211533 - R8 SDMS

ADMINISTRATIVE RECORD

U.S. Army Corps of Engineers
Omaha District

PUBLIC DOCUMENT

Vasquez and I-70 Site
Denver, Colorado

Draft Report for Rapid Response Sampling and Analysis Residential Area

Volume I

Contract Number DACA45-98-D-0004
Delivery Order No. 5

16 February 1999

Prepared for:

U.S. ARMY CORPS. OF ENGINEERS, OMAHA DISTRICT
Fort Crook Area, Rapid Response Resident Office

Prepared by

WESTON®
MANAGERS DESIGNERS/CONSULTANTS

Roy F. Weston, Inc.
Denver, Colorado

EXECUTIVE SUMMARY

I. INTRODUCTION

Roy F. Weston, Inc. (WESTON®) conducted residential area sampling and analysis for the Omaha District, Corps of Engineers, Rapid Response Program (Contract No. DACW45-98-D-0004, Delivery Order No. 5). The Rapid Response Program was conducting this sampling at the request of the USEPA Region VIII.

The scope of work was to collect samples from "impacted" residences and "unimpacted" residences. Sample collection from "impacted" residences included tap water samples for lead analysis, garden vegetables and associated garden soils, living area and attic dust samples, and portable XRF analysis for lead on interior and exterior walls. Sample collection from "unimpacted" residences included soil samples from soil grade to two inches below grade along a five-foot grid. One core sample each from the front and back yards was collected at each residence.

II. SAMPLING AND ANALYTICAL ACTIVITIES

Sampling activities for the "impacted" residences began on 5 October 1998 and was concluded on 14 October 1998. A total of 16 residences were sampled. Table 1 identifies sample locations and deviations from the initial work plan. Table 2 provides the analytical results for the indoor dust samples (University of Colorado Laboratory for Environmental and Geological Studies) and tab water samples (Quanterra, Inc.). Results of the XRF analysis for interior and exterior paint can be found in Lead Paint Data Appendix (Gobbell Hays Partners, Inc.).

Sampling activities for the "unimpacted" residences began on 6 October 1998 and was completed on 14 October 1998. Activities associated with this sampling event did not deviate from the work plan. Figures 1-3 identify sampling locations. Tables 3 thru 6 summarize the analytical results provided by the University of Colorado Laboratory for Environmental and Geological Studies. Additional "confirmatory" sample analysis was conducted by Quanterra, Inc. The comparison of the analytical result between the two laboratories are provided in

Table 7. This table also provides the result of "blind standards" submitted to Quanterra for confirmatory analysis. "Blind Standards" were also submitted to the University of Colorado and the comparison of these results are presented in Table 8.

III. SUMMARY AND CONCLUSIONS

The objective of this project was to obtain additional site-specific information to be incorporated in a risk assessment and to support risk management decisions for future clean-up. This project was successful in meeting that objective and also identified the potential need for additional intensive sampling based on the identification of elevated levels of arsenic at one of the "unimpacted" residences.

No significant problems were encountered in the field. Recently cleaned residences made obtaining sufficient samples for analysis difficult in some cases. Also, other residents did not allow access after initially indicating that sampling would be allowed.

Table 1

"Impacted"
I-70 Vasquez Residential Sampling

Address	Living Area Dust Sample (sq ft sampled)	Attic Dust Sample (sq ft sampled)	Water Sample	Vegetables	Deviation from Work Plan
4691 Vine	Y	Y	Y	N	
2000 E 47th	Y (2)	N	N	N	Tenant claimed there was no attic access, not very cooperative. We have checked back 3 times, door is always open, but tenant doesn't answer. We have not retrieved water sample bottles
5195 St Paul St.	Y (3)	Y (2)	Y	N	
3825 Adams	Y (2)	Y (3)	Y	N	
4936 Steele	Y (2)	Y (2)	Y	N	
4690 Clayton	Y (2.5)	Y (12 Linear + 1 sq.)	Y	N	
4641 Clayton	Y (2)	N	D	N	Attic access blocked by full closet- Tenant supposedly moving weekend of Oct. 10 Returned 2 days straight for water samples, which had not been taken. Tenant would not let us in house, but let us fill bottles at an outside tap.
4850 Adams	Y (2)	Y (12 Linear)	D	N	Owner filled initial bottle in the morning, but didn't fill the 5 minute bottle. We arrived to pick bottles up, had him fill the other bottle after running tap 5 minutes.
4771 Vine	Y	D (1)	Y	N	Attic had been converted to a bedroom, so a dusty corner of the bedroom was sampled.
3818 Madison	Y (17)	Y (4)	Y	Y	House was very clean. Took 17 sq. ft. to obtain 0.5g living room sample.
4044 Steele	D (22)	D (2)	Y	N	After vacuuming 22 sq. ft., only recovered 0.2g of dust. No attic access. Sampled basement in place of attic, and because it was the only place there was dust.
3535 Humboldt	Y (2)	D (9)	Y	N	No attic access. Took substitute from basement.
4760 St Paul Ct.	N (12)	D (10)	Y	N	Vacuumed 12 sq. ft. in living room and recovered no sample. Has attic access, but door would be destroyed in process of opening it. Substitution for attic sample was taken from top of cabinets in kitchen.
4715 St Paul Ct.	Y (3)	Y (1)	Y	Y	
4940 Steele	D (20)	Y (3)	Y	N	Vacuumed 20 sq ft, only recovered 0.2g of dust.
4980 Steele	Y	Y	Y	N	

D = Deviation

TABLE 2

ANALYTICAL RESULTS FROM RESIDENTIAL DUST AND WATER SAMPLES

SITE	LIVING AREA DUST SAMPLE (mg/kg)				ATTIC DUST SAMPLE (mg/kg)				WATER SAMPLE (mg/l)	
	Arsenic	Lead	Cadmium	Zinc	Arsenic	Lead	Cadmium	Zinc	Initial	5-min.
4691 Vine	83	79	24	869	499	2809	67	4538	ND	4.3
2000 E. 47th	77	230	24	955	Not collected					
5195 St. Paul St.	169	79	9	660	2	828	32	4383	ND	ND
3825 Adams	130	116	7	318	53	4106	7	427	ND	ND
4936 Steele	116	76	18	648	85	563	36	1362	ND	ND
4690 Clayton	70	220	24	610	41	999	36	1080	3.1	ND
4641 Clayton	51	67	14	517	Not collected				ND	ND
4850 Adams	84	385	16	1645	377	1946	46	3433	5.4	5.9
4771 Vine	96	361	23	1308	104	231	10	544	11.4	6.0
3818 Madison	126	100	16	1905	24	293	275	2777	ND	ND
4044 Steele	Is				788	811	27	6865	ND	ND
3535 Humboldt	123	310	14	982						
3535 Humboldt-bsmt	47	1698	35	5197						
4760 St. Paul Ct.	18	222	6	734	See Table 1					
4715 St. Paul Ct.	164	1145	39	2002	422	916	15	1459	4.5	ND
4940 Steele	97	158	12	846	IS				3.1	ND

IS = Insufficient Sample

ND = Not Detected

Analysis for the living area and attic dust samples are by XRF except for the attic dust sample for 4690 Clayton which is ICP.

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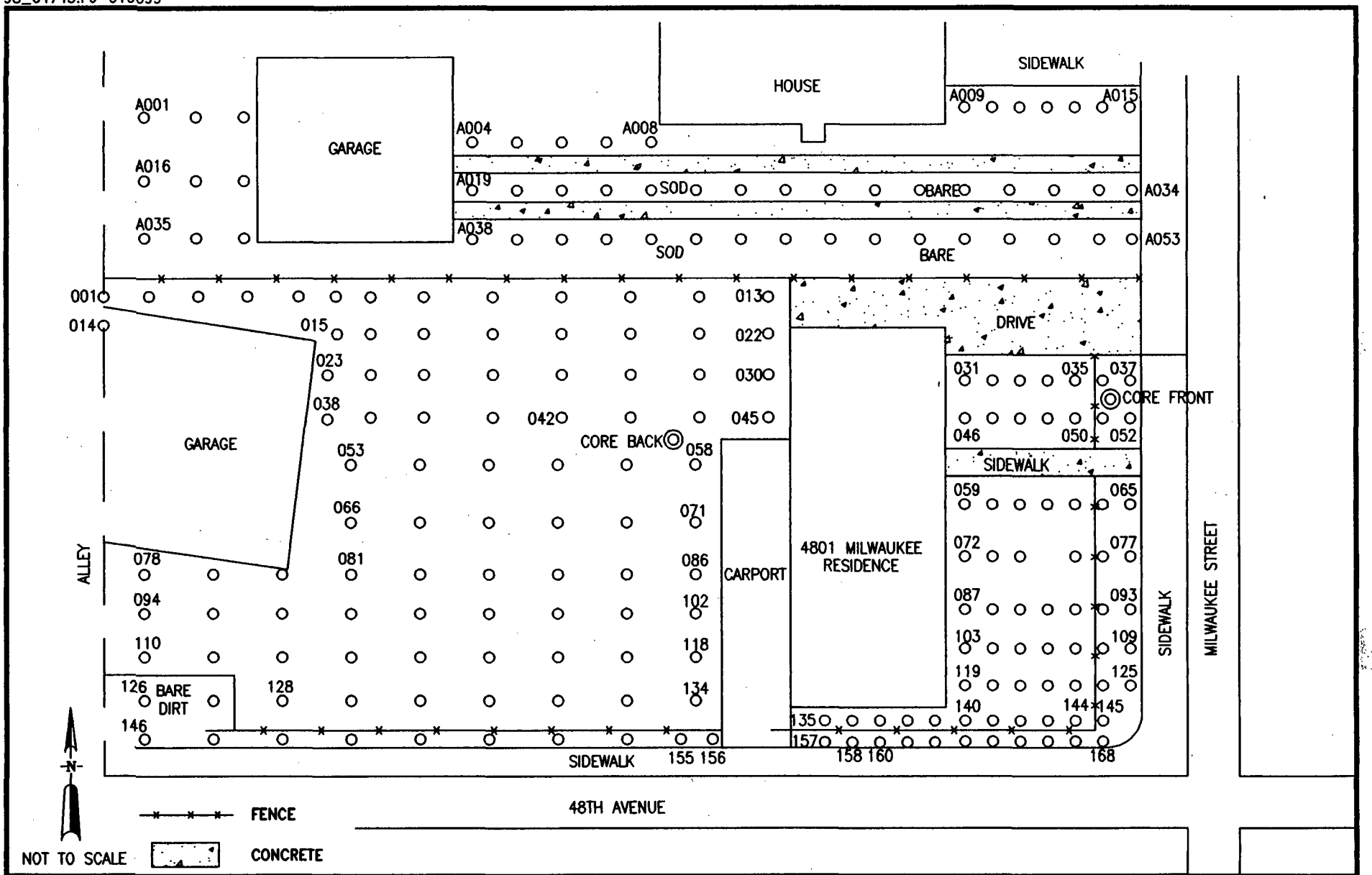

