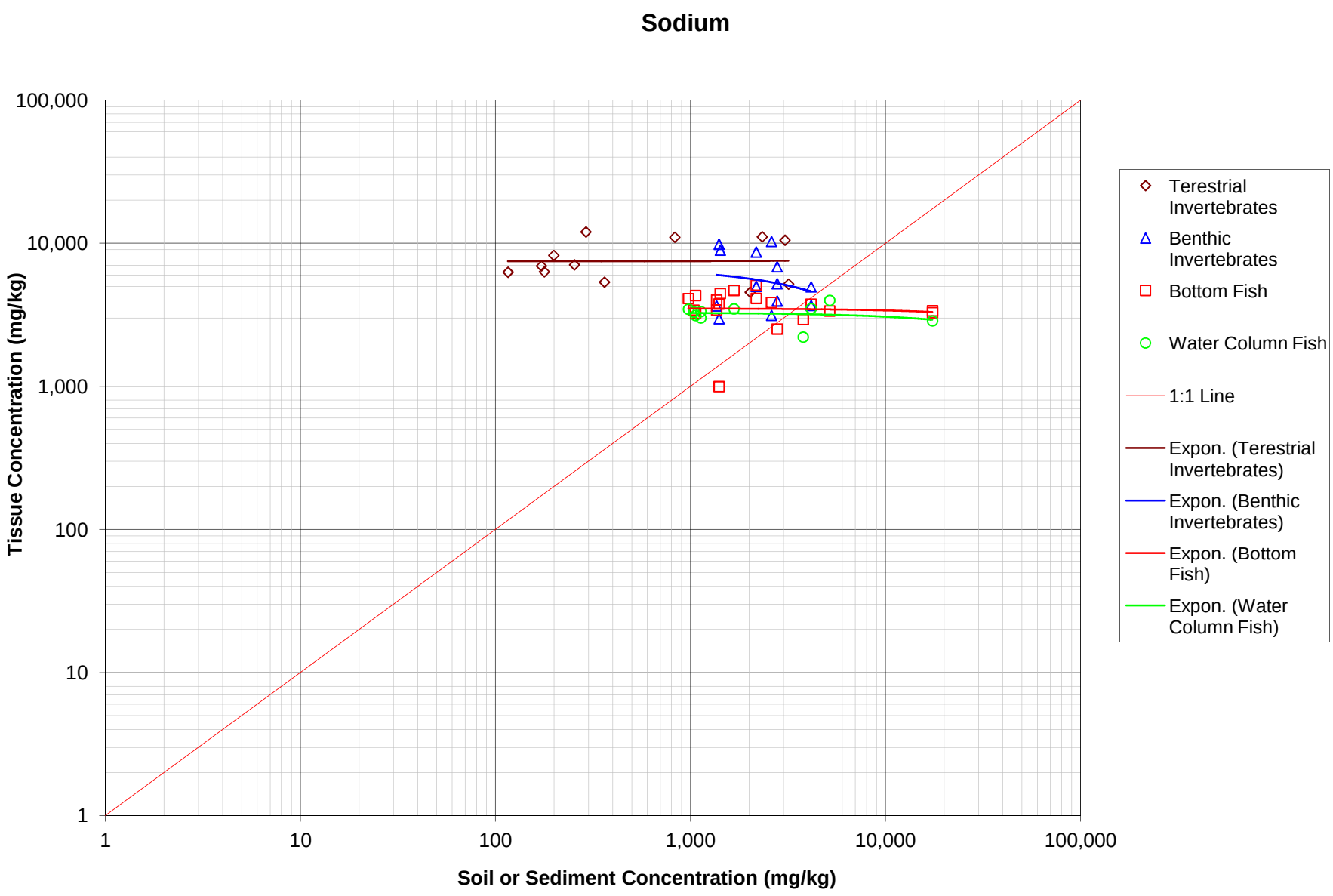

Magnesium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

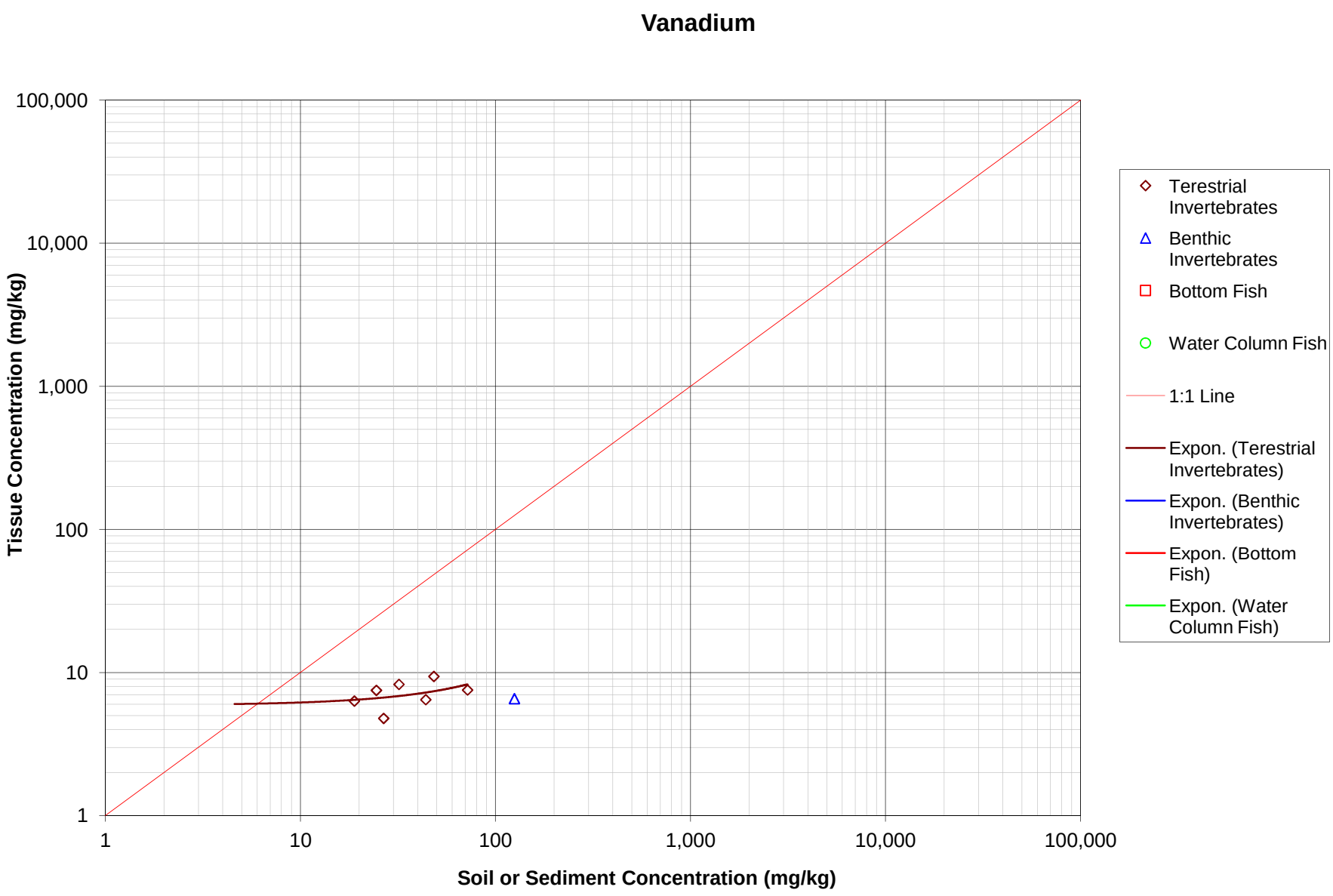

Manganese
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

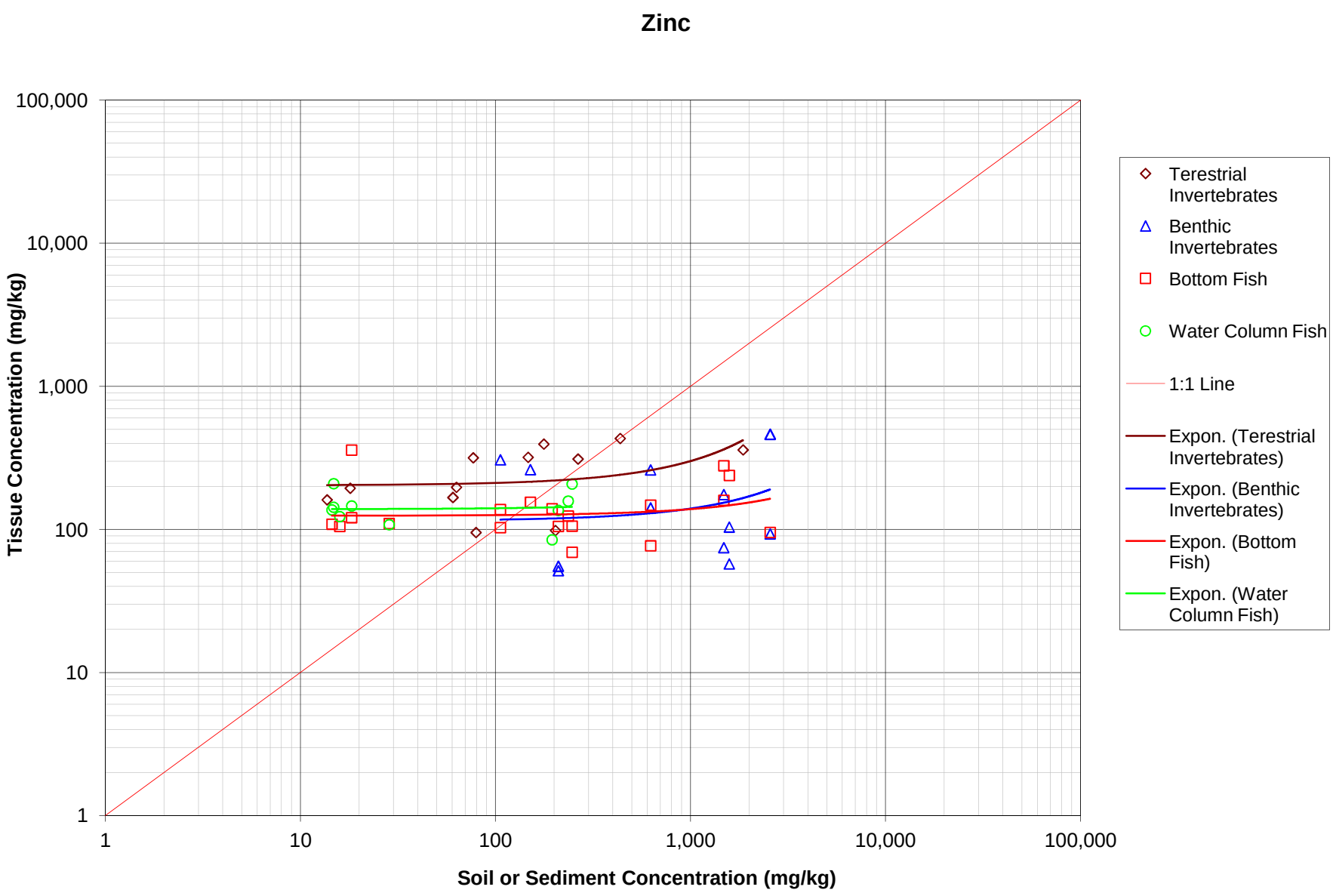

Nickel
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)


Potassium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)


Selenium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)


Sodium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)


Vanadium
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)


Zinc
Tissue Concentration (mg/kg)
100,000
10,000
1,000
100
10
1
1
10
100
1,000
10,000
100,000
Soil or Sediment Concentration (mg/kg)
Terestrial Invertebrates
Benthic Invertebrates
Bottom Fish
Water Column Fish
1:1 Line
Expon. (Terestrial Invertebrates)
Expon. (Benthic Invertebrates)
Expon. (Bottom Fish)
Expon. (Water Column Fish)

Attachment D-2
Scatter Plots of Sediment-Biota and Soil-Biota Bioaccumulation Data

Attachment D-2
Scatter Plots of Sediment-Biota and Soil-Biota Bioaccumulation Data

This attachment contains the following plots:

