

*Richardson Flat Tailings Site*  
*Screening Ecological Risk Assessment*

**APPENDIX G**

**CALCULATION OF HAZARDS FOR SOIL FAUNA FROM  
DIRECT CONTACT WITH SOILS/TAILINGS**

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**APPENDIX G**  
**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

*Richardson Flat Tailings Site*  
**Screening Ecological Risk Assessment**

\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
Background Soils	RF-BG-BG1	Arsenic	11.0	20	100	6E-01	1E-01
Background Soils	RF-BG-BG1	Lead	47.0	140	900	3E-01	5E-02
Background Soils	RF-BG-BG10	Arsenic	7.0	20	100	4E-01	7E-02
Background Soils	RF-BG-BG10	Barium	220.0	3000	NA	7E-02	NC
Background Soils	RF-BG-BG10	Cadmium	0.3	1.6	20	2E-01	1E-02
Background Soils	RF-BG-BG10	Chromium	22.5	0.4	100	<b>6E+01</b>	2E-01
Background Soils	RF-BG-BG10	Copper	15.5	40	150	4E-01	1E-01
Background Soils	RF-BG-BG10	Lead	30.5	140	900	2E-01	3E-02
Background Soils	RF-BG-BG10	Mercury	0.1	0.1	30	5E-01	2E-03
Background Soils	RF-BG-BG10	Selenium	2.5	2	100	1E+00	3E-02
Background Soils	RF-BG-BG10	Silver	2.5	50	NA	5E-02	NC
Background Soils	RF-BG-BG10	Zinc	93.0	100	600	9E-01	2E-01
Background Soils	RF-BG-BG2	Arsenic	8.1	20	100	4E-01	8E-02
Background Soils	RF-BG-BG2	Lead	26.0	140	900	2E-01	3E-02
Background Soils	RF-BG-BG3	Arsenic	8.6	20	100	4E-01	9E-02
Background Soils	RF-BG-BG3	Lead	22.0	140	900	2E-01	2E-02
Background Soils	RF-BG-BG4	Arsenic	9.2	20	100	5E-01	9E-02
Background Soils	RF-BG-BG4	Lead	25.0	140	900	2E-01	3E-02
Background Soils	RF-BG-BG5	Arsenic	11.0	20	100	6E-01	1E-01
Background Soils	RF-BG-BG5	Lead	43.0	140	900	3E-01	5E-02
Background Soils	RF-BG-BG6	Arsenic	7.0	20	100	4E-01	7E-02
Background Soils	RF-BG-BG6	Lead	30.0	140	900	2E-01	3E-02
Background Soils	RF-BG-BG7	Arsenic	6.9	20	100	3E-01	7E-02
Background Soils	RF-BG-BG7	Lead	25.0	140	900	2E-01	3E-02
Background Soils	RF-BG-BG8	Arsenic	14.0	20	100	7E-01	1E-01
Background Soils	RF-BG-BG8	Barium	265.0	3000	NA	9E-02	NC
Background Soils	RF-BG-BG8	Cadmium	1.0	1.6	20	6E-01	5E-02
Background Soils	RF-BG-BG8	Chromium	20.0	0.4	100	<b>5E+01</b>	2E-01
Background Soils	RF-BG-BG8	Copper	29.0	40	150	7E-01	2E-01
Background Soils	RF-BG-BG8	Lead	84.0	140	900	6E-01	9E-02
Background Soils	RF-BG-BG8	Mercury	0.2	0.1	30	<b>2E+00</b>	5E-03
Background Soils	RF-BG-BG8	Selenium	2.5	2	100	1E+00	3E-02
Background Soils	RF-BG-BG8	Silver	2.5	50	NA	5E-02	NC
Background Soils	RF-BG-BG8	Zinc	127.0	100	600	1E+00	2E-01
Background Soils	RF-BG-BG9	Arsenic	6.7	20	100	3E-01	7E-02
Background Soils	RF-BG-BG9	Lead	98.0	140	900	7E-01	1E-01
Off-Impoundment Soils	RF-OF-T1A	Arsenic	26.0	20	100	1E+00	3E-01
Off-Impoundment Soils	RF-OF-T1A	Lead	470.5	140	900	<b>3E+00</b>	5E-01
Off-Impoundment Soils	RF-OF-T1B	Arsenic	11.0	20	100	6E-01	1E-01
Off-Impoundment Soils	RF-OF-T1B	Lead	101.0	140	900	7E-01	1E-01
Off-Impoundment Soils	RF-OF-T1C	Arsenic	8.5	20	100	4E-01	9E-02
Off-Impoundment Soils	RF-OF-T1C	Barium	193.5	3000	NA	6E-02	NC
Off-Impoundment Soils	RF-OF-T1C	Cadmium	1.0	1.6	20	6E-01	5E-02
Off-Impoundment Soils	RF-OF-T1C	Chromium	21.5	0.4	100	<b>5E+01</b>	2E-01
Off-Impoundment Soils	RF-OF-T1C	Copper	24.0	40	150	6E-01	2E-01
Off-Impoundment Soils	RF-OF-T1C	Lead	77.0	140	900	6E-01	9E-02
Off-Impoundment Soils	RF-OF-T1C	Mercury	0.1	0.1	30	5E-01	2E-03
Off-Impoundment Soils	RF-OF-T1C	Selenium	2.5	2	100	1E+00	3E-02
Off-Impoundment Soils	RF-OF-T1C	Silver	2.5	50	NA	5E-02	NC
Off-Impoundment Soils	RF-OF-T1C	Zinc	145.0	100	600	1E+00	2E-01
Off-Impoundment Soils	RF-OF-T1D	Arsenic	8.5	20	100	4E-01	8E-02
Off-Impoundment Soils	RF-OF-T1D	Lead	76.0	140	900	5E-01	8E-02
Off-Impoundment Soils	RF-OF-T1E	Arsenic	9.1	20	100	5E-01	9E-02
Off-Impoundment Soils	RF-OF-T1E	Lead	53.3	140	900	4E-01	6E-02
Off-Impoundment Soils	RF-OF-T1F	Arsenic	10.5	20	100	5E-01	1E-01
Off-Impoundment Soils	RF-OF-T1F	Lead	64.5	140	900	5E-01	7E-02
Off-Impoundment Soils	RF-OF-T1G	Arsenic	9.2	20	100	5E-01	9E-02
Off-Impoundment Soils	RF-OF-T1G	Lead	46.5	140	900	3E-01	5E-02
Off-Impoundment Soils	RF-OF-T1H	Arsenic	10.0	20	100	5E-01	1E-01
Off-Impoundment Soils	RF-OF-T1H	Lead	32.5	140	900	2E-01	4E-02
Off-Impoundment Soils	RF-OF-T2A	Arsenic	37.0	20	100	<b>2E+00</b>	4E-01

