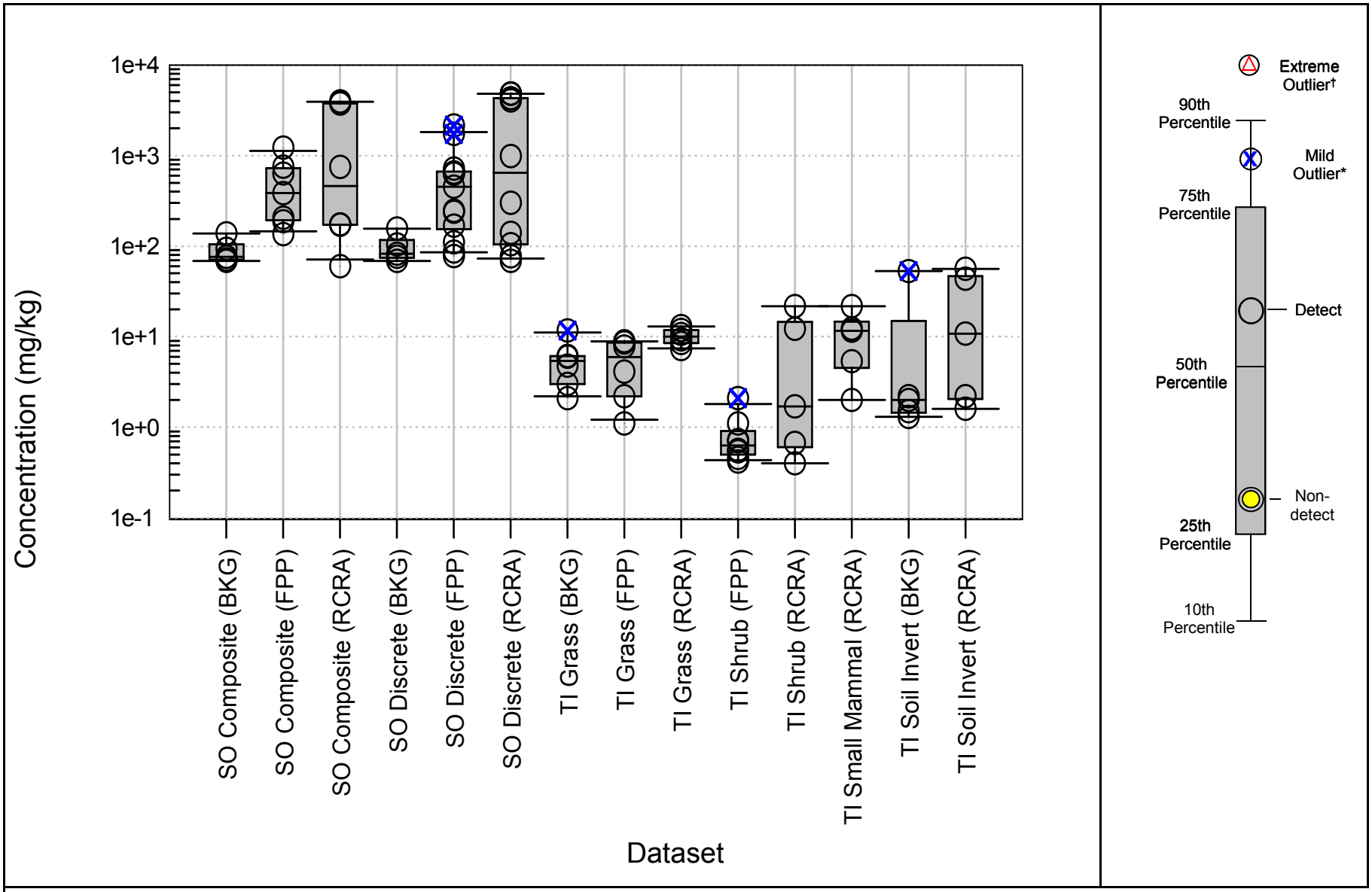
SUB-ATTACHMENTS U-6

SITE-SPECFIC BIOTA UPTAKE AND REGRESSION ANALYSIS

SUB-ATTACHMENT 1

TISSUE AND CO-LOCATED SOIL/SEDIMENT BOX PLOTS AND SUMMARY STATISTICS

Sub-attachment 1: Log Box and Whisker Plots		
Group	**Figure #**	**Parameter**
Metals	1-1	Barium
	1-2	Cadmium
	1-3	Chromium
	1-4	Copper
	1-5	Lead
	1-6	Molybdenum
	1-7	Vanadium
	1-8	Zinc
Pesticides	1-9	4,4'-DDD
	1-10	4,4'-DDE
	1-11	4,4'-DDT
	1-12	Total DDT
PCBs	1-13	PCB Congener TEQ-Bird
	1-14	PCB Congener TEQ-Human/mammal
	1-15	Total PCB Congeners



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Log Box and Whisker Plot
Barium
Casmalia Resources Superfund Site

Figure 1-1

Table 1-1. Barium Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	68.5	138	89.5	76.3	28.8	71.0	76.3	105
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	135	1,220	503	385	394	190	385	723
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	60.1	3,960	1,477	460	1,859	170	460	3,750
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	68.4	156	97.4	82.4	35.3	74.0	82.4	117
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	77.7	2,140	606	453	639	150	453	667
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	68.6	4,820	1,965	644	2,202	110	644	4,290
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	2.1	11.7	5.6	5.4	3.4	3.0	5.4	6.1
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	1.1	8.9	5.5	5.9	3.4	2.2	5.9	8.6
TI Grass (RCRA)	mg/kg, ww	0	6	6	NA	NA	7.3	13.1	10.1	10.0	2.2	8.5	10.0	11.8
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	0.42	2.1	0.83	0.63	0.56	0.50	0.63	0.91
TI Shrub (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.40	21.7	7.3	1.7	9.4	0.60	1.7	14.6
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	2.0	21.7	10.6	11.6	7.6	4.5	11.6	14.6
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	1.3	53.0	12.0	2.0	22.9	1.5	2.0	14.9
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	1.6	56.2	22.9	10.8	25.3	2.0	10.8	46.7

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

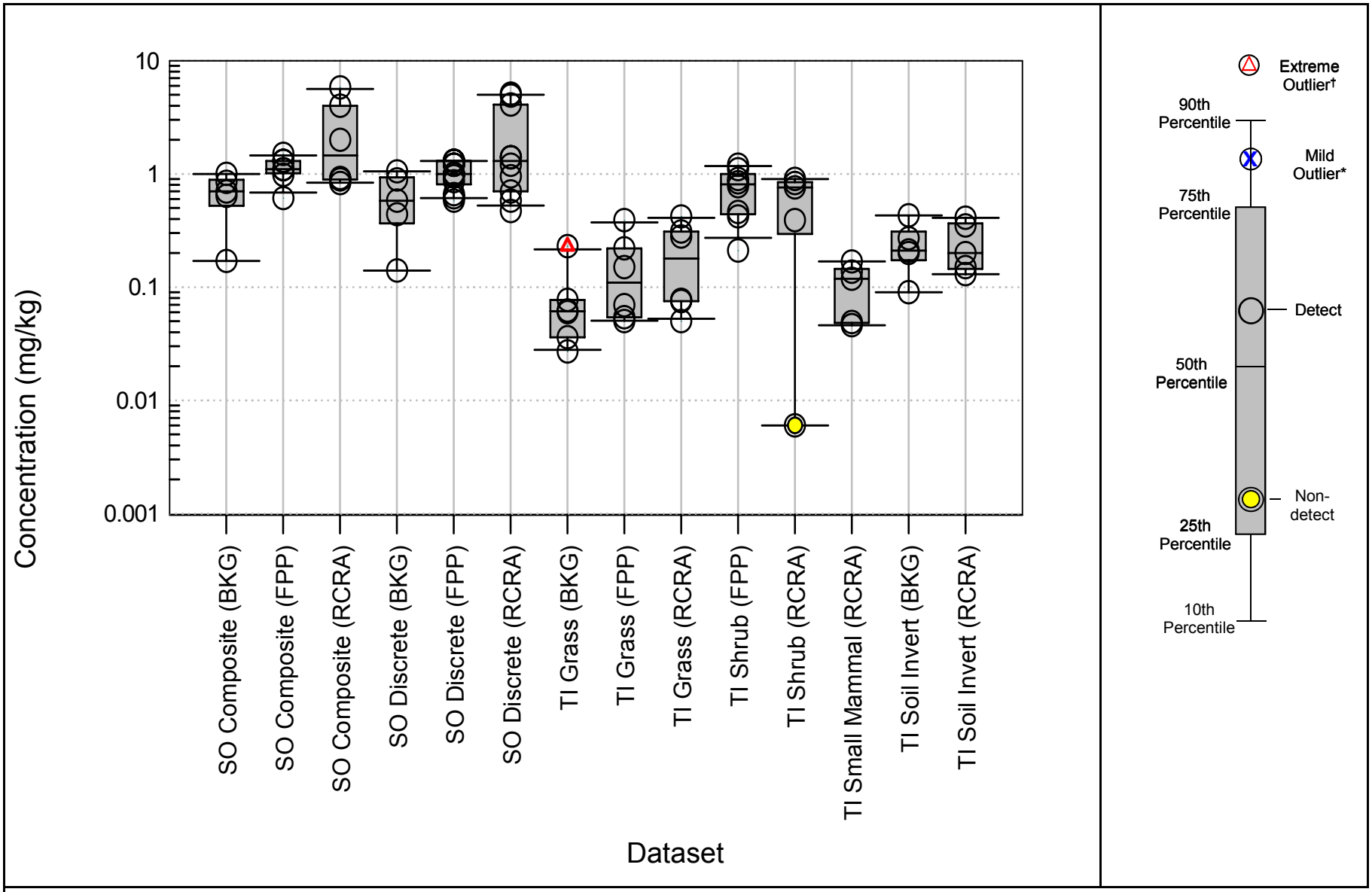
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



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Log Box and Whisker Plot
Cadmium
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Figure
1-2

Table 1-2. Cadmium Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	0.17	1.00	0.67	0.70	0.31	0.52	0.70	0.89
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	0.61	1.5	1.1	1.1	0.29	1.00	1.1	1.3
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	0.83	5.8	2.4	1.5	2.1	0.89	1.5	4.0
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	0.14	1.1	0.62	0.58	0.36	0.37	0.58	0.93
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	0.58	1.3	1.00	1.00	0.27	0.81	1.00	1.3
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	0.47	5.1	2.1	1.3	1.9	0.70	1.3	4.1
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	0.03	0.23	0.08	0.06	0.08	0.04	0.06	0.08
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	0.05	0.39	0.16	0.11	0.13	0.05	0.11	0.22
TI Grass (RCRA)	mg/kg, ww	0	6	6	NA	NA	0.05	0.42	0.20	0.18	0.16	0.08	0.18	0.31
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	0.21	1.2	0.74	0.81	0.35	0.44	0.81	1.00
TI Shrub (RCRA)	mg/kg, ww	1	4	5	0.006	0.006	0.39	0.90	0.72	0.80	0.23	0.29	0.76	0.85
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.05	0.17	0.10	0.12	0.05	0.05	0.12	0.14
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.09	0.43	0.24	0.21	0.12	0.17	0.21	0.31
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.13	0.41	0.25	0.20	0.12	0.14	0.20	0.37

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

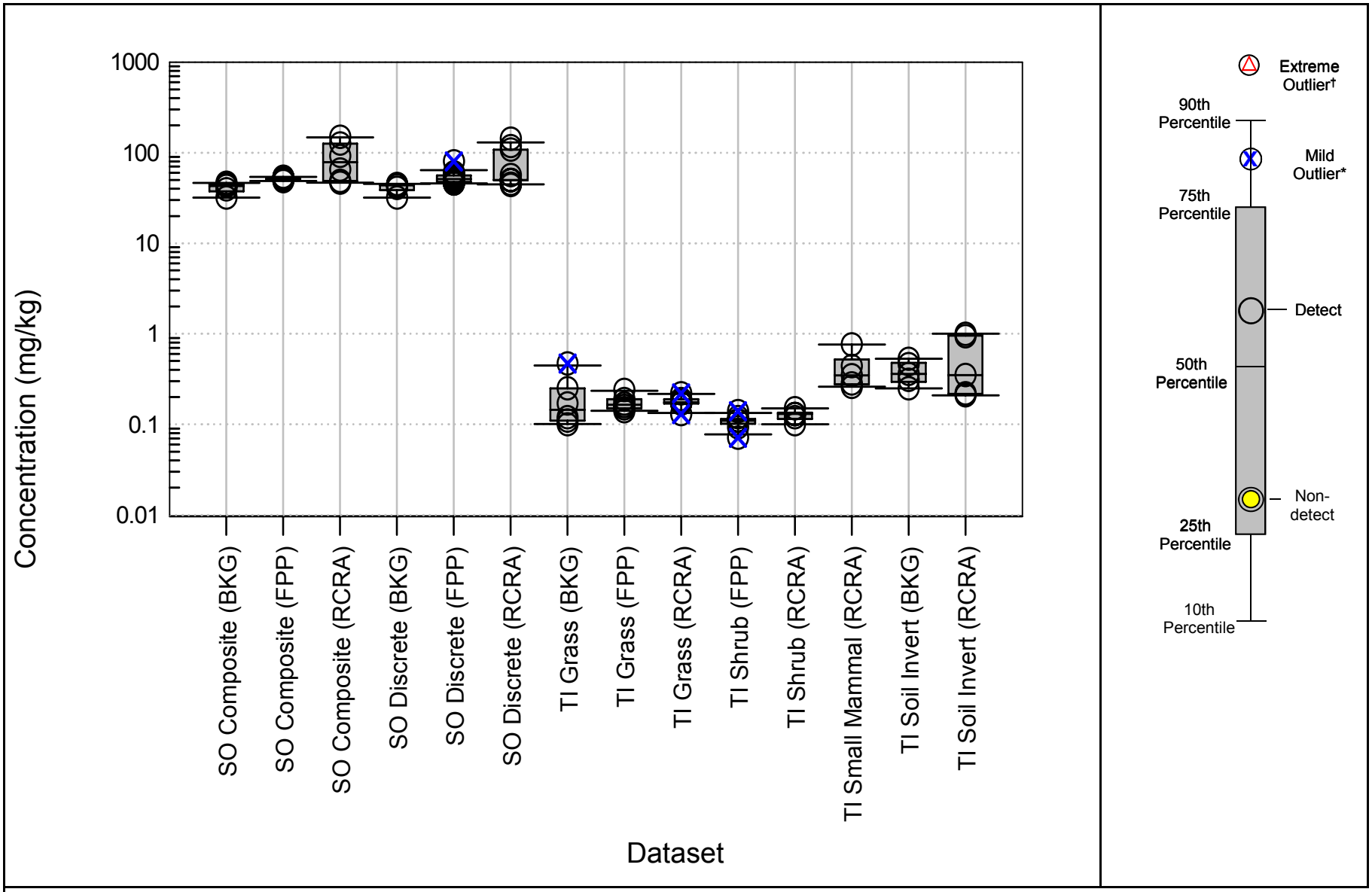
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
Chromium
Casmalia Resources Superfund Site

Figure
1-3

Table 1-3. Chromium Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	31.9	46.4	40.9	42.8	5.7	37.0	42.8	44.8
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	48.5	54.2	51.5	51.2	1.9	51.0	51.2	52.8
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	46.6	150	88.0	78.5	42.7	49.0	78.5	126
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	32.0	45.1	41.1	43.5	5.3	39.0	43.5	44.2
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	45.6	80.1	53.4	51.0	9.2	47.0	51.0	56.0
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	43.8	142	71.2	49.8	36.6	50.0	49.8	108
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	0.10	0.47	0.20	0.14	0.14	0.11	0.14	0.25
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	0.14	0.24	0.18	0.17	0.04	0.15	0.17	0.19
TI Grass (RCRA)	mg/kg, ww	0	6	6	NA	NA	0.13	0.22	0.18	0.17	0.03	0.17	0.17	0.19
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	0.07	0.14	0.11	0.11	0.02	0.10	0.11	0.12
TI Shrub (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.10	0.15	0.13	0.13	0.02	0.12	0.13	0.14
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.26	0.76	0.42	0.35	0.21	0.28	0.35	0.52
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.25	0.53	0.38	0.36	0.11	0.29	0.36	0.48
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.21	1.00	0.54	0.35	0.39	0.22	0.35	0.95