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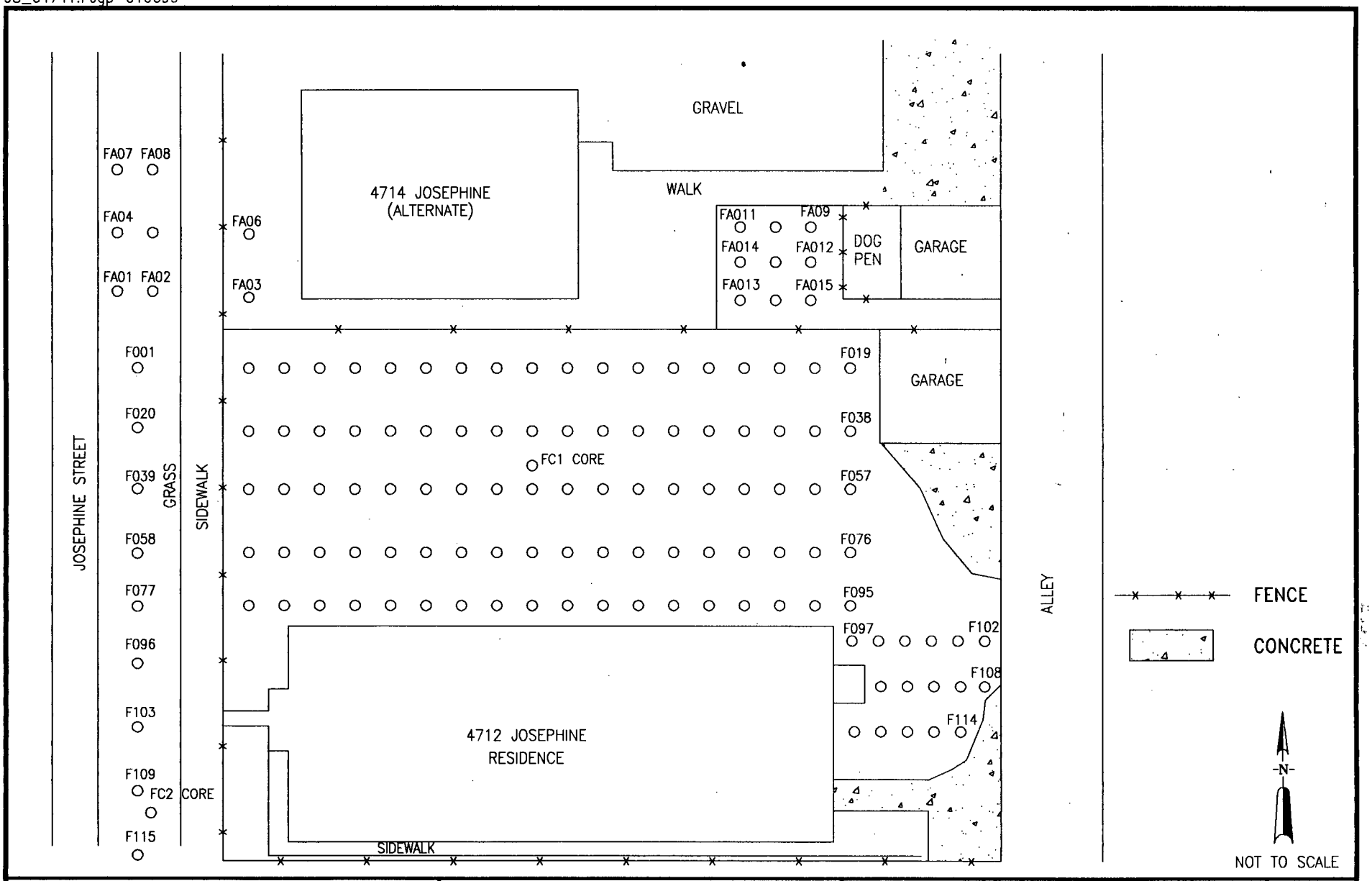
COE/EPA
4801 MILWAUKEE STREET
DENVER, COLORADO

FIGURE
1

98_64741.PJgp-010699



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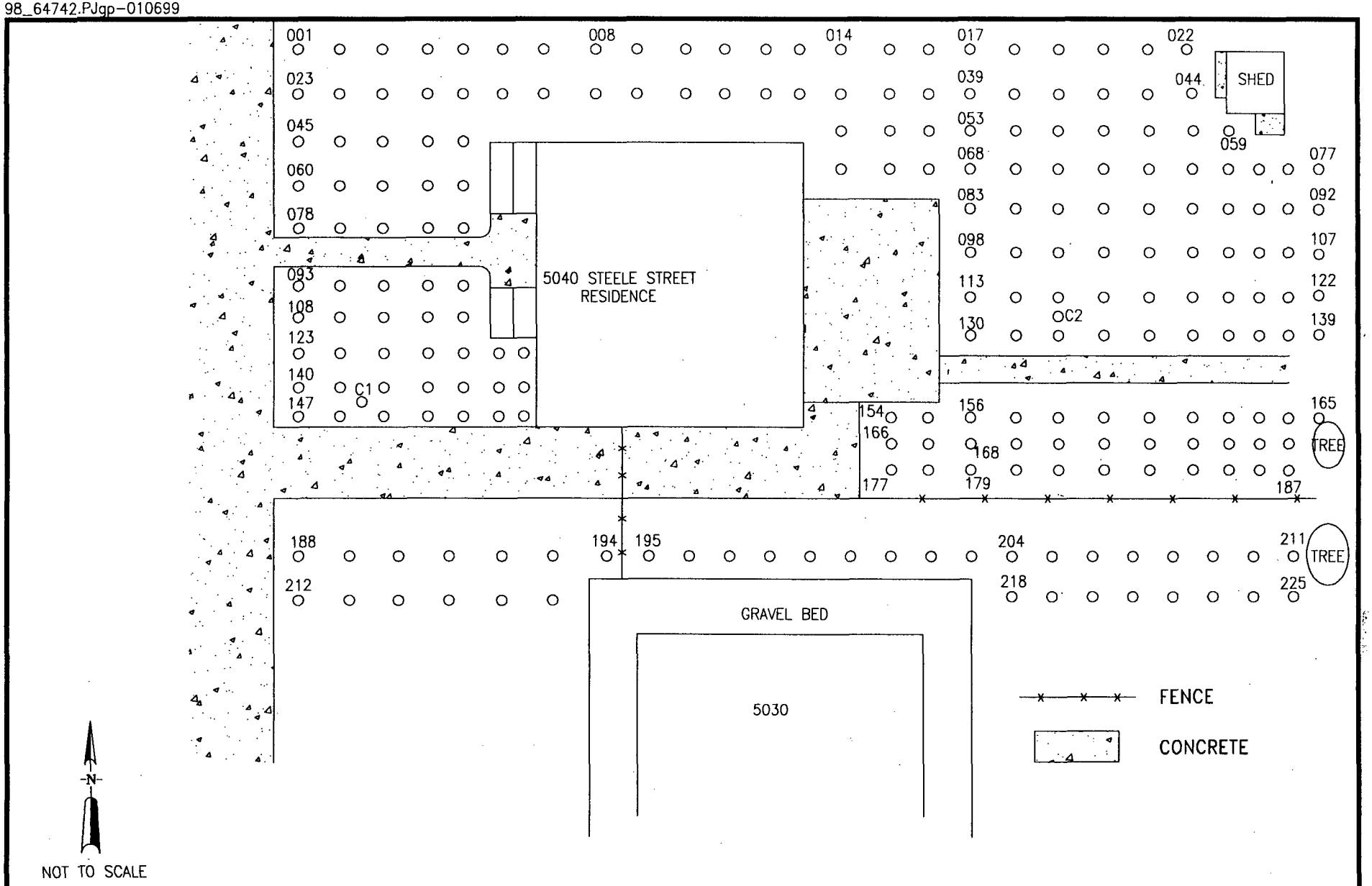
COE/EPA
4712 JOSEPHINE STREET
DENVER, COLORADO

FIGURE
2

98_64742.PJgp-010699



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COE/EPA
5040 STEELE STREET
DENVER, COLORADO

FIGURE
3

TABLE 3
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1805	041	173	320	195	9
ND-98-1806	042	214	247	219	7
ND-98-1868	001	327	5	239	5
ND-98-1869	002	594	ND	213	8
ND-98-1870	003	532	33	202	7
ND-98-1871	004	404	39	216	5
ND-98-1872	005	373	54	286	7
ND-98-1873	006	221	89	175	6
ND-98-1874	007	218	56	172	8
ND-98-1875	008	212	104	190	8
ND-98-1876	009	320	137	194	10
ND-98-1877	010	223	165	248	10
ND-98-1878	010d	211	175	340	8
ND-98-1879	011	187	106	175	9
ND-98-1880	012	221	191	271	8
ND-98-1881	013	1172	74	568	10
ND-98-1882	014	346	8	200	5
ND-98-1883	025	206	261	219	9
ND-98-1884	026	175	246	223	9
ND-98-1885	027	149	199	189	7
ND-98-1886	028	175	181	259	9
ND-98-1887	029	215	492	260	11
ND-98-1888	030	329	7	154	8
ND-98-1889	030d	268	ND	174	8
ND-98-1890	031	275	179	164	9
ND-98-1891	032	181	242	165	10
ND-98-1892	033	133	345	133	8
ND-98-1893	034	139	423	159	8
ND-98-1894	035	147	338	187	6
ND-98-1895	036	115	414	167	8
ND-98-1896	037	166	399	182	8
ND-98-1897	038	185	164	203	8
ND-98-1898	039	178	330	228	6
ND-98-1899	040	186	246	222	9
ND-98-1900	040d	166	205	191	8
ND-98-1901	015	221	76	192	7
ND-98-1902	016	169	112	138	9
ND-98-1903	017	208	224	218	11

TABLE 3 (Continued)
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1904	018	219	421	247	7
ND-98-1905	019	173	181	212	7
ND-98-1906	020	187	152	255	10
ND-98-1907	020d	178	235	233	9
ND-98-1908	021	282	84	349	5
ND-98-1909	022	305	42	197	9
ND-98-1910	023	258	264	286	8
ND-98-1911	024	177	279	242	7
ND-98-1912	043	195	428	280	11
ND-98-1913	044	166	188	148	6
ND-98-1914	045	959	40	321	6
ND-98-1915	046	318	262	191	8
ND-98-1916	047	196	323	205	9
ND-98-1917	048	129	289	139	7
ND-98-1918	049	171	395	176	7
ND-98-1919	050	149	368	164	8
ND-98-1920	050d	164	408	191	12
ND-98-1921	051	122	258	151	5
ND-98-1922	052	91	276	120	6
ND-98-1923	053	325	211	259	7
ND-98-1924	054	204	220	241	7
ND-98-1925	055	157	297	233	7
ND-98-1926	056	182	340	219	6
ND-98-1927	057	242	342	246	8
ND-98-1928	058	176	297	195	9
ND-98-1929	059	317	120	184	10
ND-98-1930	060	201	348	231	7
ND-98-1931	060d	206	371	228	10
ND-98-1932	061	178	253	168	11
ND-98-1933	062	163	340	174	10
ND-98-1934	063	154	233	165	10
ND-98-1935	064	176	299	207	9
ND-98-1936	065	173	378	240	9
ND-98-1937	066	192	317	178	7
ND-98-1938	067	159	246	209	7
ND-98-1939	068	150	287	249	7
ND-98-1940	069	625	491	337	13
ND-98-1941	070	217	627	253	8

