

Appendix J - Replicate Samples

Lichen Samples

Sample ID	Year	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	Te	Tl	Sn	Ti	U	V	Zn	Zr	
CLM1-K2-1	2005	215	1	8.9	8.9	0.03	4	0.63	2530	0.6	0.2	2.5	514	7	582	90	<0.02	0.8	0.4	2160	2220	<0.2	454	0.81	25	8.05	0.4	0.03	0.5	13.2	0.05	1.1	27.8	<3	
CLM1-K2-2		386	2.2	18.7	12.3	<0.02	10	0.84	3040	1	0.3	3.8	989	15.1	751	87.3	0.027	0.8	0.7	2610	2610	<0.2	482	2.03	51	10.3	0.3	0.02	0.3	21.6	<0.04	1.8	48.5	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		56.9	75.0	71.0	32.1	NC	85.7	28.6	18.3	50.0	PASS	41.3	63.2	73.3	25.4	-3.0	NC	PASS	54.5	18.9	16.1	NC	PASS	85.9	68.4	24.5	-28.6	-40.0	-50.0	48.3	NC	48.3	54.3	NC	
CLM1-J2-1	2005	248	1.6	12.3	11.9	<0.02	10	0.85	2610	0.9	0.2	3.3	602	11	705	278	0.045	0.9	0.7	2450	2760	<0.2	579	1.52	44	6.78	0.4	0.03	0.5	13.9	0.05	1.2	57.1	<3	
CLM1-J2-2		271	2.7	19.2	10.1	<0.02	<2	0.77	1960	0.6	0.2	3.5	627	18.2	639	162	<0.02	<0.1	0.6	3240	3060	<0.2	639	1.44	24	4.56	<0.1	<0.02	<0.1	12.4	<0.04	1.1	42	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		8.9	51.2	43.8	-16.4	NC	NC	-9.9	-28.4	-40.0	PASS	PASS	5.9	4.1	49.3	-9.8	-52.7	NC	NC	PASS	27.8	10.3	NC	9.9	-5.4	-58.8	-39.2	NC	NC	NC	-11.4	NC	PASS	-30.5	NC
CLM1-C2-1	2005	275	1.4	15.6	18.5	<0.02	6	0.68	2150	0.8	0.3	8.4	709	11.9	691	278	0.039	0.9	0.9	2950	2930	<0.2	473	0.48	42	8.92	0.4	0.02	0.3	18.4	<0.04	1.4	39.1	<3	
CLM1-C2-2		271	1.5	16.1	13.5	<0.02	6	0.58	2220	0.8	0.3	10.5	709	13.5	793	275	<0.02	1.1	0.8	2650	3070	<0.2	464	0.42	39	6.44	0.4	<0.02	0.3	16.9	<0.04	1.3	34.3	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		-1.5	PASS	3.2	-31.3	NC	PASS	-15.9	3.2	PASS	PASS	22.2	PASS	12.6	13.7	-1.1	NC	20.0	PASS	-10.7	4.7	NC	PASS	-13.3	-7.4	-32.3	PASS	NC	PASS	-8.5	NC	PASS	-13.1	NC	
CLM1-F1-1	2005	1300	0.9	7.2	20.7	0.05	5	0.64	1650	2.7	0.8	4	1880	6.4	874	111	<0.03	1.3	1.9	2560	2680	<0.2	725	0.87	45	6.25	0.6	0.04	0.6	97.3	0.1	4.9	29.3	<3	
CLM1-F1-2		910	0.4	3.8	21.4	0.04	6	0.43	1650	1.9	0.6	4	1330	3.3	813	167	<0.02	1	1.6	3410	3340	<0.2	566	0.52	35	5.84	0.5	0.03	0.4	67.7	0.06	3.6	29.6	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		-35.3	-76.9	-61.8	3.3	-22.2	PASS	-39.3	PASS	-34.8	-28.6	PASS	-34.3	-63.9	-7.2	40.3	NC	-26.1	-17.1	28.5	21.9	NC	-24.6	-50.4	-25.0	-6.8	-18.2	PASS	-40.0	-35.9	PASS	-30.6	PASS	NC	
CLM1-I4-1	2005	184	0.3	2.6	13	<0.02	<2	0.36	2030	0.5	0.3	1.9	345	2.3	567	360	<0.02	0.7	0.5	2600	2320	<0.2	685	0.55	35	7.97	0.3	<0.02	0.1	12	<0.04	0.9	26.4	<3	
