APPENDIX D

XRF Data Package

Date	Time	Reading	Mode	Sample ID	Ti	Ti +/-	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-
6/5/2012	9:43:40	#1	Standardization																											
6/5/2012	9:46:47	#2	Soil	LYSOAA01	1891	153	57	17	392	19	32119	226	280	38	18	7	34	4	179	5	17	5	0	1	67	1	272	3	126	2
6/5/2012	9:59:00	#3	Soil	LYSOAA02	1990	165	46	18	411	20	35532	258	316	42	8	7	43	4	303	6	15	5	1	1	81	2	346	4	125	2
6/5/2012	10:01:02	#4	Soil	LYSOAA03	1972	164	83	19	402	20	33616	245	353	41	-4	7	70	5	550	9	40	7	2	1	72	2	316	3	113	2
6/5/2012	10:02:47	#5	Soil	LYSOAA04	2294	170	69	18	478	21	33846	247	309	41	3	7	59	5	249	6	20	5	1	1	72	2	323	3	187	2
6/5/2012	10:04:12	#6	Soil	LYSOAA05	2629	190	105	22	554	24	54502	407	586	56	-32	9	47	5	248	6	30	6	0	1	102	2	192	3	122	2
6/5/2012	10:05:47	#7	Soil	LYSOAA06	2032	158	35	17	345	18	23916	179	179	34	21	7	37	4	168	5	9	3	1	1	81	2	249	3	170	2
6/5/2012	10:09:27	#8	Soil	LYSOAA07	2169	158	85	18	411	19	25977	195	237	36	0	7	67	5	293	6	17	3	0	1	67	1	256	3	155	2
6/5/2012	10:10:55	#9	Soil	LYSOAA08	1799	149	57	16	436	19	20426	154	93	30	15	6	22	4	58	3	9	2	1	1	66	1	320	3	105	2
6/5/2012	10:12:29	#10	Soil	LYSOAA09	1766	141	79	16	305	17	17073	133	97	28	19	6	22	4	74	3	7	2	1	1	72	1	270	3	102	2
6/5/2012	10:14:22	#11	Soil	LYSOAA10	1732	140	86	16	315	17	16709	129	125	28	15	6	14	4	67	3	10	2	1	1	72	1	264	3	105	2
6/5/2012	10:16:38	#12	Soil	LYSOAB01	1542	164	59	19	398	20	24577	196	99	36	39	8	48	5	137	5	239	14	3	2	76	2	332	4	96	2
6/5/2012	10:18:15	#13	Soil	LYSOAB02	2121	163	59	18	510	21	29551	218	233	38	14	7	74	5	424	7	4	6	0	1	83	2	261	3	128	2
6/5/2012	10:19:48	#14	Soil	LYSOAB03	2388	191	62	21	598	24	51974	380	512	53	-4	9	104	6	975	13	61	9	2	1	64	2	262	3	151	2
6/5/2012	10:21:18	#15	Soil	LYSOAB04	1944	155	86	18	393	19	25913	194	211	36	8	7	30	4	163	5	10	3	1	1	81	2	286	3	104	2
6/5/2012	10:22:36	#16	Soil	LYSOAB05	1928	154	59	17	354	18	23859	179	216	34	15	7	24	4	84	3	11	3	0	1	71	1	254	3	144	2
6/5/2012	10:24:06	#17	Soil	LYSOAB06	1417	140	50	16	266	16	16588	130	120	28	13	6	19	4	85	3	6	2	2	1	68	1	284	3	125	2
6/5/2012	10:25:29	#18	Soil	LYSOAB07	1520	148	37	16	377	18	21012	162	185	32	-1	6	50	4	249	6	8	3	2	1	74	1	243	3	112	2
6/5/2012	10:26:56	#19	Soil	LYSOAB08	2238	158	48	17	363	18	23848	177	188	34	26	7	36	4	96	4	4	3	1	1	77	2	302	3	145	2
6/5/2012	10:28:12	#20	Soil	LYSOAB09	1531	142	23	16	326	17	19272	148	190	30	-4	6	19	4	74	3	5	2	0	1	84	2	269	3	134	2
6/5/2012	10:30:51	#21	Soil	LYSOAB10	1855	154	41	16	343	18	21418	162	199	32	8	7	23	4	84	3	8	2	1	1	73	1	247	3	168	2
6/5/2012	10:32:47	#22	Soil	LYSOAC01	2450	172	47	19	622	23	60100	401	400	52	8	8	52	4	107	4	29	5	3	1	50	1	199	2	76	2
6/5/2012	10:34:13	#23	Soil	LYSOAC02	1887	163	32	18	678	23	48096	329	312	47	36	8	89	5	243	6	26	5	2	1	62	1	227	3	110	2
6/5/2012	10:35:34	#24	Soil	LYSOAC03	1950	178	18	19	587	24	43164	320	383	48	9	8	71	5	795	11	21	7	2	1	69	2	290	3	133	2
6/5/2012	10:37:01	#25	Soil	LYSOAC04	2607	163	67	17	419	19	28051	202	191	36	15	7	36	4	163	5	13	3	1	1	72	1	254	3	134	2
6/5/2012	10:38:18	#26	Soil	LYSOAC05	2878	166	54	16	347	17	20781	156	125	31	17	6	23	4	266	6	10	2	0	1	77	1	273	3	92	2
6/5/2012	10:39:36	#27	Soil	LYSOAC06	1592	150	30	16	281	17	26801	197	208	36	12	7	25	4	79	3	10	2	1	1	81	2	261	3	96	2
6/5/2012	10:40:57	#28	Soil	LYSOAC07	1683	148	90	17	354	18	25088	183	290	34	1	7	22	4	87	3	13	2	1	1	67	1	234	3	134	2
6/5/2012	10:42:13	#29	Soil	LYSOAC08	2399	162	61	17	409	19	24160	180	202	34	9	7	19	4	111	4	10	3	1	1	79	2	260	3	138	2
6/5/2012	10:43:33	#30	Soil	LYSOAC09	1463	138	27	15	328	17	19532	146	179	30	7	6	27	4	93	3	6	2	0	1	73	1	246	3	129	2
6/5/2012	10:44:51	#31	Soil	LYSOAC10	1551	139	31	16	376	18	20109	151	227	31	-1	6	27	4	120	4	10	2	0	1	71	1	235	3	136	2
6/5/2012	10:46:15	#32	Soil	LYSOAD01	946	162	-9	20	414	21	110262	694	927	70	-50	9	66	5	25	3	-64	8	1	1	16	1	56	1	46	1
6/5/2012	10:47:46	#33	Soil	LYSOAD02	2079	185	140	22	1410	33	72368	498	487	60	42	10	78	5	379	7	35	5	3	1	55	1	203	3	113	2
6/5/2012	10:49:08	#34	Soil	LYSOAD03	1844	185	104	22	561	25	59303	437	845	59	-42	9	86	6	723	11	52	8	2	1	76	2	324	4	109	2
6/5/2012	10:50:26	#35	Soil	LYSOAD04	2020	167	54	19	334	19	50474	347	291	49	5	8	36	4	100	4	13	3	0	1	67	1	216	3	102	2
6/5/2012	10:51:59	#36	Soil	LYSOAD05	2849	178	46	18	312	18	42309	299	216	45	15	8	36	4	104	4	14	3	-1	1	75	2	294	3	91	2
6/5/2012	10:53:17	#37	Soil	LYSOAD06	2275	166	58	18	541	21	37909	269	218	42	19	7	43	4	140	4	15	3	3	1	69	1	233	3	134	2
6/5/2012	10:54:33	#38	Soil	LYSOAD07	1508	148	8	16	332	18	23743	179	236	34	13	7	30	4	186	5	10	3	2	1	86	2	237	3	109	2
6/5/2012	10:55:49	#39	Soil	LYSOAD08	1426	146	58	17	392	18	23274	174	204	33	-1	6	22	4	97	4	9	2	1	1	73	1	285	3	138	2
6/5/2012	10:57:00	#40	Soil	LYSOAD09	1608	146	28	16	326	17	22003	162	224	32	8	6	24	4	93	4	10	3	0	1	68	1	251	3	107	2
6/5/2012	10:58:11	#41	Soil	LYSOAD10	2148	150	-3	15	372	18	23401	173	169	33	13	7	32	4	100	4	8	2	1	1	76	1	236	3	124	2
6/5/2012	10:59:32	#42	Soil	LYSOAE01	427	156	-21	20	352	21	114680	737	1180	73	-71	10	67	5	7	2	51	7	-1	1	9	1	47	1	28	1
6/5/2012	11:00:48	#43	Soil	LYSOAE02	618	162	22	21	323	21	107810	707	827	71	-41	10	60	5	21	3	78	7	0	1	17	1	87	2	42	1
6/5/2012	11:02:00	#44	Soil	LYSOAE03	1950	179	52	21	389	21	71293	498	436	60	5	9	64	5	82	4	2	5	2	1	50	1	207	3	115	2
6/5/2012	11:03:17	#45	Soil	LYSOAE04	1449	157	43	18	392	20	40814	294	176	45	22	8	28	4	89	4	16	3	1	1	65	1	294	3	102	2
6/5/2012	11:04:28	#46	Soil	LYSOAE05	1332	147	42	17	311	18	29272	216	233	38	23	7	38	4	117	4	32	5	1	1	57	1	224	3	109	2