TABLE 3 (Continued)
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1946	074	176	520	198	9
ND-98-1947	075	145	295	142	7
ND-98-1948	076	174	540	199	8
ND-98-1949	077	214	391	258	8
ND-98-1950	078	287	190	264	7
ND-98-1951	079	280	113	174	7
ND-98-1952	080	236	185	217	5
ND-98-1953	080d	329	156	270	8
ND-98-1954	081	138	356	190	5
ND-98-1955	082	120	224	199	5
ND-98-1956	083	150	392	255	11
ND-98-1957	084	201	1257	635	11
ND-98-1958	085	194	1115	278	11
ND-98-1959	086	214	1716	348	8
ND-98-1960	087	133	841	162	5
ND-98-1961	088	75	177	75	4
ND-98-1962	089	160	316	237	9
ND-98-1963	090	113	213	124	8
ND-98-1964	090d	109	171	119	4
ND-98-1965	091	109	198	129	6
ND-98-1966	092	235	303	198	8
ND-98-1967	093	138	145	160	4
ND-98-1968	094	239	136	195	5
ND-98-1969	095	151	113	149	6
ND-98-1970	096	190	118	139	5
ND-98-1971	097	111	240	116	5
ND-98-1972	098	130	343	197	9
ND-98-1973	099	144	235	214	8
ND-98-1974	100	157	698	245	10
ND-98-1975	100d	144	571	231	8
ND-98-1976	101	302	201	249	10
ND-98-1977	102	365	811	309	11
ND-98-1978	103	287	795	418	10
ND-98-1979	104	84	161	50	3
ND-98-1980	105	65	169	51	3
ND-98-1981	106	133	394	124	5
ND-98-1982	107	137	337	149	5
ND-98-1983	108	135	310	197	5

TABLE 3 (Continued)
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1984	109	173	176	193	8
ND-98-1985	110	226	117	167	6
ND-98-1986	110d	241	85	192	6
ND-98-1987	111	104	66	64	6
ND-98-1988	112	138	243	173	6
ND-98-1989	113	138	299	162	7
ND-98-1990	114	162	378	228	5
ND-98-1991	115	149	268	204	6
ND-98-1992	116	207	647	284	7
ND-98-1993	117	358	156	222	7
ND-98-1994	118	807	1171	563	13
ND-98-1995	119	200	9	410	7
ND-98-1996	120d	123	137	203	5
ND-98-1997	120	141	159	260	5
ND-98-1998	121	95	157	84	2
ND-98-1999	122	143	148	180	7
ND-98-2000	123	188	138	244	5
ND-98-2001	124	194	59	195	3
ND-98-2002	125	235	70	197	5
ND-98-2003	126	197	39	230	4
ND-98-2004	127	270	49	229	4
ND-98-2005	128	280	43	195	5
ND-98-2006	129	179	77	180	6
ND-98-2007	130	242	149	181	8
ND-98-2008	131	294	219	214	5
ND-98-2009	132	182	67	167	5
ND-98-2010	133	200	91	212	7
ND-98-2011	134	282	117	208	5
ND-98-2012	135	289	1	286	6
ND-98-2013	136	222	19	200	4
ND-98-2014	137	265	8	202	3
ND-98-2015	130d	210	178	234	5
ND-98-2016	138	285	13	209	4
ND-98-2017	139	350	35	216	6
ND-98-2018	140	265	34	243	5
ND-98-2019	140d	268	45	205	5
ND-98-2020	141	148	88	184	6
ND-98-2021	142	164	141	272	6

TABLE 3 (Continued)
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-2022	143	229	23	153	4
ND-98-2023	144	223	20	172	4
ND-98-2024	145	183	ND	234	6
ND-98-2025	146	206	17	177	3
ND-98-2026	147	235	32	292	6
ND-98-2027	148	221	40	336	7
ND-98-2028	150	217	ND	408	5
ND-98-2029	150d	234	32	369	4
ND-98-2030	151	257	ND	290	5
ND-98-2031	152	517	23	209	4
ND-98-2032	153	256	88	192	4
ND-98-2033	154	255	62	213	3
ND-98-2034	155	194	ND	240	4
ND-98-2035	156	203	ND	263	3
ND-98-2036	157	164	78	217	5
ND-98-2037	158	196	67	285	5
ND-98-2038	160	193	77	265	4
ND-98-2039	160d	202	66	262	5
ND-98-2040	161	149	42	189	7
ND-98-2041	162	174	69	306	6
ND-98-2042	163	171	42	292	4
ND-98-2043	164	146	68	192	5
ND-98-2044	165	176	68	278	6
ND-98-2045	166	169	109	207	5
ND-98-2046	167	145	ND	182	5
ND-98-2047	168	145	ND	174	4
ND-98-2048	A004	381	1600	596	16
ND-98-2049	A005	493	350	295	10
ND-98-2050	A006	200	1530	435	12
ND-98-2051	A007	302	4798	877	12
ND-98-2052	A008	361	1837	437	10
ND-98-2053	A009	239	428	336	10
ND-98-2054	A0010	232	800	485	17
ND-98-2055	A0010d	216	831	447	12
ND-98-2056	A011	201	704	456	10
ND-98-2057	A012	178	688	399	9
ND-98-2058	A013	244	933	444	10
ND-98-2059	A014	178	627	458	7

TABLE 3 (Continued)
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-2060	A015	164	436	320	8
ND-98-2061	A016	240	81	128	6
ND-98-2062	A017	191	5	146	4
ND-98-2063	A018	582	394	346	8
ND-98-2064	A019	474	458	644	19
ND-98-2065	A020	396	673	740	13
ND-98-2066	A020d	408	668	635	12
ND-98-2067	A021	267	540	386	13
ND-98-2068	A022	317	486	405	13
ND-98-2069	A023	497	218	317	9
ND-98-2070	A024	509	255	526	11
ND-98-2071	A025	819	272	623	13
ND-98-2072	A026	474	258	355	17
ND-98-2073	A027	327	304	353	10
ND-98-2074	A028	381	550	392	14
ND-98-2075	A029	439	1267	686	16
ND-98-2076	A030	365	785	700	17
ND-98-2077	A030d	381	474	535	13
ND-98-2078	A031	350	270	331	11
ND-98-2079	A032	214	125	257	7
ND-98-2080	A033	295	190	328	9
ND-98-2081	A034	252	436	434	10
ND-98-2082	A035	322	27	172	7
ND-98-2083	A036	381	44	201	6
ND-98-2084	A037	904	ND	250	11
ND-98-2085	A038	361	229	436	9
ND-98-2086	A039	232	283	343	11
ND-98-2087	A040	195	192	500	8
ND-98-2088	A040d	223	150	474	6
ND-98-2089	A041	156	282	321	8
ND-98-2090	A042	168	323	260	8
ND-98-2091	A043	156	218	166	9
ND-98-2092	A044	200	437	253	6
ND-98-2093	A045	536	182	537	15
ND-98-2094	A046	332	285	396	8
ND-98-2095	A047	260	224	303	9
ND-98-2096	A048	242	535	447	14
ND-98-2097	A049	257	199	455	9

TABLE 3 (Continued)
ANALYTICAL RESULTS FROM 4801 MILWAUKEE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-2098	A050	249	246	423	9
ND-98-2099	A050d	245	203	383	7
ND-98-2100	A051	204	140	209	9
ND-98-2101	A052	224	135	259	10
ND-98-2102	A053	201	49	189	8
ND-98-2115	A001	260	27	141	6
ND-98-2116	A002	246	45	128	5
ND-98-2117	A003	181	ND	114	5
ND-98-2118	041	239	311	185	9
ND-98-2119	042	281	250	268	8

TABLE 4
ANALYTICAL RESULTS FROM 4712 JOSEPHINE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1582	F001	1036	ND	351	9
ND-98-1583	F002	555	29	317	6
ND-98-1584	F003	501	52	223	12
ND-98-1585	F004	349	51	250	7
ND-98-1586	F005	381	49	310	8
ND-98-1587	F006	310	44	260	4
ND-98-1588	F007	282	10	215	4
ND-98-1589	F008	385	38	191	6
ND-98-1590	F009	400	123	268	7
ND-98-1591	F010	281	11	214	5
ND-98-1592	F011	278	8	258	8
ND-98-1593	F012	314	37	287	5
ND-98-1594	F013	285	62	306	7
ND-98-1595	F014	486	98	469	6
ND-98-1596	F015	478	18	483	7
ND-98-1597	F016	117	62	177	6
ND-98-1598	F017	284	88	254	5
ND-98-1599	F018	244	43	179	4
ND-98-1600	F019	455	ND	255	4
ND-98-1601	F020	819	61	391	7
ND-98-1602	F021	594	149	338	8
ND-98-1603	F022	439	42	199	8
ND-98-1604	F023	251	58	213	6
ND-98-1605	F024	439	51	232	7
ND-98-1606	F025	238	19	324	5
ND-98-1607	F026	224	14	147	5
ND-98-1608	F027	232	40	159	3
ND-98-1609	F028	174	18	167	4
ND-98-1610	F029	210	40	176	6
ND-98-1611	F030	201	38	228	4
ND-98-1612	F031	263	28	200	5
ND-98-1613	F032	282	29	230	5
ND-98-1614	F033	350	51	289	6
ND-98-1615	F034	350	68	432	5
ND-98-1616	F035	304	29	348	4
ND-98-1617	F036	358	101	333	5
ND-98-1618	F037	327	82	286	4
ND-98-1619	F038	528	39	344	6

