Attachment 2
TABLE 1
LOU 62 Background Comparison

Chemical Name	Depth Interval	Background								LOU 62								Two-Sample T-test	Gehan Test	Quantile Test (0.8)	Slippage Test	Greater than Background?	Background Qualifier
		No. of Detects	Total Samples	% Detects	Minimum Detect	Maximum Detect	Median Detect	Mean Detect	Standard Deviation	No. of Detects	Total Samples	% Detects	Minimum Detect	Maximum Detect	Median Detect	Mean Detect	Standard Deviation	*p*	*p*	*p*	*p*		
Aluminum	0_10	31	31	100%	7340	11400	8970	9020	890	13	13	100%	5510	9520	8090	8020	1090	0.9956	0.997	0.9716	1	No	1
Aluminum	10_UMCf	13	13	100%	7290	18400	10600	10300	2900	11	11	100%	5110	14000	8110	8260	2210	0.9708	0.9739	0.9327	1	No	1
Antimony	0_10	3	31	10%	0.6	3.4	0.9	1.63	1.54	2	13	15%	0.14	0.15	0.145	0.145	0.00707	0.9993	0.9974	1	1	No	1 2
Antimony	10_UMCf	5	13	38%	0.7	1.4	0.9	0.92	0.286	2	11	18%	0.12	0.14	0.13	0.13	0.0141	0.9995	0.9997	1	1	No	1 2
Arsenic	0_2	16	16	100%	1.6	4.25	2	2.19	0.645	6	6	100%	1.8	2.76	2.38	2.34	0.333	0.2506	0.1049	0.4195	1	No	1
Arsenic	2_10	15	15	100%	2.05	3.13	2.54	2.59	0.321	7	7	100%	1.92	4.71	2.8	3.01	0.924	0.1393	0.1451	0.1603	**0.02273**	Yes	3
Arsenic	10_UMCf	13	13	100%	2.49	22.5	11.6	11.9	6.51	11	11	100%	3.38	23.5	5.14	8.15	6.38	0.9145	0.9302	0.7847	0.4583	No	
Barium	0_10	31	31	100%	111	213	162	166	22.4	13	13	100%	111	249	156	159	37.8	0.7185	0.8229	0.8269	0.2955	No	
Barium	10_UMCf	13	13	100%	79.9	217	97.8	117	42.9	11	11	100%	92.8	452	123	168	103	0.07722	0.03184	0.4146	0.1993	No	
Beryllium	0_10	31	31	100%	0.362	0.588	0.459	0.464	0.0475	13	13	100%	0.378	0.61	0.428	0.446	0.0658	0.8032	0.9305	0.8269	0.2955	No	
Beryllium	10_UMCf	13	13	100%	0.328	0.642	0.423	0.442	0.0919	11	11	100%	0.328	0.526	0.406	0.428	0.064	0.6686	0.6682	0.7847	1	No	1
Boron	0_10	7	31	23%	3.6	11.7	6.2	6.67	2.68	10	13	77%	13.3	112	39.6	45.9	33.7	**0.004341**	**0.000414**	**1.009E-06**	**1.153E-07**	Yes	
Boron	10_UMCf	11	13	85%	12.5	29.6	16.2	18.2	5.63	10	11	91%	14.3	71.1	17.9	23.7	17.1	0.1784	0.1846	0.7847	0.4583	No	
Cadmium	0_10	25	31	81%	0.11	0.48	0.19	0.197	0.0853	11	13	85%	0.04	0.57	0.11	0.177	0.169	0.5822	0.917	0.5828	0.2955	No	
Cadmium	10_UMCf	9	13	69%	0.13	0.26	0.18	0.184	0.0413	9	11	82%	0.06	0.17	0.11	0.108	0.038	0.9302	0.9483	1	1	No	1 2
Chromium (Total)	0_2	16	16	100%	5.57	8.63	7.24	7.11	0.718	6	6	100%	6.5	16.8	11.1	11.5	4.02	**0.02242**	**0.006096**	**0.009342**	**0.002051**	Yes	
Chromium (Total)	2_10	15	15	100%	5.6	10.7	8.12	8.43	1.23	7	7	100%	7.4	37.8	9.46	14.8	11.1	0.09067	0.1086	0.1603	**0.02273**	Yes	3