**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

*Richardson Flat Tailings Site  
Screening Ecological Risk Assessment*

\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
Off-Impoundment Soils	RF-OF-T2A	Lead	471.0	140	900	3E+00	5E-01
Off-Impoundment Soils	RF-OF-T2B	Arsenic	13.0	20	100	7E-01	1E-01
Off-Impoundment Soils	RF-OF-T2B	Lead	120.5	140	900	9E-01	1E-01
Off-Impoundment Soils	RF-OF-T2C	Arsenic	129.0	20	100	6E+00	1E+00
Off-Impoundment Soils	RF-OF-T2C	Lead	3,308.0	140	900	2E+01	4E+00
Off-Impoundment Soils	RF-OF-T2D	Arsenic	279.5	20	100	1E+01	3E+00
Off-Impoundment Soils	RF-OF-T2D	Lead	6,070.0	140	900	4E+01	7E+00
Off-Impoundment Soils	RF-OF-T2E	Arsenic	245.5	20	100	1E+01	2E+00
Off-Impoundment Soils	RF-OF-T2E	Lead	5,179.5	140	900	4E+01	6E+00
Off-Impoundment Soils	RF-OF-T2F	Arsenic	11.3	20	100	6E-01	1E-01
Off-Impoundment Soils	RF-OF-T2F	Barium	233.8	3000	NA	8E-02	NC
Off-Impoundment Soils	RF-OF-T2F	Cadmium	0.9	1.6	20	5E-01	4E-02
Off-Impoundment Soils	RF-OF-T2F	Chromium	21.5	0.4	100	5E+01	2E-01
Off-Impoundment Soils	RF-OF-T2F	Copper	30.3	40	150	8E-01	2E-01
Off-Impoundment Soils	RF-OF-T2F	Lead	112.5	140	900	8E-01	1E-01
Off-Impoundment Soils	RF-OF-T2F	Mercury	0.1	0.1	30	5E-01	2E-03
Off-Impoundment Soils	RF-OF-T2F	Selenium	2.5	2	100	1E+00	3E-02
Off-Impoundment Soils	RF-OF-T2F	Silver	2.5	50	NA	5E-02	NC
Off-Impoundment Soils	RF-OF-T2F	Zinc	178.3	100	600	2E+00	3E-01
Off-Impoundment Soils	RF-OF-T2G	Arsenic	7.6	20	100	4E-01	8E-02
Off-Impoundment Soils	RF-OF-T2G	Lead	19.5	140	900	1E-01	2E-02
Off-Impoundment Soils	RF-OF-T2H	Arsenic	8.0	20	100	4E-01	8E-02
Off-Impoundment Soils	RF-OF-T2H	Barium	303.0	3000	NA	1E-01	NC
Off-Impoundment Soils	RF-OF-T2H	Cadmium	0.6	1.6	20	4E-01	3E-02
Off-Impoundment Soils	RF-OF-T2H	Chromium	30.5	0.4	100	8E+01	3E-01
Off-Impoundment Soils	RF-OF-T2H	Copper	24.0	40	150	6E-01	2E-01
Off-Impoundment Soils	RF-OF-T2H	Lead	48.0	140	900	3E-01	5E-02
Off-Impoundment Soils	RF-OF-T2H	Mercury	0.1	0.1	30	5E-01	2E-03
Off-Impoundment Soils	RF-OF-T2H	Selenium	2.5	2	100	1E+00	3E-02
Off-Impoundment Soils	RF-OF-T2H	Silver	2.5	50	NA	5E-02	NC
Off-Impoundment Soils	RF-OF-T2H	Zinc	93.0	100	600	9E-01	2E-01
Off-Impoundment Soils	RF-OF-T2I	Arsenic	7.4	20	100	4E-01	7E-02
Off-Impoundment Soils	RF-OF-T2I	Lead	46.5	140	900	3E-01	5E-02
Off-Impoundment Soils	RF-OF-T2J	Arsenic	8.5	20	100	4E-01	9E-02
Off-Impoundment Soils	RF-OF-T2J	Lead	39.5	140	900	3E-01	4E-02
Off-Impoundment Soils	RF-OF-T3A	Arsenic	9.3	20	100	5E-01	9E-02
Off-Impoundment Soils	RF-OF-T3A	Lead	55.0	140	900	4E-01	6E-02
Off-Impoundment Soils	RF-OF-T3B	Arsenic	37.0	20	100	2E+00	4E-01
Off-Impoundment Soils	RF-OF-T3B	Barium	225.5	3000	NA	8E-02	NC
Off-Impoundment Soils	RF-OF-T3B	Cadmium	29.5	1.6	20	2E+01	1E+00
Off-Impoundment Soils	RF-OF-T3B	Chromium	20.5	0.4	100	5E+01	2E-01
Off-Impoundment Soils	RF-OF-T3B	Copper	89.5	40	150	2E+00	6E-01
Off-Impoundment Soils	RF-OF-T3B	Lead	812.5	140	900	6E+00	9E-01
Off-Impoundment Soils	RF-OF-T3B	Mercury	3.1	0.1	30	3E+01	1E-01
Off-Impoundment Soils	RF-OF-T3B	Selenium	2.5	2	100	1E+00	3E-02
Off-Impoundment Soils	RF-OF-T3B	Silver	2.5	50	NA	5E-02	NC
Off-Impoundment Soils	RF-OF-T3B	Zinc	1,366.5	100	600	1E+01	2E+00
Off-Impoundment Soils	RF-OF-T3C	Arsenic	8.6	20	100	4E-01	9E-02
Off-Impoundment Soils	RF-OF-T3C	Lead	53.5	140	900	4E-01	6E-02
Off-Impoundment Soils	RF-OF-T3D	Arsenic	7.5	20	100	4E-01	8E-02
Off-Impoundment Soils	RF-OF-T3D	Barium	403.0	3000	NA	1E-01	NC
Off-Impoundment Soils	RF-OF-T3D	Cadmium	1.0	1.6	20	6E-01	5E-02
Off-Impoundment Soils	RF-OF-T3D	Chromium	21.3	0.4	100	5E+01	2E-01
Off-Impoundment Soils	RF-OF-T3D	Copper	33.3	40	150	8E-01	2E-01
Off-Impoundment Soils	RF-OF-T3D	Lead	53.5	140	900	4E-01	6E-02
Off-Impoundment Soils	RF-OF-T3D	Mercury	0.1	0.1	30	8E-01	3E-03
Off-Impoundment Soils	RF-OF-T3D	Selenium	2.5	2	100	1E+00	3E-02
Off-Impoundment Soils	RF-OF-T3D	Silver	2.5	50	NA	5E-02	NC
Off-Impoundment Soils	RF-OF-T3D	Zinc	138.3	100	600	1E+00	2E-01
Off-Impoundment Soils	RF-OF-T3E	Arsenic	6.7	20	100	3E-01	7E-02
Off-Impoundment Soils	RF-OF-T3E	Lead	17.5	140	900	1E-01	2E-02
Off-Impoundment Soils	RF-OF-T3F	Arsenic	7.5	20	100	4E-01	7E-02