TABLE 4 (Continued)
ANALYTICAL RESULTS FROM 4712 JOSEPHINE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1620	F039	470	14	313	18
ND-98-1621	F039d	598	97	333	5
ND-98-1622	F040	520	83	340	6
ND-98-1623	F040d	497	101	337	8
ND-98-1624	F041	501	68	234	19
ND-98-1625	F041d	501	56	231	21
ND-98-1626	F042	373	56	285	6
ND-98-1627	F042d	381	114	269	6
ND-98-1628	F043	268	3	257	5
ND-98-1629	F043d	254	29	243	7
ND-98-1630	F044	225	63	289	5
ND-98-1631	F044d	228	44	182	5
ND-98-1632	F045	234	ND	154	7
ND-98-1633	F045d	229	39	177	7
ND-98-1634	F046	250	11	145	3
ND-98-1635	F046d	224	25	115	5
ND-98-1636	F047	197	33	149	5
ND-98-1637	F047d	191	32	166	5
ND-98-1638	F048	257	28	206	5
ND-98-1639	F048d	249	0	218	8
ND-98-1640	F049	273	ND	212	5
ND-98-1641	F049d	277	29	268	7
ND-98-1642	F050d	251	25	233	7
ND-98-1643	F050d	299	51	243	5
ND-98-1644	F051	354	ND	253	8
ND-98-1645	F051d	345	ND	213	7
ND-98-1646	F052	315	ND	253	6
ND-98-1647	F053	344	42	269	7
ND-98-1648	F054	229	76	262	6
ND-98-1649	F055	318	105	337	5
ND-98-1650	F056	361	121	376	6
ND-98-1651	F057	350	45	297	15
ND-98-1652	F058	811	71	403	8
ND-98-1653	F059	513	120	334	9
ND-98-1654	F060	617	33	227	15
ND-98-1655	F061	346	14	257	11
ND-98-1656	F062	614	68	373	9
ND-98-1657	F063	308	59	230	6

TABLE 4 (Continued)
ANALYTICAL RESULTS FROM 4712 JOSEPHINE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1658	F064	224	48	121	5
ND-98-1659	F065	251	68	161	5
ND-98-1660	F066	202	24	161	6
ND-98-1661	F067	190	50	151	8
ND-98-1662	F068	204	25	166	4
ND-98-1663	F069	266	91	269	7
ND-98-1664	F070	283	57	219	7
ND-98-1665	F071	252	35	216	5
ND-98-1666	F072	256	44	237	11
ND-98-1667	F073	259	91	277	6
ND-98-1668	F074	251	76	241	6
ND-98-1669	F075	311	21	257	5
ND-98-1670	F076	385	82	353	8
ND-98-1671	F077	579	85	361	8
ND-98-1672	F078	509	141	353	9
ND-98-1800	F079	540	14	189	7
ND-98-1801	F080	451	3	356	7
ND-98-1802	F081	316	17	174	5
ND-98-1803	F082	532	ND	329	8
ND-98-1804	F083	326	39	244	5
ND-98-1807	F089	412	ND	423	7
ND-98-1808	F090	229	48	185	5
ND-98-1809	F091	242	63	212	6
ND-98-1810	F092	350	27	356	4
ND-98-1811	F093	300	ND	214	4
ND-98-1812	F094	408	20	293	9
ND-98-1813	F095	451	22	298	6
ND-98-1814	F096	489	16	320	9
ND-98-1815	F097	637	ND	411	6
ND-98-1816	F098	652	17	306	5
ND-98-1817	F099	672	28	348	6
ND-98-1818	F100	695	117	427	9
ND-98-1819	F084	328	72	290	7
ND-98-1820	F085	462	3	331	6
ND-98-1821	F086	656	109	369	7
ND-98-1822	F087	455	32	316	8
ND-98-1823	F088	489	5	218	8
ND-98-1824	F101	482	119	325	9

TABLE 4 (Continued)
ANALYTICAL RESULTS FROM 4712 JOSEPHINE STREET

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1825	F102	730	6	454	8
ND-98-1826	F103	334	10	240	6
ND-98-1827	F104	345	32	260	5
ND-98-1828	F105	594	55	376	9
ND-98-1829	F106	451	0	408	5
ND-98-1830	F107	858	164	419	13
ND-98-1831	F108	730	87	350	8
ND-98-1832	F109	579	ND	432	7
ND-98-1833	F110	590	37	377	8
ND-98-1834	F111	586	87	464	8
ND-98-1835	F112	590	ND	475	10
ND-98-1836	F113	354	28	479	5
ND-98-1837	F114	858	129	498	9
ND-98-1838	F115	796	84	420	9
ND-98-1839	FA-001	893	ND	264	6
ND-98-1840	FA-002	513	101	272	6
ND-98-1841	FA-003	261	55	207	5
ND-98-1842	FA-004	249	65	122	6
ND-98-1843	FA-005	327	6	168	5
ND-98-1844	FA-006	221	46	191	6
ND-98-1845	FA-007	780	54	310	8
ND-98-1846	FA-008	385	50	202	4
ND-98-1847	FA-009	349	7	178	4
ND-98-1848	FA-010	346	25	201	4
ND-98-1849	FA-011	327	2	194	4
ND-98-1850	FA-012	458	49	243	7
ND-98-1851	FA-013	505	42	261	4
ND-98-1852	FA-014	335	13	219	5
ND-98-1853	FA-015	629	ND	261	7
ND-98-1854	FA-016	648	46	273	4
ND-98-1855	FA-017	478	ND	234	4

TABLE 5
ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1335	G001	102	99	209	6
ND-98-1336	G002	78	129	137	5
ND-98-1337	G003	86	91	172	6
ND-98-1338	G004	81	51	135	6
ND-98-1339	G005	71	98	109	4
ND-98-1340	G006	87	99	138	7
ND-98-1341	G007	86	61	160	5
ND-98-1342	G08	82	133	182	4
ND-98-1343	G009	99	92	200	4
ND-98-1344	G010	88	55	73	3
ND-98-1345	G101d	96	22	114	3
ND-98-1346	G011	109	71	168	3
ND-98-1347	G012	72	71	114	5
ND-98-1348	G013	102	56	58	4
ND-98-1349	G014	91	54	141	3
ND-98-1350	G015	81	25	104	4
ND-98-1351	G016	99	77	176	4
ND-98-1352	G017	94	19	118	3
ND-98-1353	G018	90	43	101	4
ND-98-1354	G019	100	70	92	3
ND-98-1355	G020	131	30	97	5
ND-98-1356	G020d	135	45	95	3
ND-98-1357	G021	106	55	75	4
ND-98-1358	G022	106	34	103	4
ND-98-1359	G023	107	92	187	7
ND-98-1360	G024	110	134	211	6
ND-98-1361	G025	71	91	150	6
ND-98-1362	G026	69	62	116	4
ND-98-1363	G027	80	134	167	6
ND-98-1364	G028	78	42	98	4
ND-98-1365	G029	99	42	164	4
ND-98-1366	G030	80	86	90	4
ND-98-1367	G030d	75	94	92	4
ND-98-1368	G031	81	48	69	4
ND-98-1369	G032	96	14	66	3
ND-98-1370	G033	166	149	141	5
ND-98-1371	G034	107	37	119	5
ND-98-1372	G035	133	71	79	4

TABLE 5 (Continued)

ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1373	G036	100	65	158	5
ND-98-1374	G037	81	91	135	2
ND-98-1375	G038	142	52	126	3
ND-98-1376	G039	68	44	112	4
ND-98-1377	G040	78	66	135	7
ND-98-1378	G040d	80	54	145	10
ND-98-1379	G041	56	112	104	3
ND-98-1380	G042	69	98	98	4
ND-98-1381	G043	75	49	83	4
ND-98-1382	G044	220	71	98	4
ND-98-1383	G045	88	51	134	7
ND-98-1384	G046	84	69	162	5
ND-98-1385	G047	102	35	74	3
ND-98-1386	G048	87	58	81	6
ND-98-1387	G049	63	64	58	5
ND-98-1388	G050	132	61	136	6
ND-98-1389	G050d	122	56	153	3
ND-98-1390	G051	100	121	158	4
ND-98-1391	G052	72	183	82	5
ND-98-1392	G053	70	87	87	3
ND-98-1393	G054	72	117	105	3
ND-98-1394	G055	70	90	109	4
ND-98-1395	G056	80	133	172	5
ND-98-1396	G057	99	124	84	4
ND-98-1397	G058	90	34	93	3
ND-98-1398	G059	74	61	62	5
ND-98-1399	G060	155	101	175	4
ND-98-1400	G060d	108	65	190	6
ND-98-1401	G061	87	52	142	6
ND-98-1402	G062	126	16	82	5
ND-98-1403	G063	253	31	99	5
ND-98-1404	G064	78	65	144	5
ND-98-1405	G065	167	135	469	5
ND-98-1406	G066	94	162	97	4
ND-98-1407	G067	84	105	113	3
ND-98-1408	G068	59	72	51	4
ND-98-1409	G069	69	131	92	4
ND-98-1410	G070	63	106	109	5

TABLE 5 (Continued)

ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1411	G070d	73	149	102	4
ND-98-1412	G071	48	89	60	3
ND-98-1413	G072	74	122	98	2
ND-98-1414	G073	93	87	116	7
ND-98-1415	G074	79	89	136	4
ND-98-1416	G075	90	30	80	6
ND-98-1417	G076	113	54	113	5
ND-98-1418	G077	142	75	108	5
ND-98-1419	G078	89	93	146	4
ND-98-1420	G079	89	81	151	5
ND-98-1421	G080	78	85	124	4
ND-98-1422	G080d	86	67	133	6
ND-98-1423	G081	76	31	85	4
ND-98-1424	G082	92	11	116	4
ND-98-1425	G083	60	73	58	2
ND-98-1426	G084	46	89	69	2
ND-98-1427	G085	42	62	80	4
ND-98-1428	G086	85	101	105	6
ND-98-1429	G087	72	102	125	6
ND-98-1430	G088	74	88	74	3
ND-98-1431	G089	130	28	104	3
ND-98-1432	G090	74	112	91	2
ND-98-1433	G090d	88	119	109	6
ND-98-1434	G091	120	110	303	8
ND-98-1435	G092	124	32	97	4
ND-98-1436	G093	88	44	137	3
ND-98-1437	G094	97	63	129	5
ND-98-1438	G095	109	19	126	6
ND-98-1439	G096	82	82	139	3
ND-98-1440	G097	109	46	148	5
ND-98-1441	G098	96	93	161	4
ND-98-1442	G099	174	53	110	5
ND-98-1443	G100	107	71	139	5
ND-98-1444	G100D	131	78	136	4
ND-98-1445	G101	59	74	84	5
ND-98-1446	G102	69	124	122	4
ND-98-1447	G103	78	122	175	4
ND-98-1448	G104	66	46	93	3

TABLE 5 (Continued)

ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1449	G105	72	119	84	5
ND-98-1450	G106	71	97	76	4
ND-98-1451	G107	118	25	101	6
ND-98-1452	G108	129	118	107	5
ND-98-1453	G109	65	67	84	4
ND-98-1454	G110	59	60	58	7
ND-98-1455	G110d	49	54	53	3
ND-98-1456	G111	60	37	63	4
ND-98-1457	G112	71	136	133	6
ND-98-1458	G113	100	154	197	3
ND-98-1459	G114	140	86	97	3
ND-98-1460	G115	76	96	151	5
ND-98-1461	G116	62	80	104	4
ND-98-1462	G117	55	120	137	3
ND-98-1463	G118	51	142	137	5
ND-98-1464	G119	59	92	109	6
ND-98-1465	G120	61	56	137	3
ND-98-1466	G120d	62	84	109	4
ND-98-1467	G121	102	124	213	6
ND-98-1468	G122	152	17	118	3
ND-98-1469	G123	81	100	142	4
ND-98-1470	G124	98	80	127	5
ND-98-1471	G125	79	72	138	5
ND-98-1472	G126	59	52	81	5
ND-98-1473	G127	89	114	106	5
ND-98-1474	G128	412	79	160	6
ND-98-1475	G129	197	13	90	6
ND-98-1476	G130	158	98	287	5
ND-98-1477	G130d	160	52	292	6
ND-98-1478	G131	111	184	348	5
ND-98-1479	G132	66	123	157	3
ND-98-1480	G133	90	148	287	6
ND-98-1481	G134	77	231	413	3
ND-98-1482	G135	101	120	276	4
ND-98-1483	G136	68	84	208	4
ND-98-1484	G137	91	109	237	4
ND-98-1485	G138	116	133	257	5
ND-98-1486	G139	177	41	124	4

TABLE 5 (Continued)

ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1487	G140	118	32	133	4
ND-98-1488	G140d	123	55	133	7
ND-98-1489	G141	104	55	205	5
ND-98-1490	G142	57	49	75	4
ND-98-1491	G143	54	40	70	6
ND-98-1492	G144	112	131	147	7
ND-98-1493	G145	136	81	80	3
ND-98-1494	G146	170	6	129	4
ND-98-1495	G147	104	57	226	5
ND-98-1496	G148	129	47	264	6
ND-98-1497	G149	119	63	223	5
ND-98-1498	G150	158	113	266	7
ND-98-1499	G150d	154	70	229	11
ND-98-1500	G151	183	113	173	5
ND-98-1501	G152	190	14	115	6
ND-98-1502	G153	621	6	140	4
ND-98-1503	G154	174	11	80	3
ND-98-1504	G155	262	58	92	6
ND-98-1505	G156	125	89	159	6
ND-98-1506	G157	73	57	149	8
ND-98-1507	G158	98	78	187	5
ND-98-1508	G159	83	88	140	5
ND-98-1509	G160	83	48	158	6
ND-98-1510	G160d	79	68	138	4
ND-98-1511	G161	105	55	151	8
ND-98-1512	G162	84	61	134	6
ND-98-1513	G163	103	51	159	8
ND-98-1514	G164	111	14	101	3
ND-98-1515	G165	164	1	92	4
ND-98-1516	G166	178	116	241	7
ND-98-1517	G167	247	12	214	4
ND-98-1518	G168	102	60	157	4
ND-98-1519	G169	79	67	122	5
ND-98-1520	G170	88	94	172	5
ND-98-1521	G170d	93	49	164	5
ND-98-1522	G171	97	8	128	5
ND-98-1523	G172	101	95	125	6
ND-98-1524	G173	112	100	145	7

TABLE 5 (Continued)

ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1525	G174	88	87	138	5
ND-98-1526	G175	110	84	170	4
ND-98-1527	G176	158	46	109	4
ND-98-1528	G177	358	33	96	6
ND-98-1529	G178	313	46	116	3
ND-98-1530	G179	303	27	83	3
ND-98-1531	G180	228	17	94	4
ND-98-1532	G180d	221	41	92	3
ND-98-1533	G181	232	47	60	4
ND-98-1534	G182	244	27	91	4
ND-98-1535	G183	238	nd	83	4
ND-98-1536	G184	216	54	79	3
ND-98-1537	G185	220	11	92	4
ND-98-1538	G186	220	75	95	3
ND-98-1539	G187	244	nd	95	4
ND-98-1540	G188	103	85	161	9
ND-98-1541	G189	164	130	127	6
ND-98-1542	G190	169	100	119	5
ND-98-1543	G190d	168	98	135	9
ND-98-1544	G191	151	126	150	7
ND-98-1545	G192	137	154	150	6
ND-98-1546	G193	150	129	124	8
ND-98-1547	G194	123	87	77	4
ND-98-1548	G195	67	42	94	8
ND-98-1549	G196	60	35	66	3
ND-98-1550	G197	56	33	81	3
ND-98-1551	G198	57	67	60	4
ND-98-1552	G199	58	29	57	5
ND-98-1553	G200	56	44	65	3
ND-98-1554	G200d	62	22	58	4
ND-98-1555	G201	70	23	39	2
ND-98-1556	G202	135	25	71	3
ND-98-1557	G203	62	19	45	4
ND-98-1558	G204	65	4	57	4
ND-98-1559	G205	50	56	61	4
ND-98-1560	G206	57	11	37	3
ND-98-1561	G207	100	26	68	3
ND-98-1562	G208	79	98	88	4

TABLE 5 (Continued)

ANALYTICAL RESULTS FROM 5040 STEELE

LAB ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1563	G209	78	71	76	7
ND-98-1564	G210	76	22	67	6
ND-98-1565	G210d	71	57	72	5
ND-98-1566	G211	105	189	106	5
ND-98-1567	G212	147	106	131	5
ND-98-1568	G213	138	151	138	6
ND-98-1569	G214	158	179	139	6
ND-98-1570	G215	176	343	273	7
ND-98-1571	G216	68	83	58	3
ND-98-1572	G217	111	112	128	7
ND-98-1573	G218	111	69	74	4
ND-98-1574	G219	97	137	84	4
ND-98-1575	G220	99	102	107	3
ND-98-1576	G220d	123	122	94	3
ND-98-1577	G221	87	105	84	4
ND-98-1578	G222	71	108	64	4
ND-98-1579	G223	62	132	64	6
ND-98-1580	G224	81	104	83	4
ND-98-1581	G225	71	123	69	3

Table 6

Soil Cores XRF Analytical Results

Location	Sample Number and Depth (inches)		Front/Back	Zn	As	Pb	Cd
4801 Milwaukee Street	C4801	0-2	Front	135	499	225	7
	C4801	2-4	Front	120	410	195	6
	C4801	4-6	Front	130	451	199	6
	C4801	6-8	Front	96	244	164	6
	C4801	8-10	Front	68	182	98	6
	C4801	10-12	Front	78	151	99	4
	C4801	0-2	Back	142	191	192	9
	C4801	2-4	Back	135	138	204	6
	C4801	4-6	Back	124	158	207	7
	C4801	6-8	Back	112	81	191	6
	C4801	8-10	Back	102	75	173	6
	C4801	10-12	Back	94	104	139	6
4712 Josephine	FC1	0-2	Back	827	123	438	8
	FC1	2-4	Back	1,502	154	468	7
	FC1	4-6	Back	1,571	164	450	9
	FC1	6-8	Back	1,416	151	468	8
	FC1	8-10	Back	1,261	109	428	8
	FC1	10-12	Back	610	51	212	4
	FC1	0-2	Front	245	9	181	6
	FC1	2-4	Front	261	35	211	7
	FC2	4-6	Front	261	40	211	5
	FC2	6-8	Front	237	23	199	4
	FC2	8-10	Front	238	41	213	6
	FC2	10-12	Front	243	ND	250	7
5040 Steele	Core #2	0-2	Back	86	108	189	4
	Core #2	2-4	Back	62	112	114	4
	Core #2	4-6	Back	50	91	73	4
	Core #2	6-8	Back	59	95	71	5
	Core #2	8-10	Back	53	125	84	4
	Core #2	10-12	Back	75	83	139	4
	Core #1	0-2	Front	107	57	207	6
	Core #1	2-4	Front	97	103	153	4
	Core #1	4-6	Front	97	82	154	5
	Core #1	6-8	Front	84	58	102	3
	Core #1	8-10	Front	69	46	94	4
	Core #1	10-12	Front	58	68	100	2

Table 7

Comparison of Analytical Results Between University of Colorado andQuanterra

University of Colorado Sample Number	WESTON Sample Number	University of Colorado XRF				Quanterra ICP/ICPMS			
		As	Cd	Pb	Zn	As	Cd	Pb	Zn
ND-98-1438	GO95	19	6	126	109	28.2	3.1	109	103
ND-98-1431	GO89	28	3	104	130	43.8	2.9	99.2	125
ND-98-1591	F010	11	5	214	281	12.7	4.7	175	273
ND-98-1574	G219	137	4	84	97	44.1	3.1	65.8	106
ND-98-1570	G215	343	7	273	176	193	6.4	192	152
ND-98-1619	F038	39	6	344	528	44	5	266	447
ND-98-2103	C4801 0-2 Front	499	7	225	135	321	5.4	183	129
ND-98-2115	A001	27	6	141	260	8.7	2.6	111	209
ND-98-1653	F059	120	9	334	513	71	6.7	260	413
ND-98-1819	F084	72	7	290	328	35.3	5	232	262
ND-98-1512	G162	61	6	134	84	34.4	3	109	89.4
ND-98-2101	A052	135	10	259	224	50.4	5.3	175	186
ND-98-2059	A014	627	7	458	178	434	5.4	380	149
ND-98-2065	A020	673	13	740	396	424	11.5	580	277
ND-98-2087	A040	192	8	500	195	125	7.3	370	171
ND-98-1524	G173	100	7	145	112	33.9	2.9	119	101
ND-98-1593	F012	37	5	287	314	18.8	4.1	247	248
ND-98-2074	A028	550	14	392	381	323	8.7	355	298
ND-98-2090	A042	323	8	260	168	197	5.8	231	140
ND-98-2056	A011	704	10	456	201	1000	7.6	398	161
ND-98-2067	A021	540	13	386	267	287	8.1	326	174
ND-98-2064	A019	458	19	644	474	258	11	499	339
ND-98-2094	A046	285	8	396	332	222	6.7	334	253
ND-98-2057	A012	688	9	399	178	441	7.4	360	155
ND-98-2058	A013	933	10	444	244	653	6.9	391	168
ND-98-2054	A0010	800	17	485	232	598	LA	459	LA
ND-98-2076	A030	785	17	700	365	478	LA	533	LA
ND-98-2052	A008	1837	10	437	361	1260	LA	386	LA
ND-98-2075	A029	1267	16	686	439	808	LA	578	LA
ND-98-2053	A009	428	10	336	239	304	LA	294	LA
ND-98-2045	166	109	5	207	166	49.5	LA	192	LA
ND-98-1994	118	1171	13	563	807	715	LA	450	LA
ND-98-2051	A007	4798	12	877	302	3320	LA	753	LA
ND-98-1958	085	1115	11	278	194	711	LA	235	LA

Table 7 (Continued)