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

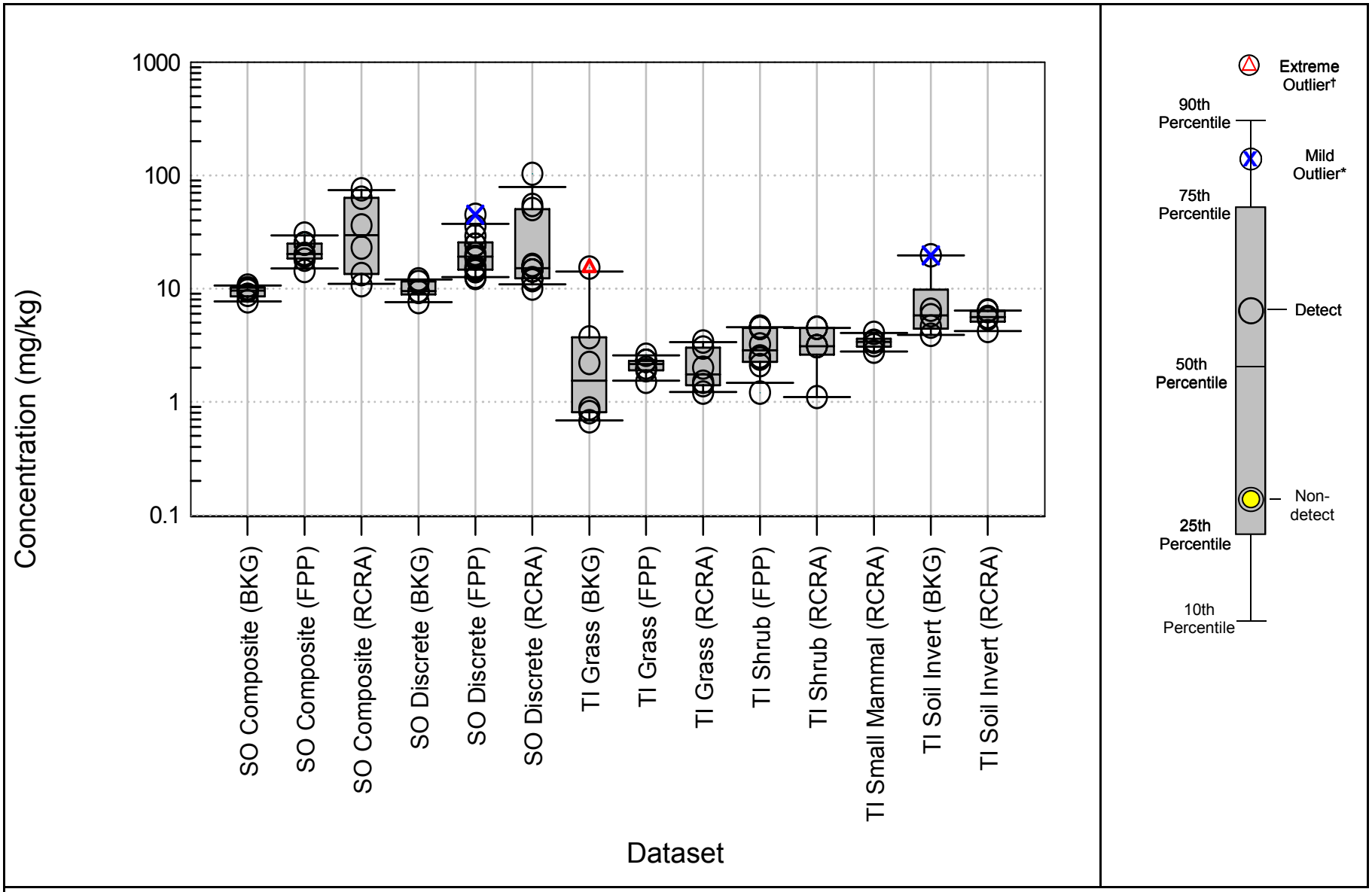
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



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Log Box and Whisker Plot
Copper
Casmalia Resources Superfund Site

Figure
1-4

Table 1-4. Copper Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	7.7	10.6	9.4	9.6	1.1	8.5	9.6	10.2
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	14.3	30.5	21.8	20.2	5.4	18.0	20.2	25.0
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	10.7	75.3	37.0	29.5	26.9	13.0	29.5	63.4
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	7.6	12.0	10.0	9.5	1.8	8.9	9.5	11.6
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	12.4	44.8	21.9	19.1	9.7	15.0	19.1	25.5
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	10.0	103	30.3	15.1	30.3	12.0	15.1	50.2
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	0.67	15.3	3.9	1.5	5.7	0.81	1.5	3.7
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	1.5	2.6	2.1	2.2	0.38	1.9	2.2	2.3
TI Grass (RCRA)	mg/kg, ww	0	6	6	NA	NA	1.2	3.4	2.1	1.8	0.91	1.4	1.8	3.0
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	1.2	4.6	3.1	2.8	1.3	2.3	2.8	4.5
TI Shrub (RCRA)	mg/kg, ww	0	5	5	NA	NA	1.1	4.5	3.3	3.1	1.4	2.6	3.1	4.5
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	2.8	4.1	3.4	3.4	0.47	3.1	3.4	3.6
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	3.9	19.6	8.1	5.8	6.5	4.4	5.8	9.8
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	4.2	6.4	5.6	5.6	0.88	5.1	5.6	6.3

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

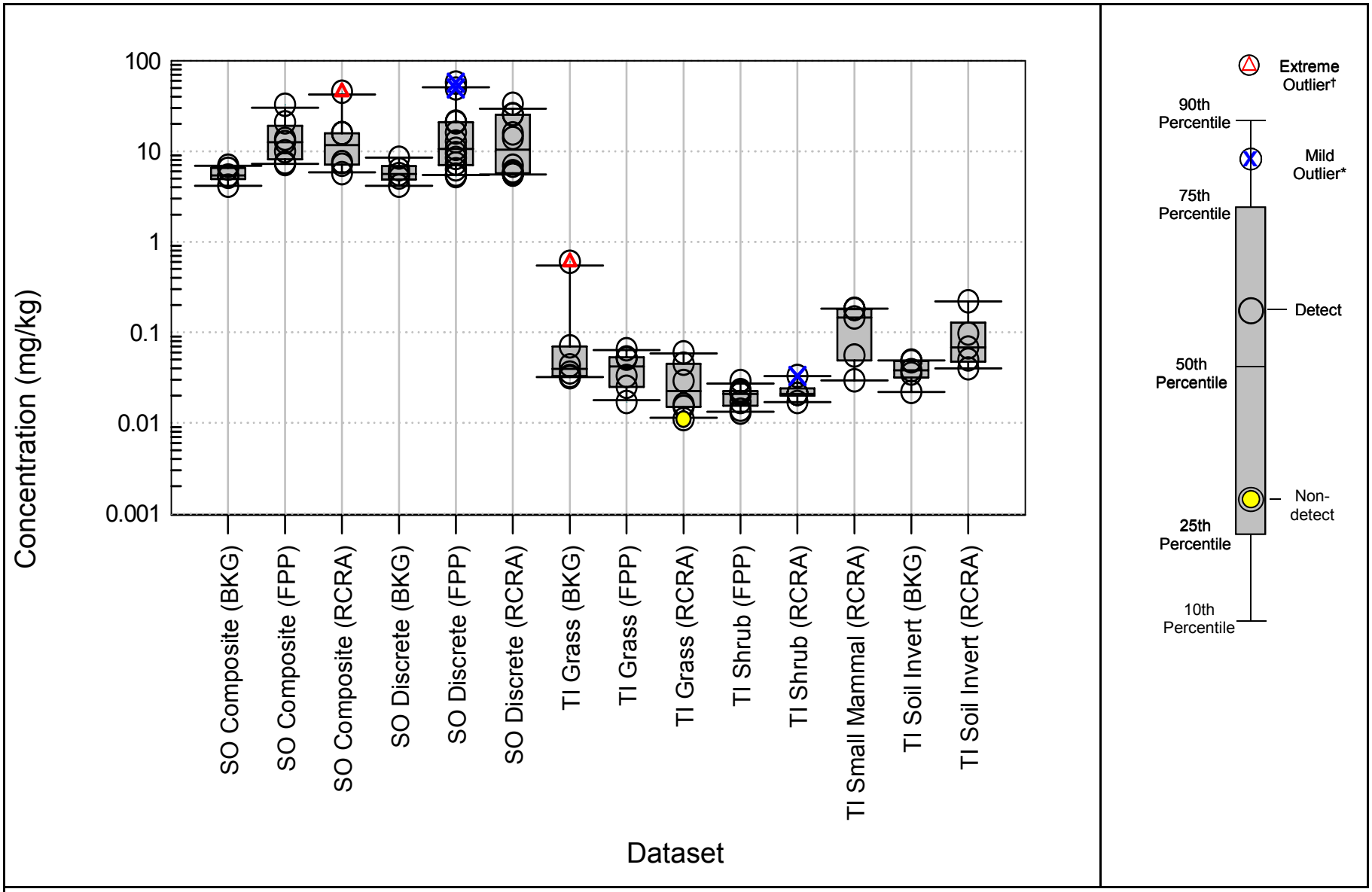
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
Lead
Casmalia Resources Superfund Site

Figure
1-5

Table 1-5. Lead Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	4.2	6.9	5.6	5.4	1.1	4.9	5.4	6.5
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	7.2	32.5	14.9	12.6	9.0	8.1	12.6	19.0
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	5.7	45.3	16.2	11.7	14.9	7.1	11.7	15.8
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	4.2	8.5	5.9	5.6	1.6	4.9	5.6	6.8
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	5.3	57.2	17.7	10.6	16.7	7.1	10.6	20.9
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	5.5	33.4	14.4	10.4	10.4	5.7	10.4	25.3
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	0.03	0.60	0.14	0.04	0.23	0.03	0.04	0.07
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	0.02	0.07	0.04	0.04	0.02	0.03	0.04	0.05
TI Grass (RCRA)	mg/kg, ww	1	5	6	0.01	0.01	0.02	0.06	0.03	0.03	0.02	0.02	0.02	0.05
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	0.01	0.03	0.02	0.02	0.0052	0.02	0.02	0.02
TI Shrub (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.02	0.03	0.02	0.02	0.0061	0.02	0.02	0.02
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.03	0.18	0.12	0.15	0.07	0.05	0.15	0.18
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.02	0.05	0.04	0.04	0.01	0.03	0.04	0.05
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.04	0.22	0.10	0.07	0.07	0.05	0.07	0.13

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

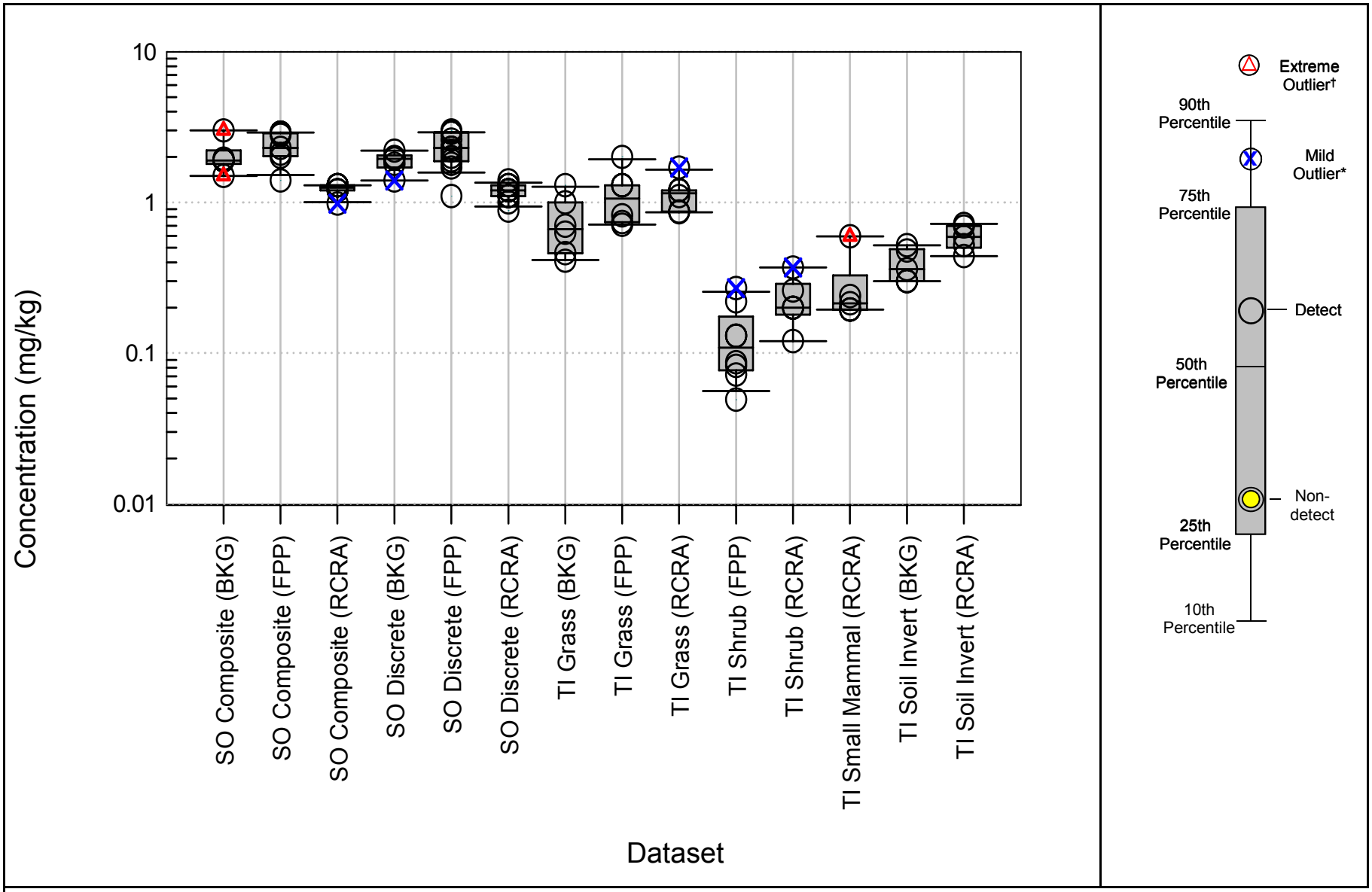
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
Molybdenum
Casmalia Resources Superfund Site

Figure
1-6

Table 1-6. Molybdenum Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	1.5	3.0	2.1	1.9	0.56	1.9	1.9	2.0
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	1.4	2.9	2.3	2.3	0.56	2.0	2.3	2.8
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	0.98	1.3	1.2	1.3	0.12	1.2	1.3	1.3
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	1.4	2.2	1.9	2.0	0.30	1.8	2.0	2.0
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	1.1	3.0	2.3	2.3	0.57	1.9	2.3	2.9
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	0.88	1.4	1.2	1.2	0.15	1.1	1.2	1.3
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	0.41	1.3	0.75	0.67	0.34	0.50	0.67	0.93
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	0.71	2.0	1.1	1.1	0.50	0.76	1.1	1.3
TI Grass (RCRA)	mg/kg, ww	0	6	6	NA	NA	0.86	1.7	1.2	1.1	0.31	0.93	1.1	1.2
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	0.05	0.27	0.13	0.11	0.08	0.08	0.11	0.15
TI Shrub (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.12	0.37	0.23	0.20	0.09	0.20	0.20	0.26
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.19	0.60	0.29	0.21	0.17	0.19	0.21	0.24
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.30	0.52	0.39	0.36	0.10	0.30	0.36	0.48
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.44	0.72	0.59	0.59	0.12	0.52	0.59	0.69

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

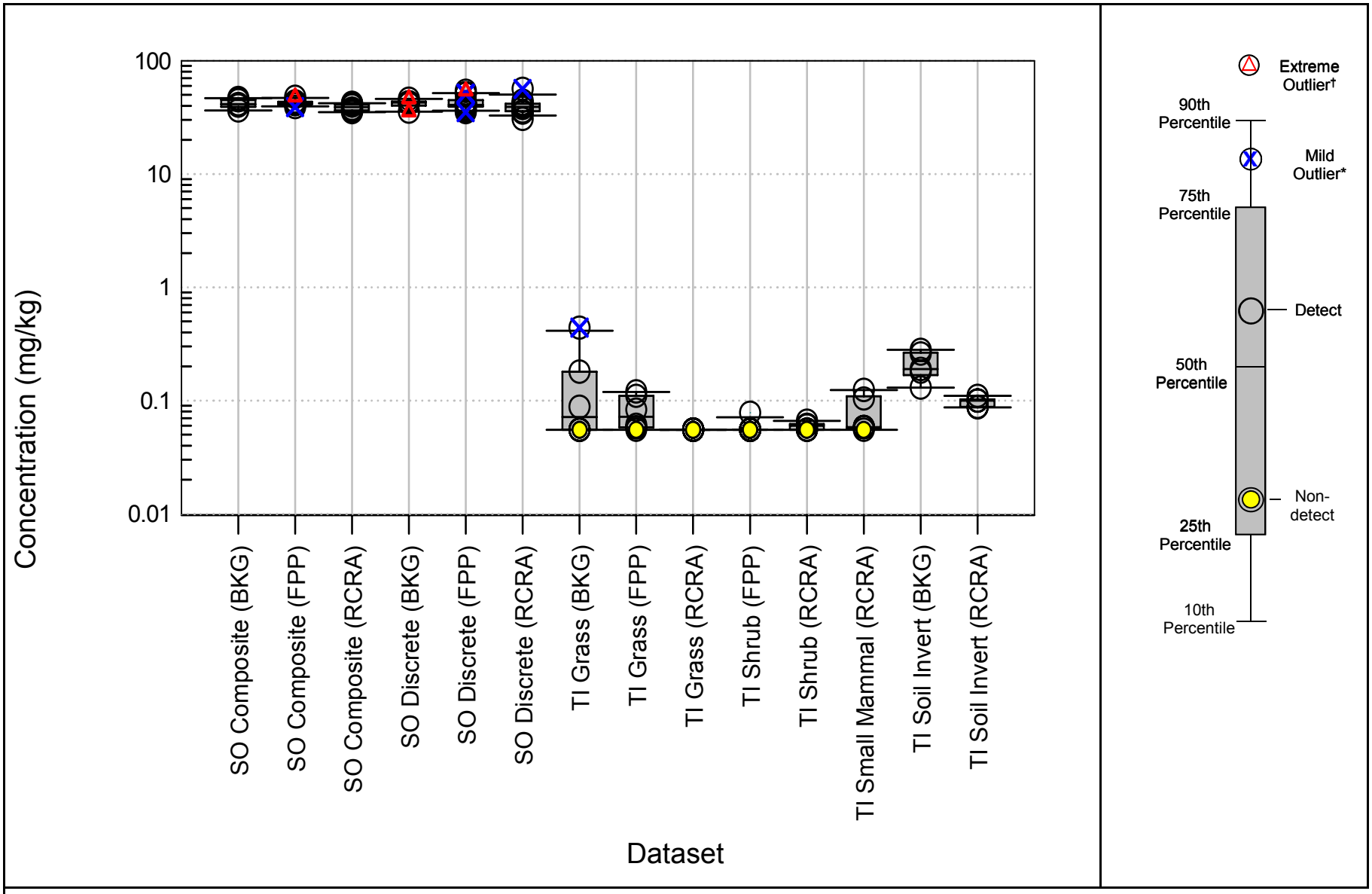
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
Vanadium
Casmalia Resources Superfund Site