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\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
Off-Impoundment Soils	RF-OF-T3F	Lead	19.0	140	900	1E-01	2E-02
Off-Impoundment Soils	RF-OF-T3G	Arsenic	6.5	20	100	3E-01	7E-02
Off-Impoundment Soils	RF-OF-T3G	Lead	27.5	140	900	2E-01	3E-02
Off-Impoundment Soils	RF-OF-T3H	Arsenic	7.0	20	100	3E-01	7E-02
Off-Impoundment Soils	RF-OF-T3H	Lead	27.0	140	900	2E-01	3E-02
Off-Impoundment Soils	RF-OF-T3I	Arsenic	9.2	20	100	5E-01	9E-02
Off-Impoundment Soils	RF-OF-T3I	Lead	25.0	140	900	2E-01	3E-02
Off-Impoundment Soils	RF-OF-T3J	Arsenic	9.2	20	100	5E-01	9E-02
Off-Impoundment Soils	RF-OF-T3J	Lead	47.0	140	900	3E-01	5E-02
Off-Impoundment Soils	SAB-1	Arsenic	12.0	20	100	6E-01	1E-01
Off-Impoundment Soils	SAB-1	Lead	98.0	140	900	7E-01	1E-01
Off-Impoundment Soils	SAB-2	Arsenic	14.0	20	100	7E-01	1E-01
Off-Impoundment Soils	SAB-2	Lead	135.0	140	900	1E+00	2E-01
Off-Impoundment Soils	SAB-3	Arsenic	11.0	20	100	6E-01	1E-01
Off-Impoundment Soils	SAB-3	Lead	75.0	140	900	5E-01	8E-02
Off-Impoundment Soils	SAB-4	Arsenic	12.0	20	100	6E-01	1E-01
Off-Impoundment Soils	SAB-4	Lead	144.0	140	900	1E+00	2E-01
Off-Impoundment Soils	SAB-5	Arsenic	12.0	20	100	6E-01	1E-01
Off-Impoundment Soils	SAB-5	Lead	53.0	140	900	4E-01	6E-02
Off-Impoundment Soils	SAB-7	Arsenic	30.0	20	100	<b>2E+00</b>	3E-01
Off-Impoundment Soils	SAB-7	Lead	165.0	140	900	1E+00	2E-01
Off-Impoundment Soils	SAB-8	Arsenic	23.0	20	100	1E+00	2E-01
Off-Impoundment Soils	SAB-8	Lead	63.0	140	900	5E-01	7E-02
On-Impoundment Soils	RF-ON-1A	Arsenic	15.0	20	100	8E-01	2E-01
On-Impoundment Soils	RF-ON-1A	Lead	37.0	140	900	3E-01	4E-02
On-Impoundment Soils	RF-ON-1B	Arsenic	9.1	20	100	5E-01	9E-02
On-Impoundment Soils	RF-ON-1B	Lead	44.0	140	900	3E-01	5E-02
On-Impoundment Soils	RF-ON-1C	Arsenic	12.0	20	100	6E-01	1E-01
On-Impoundment Soils	RF-ON-1C	Lead	163.0	140	900	1E+00	2E-01
On-Impoundment Soils	RF-ON-1D	Arsenic	10.0	20	100	5E-01	1E-01
On-Impoundment Soils	RF-ON-1D	Lead	96.0	140	900	7E-01	1E-01
On-Impoundment Soils	RF-ON-1E	Arsenic	20.0	20	100	1E+00	2E-01
On-Impoundment Soils	RF-ON-1E	Lead	336.0	140	900	<b>2E+00</b>	4E-01
On-Impoundment Soils	RF-ON-1G	Arsenic	121.0	20	100	<b>6E+00</b>	1E+00
On-Impoundment Soils	RF-ON-1G	Lead	3,239.0	140	900	<b>2E+01</b>	<b>4E+00</b>
On-Impoundment Soils	RF-ON-2A	Arsenic	13.0	20	100	7E-01	1E-01
On-Impoundment Soils	RF-ON-2A	Lead	49.0	140	900	4E-01	5E-02
On-Impoundment Soils	RF-ON-2B	Arsenic	78.0	20	100	<b>4E+00</b>	8E-01
On-Impoundment Soils	RF-ON-2B	Lead	1,155.0	140	900	<b>8E+00</b>	1E+00
On-Impoundment Soils	RF-ON-2C	Arsenic	7.8	20	100	4E-01	8E-02
On-Impoundment Soils	RF-ON-2C	Lead	19.0	140	900	1E-01	2E-02
On-Impoundment Soils	RF-ON-2D	Arsenic	6.8	20	100	3E-01	7E-02
On-Impoundment Soils	RF-ON-2D	Lead	19.5	140	900	1E-01	2E-02
On-Impoundment Soils	RF-ON-2E	Arsenic	44.0	20	100	<b>2E+00</b>	4E-01
On-Impoundment Soils	RF-ON-2E	Lead	904.5	140	900	<b>6E+00</b>	1E+00
On-Impoundment Soils	RF-ON-2F	Arsenic	82.0	20	100	<b>4E+00</b>	8E-01
On-Impoundment Soils	RF-ON-2F	Lead	2,646.0	140	900	<b>2E+01</b>	<b>3E+00</b>
On-Impoundment Soils	RF-ON-2G	Arsenic	12.0	20	100	6E-01	1E-01
On-Impoundment Soils	RF-ON-2G	Lead	59.0	140	900	4E-01	7E-02
On-Impoundment Soils	RF-ON-2H	Aluminum	22,600.0	600	NA	<b>4E+01</b>	NC
On-Impoundment Soils	RF-ON-2H	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-2H	Arsenic	3.7	20	100	2E-01	4E-02
On-Impoundment Soils	RF-ON-2H	Barium	206.0	3000	NA	7E-02	NC
On-Impoundment Soils	RF-ON-2H	Cadmium	0.5	1.6	20	3E-01	3E-02
On-Impoundment Soils	RF-ON-2H	Chromium	22.3	0.4	100	<b>6E+01</b>	2E-01
On-Impoundment Soils	RF-ON-2H	Copper	15.0	40	150	4E-01	1E-01
On-Impoundment Soils	RF-ON-2H	Lead	25.3	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-2H	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-2H	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-2H	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-2H	Zinc	91.3	100	600	9E-01	2E-01
On-Impoundment Soils	RF-ON-3A	Arsenic	49.0	20	100	<b>2E+00</b>	5E-01