Comparison of Analytical Results Between University of Colorado and Quanterra

University of Colorado Sample Number	WESTON Sample Number	University of Colorado XRF				Quanterra ICP/ICPMS			
		As	Cd	Pb	Zn	As	Cd	Pb	Zn
ND-98-1989	113	299	7	162	138	207	LA	136	LA
ND-98-1974	100	698	10	245	157	456	LA	216	LA
ND-98-1977	102	811	11	309	365	499	LA	238	LA
ND-98-2096	A048	535	14	447	242	296	LA	348	LA
ND-98-1946	074	520	9	198	176	311	LA	155	LA
ND-98-1943	071	586	7	404	385	372	LA	301	LA
ND-98-2048	A004	1600	16	596	381	764	LA	380	LA
ND-98-1959	086	1716	8	348	214	1070	LA	288	LA
ND-98-1957	084	1257	11	635	201	826	LA	513	LA
ND-98-1992	116	647	7	284	207	412	LA	233	LA
ND-98-1948	076	540	8	199	174	338	LA	163	LA
ND-98-1949	077	391	8	258	214	265	LA	215	LA
ND-98-1960	087	841	5	162	133	492	LA	128	LA
ND-98-1928	058	297	9	195	176	190	LA	164	LA
ND-98-1882	014	8	5	200	346	12.8	3.3	136	304
ND-98-1904	018	421	7	247	219	248	6.9	176	181
ND-98-1956	083	392	11	255	150	204	6.8	184	134
ND-98-1883	025	261	9	219	206	157	6.3	150	166
ND-98-1894	035	338	6	187	147	206	5.8	134	131
ND-98-1895	036	414	8	167	115	186	4.3	107	110
ND-98-1918	049	395	7	176	171	204	6.9	132	150
ND-98-1935	064	299	9	207	176	166	6.4	135	148
ND-98-1941	070	627	8	253	217	333	7.3	198	168
ND-98-3101	Reference Std	105	42	1162	NP	69.3	38.4	931	307
ND-98-3125	Reference Std	23	3.45	161	NP	12.9	2.9	122	394
ND-98-3209	Reference Std	18	0.38	19	NP	8.8	ND	8.7	81.9
ND-98-2998	Reference Std	397	21	5195	NP	353	20	2380	3220
ND-98-2995	Reference Std	78	432	4414	NP	64.3	413	2900	19,400
ND-98-3204	Reference Std	12	29	2500	NP	11.2	30.1	2150	27,000
ND-98-1911	024	279	7	246	177	TBA	TBA	TBA	TBA
ND-98-2034	155	ND	4	240	194	TBA	TBA	TBA	TBA
ND-98-1990	114	378	5	228	162	TBA	TBA	TBA	TBA

LA = Lab Accident
ND = Non-detect
NP = Not Provided
TBA = To Be Analyzed

Table 8

Comparison of University of Colorado Analytical Results vs. Known Standards

Identification Standard No.	As (s)	Zn (s)	Pb (s)	Cd (s)	As (I)	An (I)	Pb (I)	Cd (I)	As (x)	Zn (x)	Pb (x)	Cd (x)
3029 Steel A 2711	105	350	1162	42	96-	383+	950-	75+	131+	328-	1464+	52+
3029 Steel H 2711-1	105	350	1162	42	89-	383+	979-	170+	65-	334-	1115-	35+
4750 Vine A 2710-2	626	6952	5532	22	441-	7163+	3683-	54+	719+	5973-	5507-	30+
4750 Vine H 2710-1	626	6952	5532	22	558-	7035+	3697-	66+	821+	5895-	5583+	36+

S = Standard
I = ICP
X = XRF

UNIVERSITY OF COLORADO
ANALYTICAL DATA

LABORATORY RESULTS AND QA/QC DATA

FOR

THE NORTH DENVER SITE

PHASE III

PREPARED FOR

USEPA REGION VIII and Roy F. Weston Inc.

January 17, 1999

1.0 INTRODUCTION

A set of solid soil and dust samples were delivered to LEGS (Laboratory for Environmental and Geological Studies) during the month of October, 1998 by representatives of Roy F. Weston. Sample homogeneity and representativeness cannot be evaluated by this laboratory and is the responsibility of Weston. All soil samples were analyzed for Pb, As, Zn, and Cd at the <250μm size fraction. Dust samples were analyzer "as is" for the same analyte suite.

1.1 Objective

The goal of this investigation is to obtain necessary data to evaluate the distribution of heavy metals in the selected regions of North Denver, Colorado. As stated in the Work Plan (ISSI 1998), the investigations primary objective:

> To determine the concentrations of elements identified by EPA as being of potential concern: lead (Pb), arsenic (As), cadmium (Cd) and zinc (Zn).

The Work Plan was designed to achieve this objective by providing high quality data and QA/QC control.

2.0 SAMPLE PREPARATION

Prior to all samples being sent to our laboratory no sample preparation was conducted by Weston representatives. Those procedures conducted by LEGS are outlined below.

Table 1.0 North Denver Dust samples

CU Lab Number	Address	ICP Weight gr	Vol. Digestion m	Date Digestion	ICP As	ICP Zn	ICP Pb	ICP Cd	Date Analyzed	Bulk ICP As	Bulk ICP Zn	Bulk ICP Pb	Bulk ICP Cd	Bulk EDSXRF As	Bulk EDSXRF Zn	Bulk EDSXRF Pb	Bulk EDSXRF Cd	Date Analyzed
ND-98-2804D	3825 Adams-A	0.438	50	12/9/98	0.31	6.03	25.38	0.27	12/11/98	36	689	2900	30	53	427	4106	7	11/28/98
ND-98-2805D	3818 Madison-H	IS	50	12/9/98										126	1905	100	16	11/28/98
ND-98-2806D	4750 Vine-A	0.449	50	12/9/98	3.96	64.29	33.06	0.49	12/11/98	441	7163	3683	54	719	5973	5507	30	11/28/98
ND-98-2807D	4715 St. Paul Ct.-H	0.424	50	12/9/98	0.20	9.50	5.30	0.37	12/11/98	24	1121	625	44	164	2002	1145	39	11/28/98
ND-98-2808D	4715 St. Paul Ct.-A	IS		12/9/98										422	1459	916	15	11/28/98
ND-98-2809D	4750 Vine-H	0.444	50	12/9/98	4.96	62.52	32.85	0.59	12/11/98	558	7035	3697	66	821	5895	5583	36	11/28/98
ND-98-2810D	3029 Stode Av.	0.394	50	12/9/98	0.70	3.02	7.73	1.34	12/11/98	89	383	979	170	65	334	1115	35	11/28/98
ND-98-2811D	3029 Steele-A	0.417	50	12/9/98	0.80	3.19	7.92	0.62	12/11/98	96	383	950	75	131	328	1464	52	11/28/98
ND-98-2812D	4691 Vine-A	0.396	50	12/9/98	0.42	57.20	13.80	0.57	12/11/98	53	7218	1742	71	499	4538	2809	67	11/28/98
ND-98-2813D	4936 Steele-A	0.416	50	12/9/98	0.26	8.96	4.61	0.41	12/11/98	31	1076	554	49	85	1362	563	36	11/28/98
ND-98-2814D	4850 Adams-A	0.312	50	12/9/98	0.39	19.79	9.41	0.37	12/11/98	62	3168	1507	59	377	3433	1946	46	11/28/98
ND-98-2815D	4044 Steele-H	IS	50	12/9/98														
ND-98-2816D	4771 Vine-A	0.403	50	12/9/98	0.13	3.57	2.04	0.17	12/11/98	17	443	253	21	104	544	231	10	11/28/98
ND-98-2817D	4044 Steele-B	0.531	50	12/9/98	0.66	64.99	7.16	0.30	12/11/98	62	6116	673	29	78	6865	811	27	11/28/98
ND-98-2818D	3818 Madison-A	0.175	50	12/9/98	0.10	7.44	1.40	0.61	12/11/98	28	2126	399	173	24	2777	293	275	11/28/98
ND-98-2819D	4771 Vine-H	0.217	50	12/9/98	0.10	4.51	1.74	0.05	12/11/98	22	1039	402	12	96	1308	361	23	11/27/98
ND-98-2820D	4690 Clayton-A	0.143	50	12/9/98	0.12	3.08	2.85	0.10	12/11/98	41	1080	999	36					
ND-98-2821D	4850 Adams-H	IS	50	12/9/98										84	1645	385	16	11/30/98
ND-98-2822D	4940 Steele-A	IS	50	12/9/98														
ND-98-2823D	4940 Steele-H	IS	50	12/9/98										97	846	158	12	11/30/98
ND-98-2824D	4690 Clayton-H	0.075	50	12/9/98										70	610	220	24	11/27/98
ND-98-2825D	5195 St. Paul-H	0.17	50	12/9/98	0.09	1.54	0.50	0.04	12/11/98	26	453	148	13	169	660	79	9	11/27/98
ND-98-2826D	4691 Vine-H	0.116	50	12/9/98										83	869	79	24	11/27/98
ND-98-2827D	4760 St. Paul Ct.-H	0.466	50	12/9/98	0.22	6.43	3.14	0.16	12/11/98	23	690	336	18	18	734	222	6	11/27/98
ND-98-2828D	4980 Steele-H	0.136	50	12/9/98										172	761	99	19	11/27/98
ND-98-2829D	4641 Clayton-H	0.154	50	12/9/98	0.07	1.21	0.37	0.04	12/11/98	24	391	121	12	51	517	67	14	11/27/98
ND-98-2830D	4980 Steele St.-A	0.374	50	12/9/98	0.23	23.87	6.65	0.21	12/11/98	31	3194	890	27	70	2529	1037	12	11/27/98
ND-98-2831D	4936 Steele-H	0.121	50	12/9/98										116	648	76	18	11/27/98
ND-98-2832D	3825 Adams-H	0.279	50	12/9/98	0.23	1.42	0.84	0.10	12/11/98	41	254	151	18	130	318	116	7	11/27/98
ND-98-2833D	4760 St. Paul Ct.-H	IS	50	12/9/98														
ND-98-2834D	2000 E. 47th-H	0.176	50	12/9/98	0.09	2.65	1.21	0.08	12/11/98	26	753	343	21	77	955	230	24	11/27/98
ND-98-2835D	5195 St. Paul-A	IS	50	12/9/98										2	4383	828	32	11/27/98
ND-98-2836D	Humboldt-H (basement)	0.353	50	12/9/98	0.16	33.95	9.00	0.19	12/11/98	23	4816	1276	27	47	5197	1698	35	11/27/98
ND-98-2837D	5 Humboldt-H (1st floor)	0.161	50	12/9/98	0.03	1.89	1.35	0.02	12/11/98	9	590	421	5	123	982	310	14	11/27/98

* IS= Insufficient Sample Available

2.1 Sample Drying

Air drying was necessary to reduce the soil moisture content to a low level to facilitate subsequent splitting and grinding of the samples. All samples were air dried for a minimum of 8 hours at a temperature of 25°C. Each sample was placed on a labeled, clean, unused paper plate along with its field label. All plates were covered with a clean paper towel and placed on a drying shelf in a secured area.

