TABLE 4-42

Summary Statistics for Measured Concentrations (mg/kg, dry weight) in Aquatic Invertebrates

Lava Cap Mine, Nevada County, California

AREA	ANALYTE	DETECTS	N	MEAN	STD	MIN	MEDIAN	P90	MAX	UCL95
Reference 1	Aluminum	1	1	537.00	.	537.00	537.00	537.00	537.00	.
Reference 2	Aluminum	3	3	3570.00	1935.48	1610.00	3620.00	5480.00	5480.00	5760.21
Midgradient	Aluminum	3	3	3496.67	1976.62	2110.00	2620.00	5760.00	5760.00	5733.42
Lake	Aluminum	7	7	2104.57	766.76	952.00	2300.00	2900.00	2900.00	2672.60
Downgradient	Aluminum	3	3	1466.67	459.82	1050.00	1390.00	1960.00	1960.00	1987.00
Reference 3	Aluminum	2	2	1805.00	346.48	1560.00	1805.00	2050.00	2050.00	2285.20
Reference 1	Antimony	1	1	0.02	.	0.02	0.02	0.02	0.02	.
Reference 2	Antimony	3	3	0.03	0.01	0.03	0.03	0.04	0.04	0.04
Midgradient	Antimony	3	3	0.36	0.11	0.27	0.32	0.48	0.48	0.48
Lake	Antimony	7	7	0.22	0.09	0.08	0.22	0.32	0.32	0.28
Downgradient	Antimony	3	3	0.28	0.04	0.23	0.30	0.31	0.31	0.33
Reference 3	Antimony	0	2	0.01	0.00	0.01	0.01	0.01	0.01	0.01
Reference 1	Arsenic	1	1	2.10	.	2.10	2.10	2.10	2.10	.
Reference 2	Arsenic	3	3	2.33	0.47	1.80	2.50	2.70	2.70	2.87
Midgradient	Arsenic	3	3	322.33	94.84	238.00	304.00	425.00	425.00	429.65
Lake	Arsenic	7	7	517.43	392.73	70.00	421.00	1140.00	1140.00	808.37
Downgradient	Arsenic	3	3	466.33	128.10	349.00	447.00	603.00	603.00	611.29
Reference 3	Arsenic	2	2	2.45	0.92	1.80	2.45	3.10	3.10	3.72
Reference 1	Barium	1	1	7.10	.	7.10	7.10	7.10	7.10	.
Reference 2	Barium	3	3	51.33	20.34	32.50	48.60	72.90	72.90	74.35
Midgradient	Barium	3	3	69.00	26.71	47.80	60.20	99.00	99.00	99.23
Lake	Barium	7	7	101.47	108.85	36.50	58.70	342.00	342.00	182.11
Downgradient	Barium	3	3	400.33	122.92	322.00	337.00	542.00	542.00	539.43
Reference 3	Barium	2	2	185.15	163.84	69.30	185.15	301.00	301.00	412.22
Reference 1	Beryllium	1	1	0.03	.	0.03	0.03	0.03	0.03	.
Reference 2	Beryllium	3	3	0.09	0.04	0.05	0.10	0.12	0.12	0.13
Midgradient	Beryllium	3	3	0.09	0.03	0.07	0.07	0.12	0.12	0.12
Lake	Beryllium	7	7	0.06	0.03	0.03	0.07	0.10	0.10	0.08
Downgradient	Beryllium	3	3	0.07	0.01	0.07	0.07	0.08	0.08	0.08
Reference 3	Beryllium	2	2	0.06	0.01	0.05	0.06	0.06	0.06	0.07
Reference 1	Cadmium	1	1	0.33	.	0.33	0.33	0.33	0.33	.
Reference 2	Cadmium	3	3	0.61	0.05	0.58	0.59	0.67	0.67	0.67
Midgradient	Cadmium	3	3	0.99	0.29	0.77	0.89	1.32	1.32	1.32
Lake	Cadmium	7	7	0.98	0.32	0.60	0.90	1.34	1.34	1.21
Downgradient	Cadmium	3	3	1.04	0.14	0.92	1.00	1.19	1.19	1.19

TABLE 4-42

Summary Statistics for Measured Concentrations (mg/kg, dry weight) in Aquatic Invertebrates