Date	Time	Reading	Mode	Sample ID	Ti	Ti +/-	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-
6/5/2012	11:05:40	#47	Soil	LYSOAE06	2020	159	24	17	362	19	37022	261	236	42	1	7	38	4	96	4	13	3	1	1	68	1	233	3	126	2
6/5/2012	11:06:47	#48	Soil	LYSOAE07	1524	145	26	16	380	19	20499	161	99	32	17	7	19	4	98	4	11	3	2	1	75	2	262	3	101	2
6/5/2012	11:07:52	#49	Soil	LYSOAE08	1671	151	40	17	451	20	27632	205	168	36	22	7	22	4	122	4	7	3	1	1	68	1	278	3	134	2
6/5/2012	11:08:59	#50	Soil	LYSOAE09	1958	150	32	16	345	18	25822	189	298	35	-4	7	27	4	136	4	12	2	1	1	74	1	244	3	124	2
6/5/2012	11:10:08	#51	Soil	LYSOAE10	1773	141	44	16	316	17	17460	134	128	28	14	6	19	4	90	3	12	2	0	1	70	1	259	3	133	2
6/5/2012	13:42:55	#52	Standardization																											
6/5/2012	13:46:14	#53	Soil	LYSOAA0505	1430	154	67	18	296	18	25048	194	245	36	10	7	55	5	167	5	19	3	2	1	105	2	326	4	171	2
6/5/2012	13:48:55	#54	Soil	LYSOAA0405	1135	193	48	23	310	24	28720	285	109	49	16	9	17	5	94	5	20	5	0	1	55	2	216	4	89	2
6/5/2012	13:51:38	#55	Soil	LYSOAA0205	1201	140	35	16	223	16	12380	114	7	26	15	6	10	4	171	5	15	3	-1	1	44	1	125	2	57	2
6/5/2012	13:54:26	#56	Soil	LYSOAA0305	436	110	9	14	145	13	8160	74	-21	19	24	6	7	3	44	3	11	2	0	1	20	1	52	1	18	1
6/5/2012	13:56:30	#57	Soil	LYSOAA0105	1765	167	38	18	305	19	30228	240	256	42	-2	7	23	4	118	4	18	4	0	1	131	2	224	3	174	2
6/5/2012	13:59:17	#58	Soil	LYSOAA0105SE	1322	174	5	19	341	22	21837	207	13	39	18	8	23	5	402	9	9	5	-1	1	57	2	192	3	75	2
6/5/2012	14:01:02	#59	Soil	LYSOAA0105E	1507	180	70	21	326	21	29116	256	208	45	-4	8	20	5	169	6	11	4	0	1	63	2	203	3	101	2
6/5/2012	14:04:11	#60	Soil	LYSOAB0105E	914	159	49	19	168	17	17571	165	106	34	-2	7	6	4	81	4	6	3	0	1	75	2	210	3	75	2
6/5/2012	14:07:57	#61	Soil	LYSOAC0105E	1424	170	80	20	237	19	25124	220	104	40	-10	7	10	4	62	4	26	3	0	1	59	2	191	3	98	2
6/5/2012	14:10:28	#62	Soil	LYSOAD0105E	1842	163	39	18	587	23	22673	185	83	35	16	7	22	4	159	5	13	3	-1	1	66	2	218	3	206	3
6/5/2012	14:12:38	#63	Soil	LYSOAE0105E	349	177	-19	21	191	21	41953	385	245	58	-21	9	27	5	34	3	17	5	0	1	72	2	138	3	45	2
6/5/2012	14:20:53	#64	Soil	LYSOAD0112	750	184	9	23	340	25	62033	538	385	68	-36	10	27	5	21	3	20	5	1	1	17	1	57	2	44	2
6/6/2012	12:49:08	#1	Standardization																											
6/6/2012	12:58:27	#2	Soil	LYSSC0101	2087	160	40	17	285	17	23935	183	330	35	-1	7	28	4	71	3	8	2	0	1	82	2	267	3	191	2
6/6/2012	13:00:07	#3	Soil	LYSSC0102	2114	160	57	17	253	17	17582	143	133	30	12	7	25	4	62	3	6	2	1	1	70	1	387	4	140	2
6/6/2012	13:02:47	#4	Soil	LYSSC0103	2603	180	77	19	368	20	26654	212	181	38	14	7	23	4	70	4	7	2	0	1	80	2	266	3	217	3
6/6/2012	13:04:24	#5	Soil	LYSSC0104	2857	184	63	19	1220	31	39651	292	499	46	-14	8	31	4	85	4	15	2	3	1	78	2	226	3	115	2
6/6/2012	13:09:34	#6	Soil	LYSSC0105	2033	156	35	16	179	15	18504	149	160	31	10	7	23	4	39	3	4	1	0	1	47	1	228	3	176	2
6/6/2012	13:11:31	#7	Soil	LYSSC0106	2256	155	68	17	275	16	34819	236	382	39	-3	7	33	4	52	3	9	1	1	1	57	1	145	2	141	2
6/6/2012	13:26:19	#8	Soil	LYSSC0201	2307	165	67	17	295	17	22276	171	200	33	7	7	41	4	54	3	11	2	1	1	80	2	290	3	150	2
6/6/2012	13:29:23	#9	Soil	LYSSC0205	2018	165	86	19	285	18	19480	164	168	33	15	7	50	5	77	4	13	2	1	1	64	2	241	3	174	2
6/6/2012	13:30:54	#10	Soil	LYSSC0206	1965	184	70	21	257	20	31914	267	392	46	-16	8	29	5	53	3	7	2	1	1	52	1	211	3	153	2
6/6/2012	13:34:01	#11	Soil	LYSSC0207	1757	138	33	14	194	14	13610	105	87	24	24	6	10	3	28	2	6	1	0	1	68	1	219	2	88	2
6/6/2012	13:35:33	#12	Soil	LYSSC0208	2313	140	21	14	155	13	15502	116	147	26	22	6	9	3	32	2	6	1	1	1	70	1	205	2	134	2
6/6/2012	13:42:43	#13	Soil	LYSSC0301	878	99	-20	11	29	9	7152	62	44	17	-15	4	11	3	8	2	1	1	0	1	28	1	248	3	72	1
6/6/2012	13:44:09	#14	Soil	LYSSC0303	2743	169	72	18	216	16	23438	184	189	35	7	7	22	4	70	3	9	2	0	1	71	2	234	3	272	3
6/6/2012	13:45:50	#15	Soil	LYSSC0306	2681	165	39	17	542	21	23720	178	202	34	12	7	22	4	62	3	4	2	0	1	70	1	190	2	221	3
6/6/2012	13:47:44	#16	Soil	LYSSC0307	2360	165	45	18	307	18	33136	241	349	41	6	7	20	4	50	3	7	1	0	1	58	1	156	2	139	2
6/6/2012	13:49:15	#17	Soil	LYSSC0308	1060	121	42	14	118	12	12847	100	174	24	4	6	13	3	28	2	1	1	0	1	57	1	157	2	142	2
6/6/2012	13:53:32	#18	Soil	LYSSC0401	1548	149	22	16	311	18	15271	130	74	28	6	6	11	4	18	2	5	2	1	1	71	2	256	3	91	2
6/6/2012	13:55:44	#19	Soil	LYSSC0405	1320	116	17	13	114	11	11996	91	152	22	-4	5	47	4	25	2	3	2	0	1	40	1	390	3	101	2
6/6/2012	14:02:57	#20	Soil	LYSSC0501	2414	179	83	19	427	20	27785	213	286	38	4	7	18	4	45	3	8	2	1	1	77	2	222	3	183	2
6/6/2012	14:05:15	#21	Soil	LYSSC0505	1892	159	24	17	296	18	23067	181	247	35	-1	7	15	4	62	3	7	2	0	1	67	1	227	3	198	2
6/6/2012	14:07:18	#22	Soil	LYSSC0506	2719	167	58	17	373	18	21852	167	248	33	9	7	14	4	63	3	5	2	1	1	71	1	199	3	194	2
6/6/2012	14:10:22	#23	Soil	LYSSC0507	1071	119	49	14	157	13	9551	80	51	20	12	5	8	3	17	2	5	1	2	1	81	1	233	3	92	2
6/6/2012	14:56:11	#24	Soil	LYSSB0101	2850	171	74	18	547	21	25772	195	191	36	17	7	125	6	75	3	9	3	1	1	83	2	258	3	154	2
6/6/2012	15:00:33	#25	Soil	LYSSB0201	1202	150	33	17	238	17	18795	157	193	32	-7	7	10	4	41	3	4	2	0	1	70	2	220	3	131	2
6/6/2012	15:03:01	#26	Soil	LYSSB0205	1349	138	77	16	228	15	14610	117	147	26	12	6	30	4	29	2	5	1	0	1	77	1	276	3	104	2
6/6/2012	15:18:52	#27	Soil	LYSSB0302	2122	157	138	19	465	20	26886	197	296	36	245	10	36	4	96	4	9	2	1	1	56	1	225	3	127	2
6/6/2012	15:20:30	#28	Soil	LYSSB0303	1529	139	22	15	289	17	19004	148	235	31	-5	6	5	4	42	3	5	2	0	1	65	1	223	3	144	2