2.2 Sample Splitting

Sample splitting was designed to create a comparable sub-sample for EDSXRF analysis. Each sample was divided into equal segments, alternate segments were removed for further sample preparation, while the remaining material was returned to the original sample container.

2.3 Sample Sieving

The SOP required one split be made for EDSXRF analysis; at the <250μm size fraction. All coarser material was properly disposed of.

2.4 Sample Grinding

Grinding was designed to homogenize the sub-sample and reduce the particle size to approximately 350 mesh. Samples were ground using a centrifugal shatter box with tungsten carbide containers. Sample grinding times were maintained at 30 seconds for all samples. After grinding all of the material was transferred to a clean sheet of computer paper and then to a labeled poly vials.

Between samples each container was carefully cleaned with a nylon brush and Type I water. A sample preparation blank was prepared at a 25% frequency to monitor any contamination during sample preparation.

3.0 X-RAY FLUORESCENCE ANALYSIS QA/QC

X-ray fluorescence (XRF) analysis was conducted with a KEVEX 0700 spectrometer following the operating procedures specified in the SOP (LEGS, 1993). The 0700 utilizes a Si-Li detector and a Rh x-ray tube. Secondary targets were used to optimize excitation conditions for a particular element emission line.

3.1 XRF Calibration

The XRF instrument was calibrated for the analytes; Zn, Pb, As, and Cd by defining regions of interest (ROI) using inter-laboratory and NIST SRM standards. Simple linear regression models were used to relate analyte concentration to analyte ratio value (intensity/compton intensity) for Cd, As, Pb, and Zn. Calibration curve "r-squared" values range from 0.95-0.99 (see LEGS 1993, Figures 3.1-3.6).

3.2 Analytical Technique

XRF analysis were conducted in batches of 15 samples. Each batch contained 13-14 prepared unknown samples, one flux monitor, and/or 2 QA/QC samples. The QA/QC samples consisted of a preparation blank and a SRM standard or calibration check. Acquisition conditions (SOP, LEGS,1993) were optimized to achieve the lowest possible detection limits.

3.2.1 Detection Limits

XRF detection limits can be determined using a number of acceptable procedures. For this study we have selected three, each more rigorous in data interpretation, Table 3.2.1. The first two methods are used to define LOD (Limit of Detection) and LOQ (Limit of Quantification).

TABLE 3.2.1 Detection Limits

	Zn	As	Pb	Cd
$DL = 2 * S_{(b)}$	4	18	12	4
$DL = y_{(0)} + 1.645 * S_y$	49	32	26	5
$DL = y_{(0)} + 3 * S_y$	90	60	47	8

$S_{(b)}$ = standard deviation of replicate blanks.
$y_{(0)}$ = Y intercept on calibration curve.
S_y = standard deviation of residuals.

3.2.2 Procedure Blanks

Procedure blanks were prepared every twenty-five field samples following identical conditions using commercial silica sand. The blanks were used to document any contamination that may have occurred during sample preparation. Results of blank analysis are given in Table 3.2.2.

All blank concentrations fell within SOP requirements for zinc and cadmium. All average blank concentrations are well within SOP limits. Individual accedences were observed on Blanks:

TABLE 3.2.2 Summary of Preparation Blanks for Phase III EDSXRF.

	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed
BLANK-109	-10	17	11	3	30-Oct-98
BLANK-110	16	-1	15	2	31-Oct-98
BLANK-112	9	8	17	2	2-Nov-98
BLANK-114	22	0	13	1	3-Nov-98
BLANK-115	7	13	8	1	3-Nov-98
BLANK-117	-9	10	7	1	4-Nov-98
BLANK-119	13	-10	7	4	5-Nov-98
BLANK-120	14	3	9	3	6-Nov-98
BLANK-123	-4	8	11	2	8-Nov-98
BLANK-124	10	2	14	2	9-Nov-98
BLANK-125	22	6	9	2	11-Nov-98
BLANK-127	6	22	13	1	12-Nov-98
BLANK-129	-6	4	7	2	13-Nov-98
BLANK-130	13	4	7	3	14-Nov-98
BLANK-132	-6	34	7	1	15-Nov-98
BLANK-134	27	-12	9	2	17-Nov-98
BLANK-136	7	11	8	3	18-Nov-98
BLANK-146	16	27	9	4	24-Nov-98
BLANK-148	4	7	14	2	25-Nov-98
BLANK-150	0	14	8	1	30-Nov-98
BLANK-151	12	16	16	2	1-Dec-98
BLANK-153	18	17	11	1	2-Dec-98
BLANK-155	13	-4	9	1	3-Dec-98
BLANK-157	12	13	4	2	4-Dec-98
BLANK-158	-1	25	9	2	5-Dec-98
BLANK-160	0	47	7	2	6-Dec-98
BLANK-161	4	-18	8	2	6-Dec-98
BLANK-163	16	19	5	3	8-Dec-98
BLANK-164	15	12	8	2	8-Dec-98
BLANK-165	10	-7	9	2	9-Dec-98
BLANK-167	11	23	11	2	10-Dec-98
BLANK-168	-1	33	10	2	10-Dec-98
BLANK-170	-2	14	9	3	12-Dec-98
Average	8	11	10	2	
SOP Limits	40	20	10	10	

127,132,146,158,160,167, and 168 for arsenic and Blanks: 109,110,112,114,123,124,127,148,151,153, and 167 for lead. No immediate corrective actions were implemented due to these observations. All of the arsenic accedences are likely the result of excessive grinding of the quartz resulting in tungsten contamination and a third-order line interference with arsenic. Six of the eleven accedences for lead were in particular only 1-3 ppm above the SOP limit.

3.2.3 Control Charts

Control charts are provided in Figures 3.2.1 - 3.2.3. These charts are collected over the project duration. The monitor is used to determine if tube, vacuum, and electronics are maintaining an acceptable limit of stability. The UWL and LWL limits are 2% of average monitor value and UCL and LCL are 5% of average value. Criteria used in this lab to define "acceptable" are:

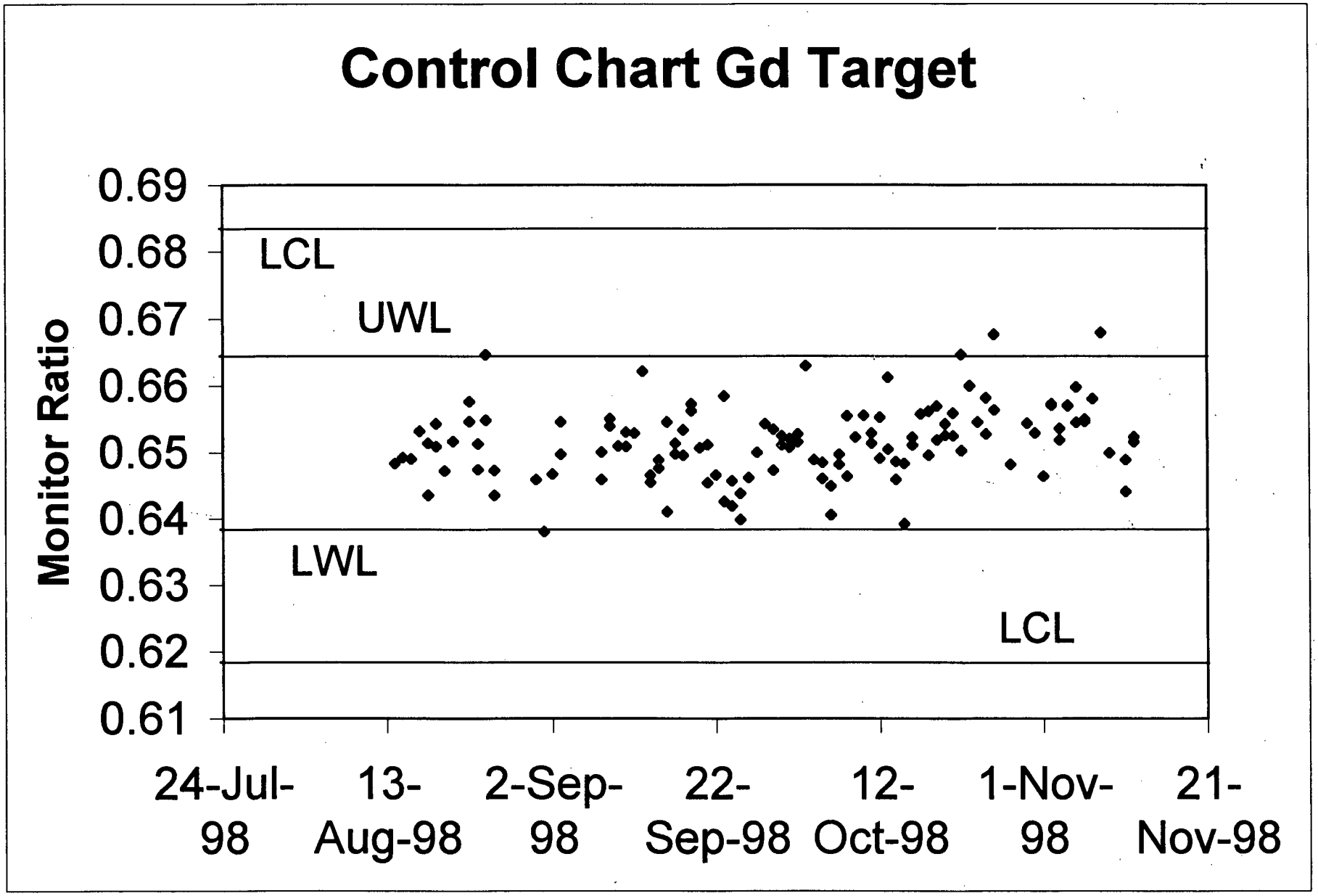
> If consecutive batch runs fall outside either the upper warning level (UWL) or lower warning level (LWL) then the batches are re-analyzed.