Lava Cap Mine, Nevada County, California

AREA	ANALYTE	DETECTS	N	MEAN	STD	MIN	MEDIAN	P90	MAX	UCL95
Reference 3	Cadmium	2	2	0.41	0.18	0.28	0.41	0.54	0.54	0.66
Reference 1	Chromium	1	1	2.60	.	2.60	2.60	2.60	2.60	.
Reference 2	Chromium	3	3	4.67	0.61	4.00	4.80	5.20	5.20	5.36
Midgradient	Chromium	3	3	6.57	1.99	5.00	5.90	8.80	8.80	8.81
Lake	Chromium	6	7	3.90	1.91	0.20	4.00	5.80	5.80	5.31
Downgradient	Chromium	3	3	3.53	0.99	2.40	4.00	4.20	4.20	4.65
Reference 3	Chromium	2	2	6.10	2.55	4.30	6.10	7.90	7.90	9.63
Reference 1	Cobalt	1	1	1.08	.	1.08	1.08	1.08	1.08	.
Reference 2	Cobalt	3	3	2.47	0.66	1.79	2.51	3.10	3.10	3.21
Midgradient	Cobalt	3	3	7.86	1.36	6.29	8.58	8.70	8.70	9.39
Lake	Cobalt	7	7	4.45	1.31	3.03	4.23	6.52	6.52	5.42
Downgradient	Cobalt	3	3	14.47	2.66	12.20	13.80	17.40	17.40	17.48
Reference 3	Cobalt	2	2	8.05	5.31	4.29	8.05	11.80	11.80	15.40
Reference 1	Copper	1	1	21.80	.	21.80	21.80	21.80	21.80	.
Reference 2	Copper	3	3	29.67	1.23	28.30	30.00	30.70	30.70	31.06
Midgradient	Copper	3	3	52.33	21.80	39.40	40.10	77.50	77.50	77.00
Lake	Copper	7	7	48.79	23.30	30.10	34.60	83.20	83.20	66.05
Downgradient	Copper	3	3	32.17	2.89	30.40	30.60	35.50	35.50	35.44
Reference 3	Copper	2	2	27.90	2.12	26.40	27.90	29.40	29.40	30.84
Reference 1	Iron	1	1	350.00	.	350.00	350.00	350.00	350.00	.
Reference 2	Iron	3	3	2436.67	837.64	1640.00	2360.00	3310.00	3310.00	3384.54
Midgradient	Iron	3	3	3713.33	698.67	3300.00	3320.00	4520.00	4520.00	4503.95
Lake	Iron	7	7	7144.29	5689.16	1090.00	4320.00	17400.00	17400.00	11358.87
Downgradient	Iron	3	3	10080.00	3375.38	7500.00	8840.00	13900.00	13900.00	13899.60
Reference 3	Iron	2	2	1805.00	318.20	1580.00	1805.00	2030.00	2030.00	2246.00
Reference 1	Lead	1	1	0.21	.	0.21	0.21	0.21	0.21	.
Reference 2	Lead	3	3	0.69	0.25	0.45	0.67	0.95	0.95	0.97
Midgradient	Lead	3	3	3.13	1.89	1.97	2.10	5.31	5.31	5.27
Lake	Lead	7	7	2.90	1.88	0.99	2.86	6.34	6.34	4.29
Downgradient	Lead	3	3	1.56	0.34	1.22	1.58	1.89	1.89	1.94
Reference 3	Lead	2	2	0.48	0.01	0.47	0.48	0.48	0.48	0.49
Reference 1	Magnesium	1	1	1310.00	.	1310.00	1310.00	1310.00	1310.00	.
Reference 2	Magnesium	3	3	1846.67	421.94	1450.00	1800.00	2290.00	2290.00	2324.14
Midgradient	Magnesium	3	3	1323.33	275.74	1060.00	1300.00	1610.00	1610.00	1635.36
Lake	Magnesium	7	7	1115.29	351.72	437.00	1140.00	1590.00	1590.00	1375.84

TABLE 4-42

Summary Statistics for Measured Concentrations (mg/kg, dry weight) in Aquatic Invertebrates