Chromium (Total)	10_UMCf	13	13	100%	6.59	41.7	17.3	17.8	8.56	11	11	100%	6.7	16.1	13	12.5	3.3	0.9728	0.9638	1	1	No	1
Chromium (VI)	0_10	1	31	3%	0.29	0.29	0.29	0.29	NA	2	13	15%	0.27	0.51	0.39	0.39	0.17	0.1932	0.5131	0.2042	0.2955	No	
Chromium (VI)	10_UMCf	0	13	0%	NA	NA	NA	NA	NA	0	11	0%	NA	NA	NA	NA	NA	0.9902	0.9982	1	NA	No	1
Cobalt	0_10	31	31	100%	5.4	9.1	7.3	7.34	0.758	13	13	100%	6.4	17.2	8	9.98	3.9	**0.0158**	**0.02429**	**0.01705**	**0.001185**	Yes	
Cobalt	10_UMCf	13	13	100%	4.1	7.3	5.3	5.65	1.04	11	11	100%	3.6	8.3	5.5	5.51	1.25	0.6121	0.6142	0.9327	0.4583	No	
Copper	0_10	31	31	100%	15.8	140	19.1	23.1	21.8	13	13	100%	12.6	35.8	19.2	20.1	5.66	0.7579	0.5614	0.5376	1	No	1
Copper	10_UMCf	13	13	100%	11.8	21.2	15.6	15.8	2.8	11	11	100%	8.9	18.9	14.9	13.7	2.95	0.9555	0.9477	0.9697	1	No	1
Iron	0_10	31	31	100%	11300	20600	15700	15500	2140	13	13	100%	10700	45600	16000	22400	11600	0.02723	0.1342	0.06919	**0.001185**	Yes	3
Iron	10_UMCf	13	13	100%	8770	16100	13100	13000	2530	11	11	100%	6990	17200	12700	12500	2790	0.6543	0.6575	0.7847	0.4583	No	
Lead	0_10	31	31	100%	7.1	72.8	8.9	11.3	11.6	13	13	100%	7	112	8.5	17.7	28.5	0.222	0.3641	0.2406	0.2955	No	
Lead	10_UMCf	13	13	100%	5.2	11.2	6.5	7.14	1.77	11	11	100%	5.3	8.3	7.2	7.02	0.974	0.5822	0.3969	0.7847	1	No	1
Magnesium	0_2	16	16	100%	7700	11500	9120	9300	1110	6	6	100%	6320	8750	7560	7560	816	0.9992	0.9984	1	1	No	1
Magnesium	2_10	15	15	100%	9230	13000	10500	10700	1140	7	7	100%	7570	11300	10000	9770	1380	0.9297	0.8779	0.886	1	No	1
Magnesium	10_UMCf	13	13	100%	7890	30000	19200	19100	6140	11	11	100%	5080	23000	10600	11700	4660	0.9985	0.9931	0.9327	1	No	1
Manganese	0_10	31	31	100%	262	537	360	366	61.3	11	11	100%	305	455	354	359	42.6	0.6685	0.5738	0.9548	1	No	1
Manganese	10_UMCf	13	13	100%	142	336	235	239	59.7	9	9	100%	113	404	185	202	87.7	0.8527	0.9378	0.9511	0.4091	No	
Mercury	0_2	16	16	100%	0.012	0.362	0.0175	0.0479	0.0871	5	6	83%	0.013	0.051	0.021	0.026	0.0149	0.8632	0.5295	0.8341	1	No	1 2
Mercury	2_10	11	15	73%	0.006	0.094	0.012	0.0192	0.025	7	7	100%	0.007	0.013	0.0091	0.00987	0.00219	0.8694	0.9859	0.886	1	No	1 2
Mercury	10_UMCf	9	13	69%	0.004	0.044	0.008	0.0118	0.0124	8	11	73%	0.004	0.014	0.008	0.0085	0.00346	0.8518	0.8887	0.4146	1	No	1 2
Molybdenum	0_2	15	16	94%	0.31	32.7	0.43	2.56	8.34	6	6	100%	0.47	2.75	1.04	1.35	0.96	0.6937	**0.002228**	**0.009342**	1	Yes	
Molybdenum	2_10	15	15	100%	0.34	2.83	0.6	0.791	0.603	7	7	100%	0.34	1.67	0.59	0.734	0.473	0.5934	0.7019	0.5231	1	No	1