Date	Time	Reading	Mode	Sample ID	Ti	Ti +/-	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-
6/6/2012	15:21:57	#29	Soil	LYSSB0304	1697	159	45	17	187	16	18746	157	178	32	13	7	29	4	53	3	8	2	1	1	73	2	182	3	135	2
6/6/2012	15:23:49	#30	Soil	LYSSB0305	935	125	50	15	94	12	6972	69	-12	18	14	6	6	4	11	2	1	1	0	1	88	2	287	3	74	2
6/6/2012	15:25:17	#31	Soil	LYSSB0306	1390	135	22	15	135	13	13830	113	-4	25	15	6	5	4	9	2	7	1	0	1	62	1	271	3	73	2
6/6/2012	15:26:35	#32	Soil	LYSSB0307	1427	160	13	17	146	15	18990	162	92	33	-6	7	14	4	14	2	5	2	0	1	69	2	190	3	122	2
6/12/2012	11:25:06	#1	Standardization																											
6/12/2012	11:30:59	#2	Soil	SiO2 blank 1	-136	42	-11	6	3	4	20	4	2	2	1	2	-3	2	-2	1	0	0	-1	0	0	0	0	0	-1	0
6/12/2012	11:34:04	#3	Soil	2709	3702	101	83	10	453	11	33772	134	323	22	54	4	32	2	93	2	15	1	3	0	92	1	251	2	119	1
6/12/2012	11:37:34	#4	Soil	2710_1	3457	119	25	12	11035	65	42458	186	120	28	-2	5	3133	18	7466	34	674	11	-2	1	133	1	353	2	105	1
6/12/2012	11:41:06	#5	Soil	2711_1	3111	97	26	9	558	12	28353	117	272	21	1	4	107	3	340	4	112	5	1	1	115	1	259	2	225	1
6/12/2012	11:45:11	#6	Soil	LYSOAA01	2791	98	51	10	572	12	46131	179	430	26	12	4	47	3	247	3	13	3	1	1	71	1	268	2	204	1
6/12/2012	11:48:21	#7	Soil	LYSOAA01D	2843	99	62	10	552	12	46667	181	434	26	9	4	49	3	227	3	16	3	1	1	70	1	267	2	217	1
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6/12/2012	12:28:00	#19	Soil	LYSOAC02	3206	108	98	12	903	15	64810	250	437	31	20	5	110	3	389	4	21	3	0	1	68	1	216	2	192	1
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6/12/2012	12:33:21	#21	Soil	LYSOAD01	2119	125	21	15	623	16	166772	651	929	53	-64	7	95	3	47	2	37	4	0	1	26	1	90	1	122	1
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6/12/2012	12:57:56	#30	Soil	LYSSC0101	3236	96	57	10	375	10	27730	112	272	20	7	4	35	2	104	2	12	1	1	0	81	1	317	2	268	2
6/12/2012	13:00:35	#31	Soil	LYSSB0101	3523	104	62	10	592	12	40064	159	359	25	3	4	138	3	115	2	11	2	0	0	82	1	261	2	225	1
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Date	Time	Reading	Mode	Sample ID	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-
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6/5/2012	10:02:47	#5	Soil	LYSOAA04	0	2	5	7	7	8	5	13	-12	15	645	90	4	2	357	6
6/5/2012	10:04:12	#6	Soil	LYSOAA05	0	2	-1	8	-4	9	11	14	7	16	304	97	7	2	505	8
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6/5/2012	10:14:22	#11	Soil	LYSOAA10	1	1	21	7	-9	8	8	13	-17	14	351	74	5	2	78	3
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6/5/2012	10:35:34	#24	Soil	LYSOAC03	8	2	1	8	2	9	21	14	-18	15	660	95	10	2	753	10
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6/5/2012	10:54:33	#38	Soil	LYSOAD07	4	1	-8	7	-26	8	10	13	-5	14	492	81	3	2	109	3
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6/5/2012	11:03:17	#45	Soil	LYSOAE04	3	2	7	7	15	8	23	13	-23	15	364	85	11	2	148	4
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Date	Time	Reading	Mode	Sample ID	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-
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6/5/2012	11:07:52	#49	Soil	LYSOAE08	4	2	-13	7	-14	8	3	13	-37	14	373	80	8	2	108	3
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6/5/2012	11:10:08	#51	Soil	LYSOAE10	3	1	-10	7	-7	8	18	12	-30	14	354	74	6	2	75	3
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6/5/2012	13:51:38	#55	Soil	LYSOAA0205	2	2	-11	8	-19	9	25	14	-12	15	182	76	2	2	121	4
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6/6/2012	13:02:47	#4	Soil	LYSSC0103	2	2	17	8	-8	9	43	14	-15	16	619	93	2	2	20	2
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6/6/2012	13:44:09	#14	Soil	LYSSC0303	0	2	4	8	-2	8	-8	14	0	15	353	84	6	2	13	2
6/6/2012	13:45:50	#15	Soil	LYSSC0306	1	2	14	7	-14	8	3	13	-12	15	525	84	5	2	14	2
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6/6/2012	14:56:11	#24	Soil	LYSSB0101	-1	2	29	7	-4	8	87	13	8	15	516	86	14	2	117	4
6/6/2012	15:00:33	#25	Soil	LYSSB0201	4	2	-9	8	-4	9	-4	14	-1	15	507	84	3	2	14	2
6/6/2012	15:03:01	#26	Soil	LYSSB0205	-3	1	23	7	-2	8	0	13	-40	14	496	76	9	2	15	2
6/6/2012	15:18:52	#27	Soil	LYSSB0302	-1	1	49	7	16	8	33	13	-42	14	455	82	11	2	76	3
6/6/2012	15:20:30	#28	Soil	LYSSB0303	8	2	-22	7	-4	8	15	13	-9	14	213	74	1	2	18	2