**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

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\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
On-Impoundment Soils	RF-ON-3A	Barium	210.0	3000	NA	7E-02	NC
On-Impoundment Soils	RF-ON-3A	Cadmium	6.0	1.6	20	4E+00	3E-01
On-Impoundment Soils	RF-ON-3A	Chromium	24.0	0.4	100	6E+01	2E-01
On-Impoundment Soils	RF-ON-3A	Copper	99.0	40	150	2E+00	7E-01
On-Impoundment Soils	RF-ON-3A	Lead	875.0	140	900	6E+00	1E+00
On-Impoundment Soils	RF-ON-3A	Mercury	0.7	0.1	30	7E+00	2E-02
On-Impoundment Soils	RF-ON-3A	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-3A	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-3A	Zinc	1,010.0	100	600	1E+01	2E+00
On-Impoundment Soils	RF-ON-3B	Aluminum	22,400.0	600	NA	4E+01	NC
On-Impoundment Soils	RF-ON-3B	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-3B	Arsenic	36.0	20	100	2E+00	4E-01
On-Impoundment Soils	RF-ON-3B	Cadmium	1.0	1.6	20	6E-01	5E-02
On-Impoundment Soils	RF-ON-3B	Chromium	20.0	0.4	100	5E+01	2E-01
On-Impoundment Soils	RF-ON-3B	Copper	53.0	40	150	1E+00	4E-01
On-Impoundment Soils	RF-ON-3B	Lead	528.5	140	900	4E+00	6E-01
On-Impoundment Soils	RF-ON-3B	Mercury	0.2	0.1	30	2E+00	5E-03
On-Impoundment Soils	RF-ON-3B	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-3B	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-3B	Zinc	242.0	100	600	2E+00	4E-01
On-Impoundment Soils	RF-ON-3C	Arsenic	6.2	20	100	3E-01	6E-02
On-Impoundment Soils	RF-ON-3C	Lead	15.0	140	900	1E-01	2E-02
On-Impoundment Soils	RF-ON-3D	Aluminum	17,600.0	600	NA	3E+01	NC
On-Impoundment Soils	RF-ON-3D	Antimony	10.0	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-3D	Arsenic	46.0	20	100	2E+00	5E-01
On-Impoundment Soils	RF-ON-3D	Barium	255.0	3000	NA	9E-02	NC
On-Impoundment Soils	RF-ON-3D	Cadmium	3.5	1.6	20	2E+00	2E-01
On-Impoundment Soils	RF-ON-3D	Chromium	24.5	0.4	100	6E+01	2E-01
On-Impoundment Soils	RF-ON-3D	Copper	84.5	40	150	2E+00	6E-01
On-Impoundment Soils	RF-ON-3D	Lead	574.5	140	900	4E+00	6E-01
On-Impoundment Soils	RF-ON-3D	Mercury	1.0	0.1	30	1E+01	3E-02
On-Impoundment Soils	RF-ON-3D	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-3D	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-3D	Zinc	748.0	100	600	7E+00	1E+00
On-Impoundment Soils	RF-ON-3E	Aluminum	21,800.0	600	NA	4E+01	NC
On-Impoundment Soils	RF-ON-3E	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-3E	Arsenic	4.0	20	100	2E-01	4E-02
On-Impoundment Soils	RF-ON-3E	Barium	360.5	3000	NA	1E-01	NC
On-Impoundment Soils	RF-ON-3E	Cadmium	0.3	1.6	20	2E-01	1E-02
On-Impoundment Soils	RF-ON-3E	Chromium	21.7	0.4	100	5E+01	2E-01
On-Impoundment Soils	RF-ON-3E	Copper	21.3	40	150	5E-01	1E-01
On-Impoundment Soils	RF-ON-3E	Lead	21.0	140	900	2E-01	2E-02
On-Impoundment Soils	RF-ON-3E	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-3E	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-3E	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-3E	Zinc	62.0	100	600	6E-01	1E-01
On-Impoundment Soils	RF-ON-3F	Arsenic	23.0	20	100	1E+00	2E-01
On-Impoundment Soils	RF-ON-3F	Lead	231.0	140	900	2E+00	3E-01
On-Impoundment Soils	RF-ON-3G	Arsenic	12.0	20	100	6E-01	1E-01
On-Impoundment Soils	RF-ON-3G	Lead	23.0	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-3H	Arsenic	7.5	20	100	4E-01	8E-02
On-Impoundment Soils	RF-ON-3H	Lead	25.0	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-3I	Arsenic	9.0	20	100	5E-01	9E-02
On-Impoundment Soils	RF-ON-3I	Barium	187.0	3000	NA	6E-02	NC
On-Impoundment Soils	RF-ON-3I	Cadmium	1.0	1.6	20	6E-01	5E-02
On-Impoundment Soils	RF-ON-3I	Chromium	20.0	0.4	100	5E+01	2E-01
On-Impoundment Soils	RF-ON-3I	Copper	25.0	40	150	6E-01	2E-01
On-Impoundment Soils	RF-ON-3I	Lead	127.0	140	900	9E-01	1E-01
On-Impoundment Soils	RF-ON-3I	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-3I	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-3I	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-3I	Zinc	209.0	100	600	2E+00	3E-01