CLM1-I4-2		362	0.7	5.7	12.7	<0.02	<2	0.34	1560	1.2	0.3	2.6	683	5.2	511	255	<0.03	0.7	1.1	2770	2280	<0.2	597	1.55	39	5.29	0.2	<0.02	0.2	23.7	<0.04	1.6	26	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		65.2	80.0	74.7	-2.3	NC	NC	PASS	-26.2	82.4	PASS	31.1	65.8	77.3	-10.4	-34.1	NC	PASS	75.0	6.3	-1.7	NC	-13.7	95.2	10.8	-40.4	PASS	NC	PASS	65.5	NC	56.0	PASS	NC	
CLM1-O2-1	2005	403	1.2	10	18.8	<0.02	<2	0.59	2480	0.9	0.3	3.3	894	8.6	669	59.1	<0.02	<0.1	0.8	2370	2390	<0.2	469	0.5	31	9.22	0.1	<0.02	<0.1	21	<0.04	1.6	45.2	<3	
CLM1-O2-2		270	0.6	5.6	14	<0.02	<2	0.38	2090	0.6	0.2	2.3	517	5.2	472	69.8	<0.02	<0.1	0.5	2090	2220	<0.2	543	0.39	26	6.51	0.2	<0.02	<0.1	12.7	<0.04	1	35.1	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		-39.5	-66.7	-56.4	-29.3	NC	NC	-43.3	-17.1	-40.0	PASS	PASS	-53.4	-49.3	-34.5	16.6	NC	NC	-46.2	-12.6	-7.4	NC	14.6	-24.7	-17.5	-34.5	PASS	NC	NC	-49.3	NC	-46.2	-25.2	NC	
CLM1-N3-2	2005	538	0.9	8.1	17.1	<0.02	<2	0.45	1930	1.1	0.3	2.9	917	5.9	603	122	<0.02	<0.1	0.9	2590	2520	<0.2	409	1.14	28	6.63	<0.1	<0.02	<0.1	31.4	<0.04	2	51.1	<3	
CLM1-N3-1		414	0.6	5.7	14.3	<0.02	<2	0.31	2020	0.8	0.3	2.3	653	4.6	578	108	<0.02	<0.1	0.7	2070	2030	<0.2	434	0.65	21	5.82	<0.1	<0.02	<0.1	4	24.5	<0.04	1.5	37.2	<3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		-26.1	-40.0	-34.8	-17.8	NC	NC	-36.8	4.6	-31.6	PASS	-23.1	-33.6	-24.8	-4.2	-12.2	NC	NC	-25.0	-22.3	-21.5	NC	5.9	-54.7	-28.6	-13.0	NC	NC	NC	-24.7	NC	PASS	-31.5	NC	
CLM1-Pony3-2	2005	151	0.2	3.9	6.9	<0.02	<2	0.15	1050	0.4	0.2	1.2	289	2.4	299	177	<0.01	<0.1	0.3	1190	1350	<0.2	296	0.15	14	2.51	<0.1	<0.02	<0.1	8.2	<0.04	0.6	32.1	<3	
CLM1-Pony3-1		208	0.4	5	8.4	<0.02	<2	0.19	1280	0.5	0.2	1.5	390	3.2	356	239	<0.01	<0.1	0.4	1370	1370	<0.2	609	0.16	15	3.06	<0.1	<0.02	<0.1	9.3	<0.04	0.8	37.6	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		31.8	66.7	24.7	19.6	NC	NC	23.5	19.7	PASS	PASS	22.2	29.7	28.6	17.4	29.8	NC	NC	PASS	14.1	1.5	NC	69.2	PASS	PASS	19.7	NC	NC	NC	12.6	NC	PASS	15.8	NC	
CLM1-R3-1	2005	280	0.7	17.2	9.7	<0.02	<2	0.44	1230	0.5	0.4	1.9	896	6.4	438	214	<0.01	<0.1	0.4	1580	1460	<0.2	381	0.2	7	3.58	<0.1	0.03	<0.1	13.3	<0.04	1.9	30.7	<3	
CLM1-R3-2		248	0.7	17.5	11.3	<0.02	<2	0.49	1390	0.6	0.4	2.2	872	5.7	514	218	<0.01	<0.1	0.5	2120	2010	<0.2	283	0.27	9	3.87	<0.1	<0.02	<0.1	12.3	<0.04	1.8	35.5	<3	
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3	
RPD		-12.1	PASS	1.7	15.2	NC	NC	10.8	12.2	PASS	PASS	14.6	-2.7	-11.6	16.0	1.9	NC	NC	PASS	29.2	31.7	NC	-29.5	29.8	25.0	7.8	NC	NC	NC	-7.8	NC	PASS	14.5	NC	
CLM1-CP5-2	2005	73.6	<0.1	0.3	10.7	<0.02	<2	0.58	1900	0.3	0.1	1.8	147	0.3	747	322	0.017	0.1																	