Lava Cap Mine, Nevada County, California

AREA	ANALYTE	DETECTS	N	MEAN	STD	MIN	MEDIAN	P90	MAX	UCL95
Downgradient	Magnesium	3	3	1520.00	340.44	1220.00	1450.00	1890.00	1890.00	1905.25
Reference 3	Magnesium	2	2	2000.00	579.83	1590.00	2000.00	2410.00	2410.00	2803.60
Reference 1	Manganese	1	1	28.40	.	28.40	28.40	28.40	28.40	.
Reference 2	Manganese	3	3	80.87	11.63	72.80	75.60	94.20	94.20	94.03
Midgradient	Manganese	3	3	1610.00	329.09	1240.00	1720.00	1870.00	1870.00	1982.40
Lake	Manganese	7	7	850.57	427.19	413.00	820.00	1560.00	1560.00	1167.04
Downgradient	Manganese	3	3	6340.00	2322.26	4790.00	5220.00	9010.00	9010.00	8967.89
Reference 3	Manganese	2	2	1135.50	770.04	591.00	1135.50	1680.00	1680.00	2202.72
Reference 1	Mercury	1	1	0.11	.	0.11	0.11	0.11	0.11	.
Reference 2	Mercury	3	3	0.04	0.01	0.04	0.04	0.05	0.05	0.05
Midgradient	Mercury	3	3	0.15	0.03	0.13	0.13	0.18	0.18	0.18
Lake	Mercury	7	7	0.07	0.03	0.04	0.06	0.11	0.11	0.09
Downgradient	Mercury	3	3	0.11	0.04	0.07	0.12	0.14	0.14	0.15
Reference 3	Mercury	2	2	0.14	0.01	0.13	0.14	0.15	0.15	0.16
Reference 1	Nickel	1	1	1.75	.	1.75	1.75	1.75	1.75	.
Reference 2	Nickel	3	3	5.02	1.89	3.42	4.54	7.11	7.11	7.16
Midgradient	Nickel	3	3	11.06	1.53	9.39	11.40	12.40	12.40	12.80
Lake	Nickel	7	7	11.19	10.45	2.89	5.63	29.10	29.10	18.94
Downgradient	Nickel	3	3	12.50	1.87	10.40	13.10	14.00	14.00	14.62
Reference 3	Nickel	2	2	13.85	6.01	9.60	13.85	18.10	18.10	22.18
Reference 1	Selenium	1	1	1.90	.	1.90	1.90	1.90	1.90	.
Reference 2	Selenium	3	3	1.53	0.21	1.30	1.60	1.70	1.70	1.77
Midgradient	Selenium	3	3	3.33	0.50	2.80	3.40	3.80	3.80	3.90
Lake	Selenium	4	7	1.74	1.41	0.50	1.00	3.40	3.40	2.79
Downgradient	Selenium	2	3	1.40	0.82	0.50	1.60	2.10	2.10	2.33
Reference 3	Selenium	2	2	1.20	0.28	1.00	1.20	1.40	1.40	1.59
Reference 1	Silver	1	1	0.24	.	0.24	0.24	0.24	0.24	.
Reference 2	Silver	3	3	0.15	0.02	0.14	0.14	0.18	0.18	0.18
Midgradient	Silver	3	3	0.87	0.31	0.53	0.95	1.14	1.14	1.23
Lake	Silver	7	7	1.07	0.99	0.16	0.50	2.83	2.83	1.80
Downgradient	Silver	3	3	0.89	0.34	0.59	0.81	1.26	1.26	1.27
Reference 3	Silver	2	2	0.21	0.01	0.20	0.21	0.21	0.21	0.21
Reference 1	Thallium	0	1	0.01	.	0.01	0.01	0.01	0.01	.
Reference 2	Thallium	3	3	0.02	0.01	0.01	0.02	0.03	0.03	0.03
Midgradient	Thallium	3	3	0.03	0.02	0.02	0.02	0.06	0.06	0.06

TABLE 4-42

Summary Statistics for Measured Concentrations (mg/kg, dry weight) in Aquatic Invertebrates

Lava Cap Mine, Nevada County, California

AREA	ANALYTE	DETECTS	N	MEAN	STD	MIN	MEDIAN	P90	MAX	UCL95
Lake	Thallium	7	7	0.03	0.01	0.02	0.03	0.05	0.05	0.04
Downgradient	Thallium	3	3	0.05	0.02	0.04	0.04	0.07	0.07	0.07
Reference 3	Thallium	2	2	0.07	0.04	0.04	0.07	0.09	0.09	0.11
Reference 1	Vanadium	1	1	1.42	.	1.42	1.42	1.42	1.42	.
Reference 2	Vanadium	3	3	10.38	3.49	7.04	10.10	14.00	14.00	14.33
Midgradient	Vanadium	3	3	6.83	3.38	4.42	5.38	10.70	10.70	10.66
Lake	Vanadium	7	7	7.92	4.85	2.63	6.74	16.00	16.00	11.52
Downgradient	Vanadium	3	3	7.07	0.79	6.16	7.51	7.54	7.54	7.96
Reference 3	Vanadium	2	2	5.55	1.31	4.62	5.55	6.47	6.47	7.36
Reference 1	Zinc	1	1	133.00	.	133.00	133.00	133.00	133.00	.
Reference 2	Zinc	3	3	163.00	17.58	150.00	156.00	183.00	183.00	182.89
Midgradient	Zinc	3	3	262.67	41.88	216.00	275.00	297.00	297.00	310.06
Lake	Zinc	7	7	129.47	86.72	28.30	108.00	274.00	274.00	193.71
Downgradient	Zinc	3	3	195.33	12.01	183.00	196.00	207.00	207.00	208.93
Reference 3	Zinc	2	2	196.00	52.33	159.00	196.00	233.00	233.00	268.52

Midgradient = area that extends from below the log dam to the start of the Deposition Area upstream of Lost Lake
Lake = Deposition Area and property surrounding Lost Lake
Downgradient = area that extends from below Lost Lake dam to confluence of Clipper Creek with Little Greenhorn Creek
Reference 1 = Little Clipper Creek upgradient of the mine
Reference 2 = Clipper Creek upstream of the confluence with Little Clipper Creek
Reference 3 = Little Greenhorn Creek upstream of the Clipper Creek confluence
N = number of samples
STD = standard deviation
Min = minimum concentration
P90 = 90th percentile
Max = maximum concentration
UCL95 = 95% upper confidence limit