Date	Time	Reading	Mode	Sample ID	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-
6/6/2012	15:21:57	#29	Soil	LYSSB0304	1	2	19	8	-1	9	20	14	-21	16	507	86	5	2	13	2
6/6/2012	15:23:49	#30	Soil	LYSSB0305	2	1	15	7	3	8	11	13	-37	14	319	70	3	2	15	2
6/6/2012	15:25:17	#31	Soil	LYSSB0306	0	1	13	7	-3	8	6	13	-28	14	310	73	2	2	8	2
6/6/2012	15:26:35	#32	Soil	LYSSB0307	-1	2	24	8	-7	9	20	15	-20	16	590	88	0	2	9	2
6/12/2012	11:25:06	#1	Standardization																	
6/12/2012	11:30:59	#2	Soil	SiO2 blank 1	0	1	-10	3	-11	4	7	6	-11	7	59	27	2	1	0	1
6/12/2012	11:34:04	#3	Soil	2709	5	1	-19	4	-8	4	12	7	-5	8	623	50	6	1	11	1
6/12/2012	11:37:34	#4	Soil	2710_1	18	1	20	5	22	5	31	8	23	9	527	60	77	3	5829	26
6/12/2012	11:41:06	#5	Soil	2711_1	3	1	-26	4	26	5	23	7	37	8	464	48	12	1	1203	7
6/12/2012	11:45:11	#6	Soil	LYSOAA01	3	1	-16	4	-11	4	27	7	-1	8	493	50	5	1	610	4
6/12/2012	11:48:21	#7	Soil	LYSOAA01D	1	1	-17	4	-5	4	22	7	1	8	498	50	7	1	601	4
6/12/2012	11:51:07	#8	Soil	LYSOAA02	2	1	-11	4	-15	5	26	7	-9	8	774	54	7	1	1077	7
6/12/2012	11:54:00	#9	Soil	LYSOAA03	3	1	-4	4	-7	5	27	7	-8	8	947	55	6	1	1672	9
6/12/2012	11:57:13	#10	Soil	LYSOAA04	1	1	-10	4	6	5	23	7	-5	8	683	52	7	1	625	5
6/12/2012	12:00:00	#11	Soil	LYSOAA05	2	1	-8	4	23	5	29	7	13	8	548	50	7	1	891	6
6/12/2012	12:02:42	#12	Soil	2709	3	1	-26	4	-15	4	20	7	2	8	596	50	6	1	11	1
6/12/2012	12:10:32	#13	Soil	LYSOAB01	3	1	-14	4	2	4	33	7	-12	8	545	50	6	1	569	4
6/12/2012	12:13:23	#14	Soil	LYSOAB02	1	1	-12	4	3	5	41	7	0	8	611	51	8	1	828	5
6/12/2012	12:16:13	#15	Soil	LYSOAB03	0	1	-17	4	-1	5	88	8	-3	8	827	58	6	2	2234	11
6/12/2012	12:19:20	#16	Soil	LYSOAC01	5	1	-27	4	-4	5	25	7	-16	8	588	56	5	1	598	5
6/12/2012	12:21:54	#17	Soil	2709	4	1	-27	4	-1	4	24	7	-4	8	662	50	6	1	10	1
6/12/2012	12:25:07	#18	Soil	LYSOAC01MB	1	1	0	3	-5	4	14	6	-11	7	-15	27	1	1	1	1
6/12/2012	12:28:00	#19	Soil	LYSOAC02	2	1	-11	4	-7	5	43	7	-14	8	515	55	11	1	695	5
6/12/2012	12:30:35	#20	Soil	LYSOAC03	1	1	-17	4	-1	5	48	7	-3	8	735	53	9	1	962	6
6/12/2012	12:33:21	#21	Soil	LYSOAD01	5	1	-33	4	6	5	21	8	-20	8	-36	65	5	1	667	5
6/12/2012	12:36:17	#22	Soil	2709	3	1	-17	4	-5	4	14	7	-6	8	681	50	4	1	13	1
6/12/2012	12:38:56	#23	Soil	LYSOAD02	4	1	-16	4	-3	5	25	7	-20	8	632	60	7	1	529	4
6/12/2012	12:41:42	#24	Soil	LYSOAD03	2	1	-15	4	0	5	40	7	12	8	965	56	8	1	1510	8
6/12/2012	12:44:40	#25	Soil	LYSOAE01	5	1	-38	4	3	5	21	8	-4	8	-60	62	3	1	607	5
6/12/2012	12:47:24	#26	Soil	LYSOAE02	6	1	-33	4	-6	5	30	8	-4	8	9	61	5	1	663	5
6/12/2012	12:49:59	#27	Soil	2709	3	1	-25	4	0	4	15	7	-7	8	587	49	7	1	10	1
6/12/2012	12:52:31	#28	Soil	LYSOAE03	0	1	-21	4	5	5	31	7	-10	8	578	58	9	1	432	4
6/12/2012	12:55:10	#29	Soil	LYSOAE05	1	1	-12	4	8	5	27	7	-10	8	386	53	17	1	250	3
6/12/2012	12:57:56	#30	Soil	LYSSC0101	0	1	-17	4	-6	4	20	7	-16	8	588	48	10	1	81	2
6/12/2012	13:00:35	#31	Soil	LYSSB0101	2	1	-9	4	-14	5	25	7	0	8	608	52	13	1	178	2
6/12/2012	13:03:11	#32	Soil	2709	4	1	-26	4	-1	4	15	7	-6	8	721	50	6	1	12	1
6/12/2012	13:06:05	#33	Soil	LYSSB0101MB	1	1	-12	3	-7	4	17	6	-8	7	-23	27	1	1	0	1
6/12/2012	13:08:50	#34	Soil	LYSSC0303	-2	1	1	4	2	4	14	7	-16	8	573	47	7	1	12	1
6/12/2012	13:11:20	#35	Soil	LYSSC0303D	1	1	-9	4	-3	4	30	7	-4	8	430	46	6	1	10	1
6/12/2012	13:14:05	#36	Soil	LYSSB0303	3	1	-11	4	-8	4	16	7	-16	8	513	46	7	1	16	1
6/12/2012	13:16:58	#37	Soil	2710_2	19	1	8	5	22	5	36	8	10	9	629	62	78	3	5776	26
6/12/2012	13:19:31	#38	Soil	2711_2	2	1	-22	4	27	5	30	7	18	8	553	50	15	1	1196	7
6/12/2012	13:22:05	#39	Soil	2709	4	1	-20	4	-3	4	6	7	-17	8	675	50	7	1	9	1
6/12/2012	13:24:42	#40	Soil	SiO2 Blank 2	1	1	-17	3	-8	4	13	6	-7	7	24	27	1	1	0	1

ID	AnalysisDate	units	As	AsQ	AsDL	AsRL	Cr	CrQ	CrDL	CrRL	Co	CoQ	CoDL	CoRL	Cu	CuQ	CuDL	CuRL	Fe	FeQ	FeDL	FeRL	Pb	PbQ	PbDL	PbRL	Mn	MnQ	MnDL	MnRL	Hg	HgQ	HgDL	HgRL
2710_1	6/12/2012	mg/Kg	674		2.36	7.87	25	J	16.3	54.4	120	J	61.1	204	3133		5.03	16.8	42458		954	3180	5829		4.04	13.5	11035		23	76.8	77		3	10
2710_2	6/12/2012	mg/Kg	703		2.36	7.87		U	16.3	54.4	64	J	61.1	204	3189		5.03	16.8	42813		954	3180	5776		4.04	13.5	11081		23	76.8	78		3	10
2711_1	6/12/2012	mg/Kg	120.3	U	2.36	7.87	26	J	16.3	54.4	272		61.1	204	107		5.03	16.8	28353		954	3180	1203		4.04	13.5	558		23	76.8	12		3	10
2711_2	6/12/2012	mg/Kg	119.6	U	2.36	7.87	47	J	16.3	54.4	244		61.1	204	105		5.03	16.8	28363		954	3180	1196		4.04	13.5	552		23	76.8	15		3	10
LYSOAA01	6/12/2012	mg/Kg	61	U	2.36	7.87	51	J	16.3	54.4	430		61.1	204	47		5.03	16.8	46131		954	3180	610		4.04	13.5	572		23	76.8	5	J	3	10
LYSOAA01D	6/12/2012	mg/Kg	60.1	U	2.36	7.87	62		16.3	54.4	434		61.1	204	49		5.03	16.8	46667		954	3180	601		4.04	13.5	552		23	76.8	7	J	3	10
LYSOAA02	6/12/2012	mg/Kg	107.7	U	2.36	7.87	95		16.3	54.4	451		61.1	204	77		5.03	16.8	47915		954	3180	1077		4.04	13.5	613		23	76.8	7	J	3	10
LYSOAA03	6/12/2012	mg/Kg	167.2	U	2.36	7.87	77		16.3	54.4	468		61.1	204	90		5.03	16.8	45656		954	3180	1672		4.04	13.5	662		23	76.8	6	J	3	10
LYSOAA04	6/12/2012	mg/Kg	62.5	U	2.36	7.87	88		16.3	54.4	360		61.1	204	63		5.03	16.8	43589		954	3180	625		4.04	13.5	577		23	76.8	7	J	3	10
LYSOAA05	6/12/2012	mg/Kg	89.1	U	2.36	7.87	128		16.3	54.4	323		61.1	204	71		5.03	16.8	37304		954	3180	891		4.04	13.5	566		23	76.8	7	J	3	10
LYSOAB01	6/12/2012	mg/Kg	56.9	U	2.36	7.87	93		16.3	54.4	297		61.1	204	61		5.03	16.8	46955		954	3180	569		4.04	13.5	604		23	76.8	6	J	3	10
LYSOAB02	6/12/2012	mg/Kg	82.8	U	2.36	7.87	71		16.3	54.4	359		61.1	204	78		5.03	16.8	43228		954	3180	828		4.04	13.5	639		23	76.8	8	J	3	10
LYSOAB03	6/12/2012	mg/Kg	223.4	U	2.36	7.87	101		16.3	54.4	496		61.1	204	139		5.03	16.8	60172		954	3180	2234		4.04	13.5	741		23	76.8	6	J	3	10
LYSOAC01	6/12/2012	mg/Kg	59.8	U	2.36	7.87	72		16.3	54.4	612		61.1	204	82		5.03	16.8	81282		954	3180	598		4.04	13.5	871		23	76.8	5	J	3	10
LYSOAC01MB	6/12/2012	mg/Kg		U	2.36	7.87		U	16.3	54.4		U	61.1	204		U	5.03	16.8		U	954	3180		U	4.04	13.5		U	23	76.8		U	3	10
LYSOAC02	6/12/2012	mg/Kg	69.5	U	2.36	7.87	98		16.3	54.4	437		61.1	204	110		5.03	16.8	64810		954	3180	695		4.04	13.5	903		23	76.8	11		3	10
LYSOAC03	6/12/2012	mg/Kg	96.2	U	2.36	7.87	59		16.3	54.4	316		61.1	204	77		5.03	16.8	45645		954	3180	962		4.04	13.5	609		23	76.8	9	J	3	10
LYSOAD01	6/12/2012	mg/Kg	66.7	U	2.36	7.87	21	J	16.3	54.4	929		61.1	204	95		5.03	16.8	166772		954	3180	667		4.04	13.5	623		23	76.8	5	J	3	10
LYSOAD02	6/12/2012	mg/Kg	52.9	U	2.36	7.87	90		16.3	54.4	566		61.1	204	110		5.03	16.8	92312		954	3180	529		4.04	13.5	1703		23	76.8	7	J	3	10
LYSOAD03	6/12/2012	mg/Kg	151	U	2.36	7.87	67		16.3	54.4	406		61.1	204	103		5.03	16.8	51483		954	3180	1510		4.04	13.5	654		23	76.8	8	J	3	10
LYSOAE01	6/12/2012	mg/Kg	60.7	U	2.36	7.87		U	16.3	54.4	972		61.1	204	83		5.03	16.8	156375		954	3180	607		4.04	13.5	513		23	76.8	3	J	3	10
LYSOAE02	6/12/2012	mg/Kg	66.3	U	2.36	7.87	41	J	16.3	54.4	816		61.1	204	80		5.03	16.8	134280		954	3180	663		4.04	13.5	520		23	76.8	5	J	3	10
LYSOAE03	6/12/2012	mg/Kg	43.2	U	2.36	7.87	89		16.3	54.4	395		61.1	204	76		5.03	16.8	74782		954	3180	432		4.04	13.5	744		23	76.8	9	J	3	10
LYSOAE05	6/12/2012	mg/Kg	25	U	2.36	7.87	54	J	16.3	54.4	370		61.1	204	48		5.03	16.8	53670		954	3180	250		4.04	13.5	576		23	76.8	17		3	10
LYSSB0101	6/12/2012	mg/Kg	17.8	U	2.36	7.87	62		16.3	54.4	359		61.1	204	138		5.03	16.8	40064		954	3180	178		4.04	13.5	592		23	76.8	13		3	10
LYSSB0101MB	6/12/2012	mg/Kg		U	2.36	7.87		U	16.3	54.4		U	61.1	204		U	5.03	16.8		U	954	3180		U	4.04	13.5		U	23	76.8		U	3	10
LYSSB0303	6/12/2012	mg/Kg	9		2.36	7.87	62		16.3	54.4	230		61.1	204	20		5.03	16.8	26799		954	3180	16		4.04	13.5	531		23	76.8	7	J	3	10
LYSSC0101	6/12/2012	mg/Kg	12		2.36	7.87	57		16.3	54.4	272		61.1	204	35		5.03	16.8	27730		954	3180	81		4.04	13.5	375		23	76.8	10		3	10
LYSSC0303	6/12/2012	mg/Kg	6	J	2.36	7.87	49	J	16.3	54.4	170	J	61.1	204	14	J	5.03	16.8	25967		954	3180	12	J	4.04	13.5	291		23	76.8	7	J	3	10
LYSSC0303D	6/12/2012	mg/Kg	8		2.36	7.87	48	J	16.3	54.4	120	J	61.1	204	10	J	5.03	16.8	27235		954	3180	10	J	4.04	13.5	327		23	76.8	6	J	3	10
SiO2 blank 1	6/12/2012	mg/Kg		U	2.36	7.87		U	16.3	54.4		U	61.1	204		U	5.03	16.8		U	954	3180		U	4.04	13.5		U	23	76.8		U	3	10
SiO2 Blank 2	6/12/2012	mg/Kg		U	2.36	7.87		U	16.3	54.4		U	61.1	204		U	5.03	16.8		U	954	3180		U	4.04	13.5		U	23	76.8		U	3	10