Sample ID	Year	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	Te	Ti	Sn	Tl	U	V	Zn	Zr
CLMI-B5-2	2006	95.5	< 0.1	0.3	5.1	< 0.02	< 2	0.04	603	0.4	< 0.1	0.7	122	0.2	217	152	< 0.01	< 0.1	0.3	390	894	< 0.2	129	0.02	17	1.59	< 0.1	< 0.02	< 0.1	5.3	< 0.04	< 0.5	12.5	< 3
CLMI-B5-3		102	< 0.1	0.2	4.2	< 0.02	< 2	0.02	682	0.2	< 0.1	0.8	136	0.2	307	142	< 0.01	< 0.1	0.3	489	1220	< 0.2	152	0.02	15	1.63	< 0.1	< 0.02	< 0.1	6	< 0.04	< 0.5	13.8	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		6.6	NC	PASS	-19.4	NC	NC	PASS	12.3	PASS	NC	PASS	PASS	PASS	34.4	-6.8	NC	NC	PASS	22.5	30.8	NC	PASS	PASS	PASS	PASS	NC	NC	NC	PASS	NC	NC	PASS	NC
CLMI-T3-1	2006	103	< 0.1	0.6	5	< 0.02	< 2	0.07	575	0.3	< 0.1	0.7	136	0.7	190	32.8	< 0.01	< 0.1	0.3	327	790	< 0.2	158	0.08	14	1.84	< 0.1	< 0.02	0.2	5.5	< 0.04	< 0.5	10.1	< 3
CLMI-T3-2		109	< 0.1	0.4	5.1	< 0.02	< 2	0.06	673	0.3	< 0.1	0.8	142	0.6	216	42	< 0.01	< 0.1	0.4	349	948	< 0.2	124	0.08	15	1.78	< 0.1	< 0.02	< 0.1	5.7	< 0.04	< 0.5	10.9	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		5.7	NC	PASS	PASS	NC	NC	PASS	15.7	PASS	NC	PASS	PASS	PASS	12.8	24.6	NC	NC	PASS	6.5	18.2	NC	PASS	PASS	PASS	PASS	NC	NC	NC	NC	NC	NC	PASS	NC

CLMI-U4-1	2006	105	< 0.1	0.7	3.9	< 0.02	< 2	0.08	604	0.2	< 0.1	0.8	143	2	232	82.6	< 0.01	< 0.1	0.3	384	932	< 0.2	143	0.16	9	2.01	< 0.1	< 0.02	< 0.1	5.3	< 0.04	< 0.5	13.9	< 3
CLMI-U4-2		112	< 0.1	0.5	3.7	< 0.02	< 2	0.05	680	0.3	< 0.1	0.8	146	0.7	270	90.8	< 0.01	< 0.1	0.4	419	1090	< 0.2	131	0.15	13	2.08	< 0.1	< 0.02	< 0.1	5.9	< 0.04	< 0.5	12.5	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		6.5	NC	PASS	PASS	NC	NC	PASS	11.8	PASS	NC	PASS	PASS	-96.3	15.1	9.5	NC	NC	PASS	8.7	15.6	NC	PASS	PASS	PASS	PASS	NC	NC	NC	PASS	NC	NC	PASS	NC