**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

*Richardson Flat Tailings Site  
Screening Ecological Risk Assessment*

\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
On-Impoundment Soils	RF-ON-4A	Arsenic	81.0	20	100	4E+00	8E-01
On-Impoundment Soils	RF-ON-4A	Lead	1,350.0	140	900	1E+01	2E+00
On-Impoundment Soils	RF-ON-4B	Arsenic	11.0	20	100	6E-01	1E-01
On-Impoundment Soils	RF-ON-4B	Lead	63.0	140	900	5E-01	7E-02
On-Impoundment Soils	RF-ON-4C	Aluminum	18,900.0	600	NA	3E+01	NC
On-Impoundment Soils	RF-ON-4C	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-4C	Arsenic	12.5	20	100	6E-01	1E-01
On-Impoundment Soils	RF-ON-4C	Barium	240.0	3000	NA	8E-02	NC
On-Impoundment Soils	RF-ON-4C	Cadmium	2.5	1.6	20	2E+00	1E-01
On-Impoundment Soils	RF-ON-4C	Chromium	22.5	0.4	100	6E+01	2E-01
On-Impoundment Soils	RF-ON-4C	Copper	32.5	40	150	8E-01	2E-01
On-Impoundment Soils	RF-ON-4C	Lead	111.5	140	900	8E-01	1E-01
On-Impoundment Soils	RF-ON-4C	Mercury	0.5	0.1	30	5E+00	2E-02
On-Impoundment Soils	RF-ON-4C	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-4C	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-4C	Zinc	222.5	100	600	2E+00	4E-01
On-Impoundment Soils	RF-ON-4D	Aluminum	21,600.0	600	NA	4E+01	NC
On-Impoundment Soils	RF-ON-4D	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-4D	Arsenic	6.5	20	100	3E-01	7E-02
On-Impoundment Soils	RF-ON-4D	Barium	327.0	3000	NA	1E-01	NC
On-Impoundment Soils	RF-ON-4D	Cadmium	0.3	1.6	20	2E-01	1E-02
On-Impoundment Soils	RF-ON-4D	Chromium	22.5	0.4	100	6E+01	2E-01
On-Impoundment Soils	RF-ON-4D	Copper	28.0	40	150	7E-01	2E-01
On-Impoundment Soils	RF-ON-4D	Lead	17.5	140	900	1E-01	2E-02
On-Impoundment Soils	RF-ON-4D	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-4D	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-4D	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-4D	Zinc	80.0	100	600	8E-01	1E-01
On-Impoundment Soils	RF-ON-4E	Arsenic	7.0	20	100	4E-01	7E-02
On-Impoundment Soils	RF-ON-4E	Lead	20.0	140	900	1E-01	2E-02
On-Impoundment Soils	RF-ON-4F	Aluminum	21,900.0	600	NA	4E+01	NC
On-Impoundment Soils	RF-ON-4F	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-4F	Arsenic	6.7	20	100	3E-01	7E-02
On-Impoundment Soils	RF-ON-4F	Barium	218.5	3000	NA	7E-02	NC
On-Impoundment Soils	RF-ON-4F	Cadmium	0.8	1.6	20	5E-01	4E-02
On-Impoundment Soils	RF-ON-4F	Chromium	17.0	0.4	100	4E+01	2E-01
On-Impoundment Soils	RF-ON-4F	Copper	24.7	40	150	6E-01	2E-01
On-Impoundment Soils	RF-ON-4F	Lead	29.3	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-4F	Mercury	0.1	0.1	30	1E+00	4E-03
On-Impoundment Soils	RF-ON-4F	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-4F	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-4F	Zinc	185.3	100	600	2E+00	3E-01
On-Impoundment Soils	RF-ON-4G	Aluminum	26,100.0	600	NA	4E+01	NC
On-Impoundment Soils	RF-ON-4G	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-4G	Arsenic	6.7	20	100	3E-01	7E-02
On-Impoundment Soils	RF-ON-4G	Cadmium	0.3	1.6	20	2E-01	1E-02
On-Impoundment Soils	RF-ON-4G	Chromium	20.0	0.4	100	5E+01	2E-01
On-Impoundment Soils	RF-ON-4G	Copper	38.0	40	150	1E+00	3E-01
On-Impoundment Soils	RF-ON-4G	Lead	22.7	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-4G	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-4G	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-4G	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-4G	Zinc	100.0	100	600	1E+00	2E-01
On-Impoundment Soils	RF-ON-4H	Aluminum	24,700.0	600	NA	4E+01	NC
On-Impoundment Soils	RF-ON-4H	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-4H	Arsenic	7.0	20	100	4E-01	7E-02
On-Impoundment Soils	RF-ON-4H	Cadmium	0.3	1.6	20	2E-01	1E-02
On-Impoundment Soils	RF-ON-4H	Chromium	24.0	0.4	100	6E+01	2E-01
On-Impoundment Soils	RF-ON-4H	Copper	28.0	40	150	7E-01	2E-01
On-Impoundment Soils	RF-ON-4H	Lead	29.0	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-4H	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-4H	Selenium	2.5	2	100	1E+00	3E-02

