



Synthetic Precipitation Leaching Procedure

Parameter	Unit	Dir No. 019*	Average Grade Comp	Average Grade Comp DUP1	Average Grade Comp DUP2	Average Grade +270	Average Grade +270 DUP1	Average Grade +270 DUP2	Average Grade -270	Average Grade -270 DUP1	Average Grade -270 DUP2	Low Grade Residue Comp	Low Grade Residue Comp DUP1	Low Grade Residue Comp DUP2
LIMS			10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08
Sample weight	g		100	100	100	100	100	100	100	100	100	100	100	100
Ext. Fluid	#1 or #2		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext. Volume	mL		2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH	units		9.55	9.54	9.54	9.46	9.46	9.45	9.56	9.56	9.53	9.50	9.48	9.48
Final pH	units	6.0 - 9.5	9.43	9.42	9.44	9.31	9.36	9.34	8.86	8.87	8.80	9.35	9.34	9.37
Hg	mg/L		< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Al	mg/L		0.596	0.727	0.485	0.976	0.742	0.787	0.514	0.409	0.406	0.492	0.434	0.409
As	mg/L	0.400	0.0006	0.0008	0.0008	0.0008	0.0003	0.0004	0.0010	0.0005	0.0005	0.0045	0.0044	0.0046
Ag	mg/L		0.00002	< 0.00001	< 0.00001	0.00012	0.00001	0.00001	0.00033	0.00002	< 0.00001	0.00003	< 0.00001	< 0.00001
Ba	mg/L		0.556	0.543	0.524	0.543	0.523	0.547	0.548	0.490	0.511	0.484	0.506	0.468
Be	mg/L		0.00004	0.00005	0.00003	0.00015	0.00005	0.00004	0.00030	0.00003	0.00002	0.00006	0.00003	0.00003
B	mg/L		0.325	0.353	0.301	0.351	0.321	0.334	0.373	0.353	0.394	0.305	0.329	0.303
Bi	mg/L		0.00042	0.00015	0.00011	0.00048	0.00020	0.00018	0.00083	0.00017	0.00009	0.00026	0.00016	0.00017
Ca	mg/L		9.22	9.20	9.22	9.00	9.00	9.21	14.9	14.3	15.9	11.1	10.9	11.0
Cd	mg/L		0.000024	0.000013	0.000007	0.000123	0.000017	0.000013	0.000313	0.000024	0.000013	0.000033	0.000009	0.000009
Co	mg/L		0.000281	0.000296	0.000245	0.000347	0.000229	0.000212	0.000481	0.000144	0.000137	0.000290	0.000260	0.000271
Cr	mg/L		0.0025	0.0030	0.0020	0.0042	0.0031	0.0030	0.0023	0.0016	0.0016	0.0019	0.0018	0.0019
Cu	mg/L	0.600	0.0006	0.0008	0.0006	0.0014	0.0011	0.0011	0.0012	0.0005	0.0006	0.0006	0.0007	0.0007
Fe	mg/L	6.000	0.67	0.79	0.55	1.05	0.86	0.84	0.51	0.40	0.39	0.47	0.43	0.48
K	mg/L		1.97	1.57	1.29	1.46	1.24	0.96	2.60	1.88	2.01	1.80	1.41	1.37
Li	mg/L		0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001
Mg	mg/L		0.534	0.595	0.497	0.882	0.824	0.835	0.662	0.585	0.642	0.474	0.456	0.470
Mn	mg/L		0.00590	0.00787	0.00483	0.0113	0.00918	0.00875	0.00673	0.00521	0.00545	0.00474	0.00442	0.00474
Mo	mg/L		0.00113	0.00105	0.00115	0.00104	0.00100	0.00102	0.00421	0.00444	0.00460	0.00153	0.00146	0.00152
Na	mg/L		8.10	8.32	7.49	8.26	7.15	7.22	9.82	9.20	9.82	7.93	7.38	7.46
Ni	mg/L	1.000	0.0011	0.0013	0.0009	0.0019	0.0015	0.0014	0.0014	0.0008	0.0008	0.0008	0.0008	0.0008
P	mg/L		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pb	mg/L	0.400	0.00165	0.00172	0.00139	0.00343	0.00275	0.00271	0.00171	0.00104	0.00100	0.00132	0.00121	0.00141
Sb	mg/L		0.00026	0.00022	0.00019	0.00031	0.00018	0.00014	0.00082	0.00066	0.00061	0.00226	0.00210	0.00215
Se	mg/L		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Si	mg/L		3.95	4.19	3.40	4.48	3.47	3.67	3.67	3.24	3.46	3.33	3.26	3.11
Sn	mg/L		< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00003	< 0.00001	0.00003	< 0.00001	< 0.00001	0.00007	0.00006	0.00008
Sr	mg/L		0.635	0.631	0.634	0.406	0.410	0.422	0.637	0.614	0.670	0.319	0.314	0.317
Ti	mg/L		0.0281	0.0358	0.0230	0.0435	0.0346	0.0340	0.0190	0.0148	0.0146	0.0152	0.0141	0.0151
Tl	mg/L		0.000025	0.000008	0.000005	0.000104	0.000011	0.000007	0.000307	0.000012	0.000004	0.000039	0.000006	0.000004
U	mg/L		0.000139	0.000132	0.000105	0.000261	0.000158	0.000141	0.000680	0.000419	0.000457	0.000174	0.000133	0.000142
V	mg/L		0.00212	0.00232	0.00180	0.00250	0.00191	0.00193	0.00149	0.00105	0.00104	0.00128	0.00127	0.00130
W	mg/L		0.00085	0.00086	0.00083	0.00040	0.00036	0.00036	0.00162	0.00141	0.00156	0.00036	0.00034	0.00037
Y	mg/L		0.000199	0.000222	0.000150	0.000359	0.000206	0.000190	0.000500	0.000116	0.000102	0.000163	0.000132	0.000134
Zn	mg/L	1.000	0.098	0.107	0.087	0.105	0.095	0.096	0.122	0.080	0.089	0.085	0.104	0.081