CLMI-V1-1A	2006	102	< 0.1	0.8	4.5	< 0.02	< 2	0.15	776	0.4	< 0.1	0.9	144	5.5	322	110	< 0.01	< 0.1	0.4	526	1390	< 0.2	113	0.09	12	2.08	< 0.1	< 0.02	< 0.1	5.6	< 0.04	< 0.5	14.4	< 3
CLMI-V1-1B		103	< 0.1	0.9	5.3	< 0.02	< 2	0.14	769	0.3	< 0.1	1	147	1.7	324	104	< 0.01	< 0.1	0.4	534	1420	< 0.2	112	0.14	13	2.08	< 0.1	< 0.02	< 0.1	5	< 0.04	< 0.5	14.8	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		PASS	NC	PASS	PASS	N	N	PASS	PASS	PASS	NC	PASS	PASS	-105.6	PASS	-5.6	NC	NC	PASS	1.5	2.1	NC	PASS	PASS	PASS	PASS	NC	NC	NC	PASS	NC	NC	PASS	NC

CLM1-M1-1	2005	96.7	0.1	1.9	7.3	< 0.02	< 2	0.39	1860	0.3	0.1	1.6	175	1.6	400	136	< 0.01	< 0.1	0.3	2130	2170	< 0.2	310	0.15	12	5.23	< 0.1	< 0.02	< 0.1	4.5	< 0.04	< 0.5	37.9	< 3
CLM1-M1-2		137	0.2	2.9	8.6	< 0.02	< 2	0.39	1510	0.4	0.1	1.7	252	2.5	553	207	< 0.01	< 0.1	0.3	2250	2100	< 0.2	314	0.18	8	3.59	< 0.1	< 0.02	< 0.1	6.3	< 0.04	0.6	34.4	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		34.5	PASS	41.7	16.4	NC	NC	0.0	-20.8	PASS	PASS	PASS	36.1	43.9	32.1	41.4	NC	NC	PASS	5.5	-3.3	NC	PASS	18.2	-40.0	-37.2	NC	NC	NC	33.3	NC	NC	-9.7	NC

Plant Samples

LELA-PONY2-1	2005	11.9	< 0.1	0.3	34	< 0.02	25	0.07	5850	< 0.1	< 0.1	3.8	49	< 0.1	1240	48.4	< 0.01	< 0.1	0.1	1100	5410	< 0.2	119	0.01	14	12.8	< 0.1	< 0.02	< 0.1	1.2	< 0.04	< 0.5	39.5	< 3
LELA-PONY2-2		10.2	< 0.1	0.3	36.9	< 0.02	18	0.11	6140	< 0.1	< 0.1	3.9	48	0.1	1350	39.6	< 0.01	< 0.1	0.1	1140	5170	< 0.2	119	0.01	< 1	14	< 0.1	< 0.02	< 0.1	1.1	< 0.04	< 0.5	41.6	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		-15.4	NC	PASS	8.2	NC	-32.6	44.4	4.8	NC	NC	PASS	PASS	NC	8.5	-20.0	NC	NC	PASS	3.6	-4.5	NC	PASS	PASS	NC	9.0	NC	NC	NC	PASS	NC	NC	5.2	NC

LELA-CP2-1	2006	24.6	< 0.1	< 0.1	54.2	< 0.02	13	< 0.02	5090	< 0.1	< 0.1	3	40	< 0.1	1200	923	< 0.01	< 0.1	0.2	1320	4080	< 0.2	105	< 0.01	2	8.05	< 0.1	0.04	< 0.1	0.9	< 0.04	< 0.5	27.5	< 3
LELA-CP2-2		27.6	< 0.1	< 0.1	57.6	< 0.02	16	0.04	6690	< 0.1	< 0.1	2.9	55	< 0.1	1220	1320	< 0.01	< 0.1	0.2	1450	4790	< 0.2	114	< 0.01	1	8.42	< 0.1	0.05	< 0.1	1.4	< 0.04	< 0.5	26.8	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		11.5	NC	NC	6.1	NC	PASS	NC	27.2	NC	NC	PASS	PASS	NC	1.7	35.4	NC	NC	PASS	9.4	16.0	NC	PASS	NC	PASS	4.5	NC	PASS	NC	PASS	NC	NC	PASS	NC