ID	Mo	MoQ	MoDL	MoRL	Ni	NiQ	NiDL	NiRL	Rb	RbQ	RbDL	RbRL	Se	SeQ	SeDL	SeRL	Sr	SrQ	SrDL	SrRL	Zn	ZnQ	ZnDL	ZnRL	Zr	ZrQ	ZrDL	ZrRL	P	PQ	PDL	PRL	S	SQ	SDL	SRL	Cl	ClQ	ClDL	ClRL
2710_1	18		2.27	7.56		U	11.3	37.8	133		3.82	12.7		U	1.73	5.77	353		7.11	23.7	7466		8.95	29.8	105		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
2710_2	19		2.27	7.56		U	11.3	37.8	132		3.82	12.7		U	1.73	5.77	344		7.11	23.7	7476		8.95	29.8	103		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
2711_1	3	J	2.27	7.56		U	11.3	37.8	115		3.82	12.7		U	1.73	5.77	259		7.11	23.7	340		8.95	29.8	225		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
2711_2		U	2.27	7.56		U	11.3	37.8	117		3.82	12.7		U	1.73	5.77	255		7.11	23.7	339		8.95	29.8	228		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAA01	3	J	2.27	7.56	12	J	11.3	37.8	71		3.82	12.7		U	1.73	5.77	268		7.11	23.7	247		8.95	29.8	204		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAA01D		U	2.27	7.56		U	11.3	37.8	70		3.82	12.7		U	1.73	5.77	267		7.11	23.7	227		8.95	29.8	217		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAA02		U	2.27	7.56		U	11.3	37.8	71		3.82	12.7		U	1.73	5.77	269		7.11	23.7	598		8.95	29.8	225		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAA03	3	J	2.27	7.56		U	11.3	37.8	67		3.82	12.7		U	1.73	5.77	281		7.11	23.7	1002		8.95	29.8	233		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAA04		U	2.27	7.56		U	11.3	37.8	72		3.82	12.7		U	1.73	5.77	260		7.11	23.7	411		8.95	29.8	251		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAA05		U	2.27	7.56	13	J	11.3	37.8	77		3.82	12.7		U	1.73	5.77	254		7.11	23.7	392		8.95	29.8	251		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAB01	3	J	2.27	7.56	12	J	11.3	37.8	69		3.82	12.7		U	1.73	5.77	264		7.11	23.7	346		8.95	29.8	177		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAB02		U	2.27	7.56		U	11.3	37.8	68		3.82	12.7		U	1.73	5.77	264		7.11	23.7	548		8.95	29.8	219		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAB03		U	2.27	7.56		U	11.3	37.8	62		3.82	12.7		U	1.73	5.77	266		7.11	23.7	1408		8.95	29.8	239		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAC01	5	J	2.27	7.56		U	11.3	37.8	60		3.82	12.7		U	1.73	5.77	200		7.11	23.7	234		8.95	29.8	148		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAC01MB		U	2.27	7.56		U	11.3	37.8		U	3.82	12.7		U	1.73	5.77		U	7.11	23.7		U	8.95	29.8	10	J	7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAC02		U	2.27	7.56	20	J	11.3	37.8	68		3.82	12.7		U	1.73	5.77	216		7.11	23.7	389		8.95	29.8	192		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAC03		U	2.27	7.56	12	J	11.3	37.8	69		3.82	12.7		U	1.73	5.77	277		7.11	23.7	901		8.95	29.8	213		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAD01	5	J	2.27	7.56		U	11.3	37.8	26		3.82	12.7		U	1.73	5.77	90		7.11	23.7	47		8.95	29.8	122		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAD02	4	J	2.27	7.56	59		11.3	37.8	54		3.82	12.7		U	1.73	5.77	196		7.11	23.7	459		8.95	29.8	194		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAD03		U	2.27	7.56		U	11.3	37.8	64		3.82	12.7		U	1.73	5.77	273		7.11	23.7	1241		8.95	29.8	233		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAE01	5	J	2.27	7.56		U	11.3	37.8	23		3.82	12.7		U	1.73	5.77	87		7.11	23.7	35		8.95	29.8	120		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAE02	6	J	2.27	7.56		U	11.3	37.8	30		3.82	12.7		U	1.73	5.77	133		7.11	23.7	78		8.95	29.8	122		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAE03		U	2.27	7.56	29	J	11.3	37.8	60		3.82	12.7		U	1.73	5.77	217		7.11	23.7	403		8.95	29.8	206		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSOAE05		U	2.27	7.56	16	J	11.3	37.8	63		3.82	12.7		U	1.73	5.77	261		7.11	23.7	198		8.95	29.8	249		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSSB0101		U	2.27	7.56		U	11.3	37.8	82		3.82	12.7		U	1.73	5.77	261		7.11	23.7	115		8.95	29.8	225		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSSB0101MB		U	2.27	7.56		U	11.3	37.8		U	3.82	12.7		U	1.73	5.77		U	7.11	23.7		U	8.95	29.8	25		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSSB0303	3	J	2.27	7.56		U	11.3	37.8	85		3.82	12.7		U	1.73	5.77	314		7.11	23.7	73		8.95	29.8	217		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSSC0101		U	2.27	7.56		U	11.3	37.8	81		3.82	12.7		U	1.73	5.77	317		7.11	23.7	104		8.95	29.8	268		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSSC0303		U	2.27	7.56	12	J	11.3	37.8	75		3.82	12.7		U	1.73	5.77	257		7.11	23.7	53		8.95	29.8	365		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
LYSSC0303D		U	2.27	7.56	16	J	11.3	37.8	74		3.82	12.7		U	1.73	5.77	263		7.11	23.7	59		8.95	29.8	233		7.44	24.8		U	1000	3330		U	400	1330		U	140	467
SiO2 blank 1		U	2.27	7.56		U	11.3	37.8		U	3.82	12.7		U	1.73	5.77		U	7.11	23.7		U	8.95	29.8		U	7.44	24.8		U	1000	3330		U	400	1330		U	140	467
SiO2 Blank 2		U	2.27	7.56		U	11.3	37.8		U	3.82	12.7		U	1.73	5.77		U	7.11	23.7		U	8.95	29.8		U	7.44	24.8		U	1000	3330		U	400	1330		U	140	467