- Sediment
  - Aluminum, Taxa2=Arthropods
  - Aluminum, Taxa2=Fish
  - Barium, Taxa2=Arthropods
  - Barium, Taxa2=Fish
  - Beryllium, Taxa2=Arthropods
  - Calcium, Taxa2=Arthropods
  - Calcium, Taxa2=Fish
  - Chromium, Taxa2=Arthropods
  - Chromium, Taxa2=Fish
  - Copper, Taxa2=Arthropods
  - Copper, Taxa2=Fish
  - Iron, Taxa2=Arthropods
  - Iron, Taxa2=Fish
  - Lead, Taxa2=Arthropods
  - Magnesium, Taxa2=Arthropods
  - Magnesium, Taxa2=Fish
  - Manganese, Taxa2=Arthropods
  - Manganese, Taxa2=Fish
  - Mercury, Taxa2=Fish
  - Nickel, Taxa2=Arthropods
  - Potassium, Taxa2=Arthropods
  - Potassium, Taxa2=Fish
  - Selenium, Taxa2=Arthropods
  - Selenium, Taxa2=Fish
  - Sodium, Taxa2=Arthropods
  - Sodium, Taxa2=Fish
  - Vanadium, Taxa2=Arthropods
  - Zinc, Taxa2=Arthropods
  - Zinc, Taxa2=Fish
- Soil
  - Aluminum, Taxa2=Arthropods
  - Aluminum, Taxa2=Mollusc
  - Barium, Taxa2=Arthropods
  - Barium, Taxa2=Mollusc
  - Cadmium, Taxa2=Arthropods
  - Cadmium, Taxa2=Mollusc
  - Calcium, Taxa2=Arthropods
  - Calcium, Taxa2=Mollusc
  - Chromium, Taxa2=Arthropods
  - Copper, Taxa2=Arthropods
  - Copper, Taxa2=Mollusc
  - Iron, Taxa2=Arthropods
  - Iron, Taxa2=Mollusc
  - Lead, Taxa2=Arthropods
  - Lead, Taxa2=Mollusc
  - Magnesium, Taxa2=Arthropods
  - Magnesium, Taxa2=Mollusc
  - Manganese, Taxa2=Arthropods
  - Manganese, Taxa2=Mollusc
  - Mercury, Taxa2=Mollusc
  - Nickel, Taxa2=Arthropods
  - Potassium, Taxa2=Arthropods
  - Potassium, Taxa2=Mollusc
  - Sodium, Taxa2=Arthropods
  - Sodium, Taxa2=Mollusc
  - Vanadium, Taxa2=Arthropods
  - Vanadium, Taxa2=Mollusc
  - Zinc, Taxa2=Arthropods
  - Zinc, Taxa2=Mollusc

---------- Media=Sediment Analyte=Aluminum Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
 20000 ^
       ,                                                                                                                A
       ,
       ,
       ,
       ,
       ,
       ,
 15000 ^
       ,
       ,
       ,
       ,
       ,
       ,
       ,
 10000 ^
       ,
       ,
       ,
       ,
       ,
       ,
  5000 ^
       ,                                                                                                                A
       ,
       ,
       ,
       ,
       ,          A             A                   A
     0 ^        A  A             A                   A       B                                                         A
       ,
       Šff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^ff
          0          20000        40000        60000        80000       100000       120000       140000       160000

                                                                conc
```

---------- Media=Sediment Analyte=Aluminum Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   400 ˆ
       ,
       ,
       ,            A
       ,
   350 ˆ
       ,
       ,
       ,
       ,
   300 ˆ           A
       ,                                                                                                                                A
       ,
       ,
       ,
       ,
   250 ˆ                                                   A
       ,
       ,
       ,
       ,                                             A
   200 ˆ
       ,
       ,
       ,
       ,
   150 ˆ
       ,                           A
       ,    A  A
       ,
       ,
   100 ˆ
       ,   A
       ,
       ,
       ,
    50 ˆ
       Šff`ffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆff
          0           20000         40000         60000         80000        100000        120000        140000        160000

                                                                conc
```

---------- Media=Sediment Analyte=Barium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   350 ˆ
       ,                                                                                                                                  A
       ,
       ,
   300 ˆ
       ,
       ,
       ,
       ,
   250 ˆ
       ,
       ,
       ,
       ,
   200 ˆ
       ,
       ,
       ,
       ,
   150 ˆ
       ,
       ,
       ,
       ,
   100 ˆ
       ,                                                                                                                                  A
       ,             A
       ,                                 A                                                                                                A
       ,
    50 ˆ          A
       ,                                 A
       ,                                                     A                A
       ,         A
       ,
     0 ˆ
       Šff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`ff
          0        200       400       600       800      1000      1200      1400      1600      1800      2000      2200      2400      2600

                                                                  conc
```

```
-------------------------------------------------- Media=Sediment Analyte=Barium Taxa2=Fish --------------------------------------------------

                                            Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

Tissue ,
       ,
    31 ˆ   A
       ,
       ,
    29 ˆ
       ,
       ,
    27 ˆ
       ,
       ,
    25 ˆ
       ,
       ,
    23 ˆ
       ,
       ,
    21 ˆ
       ,
       ,
    19 ˆ             A
       ,
       ,
    17 ˆ
       ,
       ,
    15 ˆ
       ,
       ,
    13 ˆ          A
       ,
       ,
    11 ˆ                                                                                                                                                                  A
       ,
       Šƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒ
         0        200       400       600       800      1000      1200      1400      1600      1800      2000      2200      2400      2600

                                                                    conc
```

--- Media=Sediment Analyte=Beryllium Taxa2=Arthropods --

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
       4 ˆ
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
  Tissue ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
       2 ˆ                                                                     A
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
         ‚
       0 ˆ
         Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
          0                                                                 10.3                                                                20.6

                                                                            conc
```

---------- Media=Sediment Analyte=Calcium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
250000 ˆ
       ,
       ,
       ,
       ,
       ,                A
       ,
200000 ˆ
       ,
       ,
       ,
       ,
       ,
       ,                                                A
150000 ˆ
       ,
       ,
       ,
       ,
       ,        A
       ,
100000 ˆ                                                     A                                                A
       ,
       ,
       ,
       ,
       ,
       ,
 50000 ˆ
       ,
       ,
       ,        A
       ,
       ,                B A
       ,            A
     0 ˆ                                                A    A                                                A
       Šff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`ff
          0         10000       20000       30000       40000       50000       60000       70000       80000       90000