* Acceptable maximum concentration of an instantaneous, non-dilute final effluent sample.



Synthetic Precipitation Leaching Procedure

Parameter	Unit	Dir No. 019*	Low Grade Residue Comp +270	Low Grade Residue Comp +270 DUP1	Low Grade Residue Comp +270 DUP2	Low Grade Residue Comp -270	Low Grade Residue Comp -270 DUP1	Low Grade Residue Comp -270 DUP2
LIMS			10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08	10313-AUG08
Sample weight	g		100	100	100	100	100	100
Ext. Fluid	#1 or #2		1.0	1.0	1.0	1.0	1.0	1.0
Ext. Volume	mL		2000	2000	2000	2000	2000	2000
Initial pH	units		9.40	9.40	9.40	9.58	9.56	9.56
Final pH	units	6.0 - 9.5	9.28	9.30	9.35	8.80	8.84	8.75
Hg	mg/L		< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Al	mg/L		0.739	0.832	0.731	0.344	0.385	0.306
As	mg/L	0.400	0.0011	0.0011	0.0011	0.0017	0.0014	0.0016
Ag	mg/L		0.00006	0.00002	0.00001	0.00019	0.00001	0.00004
Ba	mg/L		0.512	0.506	0.478	0.500	0.520	0.504
Be	mg/L		0.00010	0.00005	0.00005	0.00019	0.00003	< 0.00002
B	mg/L		0.314	0.306	0.289	0.331	0.396	0.364
Bi	mg/L		0.00047	0.00035	0.00031	0.00049	0.00013	0.00017
Ca	mg/L		9.88	9.41	9.33	15.2	14.4	16.2
Cd	mg/L		0.000075	0.000014	0.000015	0.000189	0.000018	0.000021
Co	mg/L		0.000403	0.000295	0.000299	0.000370	0.000139	0.000238
Cr	mg/L		0.0033	0.0036	0.0035	0.0013	0.0012	0.0010
Cu	mg/L	0.600	0.0016	0.0018	0.0016	0.0008	0.0006	0.0012
Fe	mg/L	6.000	0.88	0.97	0.92	0.25	0.28	0.21
K	mg/L		1.35	0.92	0.78	2.20	1.54	1.82
Li	mg/L		0.001	0.001	0.001	0.001	0.001	0.001
Mg	mg/L		0.691	0.710	0.698	0.375	0.368	0.378
Mn	mg/L		0.0104	0.0115	0.0108	0.00492	0.00443	0.00534
Mo	mg/L		0.00271	0.00266	0.00269	0.00744	0.00739	0.00751
Na	mg/L		6.90	6.42	5.95	9.57	9.83	9.69
Ni	mg/L	1.000	0.0016	0.0017	0.0017	0.0009	0.0006	0.0018
P	mg/L		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pb	mg/L	0.400	0.00343	0.00380	0.00363	0.00091	0.00087	0.00141
Sb	mg/L		0.00189	0.00165	0.00159	0.00578	0.00567	0.00574
Se	mg/L		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Si	mg/L		3.53	3.46	3.07	2.98	3.00	2.97
Sn	mg/L		0.00052	0.00059	0.00054	0.00007	0.00005	0.00002
Sr	mg/L		0.245	0.229	0.231	0.338	0.320	0.348
Ti	mg/L		0.0256	0.0284	0.0270	0.0066	0.0071	0.0055
Tl	mg/L		0.000059	0.000010	0.000007	0.000178	0.000008	0.000008
U	mg/L		0.000242	0.000204	0.000195	0.000856	0.000617	0.000671
V	mg/L		0.00158	0.00159	0.00156	0.00075	0.00059	0.00051
W	mg/L		0.00023	0.00022	0.00020	0.00101	0.00102	0.00103
Y	mg/L		0.000230	0.000207	0.000191	0.000271	0.000080	0.000068
Zn	mg/L	1.000	0.102	0.098	0.090	0.080	0.097	0.084

* Acceptable maximum concentration of an instantaneous, non-dilute fi