SASP-PONY3-1	2005	18.8	0.1	0.9	10.9	< 0.02	9	16	11200	< 0.1	0.4	4.4	139	0.5	2130	471	< 0.01	< 0.1	0.2	861	3690	< 0.2	59	0.03	180	54.5	< 0.1	< 0.02	< 0.1	1.4	< 0.04	< 0.5	457	< 3
SASP-PONY3-2		13	< 0.1	0.6	12.7	< 0.02	10	11.8	11300	< 0.1	0.7	4.3	138	0.3	2110	696	< 0.01	< 0.1	0.2	851	3570	< 0.2	68	0.03	286	57.2	< 0.1	< 0.02	< 0.1	1.1	< 0.04	< 0.5	416	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		-36.5	NC	-40.0	15.3	NC	PASS	-30.2	0.9	NC	54.5	PASS	PASS	-50.0	-0.9	38.6	NC	NC	PASS	-1.2	-3.3	NC	14.2	PASS	45.5	4.8	NC	NC	NC	PASS	NC	NC	-9.4	NC

SASP-TAIL-1	2005	48.5	0.5	4.5	119	< 0.02	11	12.2	18700	< 0.1	1.2	4.5	153	6	2480	413	< 0.01	0.5	2.6	1060	7410	< 0.2	74	0.09	4	101	< 0.1	< 0.02	< 0.1	1	< 0.04	< 0.5	486	< 3
SASP-TAIL-2		19.9	0.7	8.3	32.6	< 0.02	79	23.7	23200	< 0.1	2	11.2	223	6.3	1880	722	< 0.01	0.9	2.2	2190	11600	< 0.2	97	0.08	5	62.9	< 0.1	< 0.02	< 0.1	2.3	< 0.04	< 0.5	372	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		-83.6	33.3	59.4	-114.0	NC	151.1	64.1	21.5	NC	50.0	85.4	37.2	4.9	-27.5	54.4																		

Sample ID	Year	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	Te	Ti	Sn	Ti	U	V	Zn	Zr
VAVI-D3-1	2005	7.6	< 0.1	< 0.1	18.4	< 0.02	16	0.05	3000	< 0.1	< 0.1	2.9	19	< 0.1	793	166	< 0.01	0.1	0.2	1170	8230	< 0.2	120	< 0.01	1	7.09	< 0.1	< 0.02	< 0.1	0.8	< 0.04	< 0.5	10.2	< 3
VAVI-D3-2		6.5	< 0.1	< 0.1	16.5	< 0.02	18	0.06	3270	< 0.1	< 0.1	3.3	23	< 0.1	968	170	< 0.01	0.1	0.2	1350	9930	< 0.2	130	< 0.01	3	8.45	< 0.1	< 0.02	< 0.1	0.9	< 0.04	< 0.5	11.8	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		-15.6	NC	NC	-10.9	NC	PASS	PASS	8.6	NC	NC	12.9	PASS	NC	19.9	2.4	NC	PASS	PASS	14.3	18.7	NC	PASS	NC	100.0	17.5	NC	NC	NC	PASS	NC	NC	14.5	NC

VAVI-N3-1	2005	15.7	< 0.1	< 0.1	4.5	< 0.02	11	< 0.02	1210	< 0.1	< 0.1	4	12	< 0.1	541	256	< 0.01	< 0.1	0.2	953	7440	< 0.2	98	< 0.01	3	1.79	< 0.1	< 0.02	< 0.1	0.5	< 0.04	< 0.5	14	< 3
VAVI-N3-2		14.9	< 0.1	< 0.1	4.5	< 0.02	11	< 0.02	1040	0.2	< 0.1	3.6	10	< 0.1	511	242	< 0.01	< 0.1	0.1	884	6670	< 0.2	86	< 0.01	5	1.61	< 0.1	< 0.02	< 0.1	0.5	< 0.04	< 0.5	12.1	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		-5.2	NC	NC	PASS	NC	PASS	NC	-15.1	NC	NC	-10.5	PASS	NC	-5.7	-5.6	NC	NC	PASS	-7.5	-10.9	NC	-13.0	NC	50.0	-10.6	NC	NC	NC	PASS	NC	NC	-14.6	NC