**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

**Richardson Flat Tailings Site  
Screening Ecological Risk Assessment**

\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
On-Impoundment Soils	RF-ON-4H	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-4H	Zinc	115.0	100	600	1E+00	2E-01
On-Impoundment Soils	RF-ON-4I	Arsenic	17.0	20	100	9E-01	2E-01
On-Impoundment Soils	RF-ON-4I	Lead	344.0	140	900	<b>2E+00</b>	4E-01
On-Impoundment Soils	RF-ON-5A	Arsenic	13.0	20	100	7E-01	1E-01
On-Impoundment Soils	RF-ON-5A	Lead	42.0	140	900	3E-01	5E-02
On-Impoundment Soils	RF-ON-5B	Aluminum	18,400.0	600	NA	<b>3E+01</b>	NC
On-Impoundment Soils	RF-ON-5B	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-5B	Arsenic	4.3	20	100	2E-01	4E-02
On-Impoundment Soils	RF-ON-5B	Barium	198.0	3000	NA	7E-02	NC
On-Impoundment Soils	RF-ON-5B	Cadmium	0.3	1.6	20	2E-01	1E-02
On-Impoundment Soils	RF-ON-5B	Chromium	20.5	0.4	100	<b>5E+01</b>	2E-01
On-Impoundment Soils	RF-ON-5B	Copper	23.0	40	150	6E-01	2E-01
On-Impoundment Soils	RF-ON-5B	Lead	21.5	140	900	2E-01	2E-02
On-Impoundment Soils	RF-ON-5B	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-5B	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-5B	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-5B	Zinc	66.0	100	600	7E-01	1E-01
On-Impoundment Soils	RF-ON-5C	Arsenic	15.0	20	100	8E-01	2E-01
On-Impoundment Soils	RF-ON-5C	Lead	159.0	140	900	1E+00	2E-01
On-Impoundment Soils	RF-ON-5D	Aluminum	26,100.0	600	NA	<b>4E+01</b>	NC
On-Impoundment Soils	RF-ON-5D	Antimony	2.5	NA	NA	NC	NC
On-Impoundment Soils	RF-ON-5D	Arsenic	5.0	20	100	3E-01	5E-02
On-Impoundment Soils	RF-ON-5D	Barium	175.0	3000	NA	6E-02	NC
On-Impoundment Soils	RF-ON-5D	Cadmium	0.3	1.6	20	2E-01	1E-02
On-Impoundment Soils	RF-ON-5D	Chromium	36.0	0.4	100	<b>9E+01</b>	4E-01
On-Impoundment Soils	RF-ON-5D	Copper	26.0	40	150	7E-01	2E-01
On-Impoundment Soils	RF-ON-5D	Lead	23.0	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-5D	Mercury	0.1	0.1	30	5E-01	2E-03
On-Impoundment Soils	RF-ON-5D	Selenium	2.5	2	100	1E+00	3E-02
On-Impoundment Soils	RF-ON-5D	Silver	2.5	50	NA	5E-02	NC
On-Impoundment Soils	RF-ON-5D	Zinc	87.5	100	600	9E-01	1E-01
On-Impoundment Soils	RF-ON-5E	Arsenic	2.5	20	100	1E-01	3E-02
On-Impoundment Soils	RF-ON-5E	Lead	15.0	140	900	1E-01	2E-02
On-Impoundment Soils	RF-ON-5F	Arsenic	12.0	20	100	6E-01	1E-01
On-Impoundment Soils	RF-ON-5F	Lead	25.0	140	900	2E-01	3E-02
On-Impoundment Soils	RF-ON-5G	Arsenic	20.0	20	100	1E+00	2E-01
On-Impoundment Soils	RF-ON-5G	Lead	333.0	140	900	<b>2E+00</b>	4E-01
On-Impoundment Soils	RF-ON-5H	Arsenic	9.2	20	100	5E-01	9E-02
On-Impoundment Soils	RF-ON-5H	Lead	52.0	140	900	4E-01	6E-02
On-Impoundment Soils	RF-ON-6D	Arsenic	17.0	20	100	9E-01	2E-01
On-Impoundment Soils	RF-ON-6D	Lead	135.0	140	900	1E+00	2E-01
Site Tailings	RF-TA-TP1	Aluminum	2,260.0	600	NA	<b>4E+00</b>	NC
Site Tailings	RF-TA-TP1	Antimony	50.7	NA	NA	NC	NC
Site Tailings	RF-TA-TP1	Arsenic	219.0	20	100	<b>1E+01</b>	<b>2E+00</b>
Site Tailings	RF-TA-TP1	Cadmium	27.3	1.6	20	<b>2E+01</b>	1E+00
Site Tailings	RF-TA-TP1	Chromium	8.6	0.4	100	<b>2E+01</b>	9E-02
Site Tailings	RF-TA-TP1	Copper	522.2	40	150	<b>1E+01</b>	<b>3E+00</b>
Site Tailings	RF-TA-TP1	Lead	4,328.3	140	900	<b>3E+01</b>	<b>5E+00</b>
Site Tailings	RF-TA-TP1	Mercury	0.5	0.1	30	<b>5E+00</b>	2E-02
Site Tailings	RF-TA-TP1	Selenium	4.7	2	100	<b>2E+00</b>	5E-02
Site Tailings	RF-TA-TP1	Silver	18.5	50	NA	4E-01	NC
Site Tailings	RF-TA-TP1	Zinc	5,136.7	100	600	<b>5E+01</b>	<b>9E+00</b>
Site Tailings	RF-TA-TP2	Aluminum	3,986.7	600	NA	<b>7E+00</b>	NC
Site Tailings	RF-TA-TP2	Antimony	174.9	NA	NA	NC	NC
Site Tailings	RF-TA-TP2	Arsenic	308.9	20	100	<b>2E+01</b>	<b>3E+00</b>
Site Tailings	RF-TA-TP2	Cadmium	42.6	1.6	20	<b>3E+01</b>	<b>2E+00</b>
Site Tailings	RF-TA-TP2	Chromium	30.3	0.4	100	<b>8E+01</b>	3E-01
Site Tailings	RF-TA-TP2	Copper	475.1	40	150	<b>1E+01</b>	<b>3E+00</b>
Site Tailings	RF-TA-TP2	Lead	5,508.3	140	900	<b>4E+01</b>	<b>6E+00</b>
Site Tailings	RF-TA-TP2	Mercury	4.0	0.1	30	<b>4E+01</b>	1E-01
Site Tailings	RF-TA-TP2	Selenium	10.7	2	100	<b>5E+00</b>	1E-01