Figure
1-7

Table 1-7. Vanadium Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	36.3	46.7	41.8	41.4	4.0	40.0	41.4	44.6
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	39.0	47.9	42.5	41.8	2.8	41.0	41.8	42.9
SO Composite (RCRA)	mg/kg, dw	0	6	6	NA	NA	35.1	42.3	38.8	39.0	2.8	37.0	39.0	40.9
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	35.4	46.1	41.7	42.7	3.9	42.0	42.7	42.8
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	35.2	54.0	42.6	40.7	5.9	40.0	40.7	42.7
SO Discrete (RCRA)	mg/kg, dw	0	10	10	NA	NA	30.7	56.3	40.1	39.3	6.9	36.0	39.3	41.5
TI Grass (BKG)	mg/kg, ww	2	4	6	0.055	0.055	0.06	0.44	0.19	0.13	0.17	0.06	0.07	0.16
TI Grass (FPP)	mg/kg, ww	1	5	6	0.055	0.055	0.06	0.12	0.09	0.08	0.03	0.06	0.07	0.10
TI Grass (RCRA)	mg/kg, ww	6	0	6	0.055	0.055	ND	ND	ND	ND	ND	0.06	0.06	0.06
TI Shrub (FPP)	mg/kg, ww	7	1	8	0.055	0.055	0.08	0.08	0.08	0.08	ND	0.06	0.06	0.06
TI Shrub (RCRA)	mg/kg, ww	2	3	5	0.055	0.055	0.06	0.07	0.06	0.06	0.0032	0.06	0.06	0.06
TI Small Mammal (RCRA)	mg/kg, ww	1	4	5	0.055	0.055	0.06	0.12	0.09	0.08	0.03	0.06	0.06	0.10
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.13	0.28	0.21	0.19	0.06	0.18	0.19	0.26
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	0.09	0.11	0.10	0.10	0.0096	0.09	0.10	0.10

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

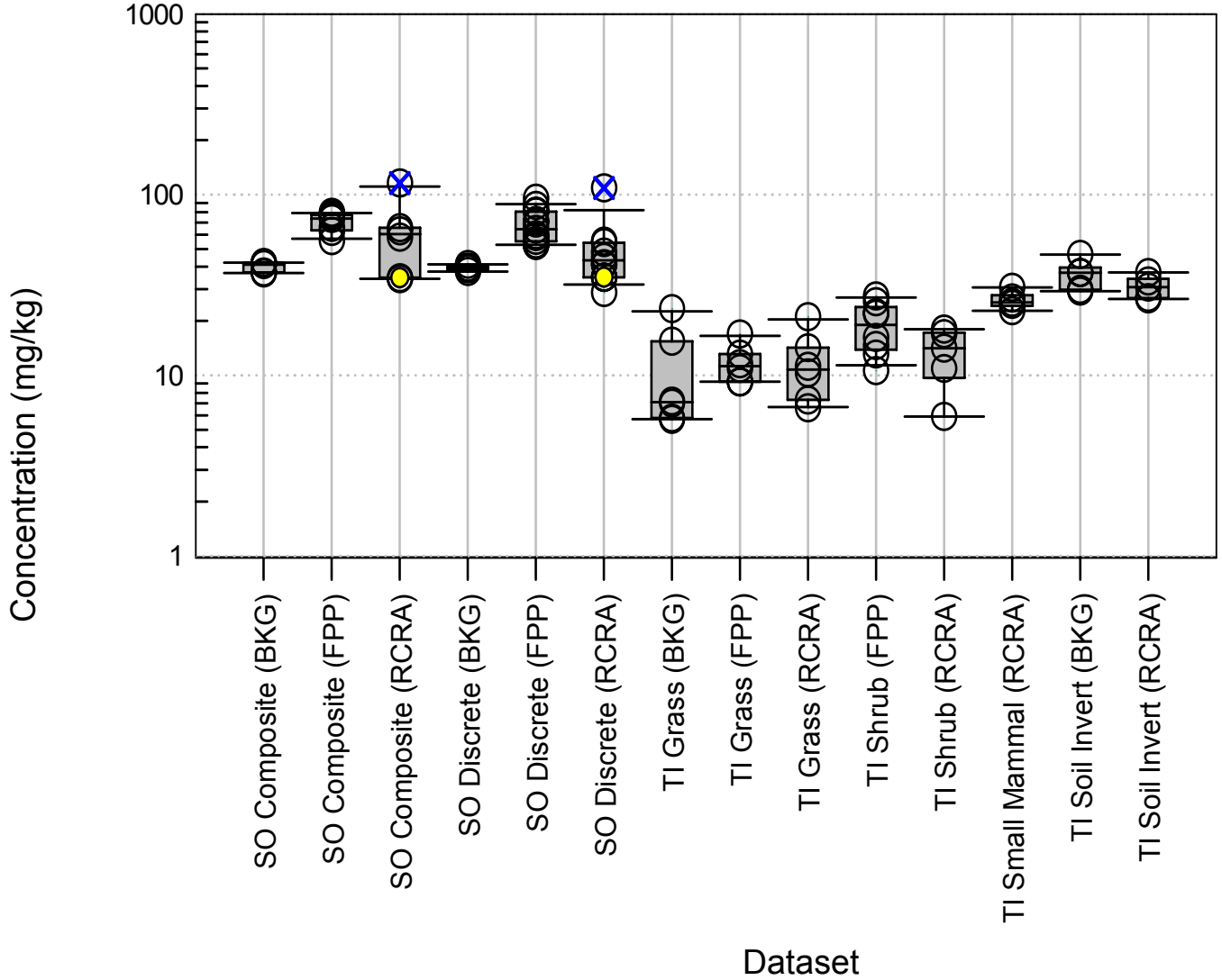
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

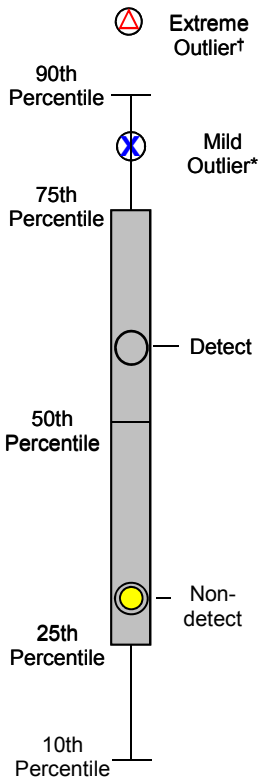
Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.





ARCADIS

Log Box and Whisker Plot
Zinc
Casmalia Resources Superfund Site

Figure
1-8

Table 1-8. Zinc Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	0	5	5	NA	NA	36.9	42.1	39.8	41.0	2.5	37.0	41.0	41.7
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	55.6	79.6	70.1	73.7	8.9	64.0	73.7	77.2
SO Composite (RCRA)	mg/kg, dw	1	5	6	34.7	34.7	34.2	116	67.3	62.9	29.9	35.0	60.5	65.5
SO Discrete (BKG)	mg/kg, dw	0	5	5	NA	NA	37.5	41.1	39.3	39.2	1.3	39.0	39.2	39.9
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	52.2	95.2	67.8	64.3	14.3	55.0	64.3	80.4
SO Discrete (RCRA)	mg/kg, dw	1	9	10	34.9	34.9	28.7	109	50.8	45.0	23.4	35.0	43.3	54.1
TI Grass (BKG)	mg/kg, ww	0	6	6	NA	NA	5.7	23.4	10.8	7.1	7.2	5.8	7.1	15.4
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	9.2	16.9	11.8	11.3	2.9	9.2	11.3	13.1
TI Grass (RCRA)	mg/kg, ww	0	6	6	NA	NA	6.6	21.1	11.8	10.8	5.3	7.3	10.8	14.2
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	10.6	27.5	18.9	19.0	6.2	14.0	19.0	23.9
TI Shrub (RCRA)	mg/kg, ww	0	5	5	NA	NA	5.9	18.0	13.2	14.1	4.9	9.6	14.1	17.3
TI Small Mammal (RCRA)	mg/kg, ww	0	5	5	NA	NA	22.8	30.7	26.1	25.3	3.0	24.0	25.3	27.8
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	29.2	46.6	36.0	37.0	7.0	30.0	37.0	39.5
TI Soil Invert (RCRA)	mg/kg, ww	0	5	5	NA	NA	26.5	37.1	30.9	30.8	4.5	27.0	30.8	34.3

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

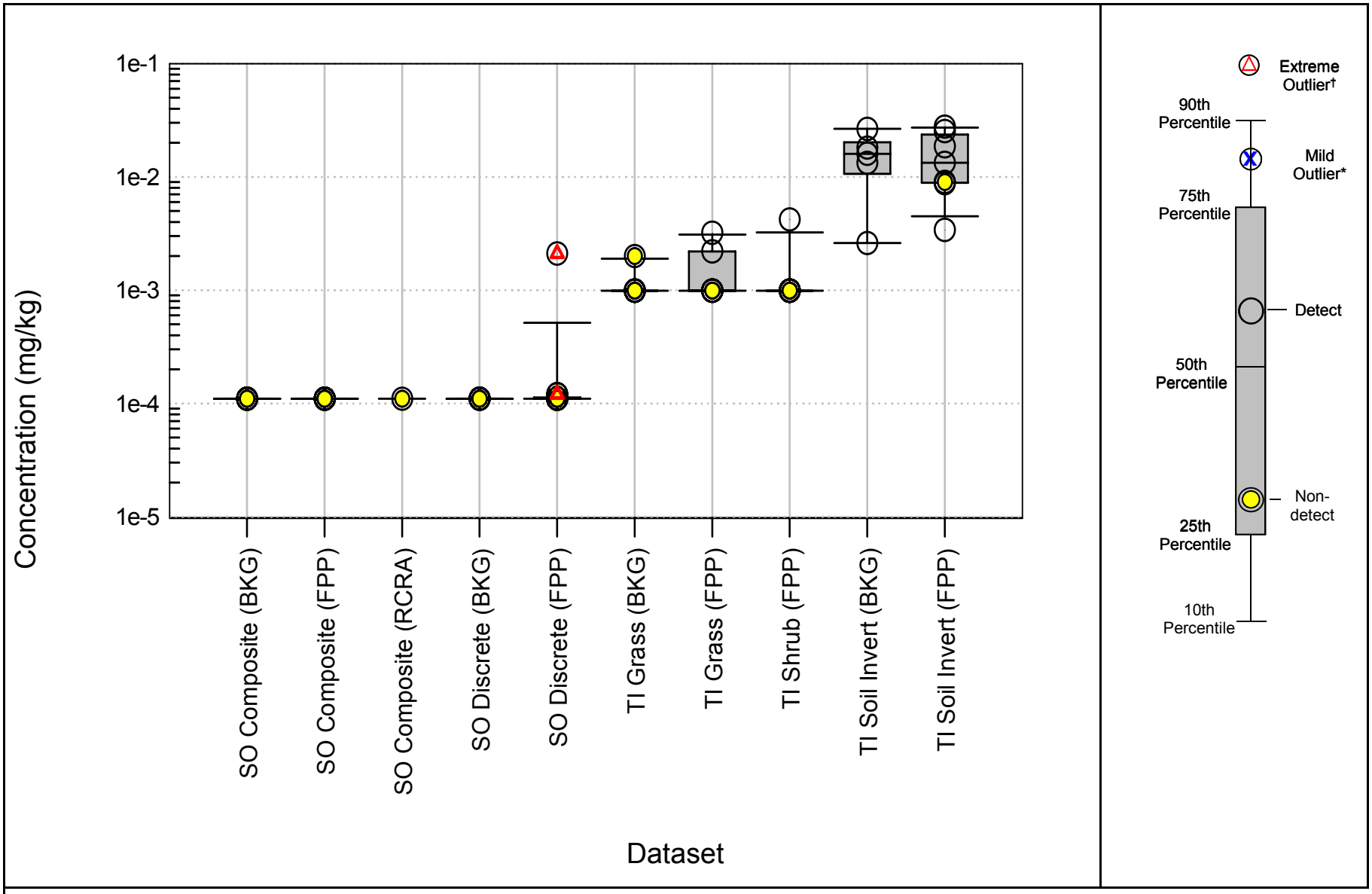
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
4,4'-DDD
Casmalia Resources Superfund Site

Figure
1-9

Table 1-9. 4,4'-DDD Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	5	0	5	0.00011	0.00011	ND	ND	ND	ND	ND	0.00011	0.00011	0.00011
SO Composite (FPP)	mg/kg, dw	7	0	7	0.00011	0.00011	ND	ND	ND	ND	ND	0.00011	0.00011	0.00011
SO Composite (RCRA)	mg/kg, dw	1	0	1	0.00011	0.00011	ND	ND	ND	ND	ND	0.00011	0.00011	0.00011
SO Discrete (BKG)	mg/kg, dw	5	0	5	0.00011	0.00011	ND	ND	ND	ND	ND	0.00011	0.00011	0.00011
SO Discrete (FPP)	mg/kg, dw	12	1	13	0.00011	0.00012	0.0021	0.0021	0.0021	0.0021	ND	0.00011	0.00011	0.00011
TI Grass (BKG)	mg/kg, ww	6	0	6	0.00099	0.002	ND	ND	ND	ND	ND	0.00099	0.00099	0.00099
TI Grass (FPP)	mg/kg, ww	4	2	6	0.00099	0.00099	0.0022	0.0032	0.0027	0.0027	0.00071	0.00099	0.00099	0.0022
TI Shrub (FPP)	mg/kg, ww	7	1	8	0.00099	0.00099	0.0042	0.0042	0.0042	0.0042	ND	0.00099	0.00099	0.00099
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.0026	0.03	0.02	0.02	0.0086	0.01	0.02	0.02
TI Soil Invert (FPP)	mg/kg, ww	1	6	7	0.009	0.009	0.0034	0.03	0.02	0.02	0.0095	0.0088	0.01	0.02

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

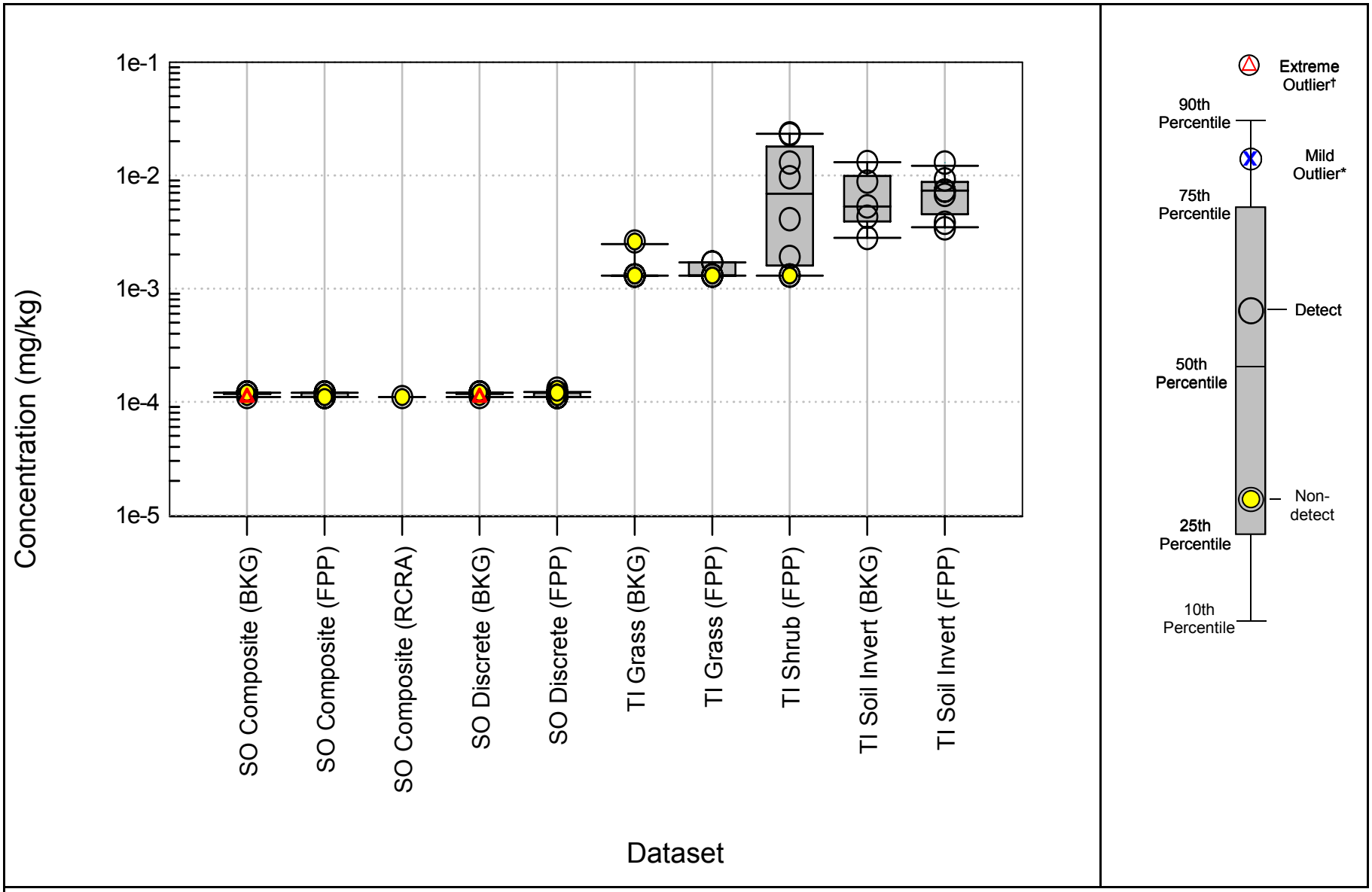
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
4,4'-DDE
Casmalia Resources Superfund Site