ID	K	KQ	KDL	KRL	Ca	CaQ	CaDL	CaRL	Ti	TiQ	TiDL	TiRL	V	VQ	VDL	VRL	Ag	AgQ	AgDL	AgRL	Cd	CdQ	CdDL	CdRL	Sn	SnQ	SnDL	SnRL	Sb	SbQ	SbDL	SbRL	Ba	BaQ	BaDL	BaRL	W	WQ	WDL	WRL
2710_1		U	120	400		U	40	133	3457		379	1260		U	7	23.3	20	J	12.2	40.6	22	J	15.9	53.1	31	J	17.2	57.3	23	J	16.9	56.4	527		147	490		U	6	20
2710_2		U	120	400		U	40	133	3484		379	1260		U	7	23.3		U	12.2	40.6	22	J	15.9	53.1	36	J	17.2	57.3		U	16.9	56.4	629		147	490		U	6	20
2711_1		U	120	400		U	40	133	3111		379	1260		U	7	23.3		U	12.2	40.6	26	J	15.9	53.1	23	J	17.2	57.3	37	J	16.9	56.4	464	J	147	490		U	6	20
2711_2		U	120	400		U	40	133	2956		379	1260		U	7	23.3		U	12.2	40.6	27	J	15.9	53.1	30	J	17.2	57.3	18	J	16.9	56.4	553		147	490		U	6	20
LYSOAA01		U	120	400		U	40	133	2791		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	27	J	17.2	57.3		U	16.9	56.4	493		147	490		U	6	20
LYSOAA01D		U	120	400		U	40	133	2843		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	22	J	17.2	57.3		U	16.9	56.4	498		147	490		U	6	20
LYSOAA02		U	120	400		U	40	133	2858		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	26	J	17.2	57.3		U	16.9	56.4	774		147	490		U	6	20
LYSOAA03		U	120	400		U	40	133	2705		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	27	J	17.2	57.3		U	16.9	56.4	947		147	490		U	6	20
LYSOAA04		U	120	400		U	40	133	2916		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	23	J	17.2	57.3		U	16.9	56.4	683		147	490		U	6	20
LYSOAA05		U	120	400		U	40	133	3126		379	1260		U	7	23.3		U	12.2	40.6	23	J	15.9	53.1	29	J	17.2	57.3		U	16.9	56.4	548		147	490		U	6	20
LYSOAB01		U	120	400		U	40	133	2584		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	33	J	17.2	57.3		U	16.9	56.4	545		147	490		U	6	20
LYSOAB02		U	120	400		U	40	133	2858		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	41	J	17.2	57.3		U	16.9	56.4	611		147	490		U	6	20
LYSOAB03		U	120	400		U	40	133	2866		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	88		17.2	57.3		U	16.9	56.4	827		147	490		U	6	20
LYSOAC01		U	120	400		U	40	133	2566		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	25	J	17.2	57.3		U	16.9	56.4	588		147	490		U	6	20
LYSOAC01MB		U	120	400		U	40	133		U	379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1		U	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20
LYSOAC02		U	120	400		U	40	133	3206		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	43	J	17.2	57.3		U	16.9	56.4	515		147	490		U	6	20
LYSOAC03		U	120	400		U	40	133	2696		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	48	J	17.2	57.3		U	16.9	56.4	735		147	490		U	6	20
LYSOAD01		U	120	400		U	40	133	2119		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	21	J	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20
LYSOAD02		U	120	400		U	40	133	3001		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	25	J	17.2	57.3		U	16.9	56.4	632		147	490		U	6	20
LYSOAD03		U	120	400		U	40	133	2592		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	40	J	17.2	57.3		U	16.9	56.4	965		147	490		U	6	20
LYSOAE01		U	120	400		U	40	133	1746		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	21	J	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20
LYSOAE02		U	120	400		U	40	133	2124		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	30	J	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20
LYSOAE03		U	120	400		U	40	133	3149		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	31	J	17.2	57.3		U	16.9	56.4	578		147	490		U	6	20
LYSOAE05		U	120	400		U	40	133	3317		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	27	J	17.2	57.3		U	16.9	56.4	386	J	147	490		U	6	20
LYSSB0101		U	120	400		U	40	133	3523		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	25	J	17.2	57.3		U	16.9	56.4	608		147	490		U	6	20
LYSSB0101MB		U	120	400		U	40	133		U	379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1		U	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20
LYSSB0303		U	120	400		U	40	133	2869		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1		U	17.2	57.3		U	16.9	56.4	513		147	490		U	6	20
LYSSC0101		U	120	400		U	40	133	3236		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	20	J	17.2	57.3		U	16.9	56.4	588		147	490		U	6	20
LYSSC0303		U	120	400		U	40	133	3369		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1		U	17.2	57.3		U	16.9	56.4	573		147	490		U	6	20
LYSSC0303D		U	120	400		U	40	133	3368		379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1	30	J	17.2	57.3		U	16.9	56.4	430	J	147	490		U	6	20
SiO2 blank 1		U	120	400		U	40	133		U	379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1		U	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20
SiO2 Blank 2		U	120	400		U	40	133		U	379	1260		U	7	23.3		U	12.2	40.6		U	15.9	53.1		U	17.2	57.3		U	16.9	56.4		U	147	490		U	6	20

ID	Au	AuQ	AuDL	AuRL	Th	ThQ	ThDL	ThRL
2710_1		U	5	16.7		U	5	16.7
2710_2		U	5	16.7		U	5	16.7
2711_1		U	5	16.7		U	5	16.7
2711_2		U	5	16.7		U	5	16.7
LYSOAA01		U	5	16.7		U	5	16.7
LYSOAA01D		U	5	16.7		U	5	16.7
LYSOAA02		U	5	16.7		U	5	16.7
LYSOAA03		U	5	16.7		U	5	16.7
LYSOAA04		U	5	16.7		U	5	16.7
LYSOAA05		U	5	16.7		U	5	16.7
LYSOAB01		U	5	16.7		U	5	16.7
LYSOAB02		U	5	16.7		U	5	16.7
LYSOAB03		U	5	16.7		U	5	16.7
LYSOAC01		U	5	16.7		U	5	16.7
LYSOAC01MB		U	5	16.7		U	5	16.7
LYSOAC02		U	5	16.7		U	5	16.7
LYSOAC03		U	5	16.7		U	5	16.7
LYSOAD01		U	5	16.7		U	5	16.7
LYSOAD02		U	5	16.7		U	5	16.7
LYSOAD03		U	5	16.7		U	5	16.7
LYSOAE01		U	5	16.7		U	5	16.7
LYSOAE02		U	5	16.7		U	5	16.7
LYSOAE03		U	5	16.7		U	5	16.7
LYSOAE05		U	5	16.7		U	5	16.7
LYSSB0101		U	5	16.7		U	5	16.7
LYSSB0101MB		U	5	16.7		U	5	16.7
LYSSB0303		U	5	16.7		U	5	16.7
LYSSC0101		U	5	16.7		U	5	16.7
LYSSC0303		U	5	16.7		U	5	16.7
LYSSC0303D		U	5	16.7		U	5	16.7
SiO2 blank 1		U	5	16.7		U	5	16.7
SiO2 Blank 2		U	5	16.7		U	5	16.7

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAA01

Aquired:

6/12/2012 11:45:11 AM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	61 U
7440-39-3	Barium	147	490	493
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	51 J
7440-48-4	Cobalt	61.1	204	430
7440-50-8	Copper	5.03	16.8	47
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	46131
7439-92-1	Lead	4.04	13.5	610
7439-96-5	Manganese	23	76.8	572
7439-97-6	Mercury	3	10	5 J
7439-98-7	Molybdenum	2.27	7.56	3 J
7440-02-0	Nickel	11.3	37.8	12 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	71
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	268
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	27 J
7440-32-6	Titanium	379	1260	2791
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	247
60569-64-6	Zircon	7.44	24.8	204

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAA01D

Aquired:

6/12/2012 11:48:21 AM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	60 U
7440-39-3	Barium	147	490	498
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	62
7440-48-4	Cobalt	61.1	204	434
7440-50-8	Copper	5.03	16.8	49
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	46667
7439-92-1	Lead	4.04	13.5	601
7439-96-5	Manganese	23	76.8	552
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	70
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	267
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	22 J
7440-32-6	Titanium	379	1260	2843
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	227
60569-64-6	Zircon	7.44	24.8	217

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:
LYSOAA02

Aquired:
6/12/2012 11:51:07 AM

Dilution: 1
Analyst: UOS - Start
Matrix: Soil
Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	108 U
7440-39-3	Barium	147	490	774
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	95
7440-48-4	Cobalt	61.1	204	451
7440-50-8	Copper	5.03	16.8	77
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	47915
7439-92-1	Lead	4.04	13.5	1077
7439-96-5	Manganese	23	76.8	613
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	71
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	269
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	26 J
7440-32-6	Titanium	379	1260	2858
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	598
60569-64-6	Zircon	7.44	24.8	225

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAA03

Aquired:

6/12/2012 11:54:00 AM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	167 U
7440-39-3	Barium	147	490	947
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	77
7440-48-4	Cobalt	61.1	204	468
7440-50-8	Copper	5.03	16.8	90
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	45656
7439-92-1	Lead	4.04	13.5	1672
7439-96-5	Manganese	23	76.8	662
7439-97-6	Mercury	3	10	6 J
7439-98-7	Molybdenum	2.27	7.56	3 J
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	67
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	281
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	27 J
7440-32-6	Titanium	379	1260	2705
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	1002
60569-64-6	Zircon	7.44	24.8	233

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAA04

Aquired:

6/12/2012 11:57:13 AM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	62 U
7440-39-3	Barium	147	490	683
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	88
7440-48-4	Cobalt	61.1	204	360
7440-50-8	Copper	5.03	16.8	63
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	43589
7439-92-1	Lead	4.04	13.5	625
7439-96-5	Manganese	23	76.8	577
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	72
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	260
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	23 J
7440-32-6	Titanium	379	1260	2916
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	411
60569-64-6	Zircon	7.44	24.8	251

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAA05

Aquired:

6/12/2012 12:00:00 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	89 U
7440-39-3	Barium	147	490	548
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	23 J
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	128
7440-48-4	Cobalt	61.1	204	323
7440-50-8	Copper	5.03	16.8	71
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	37304
7439-92-1	Lead	4.04	13.5	891
7439-96-5	Manganese	23	76.8	566
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	13 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	77
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	254
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	29 J
7440-32-6	Titanium	379	1260	3126
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	392
60569-64-6	Zircon	7.44	24.8	251

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAB01

Aquired:

6/12/2012 12:10:32 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	57 U
7440-39-3	Barium	147	490	545
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	93
7440-48-4	Cobalt	61.1	204	297
7440-50-8	Copper	5.03	16.8	61
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	46955
7439-92-1	Lead	4.04	13.5	569
7439-96-5	Manganese	23	76.8	604
7439-97-6	Mercury	3	10	6 J
7439-98-7	Molybdenum	2.27	7.56	3 J
7440-02-0	Nickel	11.3	37.8	12 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	69
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	264
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	33 J
7440-32-6	Titanium	379	1260	2584
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	346
60569-64-6	Zircon	7.44	24.8	177

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAB02

Aquired:

6/12/2012 12:13:23 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	83 U
7440-39-3	Barium	147	490	611
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	71
7440-48-4	Cobalt	61.1	204	359
7440-50-8	Copper	5.03	16.8	78
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	43228
7439-92-1	Lead	4.04	13.5	828
7439-96-5	Manganese	23	76.8	639
7439-97-6	Mercury	3	10	8 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	68
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	264
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	41 J
7440-32-6	Titanium	379	1260	2858
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	548
60569-64-6	Zircon	7.44	24.8	219

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAB03

Aquired:

6/12/2012 12:16:13 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	223 U
7440-39-3	Barium	147	490	827
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	101
7440-48-4	Cobalt	61.1	204	496
7440-50-8	Copper	5.03	16.8	139
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	60172
7439-92-1	Lead	4.04	13.5	2234
7439-96-5	Manganese	23	76.8	741
7439-97-6	Mercury	3	10	6 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	62
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	266
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	88
7440-32-6	Titanium	379	1260	2866
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	1408
60569-64-6	Zircon	7.44	24.8	239

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAC01

Aquired:

6/12/2012 12:19:20 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	60 U
7440-39-3	Barium	147	490	588
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	72
7440-48-4	Cobalt	61.1	204	612
7440-50-8	Copper	5.03	16.8	82
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	81282
7439-92-1	Lead	4.04	13.5	598
7439-96-5	Manganese	23	76.8	871
7439-97-6	Mercury	3	10	5 J
7439-98-7	Molybdenum	2.27	7.56	5 J
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	60
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	200
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	25 J
7440-32-6	Titanium	379	1260	2566
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	234
60569-64-6	Zircon	7.44	24.8	148

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAC01MB

Aquired:

6/12/2012 12:25:07 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	U
7440-48-4	Cobalt	61.1	204	U
7440-50-8	Copper	5.03	16.8	U
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	U
7439-92-1	Lead	4.04	13.5	U
7439-96-5	Manganese	23	76.8	U
7439-97-6	Mercury	3	10	U
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	U
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	U
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	U
7440-32-6	Titanium	379	1260	U
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	U
60569-64-6	Zircon	7.44	24.8	10 J

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAC02

Aquired:

6/12/2012 12:28:00 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	70 U
7440-39-3	Barium	147	490	515
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	98
7440-48-4	Cobalt	61.1	204	437
7440-50-8	Copper	5.03	16.8	110
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	64810
7439-92-1	Lead	4.04	13.5	695
7439-96-5	Manganese	23	76.8	903
7439-97-6	Mercury	3	10	11
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	20 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	68
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	216
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	43 J
7440-32-6	Titanium	379	1260	3206
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	389
60569-64-6	Zircon	7.44	24.8	192

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAC03

Aquired:

6/12/2012 12:30:35 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	96 U
7440-39-3	Barium	147	490	735
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	59
7440-48-4	Cobalt	61.1	204	316
7440-50-8	Copper	5.03	16.8	77
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	45645
7439-92-1	Lead	4.04	13.5	962
7439-96-5	Manganese	23	76.8	609
7439-97-6	Mercury	3	10	9 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	12 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	69
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	277
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	48 J
7440-32-6	Titanium	379	1260	2696
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	901
60569-64-6	Zircon	7.44	24.8	213

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAD01

Aquired:

6/12/2012 12:33:21 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	67 U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	21 J
7440-48-4	Cobalt	61.1	204	929
7440-50-8	Copper	5.03	16.8	95
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	166772
7439-92-1	Lead	4.04	13.5	667
7439-96-5	Manganese	23	76.8	623
7439-97-6	Mercury	3	10	5 J
7439-98-7	Molybdenum	2.27	7.56	5 J
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	26
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	90
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	21 J
7440-32-6	Titanium	379	1260	2119
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	47
60569-64-6	Zircon	7.44	24.8	122

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAD02

Aquired:

6/12/2012 12:38:56 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	53 U
7440-39-3	Barium	147	490	632
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	90
7440-48-4	Cobalt	61.1	204	566
7440-50-8	Copper	5.03	16.8	110
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	92312
7439-92-1	Lead	4.04	13.5	529
7439-96-5	Manganese	23	76.8	1703
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	4 J
7440-02-0	Nickel	11.3	37.8	59
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	54
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	196
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	25 J
7440-32-6	Titanium	379	1260	3001
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	459
60569-64-6	Zircon	7.44	24.8	194

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAD03

Aquired:

6/12/2012 12:41:42 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	151 U
7440-39-3	Barium	147	490	965
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	67
7440-48-4	Cobalt	61.1	204	406
7440-50-8	Copper	5.03	16.8	103
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	51483
7439-92-1	Lead	4.04	13.5	1510
7439-96-5	Manganese	23	76.8	654
7439-97-6	Mercury	3	10	8 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	64
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	273
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	40 J
7440-32-6	Titanium	379	1260	2592
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	1241
60569-64-6	Zircon	7.44	24.8	233

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAE01

Aquired:

6/12/2012 12:44:40 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	61 U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	U
7440-48-4	Cobalt	61.1	204	972
7440-50-8	Copper	5.03	16.8	83
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	156375
7439-92-1	Lead	4.04	13.5	607
7439-96-5	Manganese	23	76.8	513
7439-97-6	Mercury	3	10	3 J
7439-98-7	Molybdenum	2.27	7.56	5 J
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	23
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	87
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	21 J
7440-32-6	Titanium	379	1260	1746
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	35
60569-64-6	Zircon	7.44	24.8	120

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAE02

Aquired:

6/12/2012 12:47:24 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	66 U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	41 J
7440-48-4	Cobalt	61.1	204	816
7440-50-8	Copper	5.03	16.8	80
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	134280
7439-92-1	Lead	4.04	13.5	663
7439-96-5	Manganese	23	76.8	520
7439-97-6	Mercury	3	10	5 J
7439-98-7	Molybdenum	2.27	7.56	6 J
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	30
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	133
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	30 J
7440-32-6	Titanium	379	1260	2124
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	78
60569-64-6	Zircon	7.44	24.8	122

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAE03

Aquired:

6/12/2012 12:52:31 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	43 U
7440-39-3	Barium	147	490	578
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	89
7440-48-4	Cobalt	61.1	204	395
7440-50-8	Copper	5.03	16.8	76
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	74782
7439-92-1	Lead	4.04	13.5	432
7439-96-5	Manganese	23	76.8	744
7439-97-6	Mercury	3	10	9 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	29 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	60
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	217
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	31 J
7440-32-6	Titanium	379	1260	3149
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	403
60569-64-6	Zircon	7.44	24.8	206

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSOAE05

Aquired:

6/12/2012 12:55:10 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	25 U
7440-39-3	Barium	147	490	386 J
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	54 J
7440-48-4	Cobalt	61.1	204	370
7440-50-8	Copper	5.03	16.8	48
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	53670
7439-92-1	Lead	4.04	13.5	250
7439-96-5	Manganese	23	76.8	576
7439-97-6	Mercury	3	10	17
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	16 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	63
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	261
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	27 J
7440-32-6	Titanium	379	1260	3317
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	198
60569-64-6	Zircon	7.44	24.8	249

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSSB0101

Aquired:

6/12/2012 1:00:35 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	18 U
7440-39-3	Barium	147	490	608
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	62
7440-48-4	Cobalt	61.1	204	359
7440-50-8	Copper	5.03	16.8	138
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	40064
7439-92-1	Lead	4.04	13.5	178
7439-96-5	Manganese	23	76.8	592
7439-97-6	Mercury	3	10	13
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	82
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	261
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	25 J
7440-32-6	Titanium	379	1260	3523
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	115
60569-64-6	Zircon	7.44	24.8	225

