

Appendix 2.7.2.1-E Mine Rock Source Term Inputs to Water Quality Predictions

Rock Unit	SO4	Cl	F	Al	Sb	As	Ba	Be	Bi	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li
Units	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
Potassic Average ^(a)	55	0.24	0.009	0.017	0.0004	0.00017	0.0060637	7.6E-06	5.6E-06	0.0182	0.0000045	25	6.4E-05	9.8E-06	0.0009	0.0021	2.5E-05	0.000273
Sericite- iron carbonate Average ^(a)	4.1	NA	NA	0.025	0.0033	0.0011	0.0034	0.00024	0.00024	0.002183	0.000024	2.9	0.00024	0.000049	0.000243	0.015	0.00057	0.000485
Propylitic Average ^(a)	13.9	0.24	0.024	0.020	0.0024	0.00032	0.0034	0.00017	0.00017	0.0049	1.0E-04	6.0	0.00019	1.1E-03	0.000752	0.010	3.0E-04	0.000507
Phyllic Average ^(a)	7.0	NA	NA	0.033	0.0081	0.000732	0.0046	0.00048	0.00048	0.0025	4.8E-05	3.9	0.00048	9.5E-05	0.000445	0.014	0.00017	0.000953
Low Grade Ore Average ^(b)	45	0.23	0.011	0.015	0.0010	0.0001733	0.0029	0.000007	5.1E-06	0.0183	7.9E-06	21.1	0.00006	1.0E-05	0.0012	0.0017	2.3E-05	0.000243
Ore Average ^(c)	54	0.25	0.017	0.008	0.0023	0.0003	0.0127	7.3E-06	5.39E-06	0.019	0.00005	25	0.00006	0.00007	0.0036	0.0016	0.00006	0.0003
Tertiary Basalt ^(a)	0.8	0.28	0.018	0.018	4.3E-05	0.0004566	0.0002735	4.8E-06	2.6E-06	0.0217	3.5E-06	0.32	6.0E-05	8.6E-06	0.000368	0.0082	0.00007	0.0002

Rock Unit	Mg	Mn	Hg	Ni	P	K	Se	SiO2	Ag	Na	Sr	S	Tl	Sn	Ti	U	V	Zn	Zr
Units	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
Potassic Average ^(a)	1.0	3.3E-03	4.7E-06	8.6E-05	8.0E-03	3.6E-01	1.4E-04	2.0E-01	2.7E-06	1.8E-01	2.6E-01	2.0E+01	5.1E-06	1.6E-05	2.7E-04	4.2E-05	1.3E-04	3.7E-04	4.0E-04
Sericite- iron carbonate Average ^(a)	3.2	0.0028	NA	0.00005	NA	0.44	0.00049	0.206	0.00000	0.97	0.025	NA	0.00007	0.00005	0.0049	NA	0.0005	0.0005	NA
Propylitic Average ^(a)	1.7	1.1E-01	1.1E-05	7.6E-04	2.9E-02	2.7E-01	4.2E-04	2.3E-01	4.5E-06	7.0E-01	1.2E-01	1.2E+01	2.1E-05	4.0E-05	3.2E-03	2.1E-05	4.9E-04	6.8E-03	1.5E-03
Phyllic Average ^(a)	2.1	0.0017	NA	0.00010	NA	0.37	0.00095	0.201	0.00001	0.94	0.030	2.0E+01	0.00005	0.00010	0.0047	NA	0.0010	0.0013	NA
Low Grade Ore Average ^(b)	1.6	0.0031	4.8E-06	0.00011	1.1E-03	0.21	0.00012	0.186	0.00000	0.11	0.181	1.6E+01	0.00000	0.00002	0.0003	2.6E-05	0.0001	0.0004	3.5E-04
Ore Average ^(c)	4.0	0.0054	6.4E-06	0.00016	1.1E-03	0.72	0.00047	0.188	0.00000	0.16	0.254	1.9E+01	0.00001	0.00002	0.0004	3.6E-05	0.0001	0.0007	3.5E-04
Tertiary Basalt ^(a)	0.2	0.0002	4.9E-06	0.00012	1.6E-02	0.20	0.00002	1.684	0.00000	0.28	0.002	2.6E+00	0.00000	0.00001	0.0009	2.3E-06	0.0023	0.0004	4.8E-05

Notes: -'NA' indicates data not available.
 -Where data were not available, maximum release rates observed in other alteration types were adopted

Data sources:

- (a) \\van-svr0\Projects\01_SITES\Prosperity\1CT013.001_Revise_MLARD_Characterization\Water_Quality_Prediction\SourceTerms\WasteRock\Non-PAG_Dump\Non-PAG_SourceTerm_20120412
- (b) \\van-svr0\Projects\01_SITES\Prosperity\1CT013.001_Revise_MLARD_Characterization\Water_Quality_Prediction\SourceTerms\OreStockpile\OreStockpileLoadings_dbm_20120327
- (c) \\van-svr0\Projects\01_SITES\Prosperity\1CT013.001_Revise_MLARD_Characterization\Water_Quality_Prediction\SourceTerms\Ore-to-mill\Ore-to-Mill_Loadings_dbm_20120413