Molybdenum	10_UMCf	13	13	100%	0.37	1.82	0.78	1.02	0.594	11	11	100%	0.63	1.31	1.01	0.962	0.258	0.628	0.375	1	1	No	1
Nickel	0_10	31	31	100%	12.7	21.4	15.6	15.9	1.78	13	13	100%	12.6	32.4	17.1	19.3	5.81	0.02958	0.02523	**0.00481**	**0.005267**	Yes	
Nickel	10_UMCf	13	13	100%	9.97	16.4	13.8	13.3	2.08	11	11	100%	11.5	20.6	14.8	14.6	2.62	0.1072	0.1622	0.4146	0.4583	No	
Platinum	0_10	19	31	61%	0.006	0.046	0.01	0.0119	0.00852	11	13	85%	0.007	0.058	0.019	0.0265	0.0192	0.7512	0.781	**0.001183**	0.1573	Yes	2 3
Platinum	10_UMCf	8	13	62%	0.008	0.014	0.0105	0.0111	0.00203	10	11	91%	0.008	0.018	0.0105	0.0117	0.0033	0.9738	0.8679	0.7847	0.2895	No	2
Potassium	0_2	16	16	100%	1830	4210	2280	2510	726	6	6	100%	1580	2370	2110	2050	282	0.9762	0.9016	1	1	No	1
Potassium	2_10	15	15	100%	1450	2420	1740	1830	333	7	7	100%	1160	1680	1540	1450	221	0.9971	0.9843	1	1	No	1
Potassium	10_UMCf	13	13	100%	1590	4250	2140	2270	723	11	11	100%	1350	3590	1670	1840	605	0.934	0.9905	0.9697	1	No	1
Selenium	0_10	3	31	10%	0.8	0.9	0.8	0.833	0.0577	1	13	8%	0.8	0.8	0.8	0.8	NA	0.7041	0.7591	0.7626	1	No	1
Selenium	10_UMCf	0	13	0%	NA	NA	NA	NA	NA	1	11	9%	0.8	0.8	0.8	0.8	NA	0.2254	0.6224	0.4348	NA	No	1
Silver	0_10	0	31	0%	NA	NA	NA	NA	NA	5	13	38%	0.092	1.7	0.2	0.62	0.712	0.08253	0.5	0.08245	NA	No	1
Silver	10_UMCf	2	13	15%	0.6	0.8	0.7	0.7	0.141	3	11	27%	0.088	2.3	0.12	0.836	1.27	0.3073	0.8816	0.8587	0.4583	No	
Sodium	0_2	16	16	100%	307	864	468	533	181	6	6	100%	313	3070	1280	1490	1240	0.05915	0.1882	0.1005	**0.01299**	Yes	3
Sodium	2_10	15	15	100%	474	1050	729	714	166	7	7	100%	501	1130	919	812	246	0.1832	0.1706	**0.02073**	0.3182	Yes	3
Sodium	10_UMCf	13	13	100%	612	1200	924	887	204	11	11	100%	580	4770	1160	1410	1150	0.081	**0.02438**	**0.01087**	**0.01087**	Yes	
Strontium	0_2	16	16	100%	129	299	186	189	46.8	6	6	100%	116	178	167	158	23.4	0.9726	0.9476	1	1	No	1

Attachment 2
TABLE 1
LOU 62 Background Comparison

Chemical Name	Depth Interval	Background								LOU 62								Two-Sample T-test	Gehan Test	Quantile Test (0.8)	Slippage Test	Greater than Background?	Background Qualifier
		No. of Detects	Total Samples	% Detects	Minimum Detect	Maximum Detect	Median Detect	Mean Detect	Standard Deviation	No. of Detects	Total Samples	% Detects	Minimum Detect	Maximum Detect	Median Detect	Mean Detect	Standard Deviation	*p*	*p*	*p*	*p*		
Strontium	2_10	15	15	100%	177	339	255	257	45.3	7	7	100%	203	326	301	276	53.6	0.2203	0.2628	0.1603	1	No	1
Strontium	10_UMCf	13	13	100%	153	2240	386	775	704	11	11	100%	154	1170	266	329	287	0.9738	0.9133	0.9697	1	No	1