Figure
1-10

Table 1-10. 4,4'-DDE Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	5	0	5	0.00011	0.00012	ND	ND	ND	ND	ND	0.00012	0.00012	0.00012
SO Composite (FPP)	mg/kg, dw	7	0	7	0.00011	0.00012	ND	ND	ND	ND	ND	0.00011	0.00012	0.00012
SO Composite (RCRA)	mg/kg, dw	1	0	1	0.00011	0.00011	ND	ND	ND	ND	ND	0.00011	0.00011	0.00011
SO Discrete (BKG)	mg/kg, dw	5	0	5	0.00011	0.00012	ND	ND	ND	ND	ND	0.00012	0.00012	0.00012
SO Discrete (FPP)	mg/kg, dw	13	0	13	0.00011	0.00013	ND	ND	ND	ND	ND	0.00011	0.00012	0.00012
TI Grass (BKG)	mg/kg, ww	6	0	6	0.0013	0.0026	ND	ND	ND	ND	ND	0.0013	0.0013	0.0013
TI Grass (FPP)	mg/kg, ww	4	2	6	0.0013	0.0013	0.0017	0.0017	0.0017	0.0017	0	0.0013	0.0013	0.0017
TI Shrub (FPP)	mg/kg, ww	2	6	8	0.0013	0.0013	0.0019	0.02	0.01	0.01	0.0092	0.0016	0.0069	0.02
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.0028	0.01	0.0069	0.0053	0.0041	0.0039	0.0053	0.0099
TI Soil Invert (FPP)	mg/kg, ww	0	7	7	NA	NA	0.0034	0.01	0.0072	0.0073	0.0032	0.0045	0.0073	0.0087

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

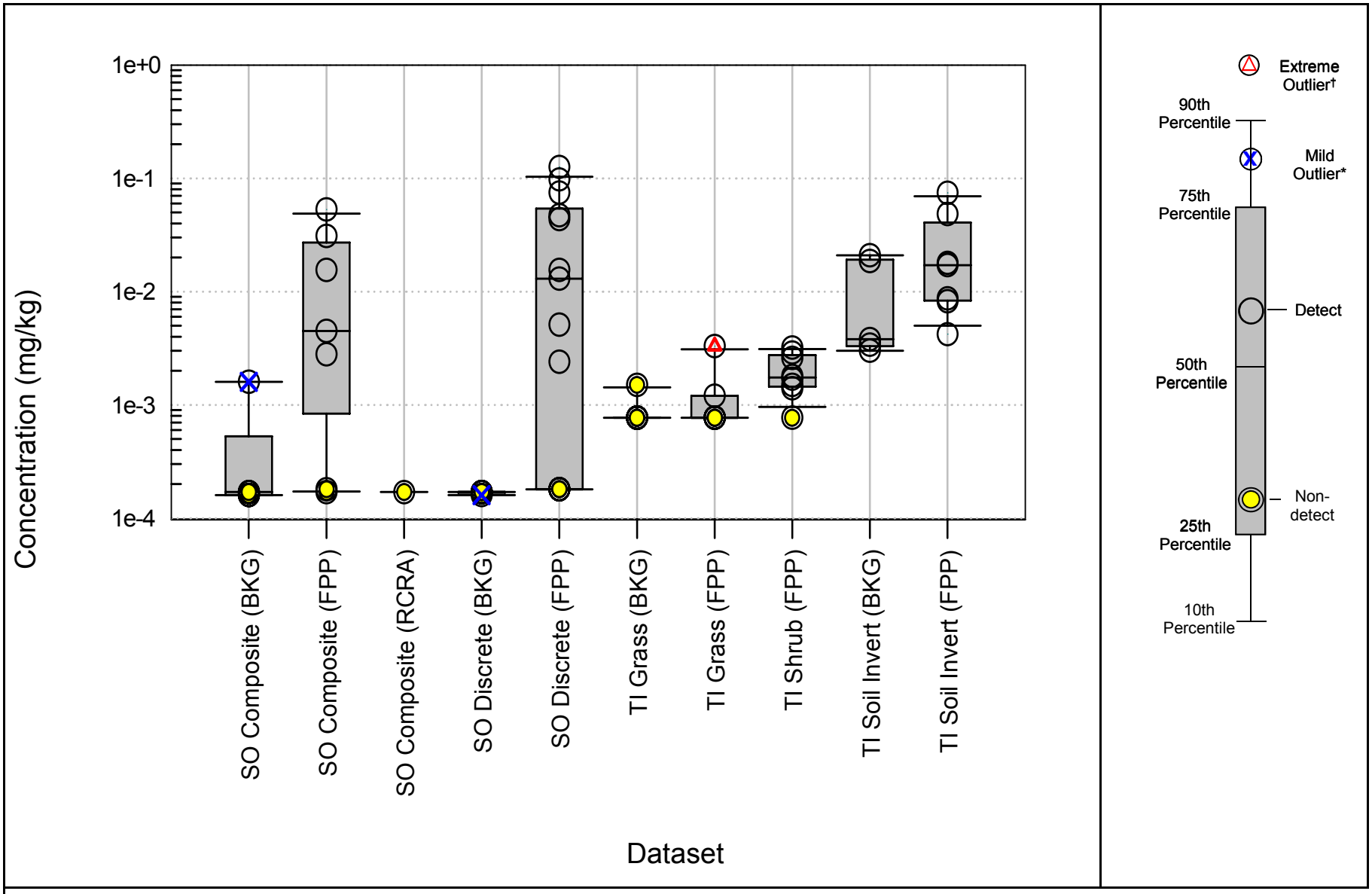
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
4,4'-DDT
Casmalia Resources Superfund Site

Figure
1-11

Table 1-11. 4,4'-DDT Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	4	1	5	0.00016	0.00017	0.0016	0.0016	0.0016	0.0016	ND	0.00016	0.00017	0.00053
SO Composite (FPP)	mg/kg, dw	2	5	7	0.00017	0.00018	0.0028	0.05	0.02	0.02	0.02	0.00084	0.0045	0.03
SO Composite (RCRA)	mg/kg, dw	1	0	1	0.00017	0.00017	ND	ND	ND	ND	ND	0.00017	0.00017	0.00017
SO Discrete (BKG)	mg/kg, dw	5	0	5	0.00016	0.00017	ND	ND	ND	ND	ND	0.00017	0.00017	0.00017
SO Discrete (FPP)	mg/kg, dw	4	9	13	0.00018	0.00018	0.0024	0.13	0.05	0.04	0.04	0.00018	0.01	0.05
TI Grass (BKG)	mg/kg, ww	6	0	6	0.00077	0.0015	ND	ND	ND	ND	ND	0.00077	0.00077	0.00077
TI Grass (FPP)	mg/kg, ww	4	2	6	0.00077	0.00077	0.0012	0.0033	0.0023	0.0022	0.0015	0.00077	0.00077	0.0012
TI Shrub (FPP)	mg/kg, ww	1	7	8	0.00077	0.00077	0.0014	0.0032	0.0022	0.0018	0.00073	0.0014	0.0018	0.0027
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.003	0.02	0.0099	0.0038	0.009	0.0033	0.0038	0.02
TI Soil Invert (FPP)	mg/kg, ww	0	7	7	NA	NA	0.0042	0.07	0.03	0.02	0.03	0.0083	0.02	0.04

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

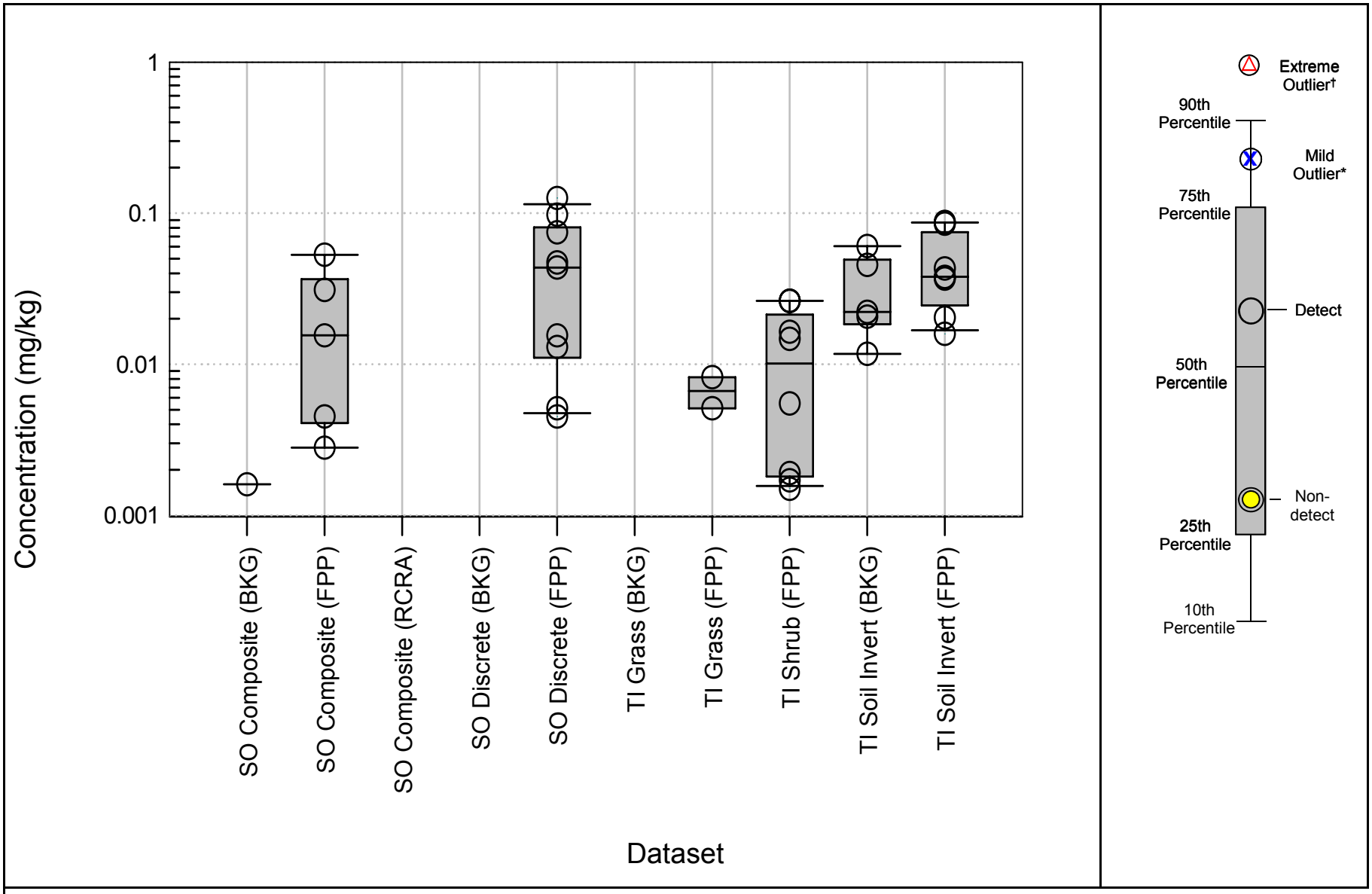
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
Total DDT
Casmalia Resources Superfund Site

Figure 1-12

Table 1-12. Total DDT Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO Composite (BKG)	mg/kg, dw	4	1	5	NA	NA	0.0016	0.0016	0.0016	0.0016	ND	0.0016	0.0016	0.0016
SO Composite (FPP)	mg/kg, dw	2	5	7	NA	NA	0.0028	0.05	0.02	0.02	0.02	0.0041	0.02	0.04
SO Composite (RCRA)	mg/kg, dw	1	0	1	--	--	--	--	--	--	--	--	--	--
SO iscreteDBKG) (	mg/kg, w	5d	0	5	--	--	--	--	--	--	--	--	--	--
SO Discrete (FPP)	mg/kg, dw	4	9	13	NA	NA	0.0045	0.13	0.05	0.04	0.04	0.01	0.04	0.08
TI rass BKG) (	mg/kg, w	6w	0	6	--	--	--	--	--	--	--	--	--	--
TI Grass (FPP)	mg/kg, ww	4	2	6	NA	NA	0.0051	0.0082	0.0067	0.0066	0.0022	0.0066	0.0066	0.0066
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	0.0015	0.03	0.01	0.01	0.01	0.0018	0.01	0.02
TI Soil Invert (BKG)	mg/kg, ww	0	5	5	NA	NA	0.01	0.06	0.03	0.02	0.02	0.02	0.02	0.05
TI Soil Invert (FPP)	mg/kg, ww	0	7	7	NA	NA	0.02	0.09	0.05	0.04	0.03	0.02	0.04	0.08

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

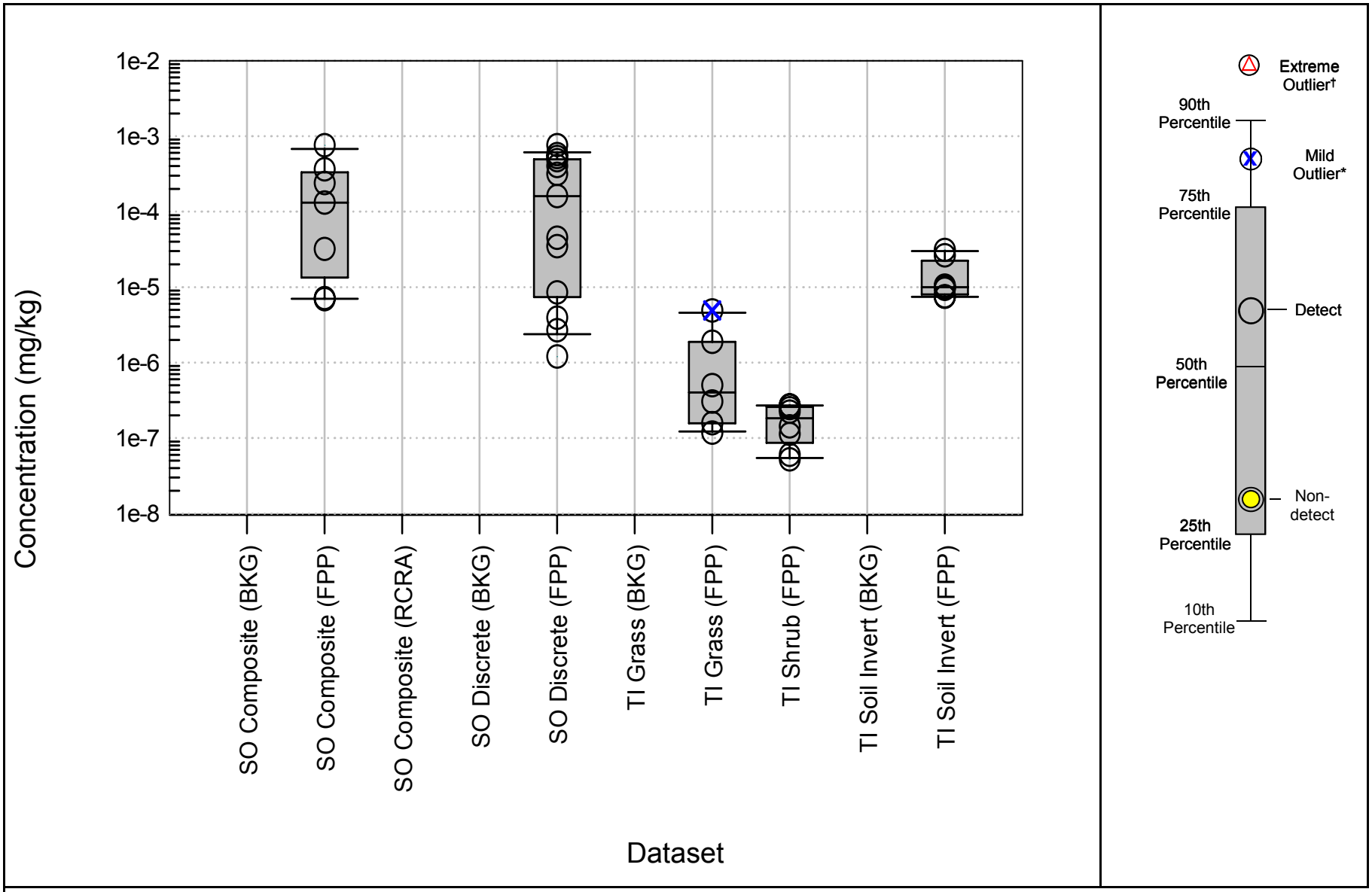
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
PCB Congener TEQ-Bird
Casmalia Resources Superfund Site

Figure
1-13

Table 1-13. PCB Congener TEQ-Bird Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO omposite BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	6.9E-06	0.00076	0.00022	0.00013	0.00027	1.3E-05	0.00013	0.00033
SO Composite (RCRA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO iscrete BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	1.2E-06	0.00076	0.00026	0.00016	0.00027	7.3E-06	0.00016	0.00049
TI rass BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	1.2E-07	4.9E-06	1.3E-06	4E-07	1.9E-06	1.6E-07	4E-07	1.9E-06
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	5.2E-08	2.7E-07	1.7E-07	1.8E-07	9.2E-08	8.6E-08	1.8E-07	2.6E-07
TI oil nvert BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TI Soil Invert (FPP)	mg/kg, ww	0	7	7	NA	NA	7.4E-06	3.1E-05	1.5E-05	9.9E-06	9.8E-06	8E-06	9.9E-06	0.000022