                                                             conc
```

---------- Media=Sediment Analyte=Calcium Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
 70000 ˆ
       ,
       ,
       ,
       ,
       ,                          A
 60000 ˆ
       ,
       ,
       ,
       ,
       ,
 50000 ˆ      A                                                                                  A
       ,
       ,
Tissue ,
       ,
       ,     A                    A                                                B
 40000 ˆ     AA A
       ,                  A                                  A                                   A
       ,                                                                                         A
       ,     AA
       ,      A                                             A
       ,                             A                       A
 30000 ˆ      A
       ,
       ,     AA
       ,           A       A
       ,
       ,          A
 20000 ˆ
       ,           A
       ,                                                    A
       ,
       ,
       ,
 10000 ˆ      A
       Šff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`ff
          0          20000        40000        60000        80000       100000       120000       140000       160000       180000

                                                                 conc
```

---------- Media=Sediment Analyte=Chromium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
    25 ˆ                                                                                A
       ,
       ,
       ,
       ,
       ,
       ,
    20 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
    15 ˆ
       ,                                                                                A
       ,
       ,
       ,
       ,
       ,
    10 ˆ  A
       ,
       ,
       ,
       ,
       ,
       ,
     5 ˆ
       ,                                                                                A
       ,
       ,
       ,
       ,
       ,
     0 ˆ
       Šff˜ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffˆff
        25.8                                                                          342

                                                   conc
```

---------- Media=Sediment Analyte=Chromium Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
     9 ^       A                                                                                                                                A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     8 ^       A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     7 ^       A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     6 ^      AA
       ,
       Šff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^ff
          0        10        20        30        40        50        60        70        80        90        100       110       120       130

                                                                                                                                  conc
```

---------- Media=Sediment Analyte=Copper Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   500 ˆ                                A
       ,
       ,
       ,
       ,
       ,
       ,
   400 ˆ                                                A
       ,
       ,
       ,
       ,
       ,                                                                                                                A
       ,
   300 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
   200 ˆ
       ,
       ,                                                                  A
       ,
       ,                                                                                                                A
       ,                                                                                                                A
   100 ˆ
       ,    A A
       ,     A
       ,                                A                                 A
       ,
       ,
       ,     A                                          A
     0 ˆ
       Šff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`ff
          0        250       500       750      1000      1250      1500      1750      2000      2250      2500      2750      3000      3250

                                                                  conc
```

---------- Media=Sediment Analyte=Copper Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
    14 ˆ  A
       ,
       ,
       ,
       ,
       ,
       ,
    13 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
       ,
    12 ˆ        A
       ,
       ,
       ,
       ,
       ,
       ,
    11 ˆ      A                                                                                   A
       ,
       ,
       ,
       ,
       ,
       ,
    10 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
     9 ˆ       A
       Šff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ffffffffffff˜ff
          0           200          400          600          800         1000         1200         1400         1600         1800

                                                                  conc
```

---------- Media=Sediment Analyte=Iron Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
 Tissue ,
   2500 ˆ
        ,
        ,
        ,
        ,
        ,
        ,                                                                A
   2000 ˆ
        ,
        ,
        ,
        ,
        ,
        ,
   1500 ˆ
        ,
        ,
        ,
        ,
        ,
        ,
   1000 ˆ
        ,                                                                A
        ,
        ,
        ,         A                                                                                      A             A
        ,
        ,
    500 ˆ
        ,                                             A
        ,
        ,         A                               A
        ,
        ,                       B                                        A
        ,                                       A    A
      0 ˆ
        Šff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`fffffff`ff
         8000     9000     10000    11000    12000    13000    14000    15000    16000    17000    18000    19000    20000    21000    22000

                                                                  conc
```

---------- Media=Sediment Analyte=Iron Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   400 ˆ
       ,
       ,
       ,             A
       ,             A
   350 ˆ      A
       ,
       ,                                                                                                                                  A
       ,
       ,
   300 ˆ
       ,
       ,
       ,                                                   A                                                         A
       ,                                         A
   250 ˆ
       ,              A                                                         A
       ,
       ,              A
       ,                                                         A         A
   200 ˆ
       ,
       ,
       ,     A
       ,
   150 ˆ                                A                         A                     A
       ,                                                          A      A
       ,                                         A
       ,     AB                                        A
       ,      A
   100 ˆ      A                         A                                             A                  A
       ,
       ,                                                                             A
       ,
       ,
    50 ˆ
       Šff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`ff
        4000         6000         8000         10000        12000        14000        16000        18000        20000        22000

                                                                 conc
```

---------- Media=Sediment Analyte=Lead Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
    23 ˆ                                                                                A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
    17 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
    11 ˆ                                                                                A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     5 ˆ  A
       ,
       Sff^ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff^ff
        26.5                                                                          274

                                                   conc
```

---------- Media=Sediment Analyte=Magnesium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
  8000 ^
       ,                                                                                                                A
       ,
       ,
  7000 ^
       ,
       ,                                                                                                                A
       ,
  6000 ^
       ,
       ,
       ,
  5000 ^
       ,     A
       ,
       ,                                A
  4000 ^                                     A
       ,
       ,
       ,
  3000 ^                                                                                                                A
       ,
       ,  A     A
       ,
  2000 ^
       ,          A
       ,
       ,                                A
  1000 ^     A
       ,  A                                  A
       ,
       ,
     0 ^
       ,
       Sff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^ff
        5000          10000         15000         20000         25000         30000         35000         40000         45000

                                                                conc
```

---------- Media=Sediment Analyte=Magnesium Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
  2500 ˆ
       ,                                        A
       ,
       ,                  A       A
       ,
       ,     A
       ,
  2000 ˆ     A
       ,                    A
       ,     A                                  A
       ,     A A       A
       ,     A             A
       ,                  A
       ,     A                   A                   A
  1500 ˆ     A        AA      A
       ,       A                 A
       ,     A
       ,     A                                                                                                  A
       ,
       ,              A
       ,
  1000 ˆ
       ,
       ,
       ,                     A
       ,
       ,
       ,                  A
   500 ˆ
       ,
       Šff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^ff
          0          5000         10000        15000        20000        25000        30000        35000        40000        45000