**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

**Richardson Flat Tailings Site  
Screening Ecological Risk Assessment**

\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
Site Tailings	RF-TA-TP2	Silver	40.8	50	NA	8E-01	NC
Site Tailings	RF-TA-TP2	Zinc	7,190.8	100	600	7E+01	1E+01
Site Tailings	RF-TA-TP3	Aluminum	1,987.2	600	NA	3E+00	NC
Site Tailings	RF-TA-TP3	Antimony	107.7	NA	NA	NC	NC
Site Tailings	RF-TA-TP3	Arsenic	224.3	20	100	1E+01	2E+00
Site Tailings	RF-TA-TP3	Cadmium	33.8	1.6	20	2E+01	2E+00
Site Tailings	RF-TA-TP3	Chromium	18.2	0.4	100	5E+01	2E-01
Site Tailings	RF-TA-TP3	Copper	253.5	40	150	6E+00	2E+00
Site Tailings	RF-TA-TP3	Lead	3,796.7	140	900	3E+01	4E+00
Site Tailings	RF-TA-TP3	Mercury	16.0	0.1	30	2E+02	5E-01
Site Tailings	RF-TA-TP3	Selenium	11.3	2	100	6E+00	1E-01
Site Tailings	RF-TA-TP3	Silver	23.8	50	NA	5E-01	NC
Site Tailings	RF-TA-TP3	Zinc	5,865.0	100	600	6E+01	1E+01
Site Tailings	RF-TSDD-GL50	Aluminum	13,377.8	600	NA	2E+01	NC
Site Tailings	RF-TSDD-GL50	Antimony	125.5	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL50	Arsenic	197.4	20	100	1E+01	2E+00
Site Tailings	RF-TSDD-GL50	Cadmium	28.8	1.6	20	2E+01	1E+00
Site Tailings	RF-TSDD-GL50	Chromium	22.5	0.4	100	6E+01	2E-01
Site Tailings	RF-TSDD-GL50	Copper	311.3	40	150	8E+00	2E+00
Site Tailings	RF-TSDD-GL50	Lead	4,059.8	140	900	3E+01	5E+00
Site Tailings	RF-TSDD-GL50	Mercury	2.8	0.1	30	3E+01	9E-02
Site Tailings	RF-TSDD-GL50	Selenium	4.1	2	100	2E+00	4E-02
Site Tailings	RF-TSDD-GL50	Silver	26.0	50	NA	5E-01	NC
Site Tailings	RF-TSDD-GL50	Zinc	5,728.8	100	600	6E+01	1E+01
Site Tailings	RF-TSDD-GL52	Aluminum	14,027.0	600	NA	2E+01	NC
Site Tailings	RF-TSDD-GL52	Antimony	253.8	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL52	Arsenic	321.8	20	100	2E+01	3E+00
Site Tailings	RF-TSDD-GL52	Cadmium	51.1	1.6	20	3E+01	3E+00
Site Tailings	RF-TSDD-GL52	Chromium	27.5	0.4	100	7E+01	3E-01
Site Tailings	RF-TSDD-GL52	Copper	620.0	40	150	2E+01	4E+00
Site Tailings	RF-TSDD-GL52	Lead	10,699.5	140	900	8E+01	1E+01
Site Tailings	RF-TSDD-GL52	Mercury	5.5	0.1	30	6E+01	2E-01
Site Tailings	RF-TSDD-GL52	Selenium	11.3	2	100	6E+00	1E-01
Site Tailings	RF-TSDD-GL52	Silver	39.8	50	NA	8E-01	NC
Site Tailings	RF-TSDD-GL52	Zinc	7,818.5	100	600	8E+01	1E+01
Site Tailings	RF-TSDD-GL53	Aluminum	16,151.5	600	NA	3E+01	NC
Site Tailings	RF-TSDD-GL53	Antimony	212.8	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL53	Arsenic	319.7	20	100	2E+01	3E+00
Site Tailings	RF-TSDD-GL53	Cadmium	56.9	1.6	20	4E+01	3E+00
Site Tailings	RF-TSDD-GL53	Chromium	29.5	0.4	100	7E+01	3E-01
Site Tailings	RF-TSDD-GL53	Copper	678.5	40	150	2E+01	5E+00
Site Tailings	RF-TSDD-GL53	Lead	10,533.5	140	900	8E+01	1E+01
Site Tailings	RF-TSDD-GL53	Mercury	10.6	0.1	30	1E+02	4E-01
Site Tailings	RF-TSDD-GL53	Selenium	13.3	2	100	7E+00	1E-01
Site Tailings	RF-TSDD-GL53	Silver	61.3	50	NA	1E+00	NC
Site Tailings	RF-TSDD-GL53	Zinc	9,420.0	100	600	9E+01	2E+01
Site Tailings	RF-TSDD-GL56	Aluminum	11,442.5	600	NA	2E+01	NC
Site Tailings	RF-TSDD-GL56	Antimony	89.2	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL56	Arsenic	136.3	20	100	7E+00	1E+00
Site Tailings	RF-TSDD-GL56	Cadmium	23.3	1.6	20	1E+01	1E+00
Site Tailings	RF-TSDD-GL56	Chromium	21.5	0.4	100	5E+01	2E-01
Site Tailings	RF-TSDD-GL56	Copper	247.5	40	150	6E+00	2E+00
Site Tailings	RF-TSDD-GL56	Lead	2,897.5	140	900	2E+01	3E+00
Site Tailings	RF-TSDD-GL56	Mercury	1.8	0.1	30	2E+01	6E-02
Site Tailings	RF-TSDD-GL56	Selenium	2.5	2	100	1E+00	3E-02
Site Tailings	RF-TSDD-GL56	Silver	20.3	50	NA	4E-01	NC
Site Tailings	RF-TSDD-GL56	Zinc	4,518.5	100	600	5E+01	8E+00
Site Tailings	RF-TSDD-GL58	Aluminum	14,787.5	600	NA	2E+01	NC
Site Tailings	RF-TSDD-GL58	Antimony	58.3	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL58	Arsenic	144.0	20	100	7E+00	1E+00
Site Tailings	RF-TSDD-GL58	Cadmium	22.7	1.6	20	1E+01	1E+00
Site Tailings	RF-TSDD-GL58	Chromium	21.0	0.4	100	5E+01	2E-01