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

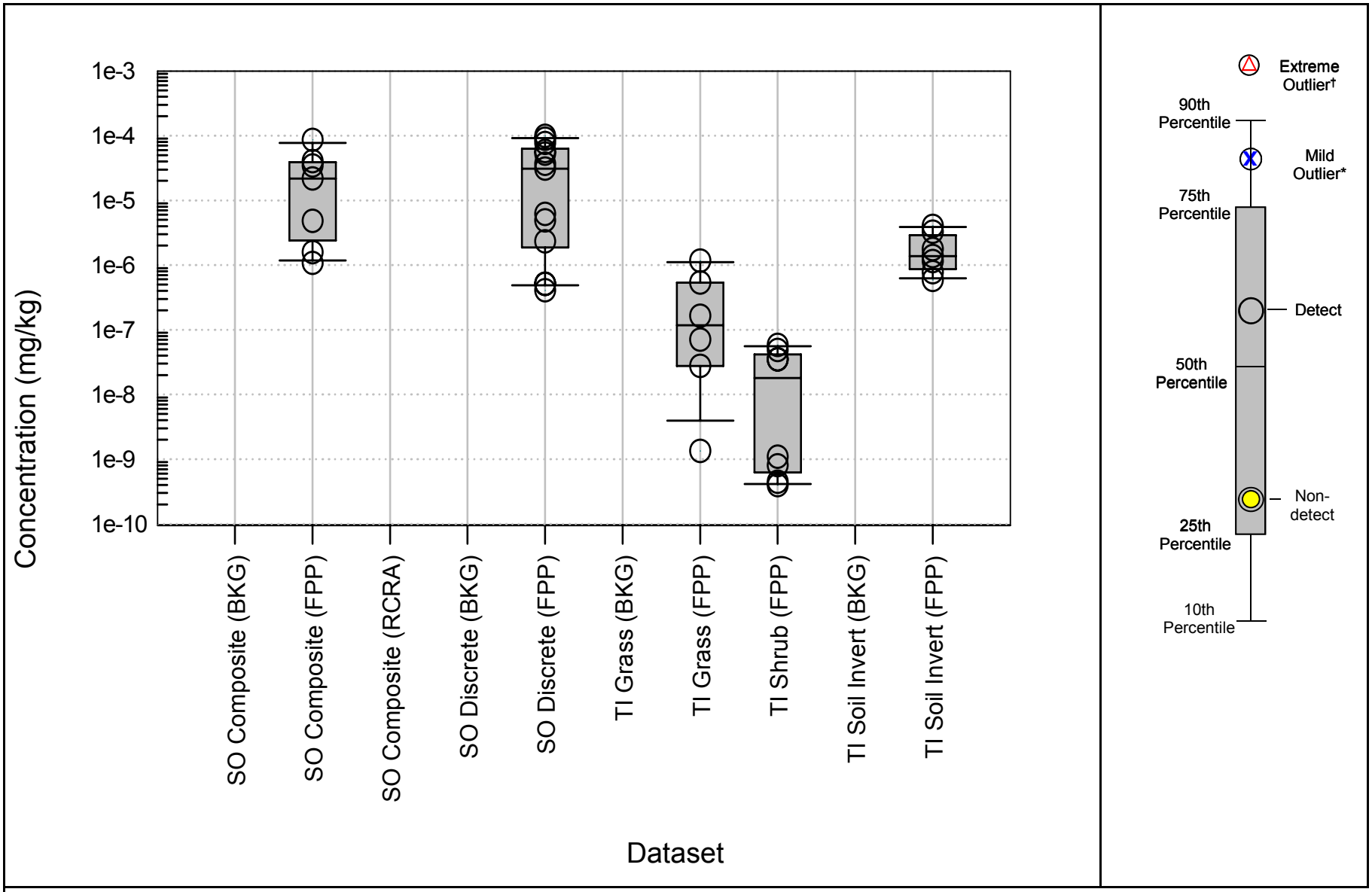
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



ARCADIS

Log Box and Whisker Plot
PCB Congener TEQ-Human/mammal
Casmalia Resources Superfund Site

Figure 1-14

Table 1-14. PCB Congener TEQ-Human/mammal Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO omposite BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	1.1E-06	8.6E-05	2.7E-05	2.2E-05	0.00003	2.4E-06	2.2E-05	0.000039
SO Composite (RCRA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO iscrete BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	4.1E-07	9.9E-05	3.5E-05	3.1E-05	3.7E-05	1.9E-06	3.1E-05	0.000063
TI rass BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	1.3E-09	1.2E-06	3.3E-07	1.2E-07	4.6E-07	2.8E-08	1.2E-07	5.4E-07
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	4E-10	5.9E-08	2.2E-08	1.8E-08	2.4E-08	6.2E-10	1.8E-08	4.2E-08
TI oil nvert BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TI Soil Invert (FPP)	mg/kg, ww	0	7	7	NA	NA	5.9E-07	4E-06	1.9E-06	1.4E-06	1.3E-06	8.7E-07	1.4E-06	2.9E-06

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

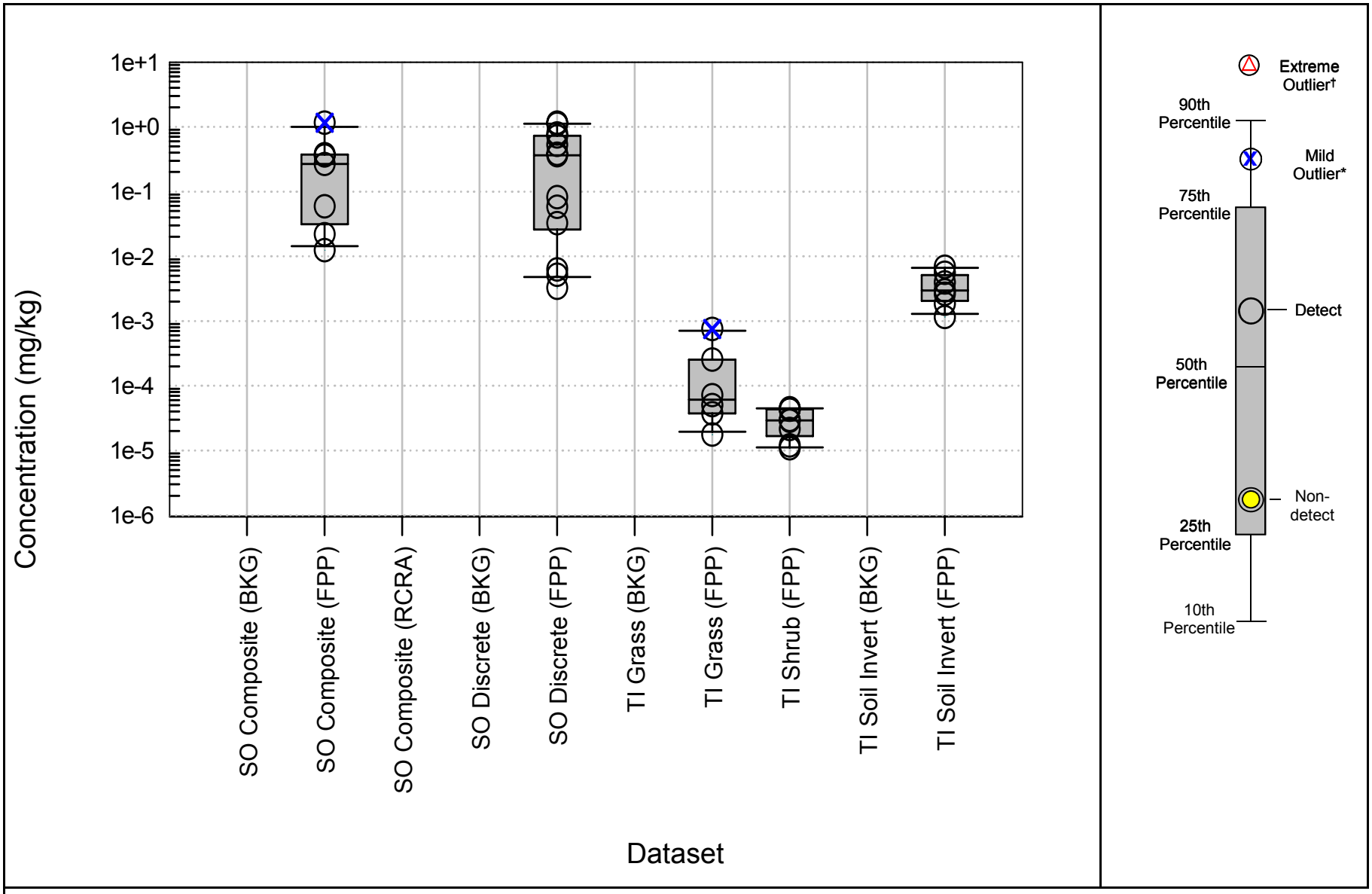
BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.



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Log Box and Whisker Plot
Total PCB Congeners
Casmalia Resources Superfund Site

Figure
1-15

Table 1-15. Total PCB Congeners Log Box and Whisker Plot Summary Statistics

Dataset	Units	Sample Size			ND Range		Detects					Percentiles (All Data)		
		NDs	Detects	Total	Min	Max	Min	Max	Mean	Median	SD	25th	50th	75th
SO omposite BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO Composite (FPP)	mg/kg, dw	0	7	7	NA	NA	0.01	1.2	0.32	0.27	0.40	0.03	0.27	0.37
SO Composite (RCRA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO iscrete BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SO Discrete (FPP)	mg/kg, dw	0	13	13	NA	NA	0.00326	1.2	0.40	0.36	0.42	0.03	0.36	0.73
TI rass BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TI Grass (FPP)	mg/kg, ww	0	6	6	NA	NA	1.8E-05	0.00075	0.0002	6.1E-05	0.00029	3.7E-05	6.1E-05	0.00025
TI Shrub (FPP)	mg/kg, ww	0	8	8	NA	NA	1.1E-05	4.5E-05	2.9E-05	2.9E-05	1.4E-05	1.7E-05	2.9E-05	0.000043
TI oil nvert BKG) (	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TI Soil Invert (FPP)	mg/kg, ww	0	7	7	NA	NA	0.00115	0.00686	0.0036	0.003	0.002	0.0021	0.003	0.0051

Abbreviations:

-- = no data
NA = value not applicable due to frequency of detection
ND = non-detect
IQR = interquartile range (75th percentile - 25th percentile)
SO = soil
TI = tissue

BKG = Background
FPP = Former Ponds & Pads
RCRA = RCRA Canyon
mg/kg, dw = milligrams per kilogram, dry weight
mg/kg, ww = milligrams per kilogram, wet weight

Notes:

† Result value is < 25th percentile - 3*IQR or > 75th percentile + 3*IQR

* Result value is < 25th percentile - 1.5*IQR or > 75th percentile + 1.5*IQR

Reporting limit is used for non-detects unless otherwise noted.

SUB-ATTACHMENT 2

TISSUE AND CO-LOCATED SOIL/SEDIMENT REGRESSIONS

Table 1. Summary of BAF statistics for pooled data.

Tissue Type	Analyte	BAF Statistics[1]						Regression Statistics		
		Pair Count	Minimum BAF	Maximum BAF	Average BAF	Median BAF	90th Percenttile BAF	Equation	R^2	p-value
Plant	Barium	31	0.000083	0.32	0.036	**0.012**	0.089	y = -0.177x + 0.927	0.0388	0.2880
Plant	Cadmium	30	0.026	1.9	0.39	0.26	0.87	**y = 0.599x - 0.664**	0.1310	0.0493
Plant	Chromium	31	0.00089	0.012	0.0031	0.0026	0.0042	y = -0.037x - 0.776	0.0010	0.8638
Plant	Chromium excluding outlier(s)	30	0.00089	0.0055	0.0028	**0.0026**	0.0039	y = 0.076x - 0.988	0.0067	0.6674
Plant	Copper	31	0.033	1.3	0.18	0.14	0.32	y = 0.308x - 0.020	0.0849	0.1118
Plant	Copper excluding outlier(s)	30	0.033	0.37	0.14	**0.13**	0.28	y = 0.396x - 0.159	0.1957	0.0144
Plant	Lead	30	0.00038	0.071	0.0057	0.003	0.006	y = -0.009x - 1.507	0.0001	0.9652
Plant	Lead excluding outlier(s)	29	0.00038	0.014	0.0035	**0.0029**	0.0059	y = 0.041x - 1.603	0.0039	0.7469
Plant	Molybdenum	31	0.019	1.7	0.44	**0.28**	1.1	y = -0.577x - 0.238	0.0413	0.2728
Plant	Avian TEQ	14	0.00025	0.077	0.013	0.0029	0.037	y = 0.307x - 5.326	0.3285	0.0321
Plant	Avian TEQ excluding outlier(s)	12	0.00025	0.077	0.014	0.0021	0.041	**y = 0.183x - 5.993**	0.4198	0.0227
Plant	Mammalian TEQ	14	0.000014	0.14	0.014	0.00092	0.02	y = 0.693x - 4.369	0.3048	0.0407
Plant	Mammalian TEQ excluding outlier(s)	12	0.000014	0.14	0.013	**0.00072**	0.0053	y = 0.528x - 5.412	0.2663	0.0859
Plant	Total DDT	6	0.036	0.42	0.16	0.12	0.3	y = 0.687x - 1.353	0.6356	0.0575
Plant	Total PCB	14	0.000025	0.0097	0.0014	0.00028	0.0029	y = 0.250x - 4.146	0.2244	0.0871
Plant	Total PCB excluding outlier(s)	12	0.000025	0.0097	0.0014	0.00019	0.0032	**y = 0.152x - 4.384**	0.3479	0.0435
Plant	Vanadium	13	0.0012	0.01	0.0026	0.0014	0.0023	y = 0.858x - 2.441	0.0213	0.6342
Plant	Vanadium excluding outlier(s)	12	0.0012	0.0043	0.002	**0.0014**	0.0021	y = 0.809x - 2.419	0.0544	0.4656
Plant	Zinc	30	0.11	0.59	0.26	**0.21**	0.43	y = 0.412x + 0.383	0.0804	0.1290
Small Mammal	Barium	5	0.0027	0.067	0.017	**0.0055**	0.043	y = 0.263x + 0.108	0.1400	0.5350
Small Mammal	Cadmium	5	0.02	0.2	0.096	**0.053**	0.18	y = 0.145x - 1.059	0.0404	0.7457
Small Mammal	Chromium	5	0.0035	0.016	0.0073	**0.0054**	0.012	y = 0.090x - 0.575	0.0077	0.8883
Small Mammal	Copper	5	0.053	0.32	0.22	**0.3**	0.31	y = -0.032x + 0.564	0.0299	0.7810
Small Mammal	Lead	5	0.004	0.019	0.0099	**0.0097**	0.016	y = 0.672x - 1.727	0.5286	0.1640
Small Mammal	Molybdenum	5	0.15	0.5	0.25	**0.2**	0.38	y = 0.806x - 0.635	0.0597	0.6921
Small Mammal	Vanadium	4	0.0014	0.0035	0.0023	**0.0016**	0.0031	y = -1.379x + 1.097	0.1024	0.6800
Small Mammal	Zinc	4	0.4	0.72	0.56	**0.67**	0.82	y = 0.154x + 1.140	0.5797	0.2386
Soil Invertebrate	Barium	10	0.0092	0.57	0.072	0.015	0.084	y = 0.722x - 0.986	0.5027	0.0217
Soil Invertebrate	Barium excluding outlier(s)	9	0.0092	0.031	0.017	0.014	0.027	**y = 0.883x - 1.526**	0.9292	<0.0001
Soil Invertebrate	Cadmium	10	0.06	0.53	0.26	0.26	0.51	**y = 0.387x - 0.661**	0.5496	0.0141
Soil Invertebrate	Chromium	10	0.0043	0.014	0.0077	0.0071	0.012	**y = 0.792x - 1.783**	0.5257	0.0177
Soil Invertebrate	Copper	10	0.085	2.2	0.57	0.44	0.77	y = -0.040x + 0.831	0.0054	0.8400
Soil Invertebrate	Copper excluding outlier(s)	9	0.085	0.61	0.39	**0.41**	0.6	y = 0.092x + 0.613	0.1713	0.2681
Soil Invertebrate	Lead	10	0.0032	0.0092	0.0065	0.0058	0.0092	**y = 0.744x - 1.970**	0.7400	0.0014
Soil Invertebrate	Molybdenum	10	0.1	0.6	0.35	**0.34**	0.58	y = -0.616x - 0.211	0.4202	0.0427
Soil Invertebrate	Avian TEQ	7	0.035	1.4	0.43	0.085	1.2	**y = 0.216x - 4.015**	0.4840	0.0826
Soil Invertebrate	Mammalian TEQ	7	0.047	0.54	0.22	0.08	0.51	**y = 0.375x - 3.968**	0.8222	0.0048
Soil Invertebrate	Total DDT	6	0.65	28.4	9.5	**5.4**	21.9	y = 0.019x - 1.348	0.0034	0.9120
Soil Invertebrate	Total PCB	7	0.0059	0.18	0.051	**0.015**	0.13	y = 0.223x - 2.318	0.3615	0.1533
Soil Invertebrate	Vanadium	10	0.0022	0.0077	0.0038	**0.003**	0.006	y = 0.622x - 1.855	0.0168	0.7208
Soil Invertebrate	Zinc	9	0.29	1.1	0.73	**0.8**	1.1	y = -0.038x + 1.576	0.0064	0.8376
Aquatic Invertebrate	Selenium	6	0.19	0.54	0.28	**0.3**	0.43	y = -0.177x - 0.008	0.2220	0.3460

Notes:

[1] Values greater than 10 are rounded to three significant figures.Values less than 10 are rounded to two significant figures.

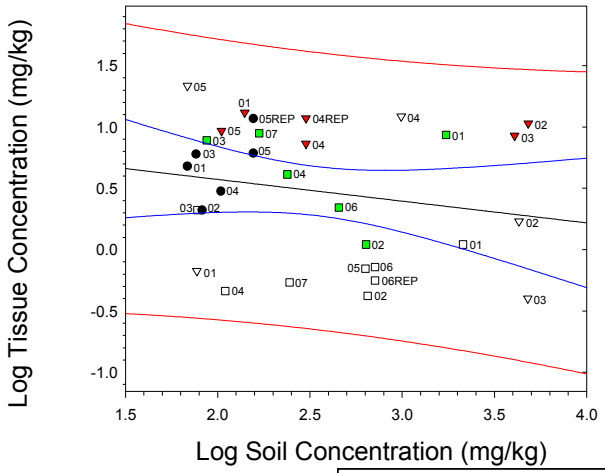
BAF = bioaccumulation factor

R^2 = coefficient of determination

Selected measure of bioaccumulation for based on data excluding outlier(s).

xxx Selected measure of bioaccumulation for each constituent is bolded with borders.