                                                                    conc
```

---------- Media=Sediment Analyte=Manganese Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
  1750 ˆ
       ,
       ,         A
       ,
       ,
  1500 ˆ
       ,
       ,
       ,
       ,
  1250 ˆ
       ,
       ,
       ,
       ,
  1000 ˆ
       ,                                                   A
       ,
       ,
       ,
   750 ˆ
       ,
       ,
       ,
       ,
   500 ˆ                                                                                                                   A
       ,                                             A
       ,
       ,
       ,                A
   250 ˆ                                                                                                                   A
       ,
       ,                                             A                                                                       A
       ,    A A  A      A
       ,                                                   A
     0 ˆ
       Šff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`ff
         200          400          600          800         1000         1200         1400         1600         1800         2000         2200

                                                                   conc
```

---------- Media=Sediment Analyte=Manganese Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   140 ˆ                                                A
       ,
       ,
       ,
       ,
   120 ˆ
       ,
       ,
       ,
       ,
   100 ˆ
       ,
       ,
       ,
       ,
    80 ˆ
       ,
       ,
       ,     A
       ,       A
    60 ˆ
       ,
       ,                          A                         A
       ,                                                                                                                  A
       ,    AA            A    A
    40 ˆ               AA   A    A
       ,    AA                 B A                                  A
       ,    AA A                 A
       ,    AA                   A
       ,
    20 ˆ                        A
       ,               A
       ,
       ,
       ,
     0 ˆ
       Šƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒ
         0          200         400         600         800        1000        1200        1400        1600        1800        2000        2200

                                                                   conc
```

```
-------------------------------------------------- Media=Sediment Analyte=Mercury Taxa2=Fish --------------------------------------------------

                                      Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

  0.038 ˆ
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
 Tissue ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
  0.019 ˆ                                                                    A
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
      0 ˆ
        Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
         0                                                                 0.03                                                                0.06

                                                                           conc
```

```
----------------------------------------------- Media=Sediment Analyte=Nickel Taxa2=Arthropods -----------------------------------------------

                                         Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

     44 ˆ
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
 Tissue ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
     22 ˆ                                                            A
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
      0 ˆ
        Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
         0                                                          158                                                          316

                                                                    conc
```

---------- Media=Sediment Analyte=Potassium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
 14000 ˆ
       ,
       ,            A
       ,
       ,
       ,
       ,
 12000 ˆ
       ,
       ,
       ,
       ,
       ,
       ,                                        A
 10000 ˆ                                                                                                                  A
       ,
       ,
       ,
       ,
       ,                                                                                                  A
       ,
  8000 ˆ
       ,
       ,                        A
       ,
       ,                                                                                                  A
       ,                        A                                                                                      A
       ,                                                                                                  A
  6000 ˆ                                    A
       ,
       ,
       ,
       ,                                    A
       ,
       ,                                        A
  4000 ˆ            A
       Šff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ff
         500         1000         1500         2000         2500         3000         3500         4000         4500         5000         5500

                                                                conc
```

---------- Media=Sediment Analyte=Potassium Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
 17500 ˆ                          A
       ,
       ,
       ,
       ,
       ,
 15000 ˆ       A                                                                                                                  A
       ,
       ,
       ,
       ,
       ,
 12500 ˆ            A                           A
       ,
       ,
Tissue ,                          A                                                                                          A
       ,                                   A
       ,
 10000 ˆ       A                            A                                                                                  A
       ,                                                  A                         A
       ,                                  A                                         A
       ,
       ,                                                  A
       ,                                                                                    A
  7500 ˆ
       ,
       ,
       ,
       ,
       ,                                                                             A
  5000 ˆ
       ,                                  A
       ,
       ,
       ,
       ,            A
  2500 ˆ
       Šff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`ff
         500         1000         1500         2000         2500         3000         3500         4000         4500         5000         5500

                                                                   conc
```

---------- Media=Sediment Analyte=Selenium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
     8 ^  A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     3 ^                                                                                                  A
       ,
       Šff^ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff^ff
         1.4                                                                                            2

                                                                 conc
```

---------- Media=Sediment Analyte=Selenium Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
     8 ^ A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     7 ^        A                          B                                                                                                    A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     6 ^        A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     5 ^                                                                                                                                          A
       ,
       Šf^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒƒƒƒƒƒ^ƒ
        1.4    1.6    1.8     2     2.2    2.4    2.6    2.8     3     3.2    3.4    3.6    3.8     4     4.2    4.4    4.6    4.8     5     5.2
```

conc

---------- Media=Sediment Analyte=Sodium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
 12000 ˆ
       ,
       ,
       ,
       ,
       ,
       ,                                                A
 10000 ˆ
       ,        A
       ,
       ,
       ,        A
       ,                                 A
       ,
  8000 ˆ
       ,
       ,
       ,
       ,                                                         A
       ,
       ,
  6000 ˆ
       ,
       ,
       ,                                 A                       A
       ,                                                                                                   A
       ,
       ,
  4000 ˆ                                                         A
       ,      A                                                                                            A
       ,
       ,                                                A
       ,        A
       ,
       ,
  2000 ˆ
       Šƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒ
       1250       1500       1750       2000       2250       2500       2750       3000       3250       3500       3750       4000       4250

                                                         conc
```

---------- Media=Sediment Analyte=Sodium Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
  6000 ˆ
       ,
       ,
       ,
       ,
       ,
       ,                A
  5000 ˆ
       ,
       ,             A
       ,
       ,          A
       ,         A
       ,        A       A
  4000 ˆ           A                       A
       ,                  A
       ,           A                A
       ,                            A
       ,        AA A A                      A                                                                  A
       ,         C                                                                                           A
       ,         A
  3000 ˆ         A                 A
       ,                                                                                                     A
       ,
       ,                    A
       ,
       ,
       ,                         A
  2000 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
  1000 ˆ           A
       Šff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`ff
          0          2000         4000         6000         8000         10000        12000        14000        16000        18000

                                                                   conc
```

```
---------------------------------------------- Media=Sediment Analyte=Vanadium Taxa2=Arthropods ----------------------------------------------