Thallium	0_10	31	31	100%	0.071	0.193	0.092	0.107	0.0329	11	13	85%	0.076	0.153	0.109	0.112	0.0231	0.7195	0.4184	0.5376	1	No	1 2
Thallium	10_UMCf	13	13	100%	0.061	0.203	0.103	0.112	0.0359	10	11	91%	0.073	0.178	0.0885	0.101	0.0353	0.8546	0.9341	0.7847	1	No	1 2
Tin	0_10	0	31	0%	NA	NA	NA	NA	NA	2	13	15%	0.41	0.47	0.44	0.44	0.0424	0.9038	0.3475	0.2955	NA	No	1
Tin	10_UMCf	1	13	8%	14.3	14.3	14.3	14.3	NA	2	11	18%	0.39	0.44	0.415	0.415	0.0354	0.964	0.9662	0.7174	1	No	1
Titanium	0_10	31	31	100%	480	1080	829	793	162	13	13	100%	380	901	657	645	152	0.9959	0.9948	1	1	No	1
Titanium	10_UMCf	13	13	100%	405	844	664	664	147	11	11	100%	332	714	548	530	118	0.9889	0.9851	1	1	No	1
Tungsten	0_10	30	31	97%	0.12	0.62	0.17	0.214	0.11	13	13	100%	0.12	0.44	0.22	0.232	0.0891	0.2378	0.1203	0.4386	1	No	1
Tungsten	10_UMCf	12	13	92%	0.16	0.39	0.285	0.288	0.0725	10	11	91%	0.12	0.77	0.21	0.276	0.201	0.6061	0.9567	0.7847	0.1993	No	
Uranium	0_2	16	16	100%	0.655	1.01	0.829	0.817	0.116	6	6	100%	0.68	0.959	0.742	0.765	0.0989	0.8399	0.7224	0.8341	1	No	1
Uranium	2_10	15	15	100%	0.913	1.94	1.34	1.34	0.332	7	7	100%	0.883	2.4	1.57	1.44	0.521	0.3276	0.5421	0.8134	0.3182	No	
Uranium	10_UMCf	13	13	100%	1.07	4.74	3.47	3.32	1.06	11	11	100%	0.857	3.5	1.64	1.87	0.858	0.9994	0.9977	1	1	No	1
Vanadium	0_10	31	31	100%	28	54.9	46	43.8	7.58	13	13	100%	26.6	46.3	35.3	36.8	7.04	0.9967	0.9964	1	1	No	1
Vanadium	10_UMCf	13	13	100%	29.4	49.8	41.6	40.5	6.22	11	11	100%	24.2	47	33.2	33.7	7.38	0.9871	0.9851	0.9697	1	No	1
Zinc	0_10	31	31	100%	25.8	254	33.3	40.4	39.9	13	13	100%	26.5	78.6	33.6	36.8	13.5	0.6735	0.4235	0.5376	1	No	1
Zinc	10_UMCf	13	13	100%	21.9	39.1	27.9	29.1	5.74	10	11	91%	17.2	33.4	24.4	25	5.02	0.972	0.9661	0.7847	1	No	1

Notes:
p values in boldface indicate p < 0.025
p values less than 10^-10 shown as 0
NA - value not available because either chemical not detected, only detected in 1 sample, or the test is invalid for the given distributior
Background dataset is from RZ-A, excluding the 6 borings in LOU 62.
Background comparison tests use 1/2 the detection limit for non-detects.

Background Qualifiers:
[1] = Gilbert's Toolbox results imply Site data lower than Background data
[2] = Less than 25% frequency of detection in either site or background data sets
[3] = Failed Gilbert's Toolbox in only 1 out of 4 tests

Depth Intervals:
0_2 - 0 feet below ground surface (bgs) to 2 feet bgs
2_10 - greater than 2 feet bgs to 10 feet bgs
0_10 - 0 feet bgs to 10 feet bgs
10_UMCf - greater than 10 feet bgs to the top of the Upper Muddy Creek formation