VAVI-PONY3-1	2005	16.8	< 0.1	< 0.1	8.1	< 0.02	11	0.04	1720	< 0.1	< 0.1	4.3	16	< 0.1	692	475	< 0.01	< 0.1	0.1	1080	8000	< 0.2	96	< 0.01	2	2.52	< 0.1	< 0.02	< 0.1	0.7	< 0.04	< 0.5	10.7	< 3
VAVI-PONY3-2		17.3	< 0.1	< 0.1	7.1	< 0.02	9	< 0.02	1310	< 0.1	< 0.1	4.1	14	< 0.1	627	420	< 0.01	< 0.1	0.2	886	7460	< 0.2	92	< 0.01	2	0.94	< 0.1	< 0.02	< 0.1	0.6	< 0.04	< 0.5	9.6	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		PASS	NC	NC	-13.2	NC	-20.0	NC	-27.1	NC	NC	-4.8	PASS	NC	-9.9	-12.3	NC	NC	PASS	-19.7	-7.0	NC	PASS	NC	PASS	-91.3	NC	NC	NC	PASS	NC	NC	-10.8	NC

WHGR-TAIL-1	2005	24.2	1.3	11.4	4.9	< 0.02	11	0.31	3500	0.3	< 0.1	7.5	207	9.4	1550	199	< 0.01	0.5	0.3	850	11000	< 0.2	271	0.12	242	20.6	< 0.1	< 0.02	< 0.1	0.7	< 0.04	< 0.5	113	< 3
WHGR-TAIL-2		15	0.7	3.5	5.8	< 0.02	13	0.07	4890	0.2	< 0.1	2.7	64	1.3	393	51.2	< 0.01	0.2	0.3	968	7620	< 0.2	193	0.06	3	16.9	< 0.1	< 0.02	< 0.1	1.1	< 0.04	< 0.5	32.3	< 3
Detection Limit		0.5	0.1	0.1	0.1	0.02	2	0.02	1	0.1	0.1	0.1	5	0.1	0.5	0.1	0.01	0.1	0.1	0.5	1	0.2	10	0.01	1	0.05	0.1	0.02	0.1	0.3	0.04	0.5	0.5	3
RPD		-46.9	-60.0	NC	16.8	NC	PASS	-126.3	33.1	PASS	NC	-94.1	-105.5	-151.4	-119.1	-118.1	NC	-85.7	PASS	13.0	-36.3	NC	-33.6	-66.7	-195.1	-19.7	NC	NC	NC	44.4	NC	NC	-111.1	NC

Soil Samples

Sample ID	Year	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Sn	V	Zn	Al	B	Ca	Fe	Mg	Mn	P	K	Na	Sr	Ti	Zr
1-C3-1	2005	< 10	< 10	134	< 1	< 0.5	5	3	14	< 5	0.08	< 4	3	0.3	< 2	< 5	32	13	4750	< 1	3060	10500	343	265	1360	112	50	32	85	< 1
1-C3-2		< 10	22	108	< 1	< 0.5	6	4	10	7	0.06	< 4	2	0.3	< 2	< 5	59	14	4650	< 1	2590	16800	555	319	925	153	69	25	169	1
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10	1	1	2	0.1	1	20	10	5	1	1	1
RPD		NC	NC	-21.5	NC	NC	PASS	PASS	-33.3	NC	-28.6	NC	PASS	PASS	NC	NC	59.3	PASS	-2.1	NC	-16.6	46.2	47.2	18.5	-38.1	30.9	31.9	-24.6	66.1	NC

1-G1-1	2005	< 10	27	206	< 1	0.6	4	2	30	8	0.08	< 4	6	0.5	< 2	< 5	8	45	6280	5	18100	6430	1320	686	1200	280	115	81	83	1
1-G1-2		< 10	48	258	< 1	0.8	5	3	33	11	0.11	< 4	7	0.5	< 2	< 5	12	73	7350	7	22000	7880	1800	731	1290	444	127	95	111	1
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10	1	1	2	0.1	1	20	10	5	1	1	1
RPD		NC	56.0	22.4	NC	PASS	PASS	PASS	9.5	PASS	31.6	NC	PASS	PASS	NC	NC	40.0	47.5	15.7	33.3	19.5	20.3	30.8	6.4	7.2	45.3	9.9	15.9	28.9	PASS