                                             Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

     14 ˆ
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
 Tissue ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
      7 ˆ                                                                  A
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
        ‚
      0 ˆ
        Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
         0                                                                125                                                                250

                                                                          conc
```

---------- Media=Sediment Analyte=Zinc Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   500 ˆ
       ,
       ,
       ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
   400 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
   300 ˆ       A
       ,
       ,
       ,          A                     A
       ,
       ,
       ,
   200 ˆ
       ,
       ,                                                                    A
       ,
       ,                                 A
       ,
       ,
   100 ˆ                                                                        A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
       ,
       ,
       ,             B                                                      A
       ,
       ,
       ,
     0 ˆ
       Šff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`ff
          0        200       400       600       800      1000      1200      1400      1600      1800      2000      2200      2400      2600

                                                                    conc
```

---------- Media=Sediment Analyte=Zinc Taxa2=Fish ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   400 ˆ
       ,
       ,
       ,
       ,   A
   350 ˆ
       ,
       ,
       ,
       ,
   300 ˆ
       ,
       ,                                                                   A
       ,
       ,
   250 ˆ
       ,                                                                        A
       ,
       ,
       ,   A          A
   200 ˆ
       ,
       ,
       ,
       ,          A   A                                                    A
   150 ˆ   A                           A
       ,   B   A    AA
       ,
       ,   B          A
       ,   D         AA
   100 ˆ       A                                                                                                   A
       ,           A
       ,                               A
       ,              A
       ,
    50 ˆ
       Šff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜fffffffff˜ff
          0        200       400       600       800      1000      1200      1400      1600      1800      2000      2200      2400      2600

                                                                   conc
```

-- Media=Soil Analyte=Aluminum Taxa2=Arthropods --

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
 12000 ˆ
       ,                                 A
       ,
       ,
       ,             A
       ,
 10000 ˆ
       ,
       ,
       ,
       ,
       ,
  8000 ˆ
       ,
       ,                                                                                                                                   A
Tissue ,
       ,                  A
       ,
  6000 ˆ
       ,
       ,
       ,
       ,
       ,
  4000 ˆ
       ,
       ,
       ,
       ,    A        A
       ,               A
  2000 ˆ
       ,
       ,                A
       ,
       ,     A
       ,
     0 ˆ
       Šƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒ
          0          10000        20000        30000        40000        50000        60000        70000        80000        90000       100000

                                                                         conc
```

---------- Media=Soil Analyte=Aluminum Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
  1600 ˆ
       ,                                                                                    A
       ,
       ,
       ,
       ,
  1400 ˆ
       ,
       ,
       ,
       ,
       ,
  1200 ˆ
       ,
       ,
Tissue ,
       ,
       ,
  1000 ˆ                                                                                                    A
       ,
       ,
       ,
       ,
       ,
   800 ˆ
       ,
       ,
       ,
       ,
       ,
   600 ˆ
       ,
       ,
       ,
       ,
       ,
   400 ˆ         A
       Šff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ff
        1000          2000          3000          4000          5000          6000          7000          8000          9000

                                                                conc
```

```
------------------------------------------------- Media=Soil Analyte=Barium Taxa2=Arthropods ------------------------------------------------

                                            Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

       Tissue ,
          500 ˆ
              ,
              ,
              ,          A
              ,
              ,
              ,
          400 ˆ
              ,
              ,
              ,
              ,
              ,
              ,
          300 ˆ
              ,
              ,                         A
              ,
              ,
              ,
              ,
          200 ˆ
              ,          A
              ,
              ,        A
              ,
              ,
              ,   A
          100 ˆ                                                                                                                    A
              ,
              ,           A
              ,            A
              ,
              ,
              ,
            0 ˆ
              Šƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒ
                 0           200          400          600          800         1000         1200         1400         1600         1800

                                                                          conc
```

---------- Media=Soil Analyte=Barium Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
   275 ˆ
       ,
       ,
       ,
   250 ˆ                                                                                                A
       ,
       ,
       ,
   225 ˆ
       ,
       ,
       ,
   200 ˆ
       ,
       ,
       ,
   175 ˆ
       ,
       ,
       ,
   150 ˆ
       ,
       ,
       ,
   125 ˆ
       ,    A
       ,
       ,
   100 ˆ
       ,
       ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
   75 ˆ
       ,
       Šff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^ff
         20          30          40          50          60          70          80          90          100         110         120
```

conc

```
------------------------------------------------- Media=Soil Analyte=Cadmium Taxa2=Arthropods -------------------------------------------------

                                            Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

     6 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
Tissue ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     3 ˆ                                                                   A
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     0 ˆ
       Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
        0                                                                 0.89                                                               1.78

                                                                          conc
```

---------- Media=Soil Analyte=Cadmium Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
    10 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
Tissue ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     5 ˆ  A                                                                    A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
     0 ˆ
       Šff^fffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff^ff
        0.66                                                                                        0.82

                                                   conc
```

---------- Media=Soil Analyte=Calcium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
200000 ^
       ,
       ,                          A
       ,
       ,
       ,
       ,
150000 ^
       ,
       ,
       ,
       ,
       ,
       ,       A
100000 ^                          A
       ,
       ,
       ,
       ,                                          A
       ,
 50000 ^           A                   A
       ,
       ,
       ,
       ,           A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
       ,
       ,                                   A
     0 ^
       ,
       Šf^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^fffffffffff^ff
       2000        4000        6000        8000        10000       12000       14000       16000       18000       20000       22000       24000

                                                                   conc
```

```
-------------------------------------------------- Media=Soil Analyte=Calcium Taxa2=Mollusc --------------------------------------------------

                                     Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

 45000 ˆ
       ‚
       ‚
       ‚ A
       ‚
       ‚
 40000 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
 35000 ˆ
       ‚
       ‚
Tissue ‚
       ‚
       ‚
 30000 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
 25000 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
 20000 ˆ                                                                                                                              A
       ‚
       ‚
       ‚
       ‚                                                                                                                               A
       ‚
 15000 ˆ
       Šƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒƒƒƒˆƒƒ
       3300  3400  3500  3600  3700  3800  3900  4000  4100  4200  4300  4400  4500  4600  4700  4800  4900  5000  5100  5200  5300  5400  5500

                                                                   conc
```