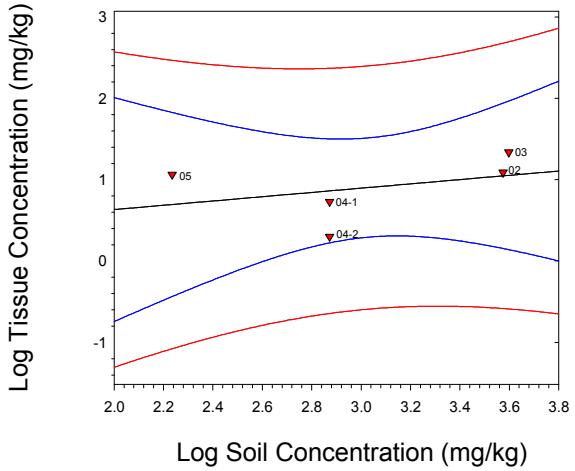
Plants - Barium - Pooled



y = -0.177x + 0.927
R = 0.1971
R^2 = 0.0388
P-value = 0.288

● = Background-grass
▼= RCRA Canyon-grass
▽= RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

Small Mammals - Barium - RCRA

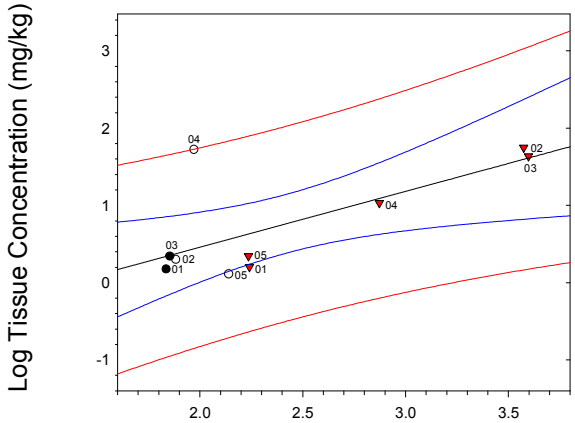


y = 0.263x + 0.108
R = 0.374
R^2 = 0.14
P-value = 0.535

▼= RCRA Canyon

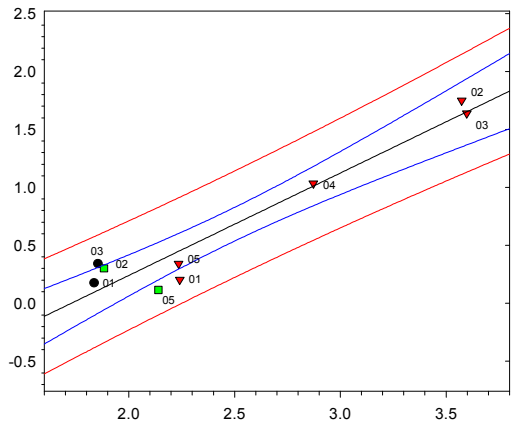
Soil Invertebrates - Barium - Pooled

Including Suspected Outliers



y = 0.722x - 0.986
R = 0.709
R^2 = 0.503
P-value = 0.022

Excluding Suspected Outliers



y = 0.883x - 1.526
R = 0.964
R^2 = 0.9292
P-value = <0.0001

Log Soil Concentration (mg/kg)

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Barium

Casmalia Resources Superfund Site

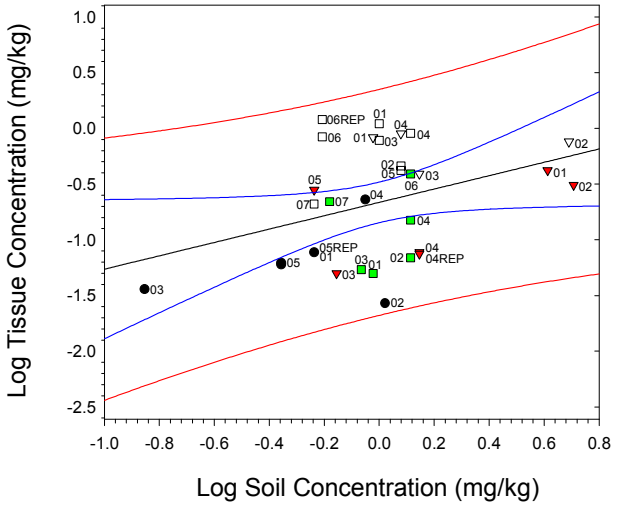
Figure 2-1

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

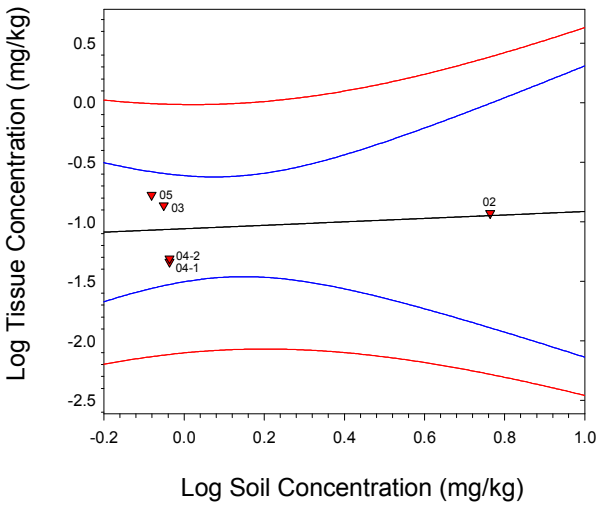
Plants - Cadmium - Pooled



y = 0.599x - 0.664
R = 0.362
R^2 = 0.131
P-value = 0.0493

• = Background-grass
▼= RCRA Canyon-grass
▽= RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

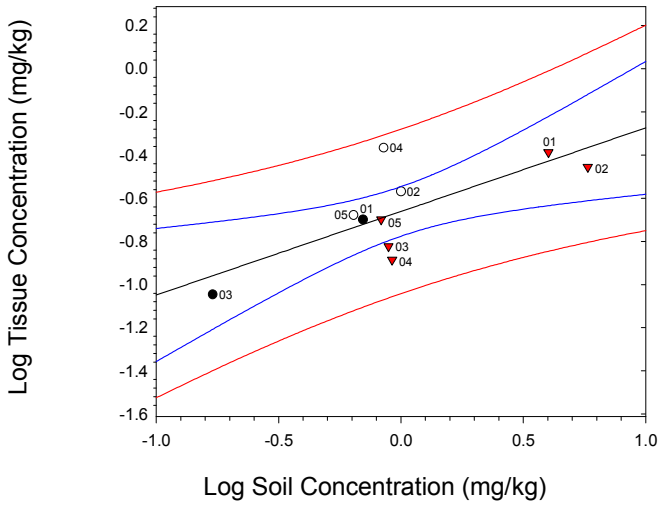
Small Mammals - Cadmium - RCRA



y = 0.145x - 1.059
R = 0.201
R^2 = 0.04
P-value = 0.746

▼= RCRA

Soil Invertebrates - Cadmium - Pooled



y = 0.387x - 0.661
R = 0.741
R^2 = 0.55
P-value = 0.014

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

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Infrastructure, environment, buildings

Cadmium

Casmalia Resources Superfund Site

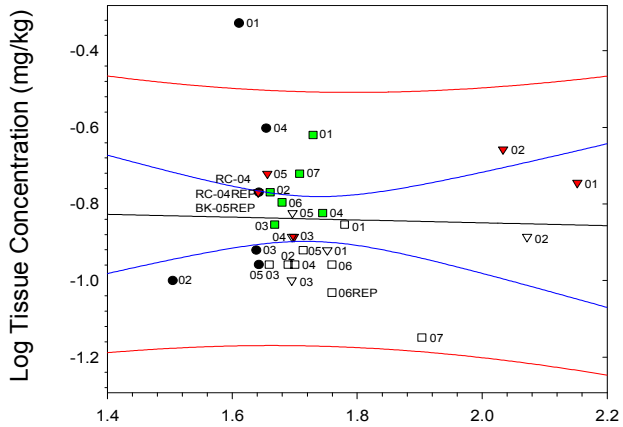
Figure 2-2

Notes:

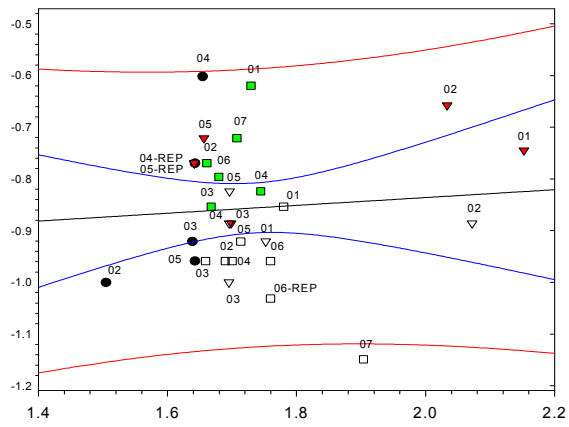
Regression based on detected soil / tissue samples. —— = Soil vs Tissue
R = Pearson's correlation coefficient —— = 95% Confidence Interval
R^2 = Coefficient of determination —— = 95% Prediction Interval

Plants - Chromium - Pooled

Including Suspected Outliers



Excluding Suspected Outliers



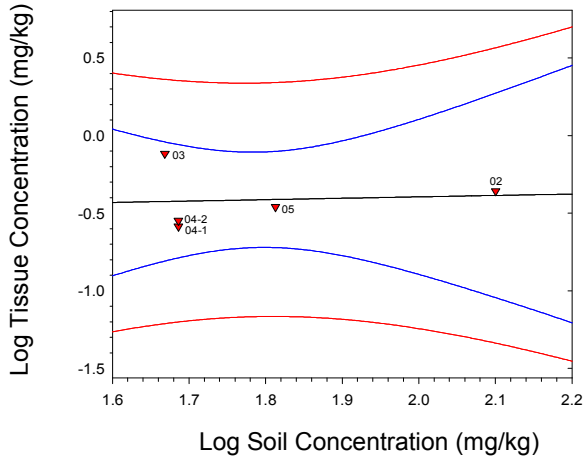
Log Soil Concentration (mg/kg)

y = -0.037x - 0.776
R = 0.0321
R^2 = 0.001
P-value = 0.8638

- • = Background-grass
- ▼= RCRA Canyon-grass
- ▽= RCRA Canyon-shrub
- ■ = FPP-grass
- □ = FPP-shrub

y = 0.076x - 0.988
R = 0.082
R^2 = 0.007
P-value = 0.667

Small Mammals - Chromium - RCRA

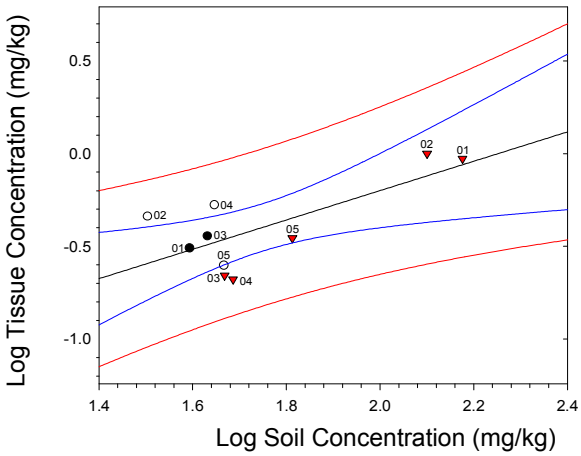


Log Soil Concentration (mg/kg)

y = 0.090x - 0.575
R = 0.0879
R^2 = 0.0077
P-value = 0.8883

▼= RCRA Canyon

Soil Invertebrates - Chromium - Pooled



Log Soil Concentration (mg/kg)

y = 0.792x - 1.783
R = 0.725
R^2 = 0.526
P-value = 0.018

- • = Background-beetle
- o = Background-mixed
- ▼= RCRA-beetle
- ▽= RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Chromium

Casmalia Resources Superfund Site

Figure 2-3

Notes:

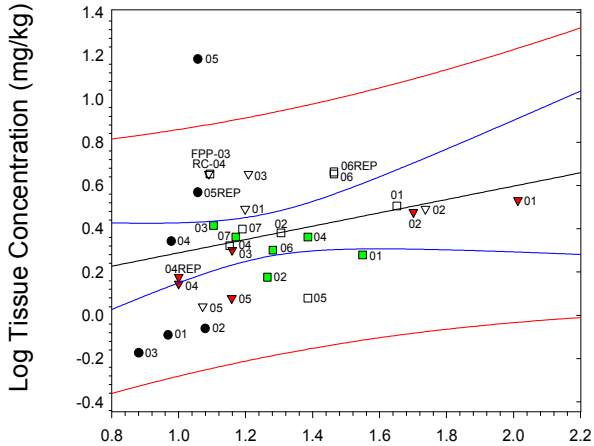
Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

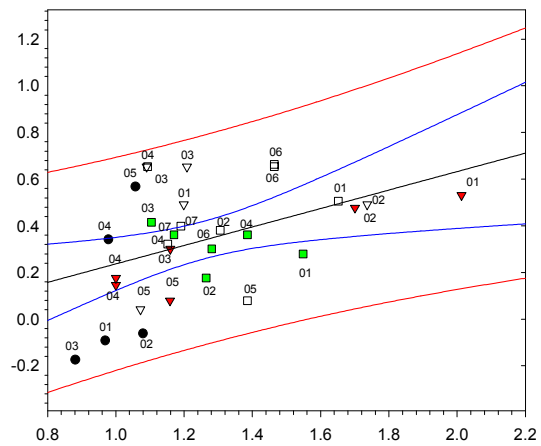
1/8/2010

Plants - Copper - Pooled

Including Suspected Outliers



Excluding Suspected Outliers



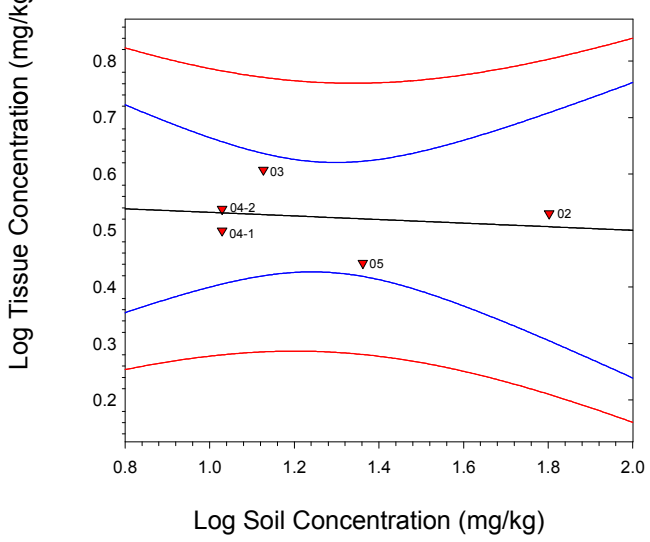
Log Soil Concentration (mg/kg)

y = 0.308x - 0.020
R = 0.291
R^2 = 0.085
P-value = 0.112

• = Background-grass
▼= RCRA Canyon-grass
▽= RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

y = 0.396x - 0.159
R = 0.442
R^2 = 0.196
P-value = 0.014

Small Mammals - Copper - RCRA



y = -0.032x + 0.564
R = 0.173
R^2 = 0.03
P-value = 0.781

▼= RCRA

ARCADIS
Infrastructure, environment, buildings

Copper

Casmalia Resources Superfund Site

Figure 2-4

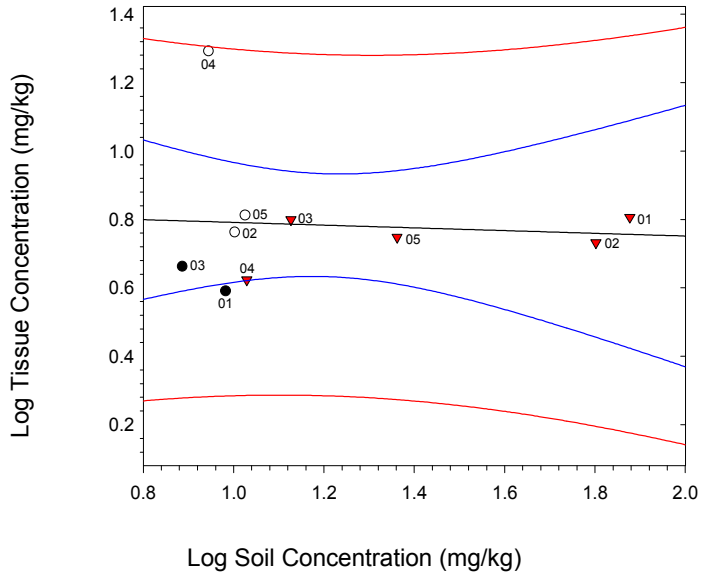
Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

Soil Invertebrates - Copper - Pooled

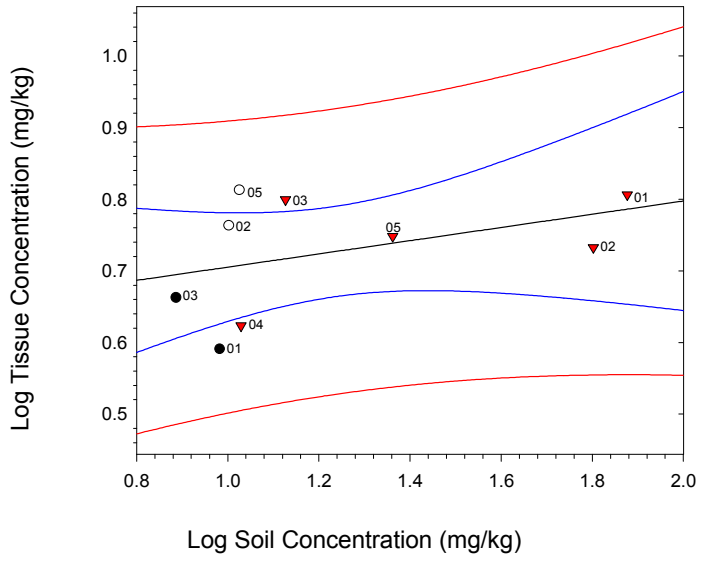
Including Suspected Outliers



y = -0.040x + 0.831
R = 0.0735
R^2 = 0.0054
P-value = 0.84

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

Excluding Suspected Outliers



y = 0.092x + 0.613
R = 0.4139
R^2 = 0.1713
P-value = 0.2681

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Copper

Casmalia Resources Superfund Site

Figure 2-5

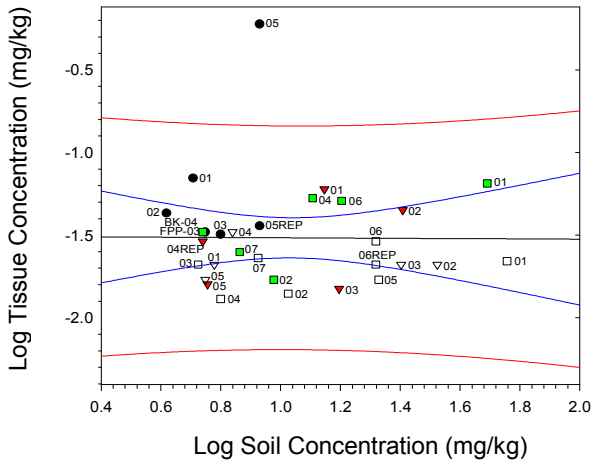
Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