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSSB0101MB

Aquired:

6/12/2012 1:06:05 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	U
7440-48-4	Cobalt	61.1	204	U
7440-50-8	Copper	5.03	16.8	U
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	U
7439-92-1	Lead	4.04	13.5	U
7439-96-5	Manganese	23	76.8	U
7439-97-6	Mercury	3	10	U
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	U
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	U
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	U
7440-32-6	Titanium	379	1260	U
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	U
60569-64-6	Zircon	7.44	24.8	25

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSSB0303

Aquired:

6/12/2012 1:14:05 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	9
7440-39-3	Barium	147	490	513
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	62
7440-48-4	Cobalt	61.1	204	230
7440-50-8	Copper	5.03	16.8	20
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	26799
7439-92-1	Lead	4.04	13.5	16
7439-96-5	Manganese	23	76.8	531
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	3 J
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	85
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	314
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	U
7440-32-6	Titanium	379	1260	2869
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	73
60569-64-6	Zircon	7.44	24.8	217

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSSC0101

Aquired:

6/12/2012 12:57:56 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	12
7440-39-3	Barium	147	490	588
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	57
7440-48-4	Cobalt	61.1	204	272
7440-50-8	Copper	5.03	16.8	35
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	27730
7439-92-1	Lead	4.04	13.5	81
7439-96-5	Manganese	23	76.8	375
7439-97-6	Mercury	3	10	10
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	81
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	317
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	20 J
7440-32-6	Titanium	379	1260	3236
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	104
60569-64-6	Zircon	7.44	24.8	268

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSSC0303

Aquired:

6/12/2012 1:08:50 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	6 J
7440-39-3	Barium	147	490	573
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	49 J
7440-48-4	Cobalt	61.1	204	170 J
7440-50-8	Copper	5.03	16.8	14 J
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	25967
7439-92-1	Lead	4.04	13.5	12 J
7439-96-5	Manganese	23	76.8	291
7439-97-6	Mercury	3	10	7 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	12 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	75
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	257
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	U
7440-32-6	Titanium	379	1260	3369
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	53
60569-64-6	Zircon	7.44	24.8	365

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

LYSSC0303D

Aquired:

6/12/2012 1:11:20 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	8
7440-39-3	Barium	147	490	430 J
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	48 J
7440-48-4	Cobalt	61.1	204	120 J
7440-50-8	Copper	5.03	16.8	10 J
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	27235
7439-92-1	Lead	4.04	13.5	10 J
7439-96-5	Manganese	23	76.8	327
7439-97-6	Mercury	3	10	6 J
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	16 J
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	74
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	263
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	30 J
7440-32-6	Titanium	379	1260	3368
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	59
60569-64-6	Zircon	7.44	24.8	233

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

SiO2 blank 1

Aquired:

6/12/2012 11:30:59 AM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	U
7440-48-4	Cobalt	61.1	204	U
7440-50-8	Copper	5.03	16.8	U
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	U
7439-92-1	Lead	4.04	13.5	U
7439-96-5	Manganese	23	76.8	U
7439-97-6	Mercury	3	10	U
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	U
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	U
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	U
7440-32-6	Titanium	379	1260	U
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	U
60569-64-6	Zircon	7.44	24.8	U

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

X-Ray Fluorescence Screening Results
XRF Metals EPA 6200

Sample:

SiO2 Blank 2

Aquired:

6/12/2012 1:24:42 PM

Dilution: 1

Analyst: UOS - Start

Matrix: Soil

Unit: mg/kg

CAS No.	Analyte	Detection Limit	Reporting Limit	Result
7440-36-0	Antimony	16.9	56.4	U
7440-38-2	Arsenic	2.36	7.87	U
7440-39-3	Barium	147	490	U
7440-69-9	Bismuth	16	53.3	U
7440-43-9	Cadmium	15.9	53.1	U
7440-70-2	Calcium	40	133	U
7782-50-5	Chlorine	140	467	U
7440-47-3	Chromium	16.3	54.4	U
7440-48-4	Cobalt	61.1	204	U
7440-50-8	Copper	5.03	16.8	U
7440-57-5	Gold	5	16.7	U
7439-89-6	Iron	954	3180	U
7439-92-1	Lead	4.04	13.5	U
7439-96-5	Manganese	23	76.8	U
7439-97-6	Mercury	3	10	U
7439-98-7	Molybdenum	2.27	7.56	U
7440-02-0	Nickel	11.3	37.8	U
7723-14-0	Phosphorous	1000	3330	U
7440-09-7	Potassium	120	400	U
7440-17-7	Rubidium	3.82	12.7	U
7782-49-2	Selenium	1.73	5.77	U
7440-22-4	Silver	12.2	40.6	U
7440-24-6	Strontium	7.11	23.7	U
7704-34-9	Sulfur	400	1330	U
7440-31-5	Tin	17.2	57.3	U
7440-32-6	Titanium	379	1260	U
7440-33-7	Tungsten	6	20	U
7440-62-2	Vanadium	7	23.3	U
7440-66-6	Zinc	8.95	29.8	U
60569-64-6	Zircon	7.44	24.8	U

U = Analyte concentration is less than Detection Limit
U with associated numerical value = As concentration is less than 10% of Pb concentration
J = Analyte concentration is greater than Detection Limit but less than the Reporting Limit
E = Analyte concentration is more than the upper calibration limit
IDQ = Insufficent data to calculate Detection Limit and Reporting Limit

XRF Preparation Log (70047)

Project(s): Laramie Yttrium Plant
Project #: 36549238

PAN #	Sample ID	Preparation		Collection		Description
		Date	Initials	Date	Time	
01	LYSOAAØ1	6/12/12	JP	6/13/12	940	
01D	LYSOAAØ1D				941	
02	LYSOAAØ2				946	
03	LYSOAAØ3				947	
04	LYSOAAØ4				951	
05	LYSOAAØ5				952	
06	LYSOABØ1				942	
07	LYSOABØ2				945	
08	LYSOABØ3				947	
09	LYSOACØ1				942	MBØ1 prepared (LYSOACØ1MB)
10	LYSOACØ2				945	
11	LYSOACØ3				948	
12	LYSOADØ1				943	
13	LYSOADØ2				945	
14	LYSOADØ3				948	
15	LYSOAEØ1				944	
16	LYSOAEØ2				945	
17	LYSOAEØ3				949	
18	LYSOAEØ5				954	
19	LYSSCØ1Ø1			6/14/12	1521	
20	LYSSBØ1Ø1				1630	MBØ2 prepared (LYSSBØ1Ø1MB)
21	LYSSCØ3Ø3				1524	
21D	LYSSCØ3Ø3D				1525	
22	LYSSBØ3Ø3				1633	
23						
24						
25						

XRF Run Log (70047)

Analysis Date: 6/12/12 Analyst: JR Analysis Length (sec): 120
Project Name: Laramie Yttrium Plant Project #: 36549238

Run	Sample ID	PAN	Pb	As	Note	Run	Sample ID	PAN	Pb	As	Note
01	Standardization	—	—	—	pass	26	LYSOAEØ2	16	1063	46	
02	SiO_2 Blank 1	—	<2	<1		27	27Ø9	—	10	15	
03	27Ø9	—	11	15		28	LYSOAEØ3	17	432	21	
04	271Ø_1	—	5829	674		29	LYSOAEØ5	18	250	15	
05	2711_1	—	1203	112		30	LYSSCØ1Ø1	19	81	12	
06	LYSOAAØ1	Ø1	610	13		31	LYSSBØ1Ø1	2Ø	178	2	
07	LYSOAAØ1D	Ø1D	1601	16		32	27Ø9	—	12	14	
08	LYSOAAØ2	Ø2	1077	13		33	LYSSBØ1Ø1MB	MBØ2	<2	<2	
09	LYSOAAØ3	Ø3	1672	18		34	LYSSCØ3Ø3	21	12	6	
10	LYSOAAØ4	Ø4	625	20		35	LYSSCØ3Ø3D	21D	10	8	
11	LYSOAAØ5	Ø5	891	23		36	LYSSBØ3Ø3	22	16	9	
12	27Ø9	—	11	14		37	271Ø_2	—	5776	703	
13	LYSOABØ1	Ø6	569	22		38	2711_2	—	1196	112	
14	LYSOABØ2	Ø7	828	25		39	27Ø9	—	9	15	
15	LYSOABØ3	Ø8	2234	23		40	SiO_2 Blank 2	—	<2	<1	
16	LYSOACØ1	Ø9	598	32		41					
17	27Ø9	—	10	15		42					
18	LYSOACØ1MB	MBØ1	<3	<1		43					
19	LYSOACØ2	1Ø	695	21		44					
20	LYSOACØ3	11	962	13		45					
21	LYSOADØ1	12	667	37		46					
22	27Ø9	—	13	13		47					
23	LYSOADØ2	13	529	26		48					
24	LYSOADØ3	14	1510	<18		49					
25	LYSOAEØ1	15	1007	34		50					