2-P3-1	2005	< 10	< 10	25	< 1	< 0.5	2	2	2	< 5	< 0.01	< 4	< 2	< 0.2	< 2	< 5	26	11	1570	< 1	1200	6850	302	70	429	120	229	8	338	< 1
2-P3-2		< 10	< 10	21	< 1	< 0.5	2	2	2	< 5	< 0.01	< 4	< 2	< 0.2	< 2	< 5	28	11	1370	< 1	1330	7440	290	55	506	98	178	8	361	< 1
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10	1	1	2	0.1	1	20	10	5	1	1	1
RPD		NC	NC	-17.4	NC	NC	PASS	PASS	PASS	NC	NC	NC	NC	NC	NC	NC	7.4	PASS	-13.6	NC	10.3	8.3	-4.1	-24.0	16.5	-20.2	-25.1	PASS	6.6	NC

3-I1-2	2005	< 10	97	103	< 1	0.8	15	6	28	9	0.06	< 4	8	< 0.2	< 2	< 5	50	60	13000	< 1	3330	19700	4570	260	712	934	79	20	465	1
3-I2-1		< 10	26	75	< 1	< 0.5	9	5	10	< 5	< 0.01	< 4	6	< 0.2	< 2	< 5	35	32	6620	< 1	2530	13500	3860	177	629	756	88	12	617	1
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10	1	1	2	0.1	1	20	10	5	1	1	1
RPD		NC	NC	-31.5	NC	NC	-50.0	PASS	-94.7	NC	NC	NC	PASS	NC	NC	NC	-35.3	-60.9	-65.0	NC	-27.3	-37.3	-16.8	-38.0	-12.4	-21.1	10.8	-50.0	28.1	PASS

Sediment Samples

Sample ID; Lab	Year	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Sn	V	Zn	Al	B	Ca	Fe	Mg	Mn	P	K	Na	Sr	Ti	Zr
D5-2; CanTest	2005	< 10	206	43	< 1	1.7	13	4	7	25	< 0.01	< 4	6	< 0.2	< 2	< 5	38	54	5060	< 1	4110	15200	2210	159	803	396	165	16	262	1
D5-1; CanTest		< 10	216	46	< 1	1.7	14	4	7	24	< 0.01	< 4	6	< 0.2	< 2	< 5	39	55	5030	< 1	4150	15600	2220	165	789	395	163	16	266	1
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10	1	1	2	0.1	1	20	10	5	1	1	1
RPD		NC	PASS	6.7	NC	PASS	PASS	PASS	PASS	PASS	PASS	NC	NC	PASS	NC	NC	NC	PASS	PASS	-0.6	NC	1.0	2.6	0.5	3.7	-1.8	PASS	PASS	PASS	1.5

D4-2; CanTest	2005	< 10	38	55	< 1	0.5	13	5	16	5	< 0.01	< 4	7	< 0.2	< 2	< 5	30	46	6310	< 1	5630	12800	2770	228	715	494	201	21	306	1
D4-1; CanTest		< 10	35	47	< 1	< 0.5	13	5	15																					