**Soil Invertebrate Hazard Quotients (HQs) for Direct Contact with Soils and Tailings**

*Richardson Flat Tailings Site  
Screening Ecological Risk Assessment*

\* Average concentration across all depths; duplicate/split samples averaged with field samples.

Reach	Station ID	Parameter	Conc* (mg/kg)	Soil Invertebrate Benchmark (mg/kg dw)		Soil HQ	
				Low	High	Low	High
Site Tailings	RF-TSDD-GL58	Copper	168.5	40	150	4E+00	1E+00
Site Tailings	RF-TSDD-GL58	Lead	2,622.0	140	900	2E+01	3E+00
Site Tailings	RF-TSDD-GL58	Mercury	2.6	0.1	30	3E+01	9E-02
Site Tailings	RF-TSDD-GL58	Selenium	11.3	2	100	6E+00	1E-01
Site Tailings	RF-TSDD-GL58	Silver	15.3	50	NA	3E-01	NC
Site Tailings	RF-TSDD-GL58	Zinc	3,378.0	100	600	3E+01	6E+00
Site Tailings	RF-TSDD-GL59	Aluminum	13,622.0	600	NA	2E+01	NC
Site Tailings	RF-TSDD-GL59	Antimony	168.3	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL59	Arsenic	219.0	20	100	1E+01	2E+00
Site Tailings	RF-TSDD-GL59	Cadmium	24.0	1.6	20	1E+01	1E+00
Site Tailings	RF-TSDD-GL59	Chromium	24.0	0.4	100	6E+01	2E-01
Site Tailings	RF-TSDD-GL59	Copper	418.5	40	150	1E+01	3E+00
Site Tailings	RF-TSDD-GL59	Lead	3,834.5	140	900	3E+01	4E+00
Site Tailings	RF-TSDD-GL59	Mercury	13.6	0.1	30	1E+02	5E-01
Site Tailings	RF-TSDD-GL59	Selenium	6.1	2	100	3E+00	6E-02
Site Tailings	RF-TSDD-GL59	Silver	22.8	50	NA	5E-01	NC
Site Tailings	RF-TSDD-GL59	Zinc	5,462.0	100	600	5E+01	9E+00
Site Tailings	RF-TSDD-GL62	Aluminum	17,379.5	600	NA	3E+01	NC
Site Tailings	RF-TSDD-GL62	Antimony	45.3	NA	NA	NC	NC
Site Tailings	RF-TSDD-GL62	Arsenic	99.6	20	100	5E+00	1E+00
Site Tailings	RF-TSDD-GL62	Cadmium	20.1	1.6	20	1E+01	1E+00
Site Tailings	RF-TSDD-GL62	Chromium	22.5	0.4	100	6E+01	2E-01
Site Tailings	RF-TSDD-GL62	Copper	126.5	40	150	3E+00	8E-01
Site Tailings	RF-TSDD-GL62	Lead	1,572.0	140	900	1E+01	2E+00
Site Tailings	RF-TSDD-GL62	Mercury	0.7	0.1	30	7E+00	2E-02
Site Tailings	RF-TSDD-GL62	Selenium	5.9	2	100	3E+00	6E-02
Site Tailings	RF-TSDD-GL62	Silver	11.3	50	NA	2E-01	NC
Site Tailings	RF-TSDD-GL62	Zinc	2,981.0	100	600	3E+01	5E+00