---------- Media=Soil Analyte=Chromium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
    50 ˆ
       ,
       ,
       ,
       ,
       ,
       ,              A
    40 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
    30 ˆ
       ,
       ,
       ,                  A
       ,
       ,
       ,
    20 ˆ
       ,
       ,
       ,                                                                                                                                  A
       ,
       ,
       ,
    10 ˆ
       ,
       ,
       ,        AA   A
       ,
       ,
       ,
     0 ˆ
       Šƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒ
         0         20         40         60         80         100        120        140        160        180        200        220        240

                                                                conc
```

---------- Media=Soil Analyte=Copper Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
  1000 ˆ
       ,
       ,
       ,
       ,
       ,                            A
       ,
   800 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
   600 ˆ
       ,
       ,
       ,            A
       ,
       ,
       ,
   400 ˆ         A
       ,                                                                                                                                  A
       ,   A
       ,
       ,
       ,
       ,
   200 ˆ
       ,
       ,  A
       ,     A
       ,
       ,    A A
       ,
     0 ˆ
       Šff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`fffffffff`ff
          0        200       400       600       800      1000      1200      1400      1600      1800      2000      2200      2400      2600

                                                                    conc
```

---------- Media=Soil Analyte=Copper Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   225 ˆ
       ,
       ,
       ,
       ,
   200 ˆ        A
       ,
       ,
       ,
       ,
   175 ˆ
       ,
       ,
       ,
       ,
   150 ˆ
       ,
       ,
       ,
       ,
   125 ˆ
       ,
       ,
       ,
       ,                                                                                                                                  A
   100 ˆ
       ,
       ,
       ,
       ,
    75 ˆ
       ,
       ,
       ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
       ˇƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒ
         3          4          5          6          7          8          9         10         11         12         13         14         15

                                                                conc
```

---------- Media=Soil Analyte=Iron Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
  5000 ˆ
       ,
       ,                                                                                A
       ,
       ,  A
       ,
       ,
  4000 ˆ
       ,                 A
       ,                                                                        A
       ,
       ,
       ,
       ,                                                                                                   A
  3000 ˆ
       ,
       ,
       ,
       ,          A
       ,
       ,
  2000 ˆ
       ,               A
       ,
       ,
       ,
       ,                    A
       ,
  1000 ˆ
       ,
       ,
       ,
       ,               A
       ,
       ,
     0 ˆ
       Šff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`fffffffffff`ff
        4000         6000         8000         10000        12000        14000        16000        18000        20000        22000

                                                                  conc
```

---------- Media=Soil Analyte=Iron Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
  3500 ˆ
       ,
       ,
       ,
       ,
       ,                                                                                                                                A
       ,
  3000 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
  2500 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
  2000 ˆ
       ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
       ,
       ,
       ,
       ,
       ,
       ,
  1500 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
  1000 ˆ           A
       Šfˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆffffffffffˆff
       6000        7000        8000        9000        10000       11000       12000       13000       14000       15000       16000       17000

                                                                conc
```

---------- Media=Soil Analyte=Lead Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
    35 ˆ
       ,
       ,                          A
       ,
       ,
       ,
    30 ˆ
       ,
       ,
       ,
       ,
       ,
    25 ˆ
       ,
       ,
Tissue ,
       ,        A                                                                                                                                  A
       ,
    20 ˆ          A
       ,
       ,
       ,
       ,
       ,
    15 ˆ
       ,
       ,
       ,
       ,
       ,
    10 ˆ
       ,  A                 A
       ,
       ,
       ,
       ,     B
     5 ˆ
       Šƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒ
         0         25         50         75        100        125        150        175        200        225        250        275        300

                                                                    conc
```

```
---------------------------------------------------- Media=Soil Analyte=Lead Taxa2=Mollusc ----------------------------------------------------

                                             Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

     8 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
Tissue ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     4 ˆ                                                                  A
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     0 ˆ
       Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
        0                                                                  8                                                                 16

                                                                          conc
```

```
------------------------------------------------ Media=Soil Analyte=Magnesium Taxa2=Arthropods ------------------------------------------------

                                         Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

    8000 ˆ
         ,
         ,
         ,
         ,
         ,
    7000 ˆ                       A
         ,
         ,                         A
         ,
         ,
         ,
    6000 ˆ
         ,
         ,
  Tissue ,
         ,               A
         ,      A
    5000 ˆ
         ,
         ,            A
         ,                                     A
         ,                             A
         ,
    4000 ˆ
         ,
         ,                                                                                                                            A
         ,
         ,
         ,
    3000 ˆ
         ,
         ,
         ,            A
         ,
         ,
    2000 ˆ
         Šƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒˆƒƒ
            0      2000     4000     6000     8000     10000    12000    14000    16000    18000    20000    22000    24000    26000    28000

                                                                         conc
```

---------- Media=Soil Analyte=Magnesium Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
  5600 ˆ
       ,
       ,
       ,
       ,                                                                                                                A
       ,
  5400 ˆ
       ,
       ,
       ,
       ,
       ,
  5200 ˆ
       ,
       ,
Tissue ,
       ,
       ,
  5000 ˆ
       ,
       ,
       ,
       ,
       ,
  4800 ˆ
       ,
       ,
       ,
       ,
       ,           A
  4600 ˆ
       ,
       ,
       ,
       ,
       ,                                                                                   A
  4400 ˆ
       Šff`ffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆffffffffffffˆff
         500          1000          1500          2000          2500          3000          3500          4000          4500