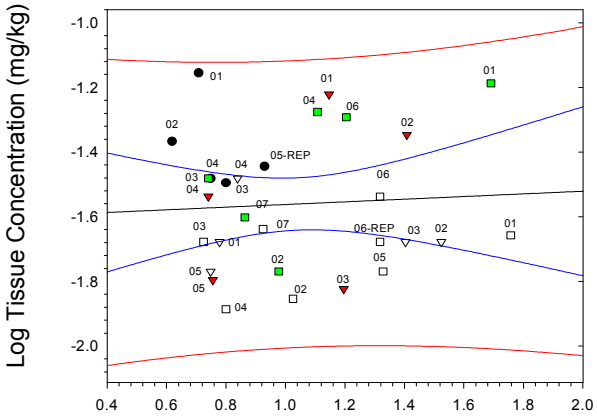
= Soil vs Tissue
= 95% Confidence Interval
= 95% Prediction Interval

Plants - Lead - Pooled

Including Suspected Outliers



Excluding Suspected Outliers

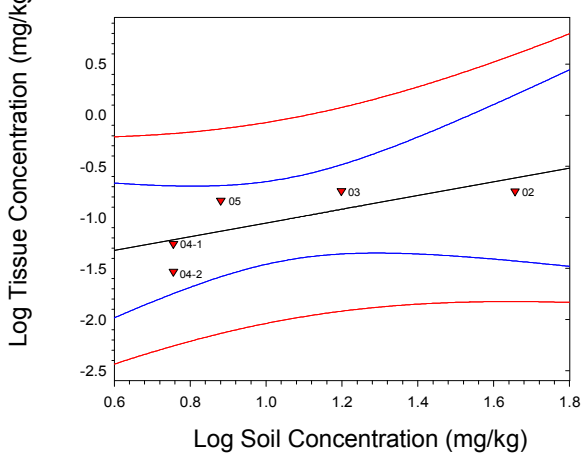


y = -0.009x - 1.507
R = 0.0083
R^2 = 6.9E-05
P-value = 0.9652

● = Background-grass
▼ = RCRA Canyon-grass
▽ = RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

y = 0.041x - 1.603
R = 0.063
R^2 = 0.004
P-value = 0.747

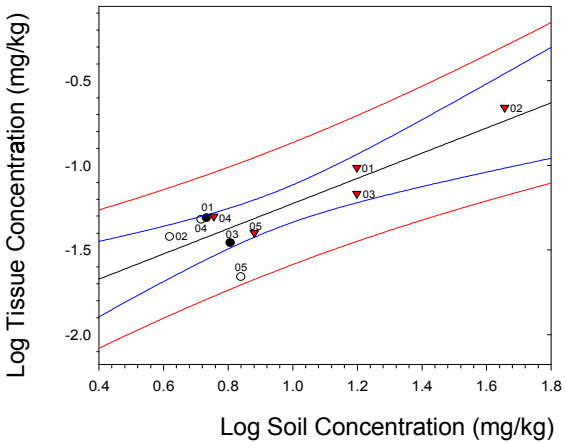
Small Mammals - Lead - RCRA



y = 0.672x - 1.727
R = 0.727
R^2 = 0.5286
P-value = 0.164

▼ = RCRA Canyon

Soil Invertebrates - Lead - Pooled



y = 0.744x - 1.970
R = 0.86
R^2 = 0.74
P-value = 0.001

● = Background-beetle
○ = Background-mixed
▼ = RCRA-beetle
▽ = RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Lead

Casmalia Resources Superfund Site

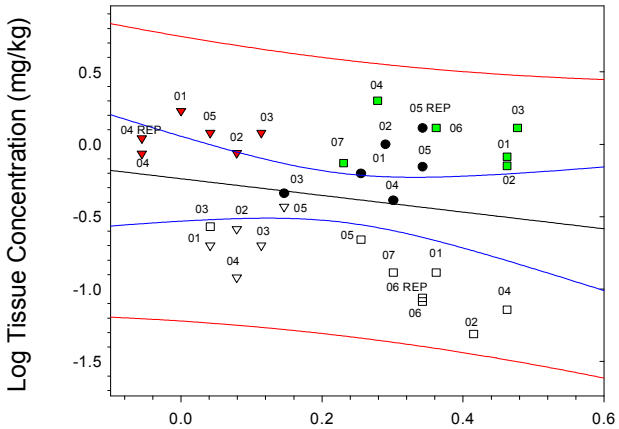
Figure 2-6

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

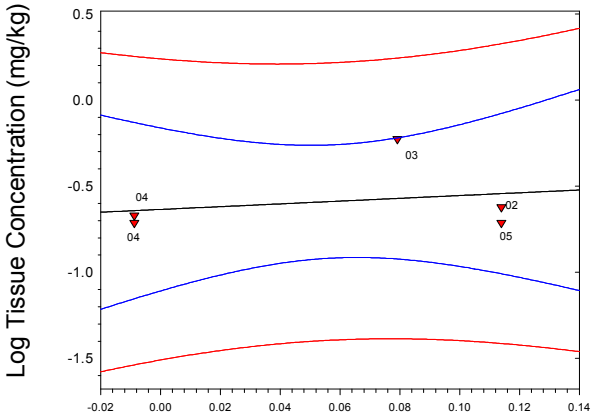
Plants - Molybdenum - Pooled



y = -0.577x - 0.238
R = 0.2032
R^2 = 0.0413
P-value = 0.2728

• = Background-grass
▼= RCRA Canyon-grass
▽= RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

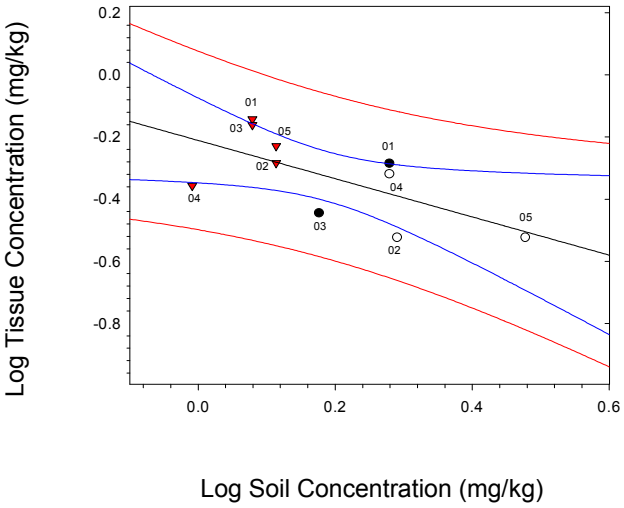
Small Mammals - Molybdenum - RCRA



y = 0.806x - 0.635
R = 0.244
R^2 = 0.06
P-value = 0.692

▼= RCRA

Soil Invertebrates - Molybdenum - Pooled



y = -0.616x - 0.211
R = 0.648
R^2 = 0.42
P-value = 0.043

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Molybdenum

Casmalia Resources Superfund Site

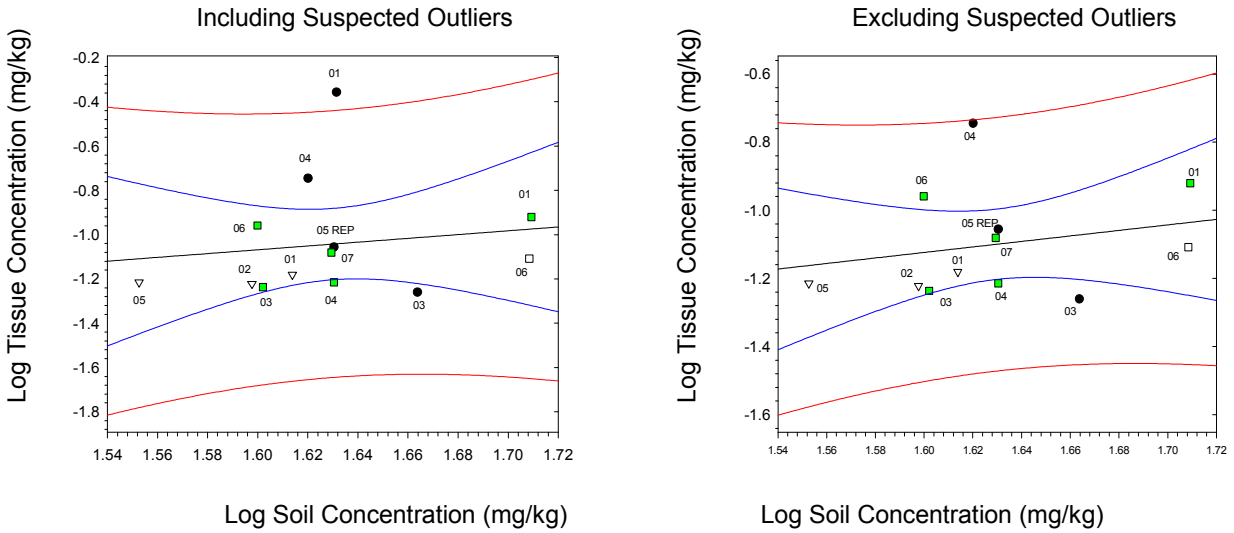
Figure 2-7

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

Plants - Vanadium - Pooled

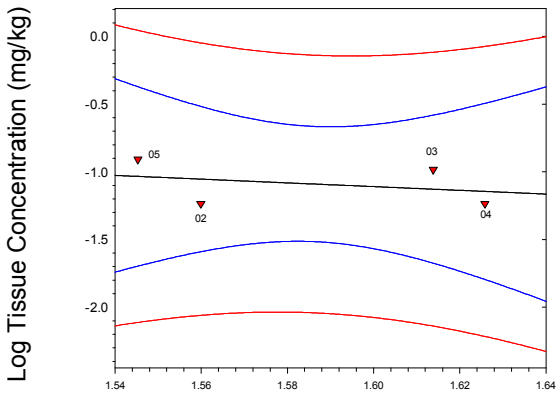


y = 0.858x - 2.441
R = 0.146
R^2 = 0.0213
P-value = 0.6342

• = Background-grass
▼= RCRA Canyon-grass
▽= RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

y = 0.809x - 2.419
R = 0.233
R^2 = 0.054
P-value = 0.466

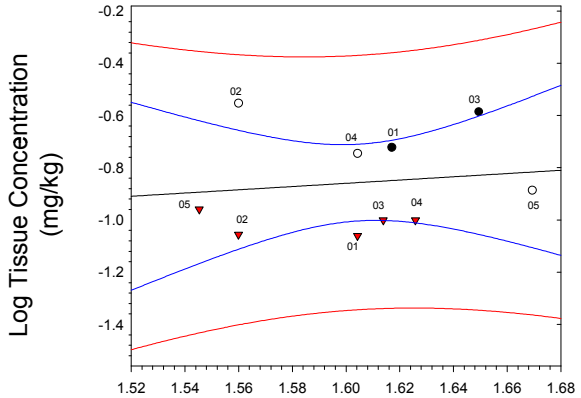
Small Mammals - Vanadium - RCRA



y = -1.379x + 1.097
R = 0.32
R^2 = 0.1024
P-value = 0.68

▼= RCRA

Soil Invertebrates - Vanadium - Pooled



y = 0.622x - 1.855
R = 0.1298
R^2 = 0.0168
P-value = 0.7208

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Vanadium

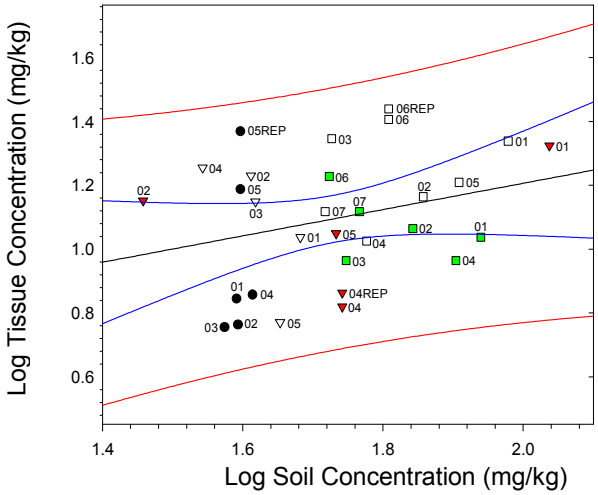
Casmalia Resources Superfund Site

Figure 2-8

Notes:

Regression based on detected soil / tissue samples. —— = Soil vs Tissue
R = Pearson's correlation coefficient —— = 95% Confidence Interval
R^2 = Coefficient of determination —— = 95% Prediction Interval

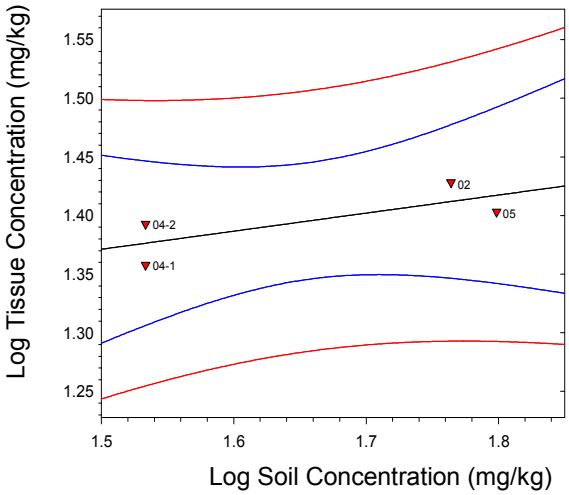
Plants - Zinc - Pooled



y = 0.412x + 0.383
R = 0.2835
R^2 = 0.0804
P-value = 0.129

• = Background-grass
▼= RCRA Canyon-grass
▽= RCRA Canyon-shrub
■ = FPP-grass
□ = FPP-shrub

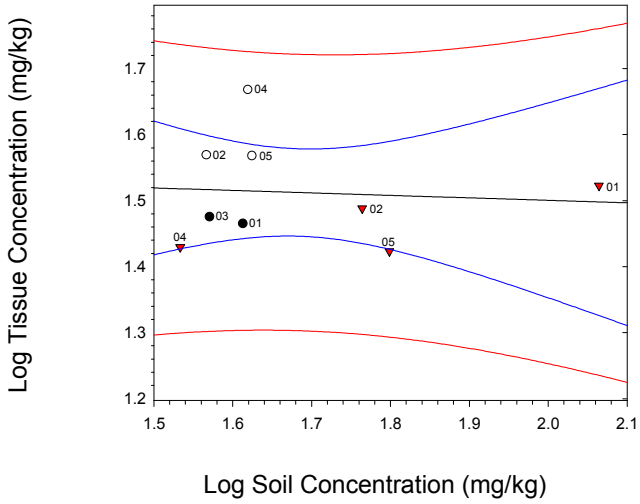
Small Mammals - Zinc - RCRA



y = 0.154x + 1.140
R = 0.761
R^2 = 0.58
P-value = 0.239

▼= RCRA

Soil Invertebrates - Zinc - Pooled



y = -0.038x + 1.576
R = 0.08
R^2 = 0.006
P-value = 0.838

• = Background-beetle
o = Background-mixed
▼= RCRA-beetle
▽= RCRA-mixed

ARCADIS
Infrastructure, environment, buildings

Zinc

Casmalia Resources Superfund Site

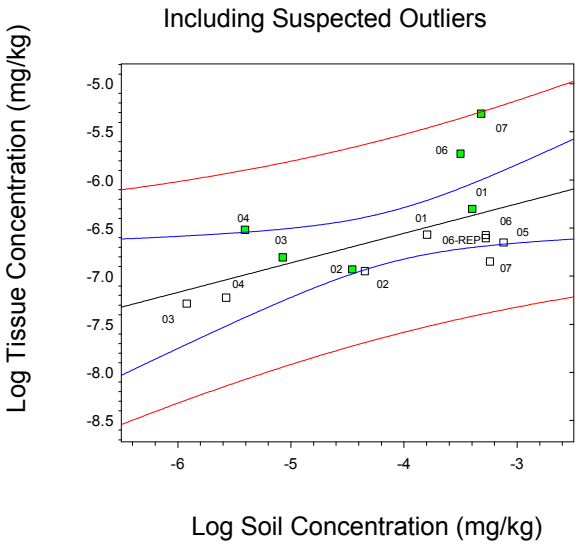
Figure 2-9

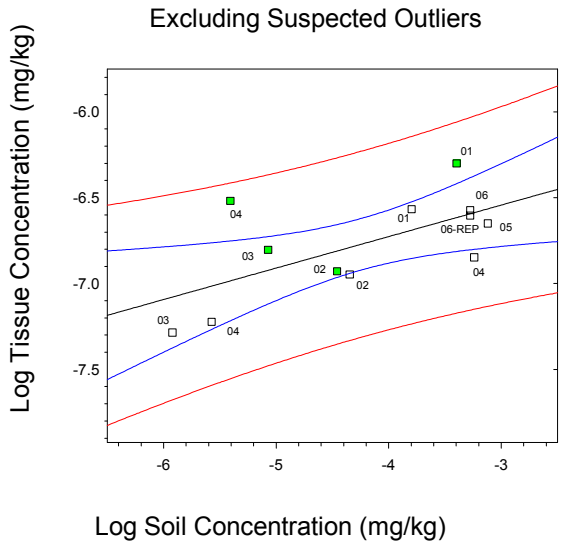
Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