Appendix J - Replicate Samples

Sample ID; Lab	Year	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Sn	V	Zn	Al	B	Ca	Fe	Mg	Mn	P	K	Na	Sr	Ti	Zr
V1-2; CanTest	2005	< 10	< 10	67	< 1	< 0.5	12	3	18	< 5	< 0.01	< 4	4	< 0.2	< 2	< 5	36	28	4620	< 1	3020	12600	1760	113	774	292	115	15	287	1
V1-1; CanTest		< 10	< 10	72	< 1	< 0.5	12	3	19	5	0.012	< 4	5	< 0.2	< 2	< 5	32	30	4750	< 1	3050	12000	1830	119	753	296	109	15	269	1
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10	1	1	2	0.1	1	20	10	5	1	1	1
RPD		NC	NC	7.2	NC	NC	PASS	PASS	PASS	NC	NC	NC	PASS	NC	NC	NC	-11.8	6.9	2.8	NC	1.0	-4.9	3.9	5.2	-2.8	1.4	-5.4	PASS	-6.5	PASS
B1-1; weak acid	2006	<0.5	10.8	102	0.11	0.83	3.22	3.2	6.34	23.5		0.2	3.5	<0.25	0.2	<0.2	8.93	42.1	2110		2770	3850	1170	604	822	250	44	13.4	48.4	<0.05
B1-2; weak acid		<0.5	10.9	99.8	0.11	0.81	3.49	3.1	6.37	23.4		0.2	3.5	<0.25	<0.1	<0.2	8.78	41.4	2080		2890	3770	1140	579	883	240	45	13.6	46	<0.05
Detection Limit		10	10	1	1	0.5	2	1	1	5		4	2	0.2	2	5	1	1	10		1	2	0.1	1	20	10	5	1	1	1
RPD		NC	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS		PASS	PASS	NC	NC	NC	PASS	PASS	PASS		4.2	-2.1	-2.6	-4.2	PASS	PASS	PASS	PASS	PASS	NC
D5-1; weak acid	2006	<0.5	51.9	36.1	0.08	0.2	3.3	1.9	6.14	13.1		0.07	4	<0.2	0.2	<0.2	7.8	44.6	2120		2900	5210	1010	122	571	260	69.8	11.2	62.1	<0.05
D5-2; weak acid		<0.5	53.5	35.8	0.08	0.2	3.29	1.9	6.18	13.9		<0.05	3.9	<0.2	0.2	<0.2	7.73	45.7	2100		3100	5180	1010	122	643	240	68.2	11.5	59.3	<0.05
Detection Limit		10	10	1	1	0.5	2	1	1	5		4	2	0.2	2	5	1	1	10		1	2	0.1	1	20	10	5	1	1	1
RPD		NC	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS		NC	PASS	NC	PASS	NC	PASS	PASS	PASS		6.7	-0.6	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
B1-1; strong acid	2006	0.8	40.6	141	0.25	0.85	14.3	5.19	14	31.8	0.013	1	7.49	<0.3	0.2	0.5	46	84.3	6580		3590	19800	2500	676	892	611	148	22.2	256	3.2
B1-2; strong acid		0.8	41.3	150	0.26	0.87	15.4	5.29	14.5	32.8	0.019	1	8	<0.3	0.2	0.4	49.9	85.9	6700		3860	21100	2500	674	984	613	156	23.5	265	3.2
Detection Limit		10	10	1	1	0.5	2	1	1	5	0.01	4	2	0.2	2	5	1	1	10		1	2	0.1	1	20	10	5	1	1	1
RPD		PASS	PASS	6.2	PASS	PASS	PASS	PASS	PASS	PASS	37.5	PASS	PASS	NC	PASS	PASS	PASS	PASS	1.8		7.2	6.4	PASS	PASS	PASS	PASS	PASS	PASS	PASS	3.5
D5-1; strong acid	2006	<0.5	51.9	36.1	0.08	0.2	3.3	1.9	6.14	13.1		0.07	4	<0.2	0.2	<0.2	7.8	44.6	2120		2900	5210	1010	122	571	260	69.8	11.2	62.1	<0.05
D5-2; strong acid		<0.5	53.5	35.8	0.08	0.2	3.29	1.9	6.18	13.9		<0.05	3.9	<0.2	0.2	<0.2	7.73	45.7	2100		3100	5180	1010	122	643	240	68.2	11.5	59.3	<0.05
Detection Limit		10	10	1	1	0.5	2	1	1	5		4	2	0.2	2	5	1	1	10		1	2	0.1	1	20	10	5	1	1	1
RPD		NC	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS		NC	PASS	NC	PASS	NC	PASS	PASS	PASS		6.7	-0.6	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

RPD = Relative Percent Difference

PASS = Replicate sample results were in the range of one to five times the detection limit. RPD calculation is not applicable in this range. Acceptance criteria is a maximum difference between the replicates equivalent to the value of the detection limit.

NC = Not Calculated. Replicate sample results were less than the detection limit. RPD calculation is not defined for levels of less than the detection limit.