                                                                conc
```

---------- Media=Soil Analyte=Manganese Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   225 ˆ                        A
       ,
       ,
       ,
       ,
   200 ˆ
       ,
       ,
       ,
       ,
   175 ˆ             A
       ,
       ,
       ,
       ,
   150 ˆ                A
       ,
       ,
       ,
       ,
   125 ˆ
       ,                                                                                                  A
       ,
       ,
       ,
   100 ˆ
       ,                     A
       ,
       ,      A                A
       ,
    75 ˆ                A
       ,                          A
       ,
       ,
       ,
    50 ˆ
       Šff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ffffffffffff`ff
          0            200           400           600           800          1000          1200          1400          1600

                                                                conc
```

```
-------------------------------------------------- Media=Soil Analyte=Manganese Taxa2=Mollusc -------------------------------------------------

                                            Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

Tissue ,
   110 ˆ
       ,
       ,
       ,
       ,                                                                                                                A
   100 ˆ
       ,
       ,
       ,
       ,
    90 ˆ
       ,
       ,
       ,                                                                                                                           A
       ,
    80 ˆ
       ,
       ,
       ,
       ,
    70 ˆ
       ,
       ,
       ,
       ,
    60 ˆ
       ,
       ,
       ,
       ,
    50 ˆ
       ,
       ,          A
       ,
       ,
    40 ˆ
       Šƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒ
        40         60         80        100        120        140        160        180        200        220        240        260        280

                                                                          conc
```

```
--------------------------------------------------- Media=Soil Analyte=Mercury Taxa2=Mollusc --------------------------------------------------

                                          Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

  0.09 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
Tissue ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
 0.045 ˆ                                                                   A
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     0 ˆ
       Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
        0                                                                0.02                                                              0.04

                                                                          conc
```

---------- Media=Soil Analyte=Nickel Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
    21 ^  A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
    15 ^                                                                                                  A
       ,
       Šff^ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff^ff
        11.2                                                                                            29.8

                                                                conc
```

---------- Media=Soil Analyte=Potassium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
 14000 ^
       ,
       ,
       ,
       ,                                                                                                A
       ,
       ,
 12000 ^
       ,
       ,
       ,
       ,
       ,
       ,            A A
 10000 ^
       ,
       ,
       ,                          A
       ,
       ,
       ,
  8000 ^             A
       ,
       ,
       ,
       ,
       ,
       ,
  6000 ^
       ,                                                                                       A
       ,
       ,                                                                                                   A
       ,
       ,
       ,
  4000 ^
       Šff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^fffffffffffff^ff
          0            500          1000          1500          2000          2500          3000          3500          4000

                                                          conc
```

--- Media=Soil Analyte=Potassium Taxa2=Mollusc ---

```
                        Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

Tissue ,
       ,
  6954 ˆ  A
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
       ,
  5890 ˆ                                                                                              A
       ,
       Šƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒ
        2840                                                                                        3200

                                                    conc
```

---------- Media=Soil Analyte=Sodium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
 12000 ^              A
       ,
       ,
       ,                                A                                                    A
       ,
       ,                                                                                                                                  A
       ,
 10000 ^
       ,
       ,
       ,
       ,
       ,
       ,          A
  8000 ^
       ,
       ,
       ,
       ,
       ,
       ,       A A
  6000 ^
       ,
       ,
       ,                                                                                                                                                  A
       ,
       ,                                                                                  A
       ,
  4000 ^
       ,
       Šff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^fffffffff^ff
          0        250       500       750      1000      1250      1500      1750      2000      2250      2500      2750      3000      3250
```

conc

---------- Media=Soil Analyte=Sodium Taxa2=Mollusc ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
  7250 ˆ
       ,
       ,
       ,                                                A
  7000 ˆ
       ,        A
       ,
       ,
  6750 ˆ
       ,
       ,
       ,
  6500 ˆ
       ,
       ,
       ,
  6250 ˆ
       ,
       ,
       ,
  6000 ˆ
       ,
       ,
       ,
  5750 ˆ
       ,
       ,
       ,
  5500 ˆ
       ,
       ,                                                                                                                                A
       ,
  5250 ˆ
       ,
       Šƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒˆƒƒ
        160         180         200         220         240         260         280         300         320         340         360         380

                                                                    conc
```

---------- Media=Soil Analyte=Vanadium Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
       ,
     9 ^                                                                A
       ,
       ,
       ,
       ,
       ,
       ,
     8 ^            A                 A                                                                                    A
       ,
       ,
       ,
       ,
       ,
       ,
     7 ^
       ,
       ,
       ,
       ,
       ,
       ,
     6 ^                                                  A
       ,
       ,
       ,
       ,
       ,
       ,
     5 ^                 A
       ,
       Šf^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒƒƒƒƒƒƒƒƒ^ƒƒ
        20          25          30          35          40          45          50          55          60          65          70          75

                                                                conc
```

```
-------------------------------------------------- Media=Soil Analyte=Vanadium Taxa2=Mollusc --------------------------------------------------

                                            Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

    12 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
Tissue ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     6 ˆ                                                                    A
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
       ‚
     0 ˆ
       Šˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒƒˆƒ
        0                                                                 18.9                                                               37.8

                                                                           conc
```

---------- Media=Soil Analyte=Zinc Taxa2=Arthropods ----------

Plot of Tissue*conc. Legend: A = 1 obs, B = 2 obs, etc.

```
Tissue ,
   500 ˆ
       ,
       ,
       ,
       ,
       ,                            A
       ,
   400 ˆ              A
       ,
       ,
       ,                                                                                                                                A
       ,
       ,
       ,       A    A      A
   300 ˆ
       ,
       ,
       ,
       ,
       ,
       ,
   200 ˆ   A
       ,
       ,
       ,
       ,
       ,
       ,
   100 ˆ       A       A
       ,
       ,
       ,
       ,
       ,
       ,
     0 ˆ
       Šff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`fffffffffffff`ff
          0           200          400          600          800         1000         1200         1400         1600         1800         2000

                                                                    conc
```

```
---------------------------------------------------- Media=Soil Analyte=Zinc Taxa2=Mollusc ----------------------------------------------------

                                    Plot of Tissue*conc.  Legend: A = 1 obs, B = 2 obs, etc.

   197 ˆ                                                                                                                                       A
       ‚
       ‚
       ‚
       ‚
       ‚
   191 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
   185 ˆ
       ‚
       ‚
Tissue ‚
       ‚
       ‚
   179 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
   173 ˆ
       ‚
       ‚
       ‚
       ‚
       ‚
   167 ˆ                                                                                                                                 A
       ‚
       ‚
       ‚
       ‚
       ‚
   161 ˆ A
       Šƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒƒƒƒƒƒˆƒ
       13.7   16.3   18.9   21.5   24.1   26.7   29.3   31.9   34.5   37.1   39.7   42.3   44.9   47.5   50.1   52.7   55.3   57.9   60.5   63.1

                                                                  conc
```