Plants - PCB Congener TEQ-Bird - Pooled



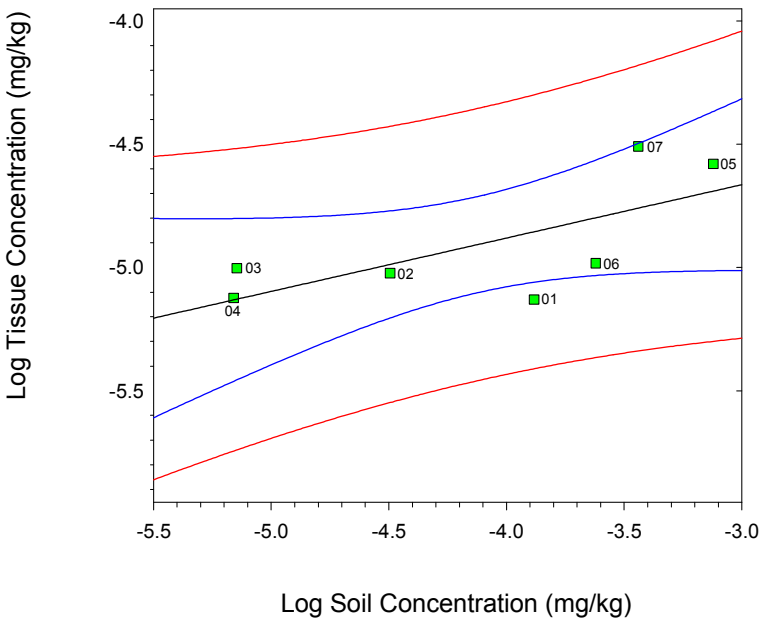


y = 0.307x - 5.326
R = 0.5731
R^2 = 0.3285
P-value = 0.0321

■ = FPP-grass
□ = FPP-shrub

y = 0.183x - 5.993
R = 0.648
R^2 = 0.42
P-value = 0.023

Soil Invertebrates - PCB Congener TEQ-Bird - Pooled



y = 0.216x - 4.015
R = 0.6957
R^2 = 0.484
P-value = 0.0826

■ = FPP-mixed
□ = FPP-beetle

ARCADIS
Infrastructure, environment, buildings

PCB Congener TEQ-Bird

Casmalia Resources Superfund Site

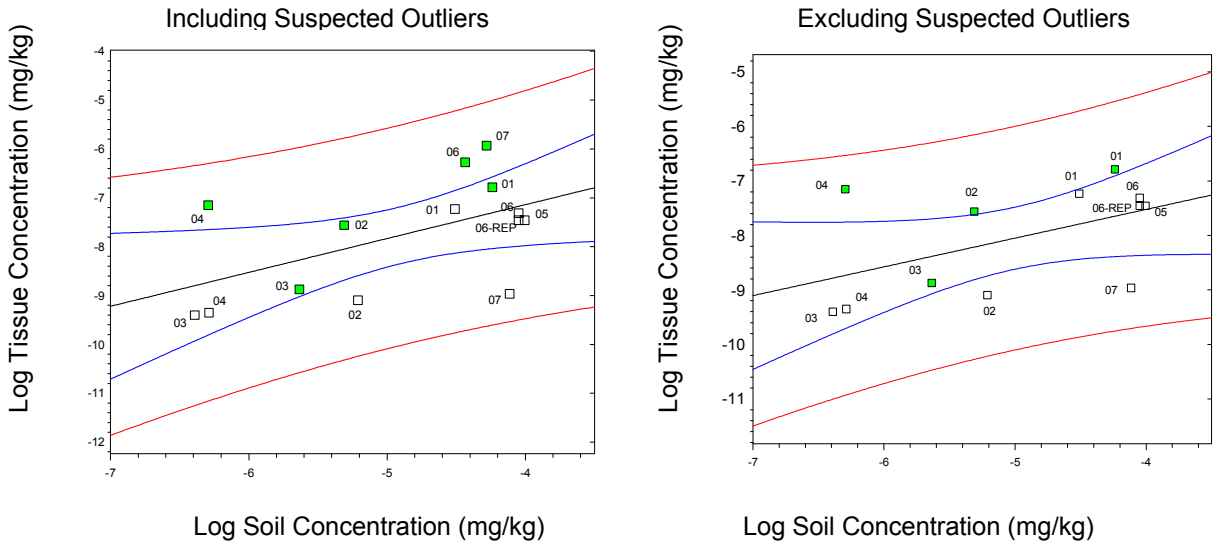
Figure 2-10

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

= Soil vs Tissue
= 95% Confidence Interval
= 95% Prediction Interval

Plants - PCB Congener TEQ-Human_mammal - Pooled

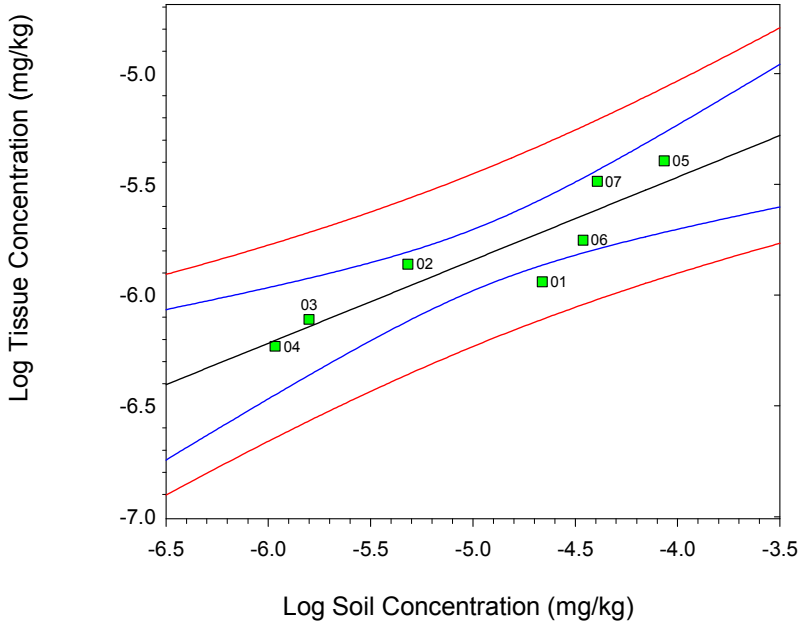


y = 0.693x - 4.369
R = 0.5521
R^2 = 0.3048
P-value = 0.0407

■ = FPP-grass
□ = FPP-shrub

y = 0.528x - 5.412
R = 0.516
R^2 = 0.266
P-value = 0.086

Soil Invertebrates - PCB Congener TEQ-Human_mammal - Pooled



y = 0.375x - 3.968
R = 0.907
R^2 = 0.822
P-value = 0.005

■ = FPP-mixed
□ = FPP-beetle

ARCADIS
Infrastructure, environment, buildings

PCB Congener TEQ-Human_mammal

Casmalia Resources Superfund Site

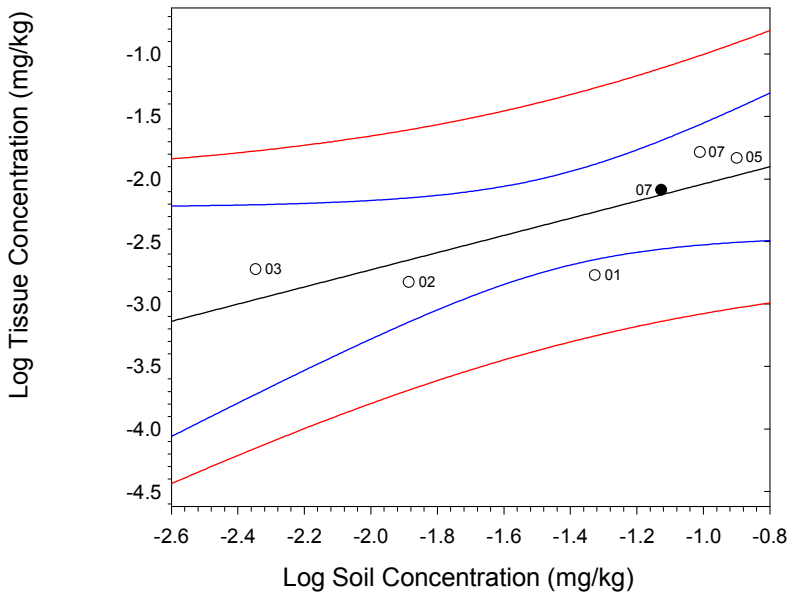
Figure 2-11

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

= Soil vs Tissue
= 95% Confidence Interval
= 95% Prediction Interval

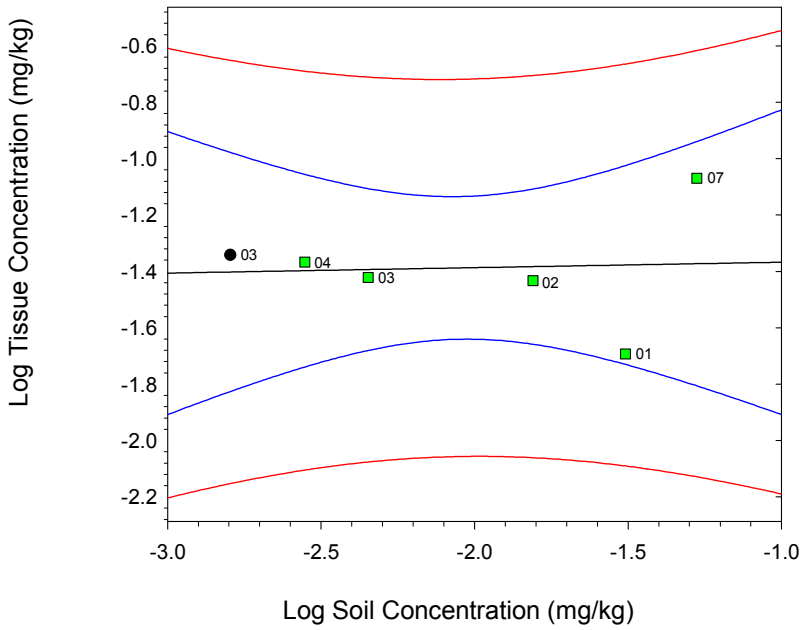
Plants - Total DDT - Pooled



y = 0.687x - 1.353
R = 0.797
R^2 = 0.636
P-value = 0.058

• = FPP-grass
o = FPP-shrub

Soil Invertebrates - Total DDT - Pooled



y = 0.019x - 1.348
R = 0.059
R^2 = 0.003
P-value = 0.912

• = Background-beetle
o = Background-mixed
■ = FPP-mixed
□ = FPP-beetle

ARCADIS
Infrastructure, environment, buildings

Total DDT

Casmalia Resources Superfund Site

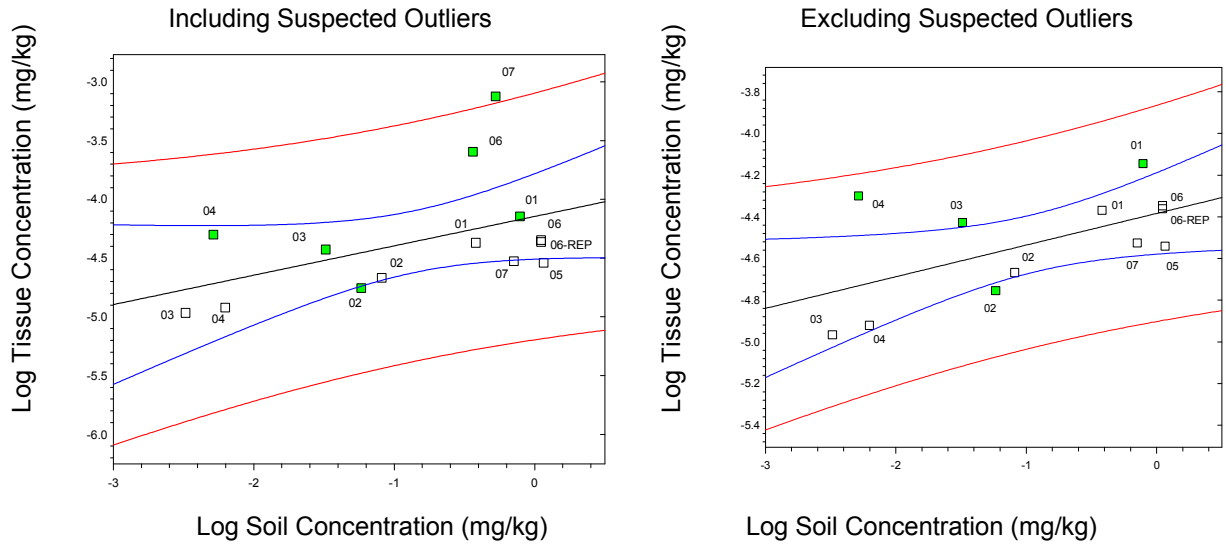
Figure 2-12

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

—— = Soil vs Tissue
—— = 95% Confidence Interval
—— = 95% Prediction Interval

Plants - Total PCB - Pooled

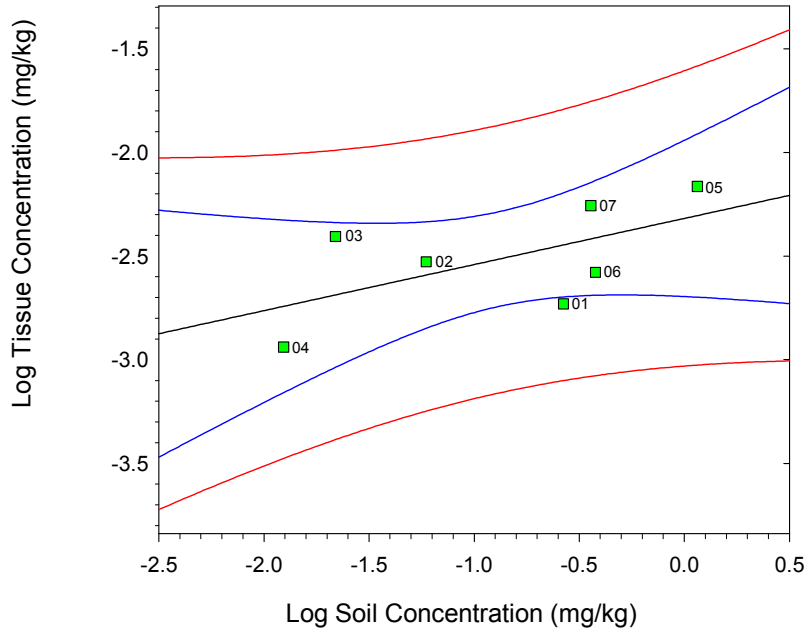


y = 0.250x - 4.146
R = 0.4737
R^2 = 0.2244
P-value = 0.0871

■ = FPP-grass
□ = FPP-shrub

y = 0.152x - 4.384
R = 0.59
R^2 = 0.348
P-value = 0.044

Soil Invertebrates - Total PCB - Pooled



y = 0.223x - 2.318
R = 0.601
R^2 = 0.362
P-value = 0.153

■ = FPP-mixed
□ = FPP-beetle

ARCADIS
Infrastructure, environment, buildings

Total PCB

Casmalia Resources Superfund Site

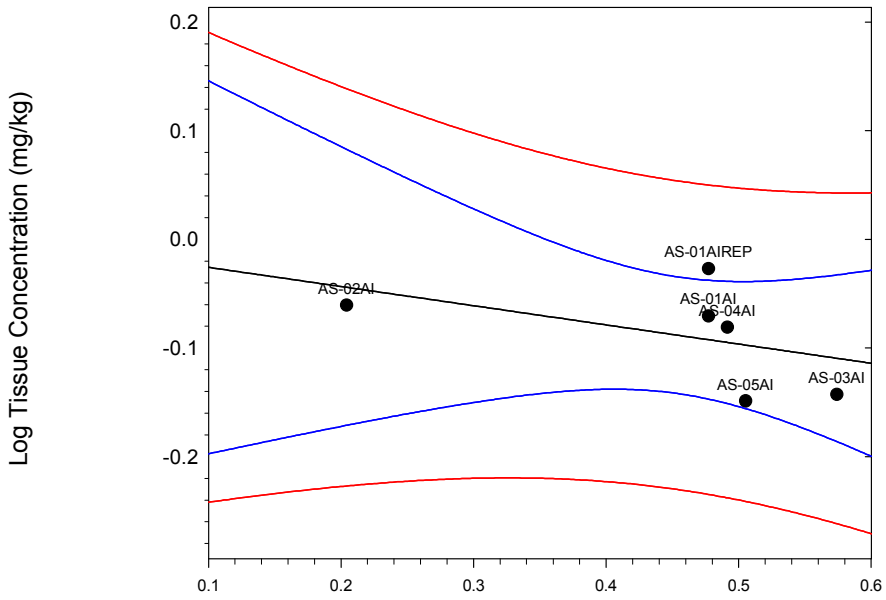
Figure 2-13

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

= Soil vs Tissue
= 95% Confidence Interval
= 95% Prediction Interval

Aquatic Invertebrates - Selenium - Pooled



y = -0.177x - 0.008
R = 0.47
R^2 = 0.22
P-value = 0.35

• = A-Series Pond

ARCADIS
Infrastructure, environment, buildings

Selenium

Casmalia Resources Suoperfund Site

Figure 2-14

Notes:

Regression based on detected soil / tissue samples.
R = Pearson's correlation coefficient
R^2 = Coefficient of determination

= Soil vs Tissue
= 95% Confidence Interval
= 95% Prediction Interval