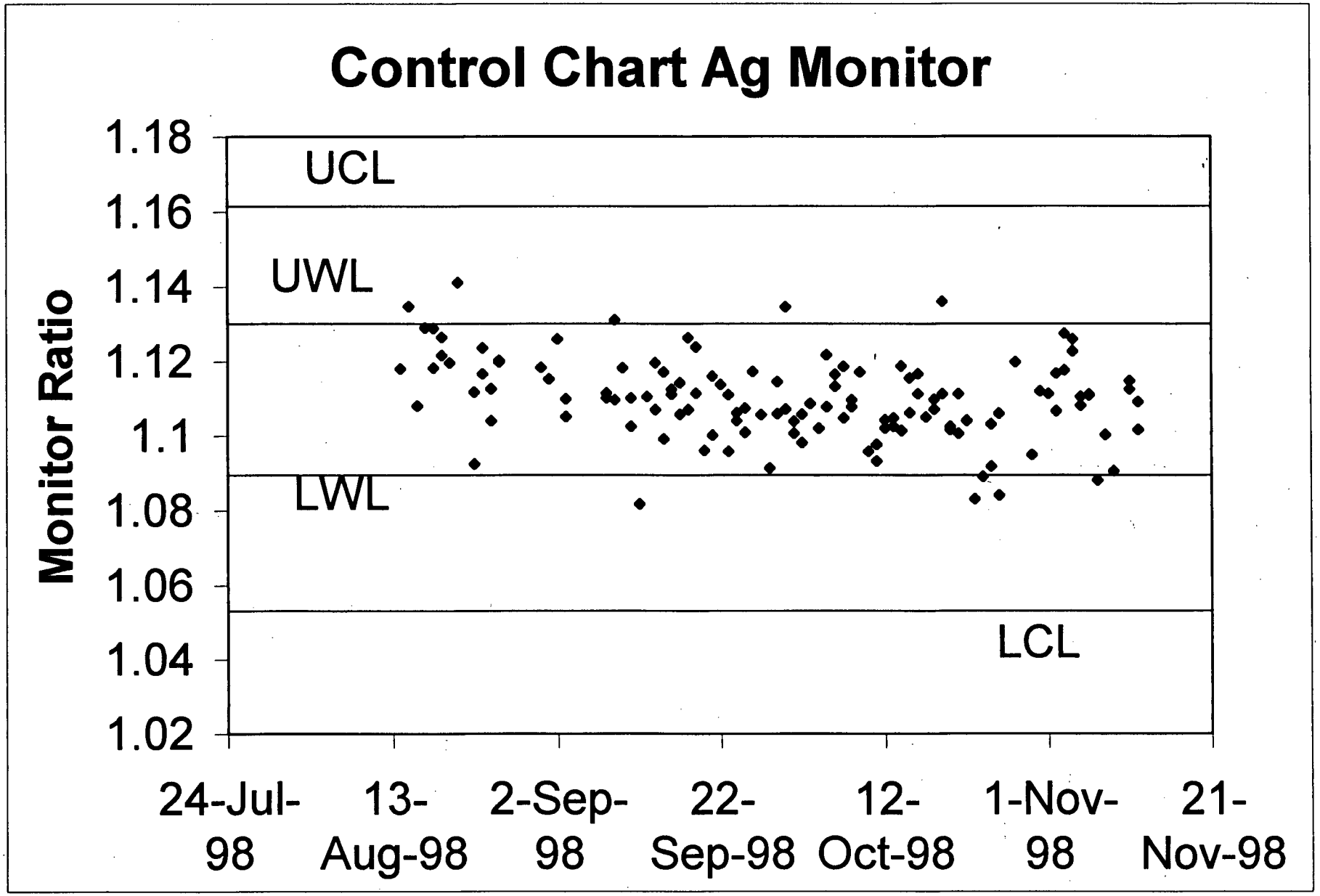
> If consecutive batch runs fall outside either the upper control limit (UCL) or the lower control limit (LCL) then the instrument is re-calibrated.

Remember, the monitor represents a "flux" value for the tube. It will degrade over time as the anode ages. The monitor value is used to normalize count rates from each batch run, therefore variations are continuously corrected. No batch runs failed these criteria during this phase of the project.

3.2.4 RPD Validations

RPD checks for both precision (duplicates) and accuracy (NIST Standard) were to be run every 25 samples. Average RPD's on duplicate analysis, above the limits of Quantification (LOQ) fall within the SOP limits, Table 3.2.3. Data indicates five accedences for arsenic, three for lead, and two for cadmium. Average RPD's on NIST standard TO-8607 fall within SOP limits for all elements, Table 3.2.4.


Control Chart Gd Target
Monitor Ratio
0.69
0.68
0.67
0.66
0.65
0.64
0.63
0.62
0.61
LCL
UWL
LWL
LCL
24-Jul-98
13-Aug-98
2-Sep-98
22-Sep-98
12-Oct-98
1-Nov-98
21-Nov-98


Control Chart Ag Monitor
Monitor Ratio
1.18
1.16
1.14
1.12
1.1
1.08
1.06
1.04
1.02
UCL
UWL
LWL
LCL
24-Jul-98
13-Aug-98
2-Sep-98
22-Sep-98
12-Oct-98
1-Nov-98
21-Nov-98

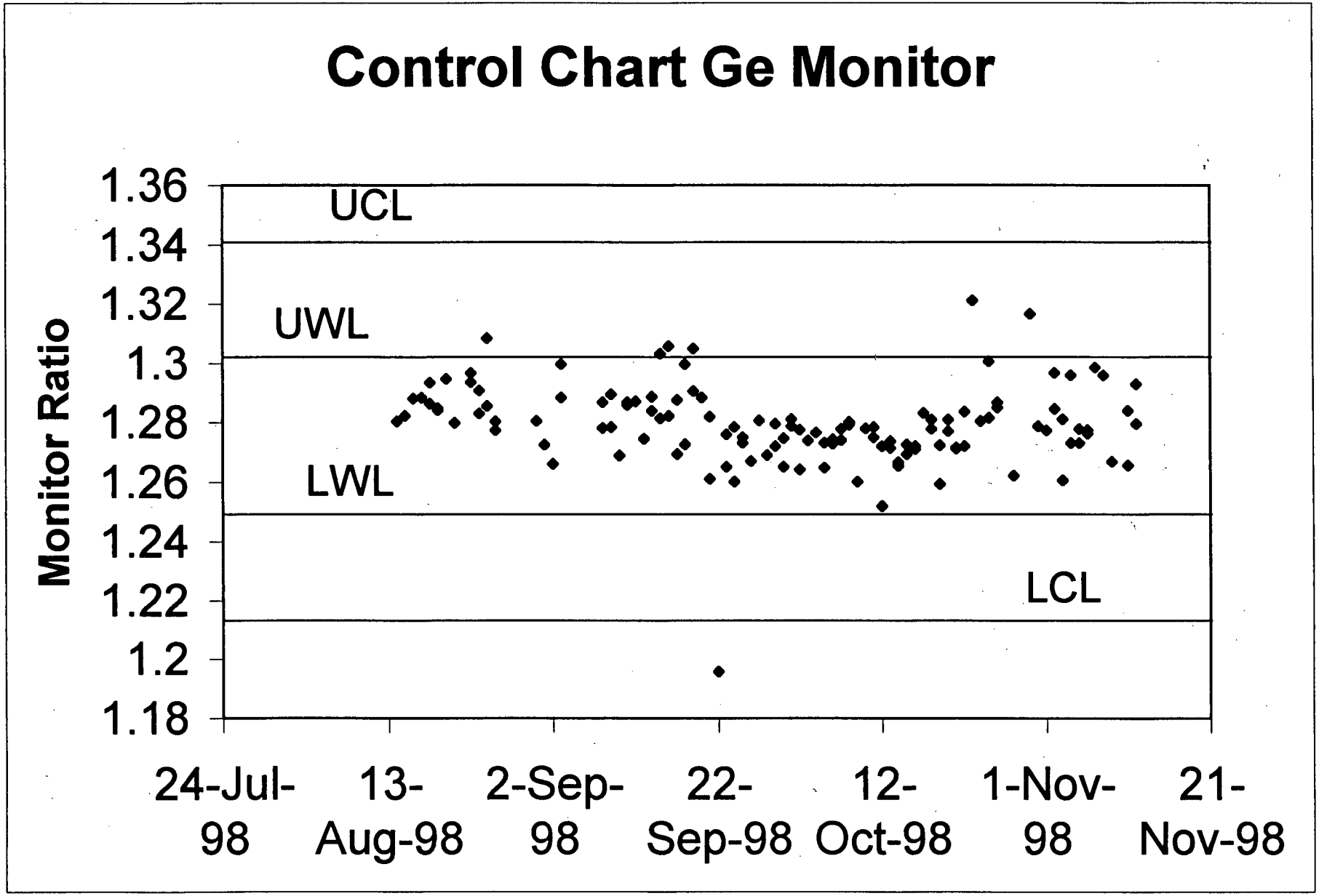

Control Chart Ge Monitor
Monitor Ratio
1.36
1.34
1.32
1.3
1.28
1.26
1.24
1.22
1.2
1.18
UCL
UWL
LWL
LCL
24-Jul-98
13-Aug-98
2-Sep-98
22-Sep-98
12-Oct-98
1-Nov-98
21-Nov-98

TABLE 3.2.3 RPD's on duplicate sample results for Phase III.

Lab ID	Zn ppm	RPD	As ppm	RPD	Pb ppm	RPD	Cd ppm	RPD		Zn ppm	As ppm	Pb ppm	Cd ppm
ND-98-1333	58	1	68	"157"	100	18	2	"62'	ND-98-1333DUP	57	8	83	4
ND-98-1366	80	4	86	"267"	90	11	4	"15"	ND-98-1366DUP	77	-12	81	4
ND-98-1387	63	3	64	27	58	14	5	"12"	ND-98-1387DUP	65	83	66	5
ND-98-1406	94	3	162	8	97	27	4	"69"	ND-98-1406DUP	92	149	127	8
ND-98-1427	42	0	62	12	80	29	4	"6"	ND-98-1427DUP	42	71	60	4
ND-98-1456	60	1	37	"145"	63	5	4	"33"	ND-98-1456DUP	61	6	67	5
ND-98-1474	412	2	79	26	160	8	6	"4"	ND-98-1474DUP	404	102	147	6
ND-98-1514	111	4	14	"49"	101	5	3	"51"	ND-98-1514DUP	115	23	96	4
ND-98-1521	93	6	49	"41"	164	9	5	"8"	ND-98-1521DUP	87	75	180	5
ND-98-1537	220	7	11	"151"	92	7	4	"5"	ND-98-1537DUP	237	82	98	4
ND-98-1559	50	2	56	"46"	61	54	4	"18"	ND-98-1559DUP	50	35	35	3
ND-98-1584	501	1	52	54	223	6	12	22	ND-98-1584DUP	505	91	236	15
ND-98-1606	238	0	19	"289"	324	6	5	"6"	ND-98-1606-dup	239	-3	346	6
ND-98-1608	232	1	40	"68"	159	11	3	"34"	ND-98-1608-dup	234	80	177	5
ND-98-1624	501	1	68	"237"	234	1	19	23	ND-98-1624DUP	497	-6	236	23
ND-98-1626	373	22	56	33	285	9	6	"30"	ND-98-1626DUP	466	78	259	8
ND-98-1646	315	4	-5	"51"	253	8	6	"13"	ND-98-1646DUP	326	-8	273	6
ND-98-1805	173	4	320	1	195	4	9	6	ND-98-1805DUP	179	324	204	9
ND-98-1827	345	3	32	"116"	260	4	5	"19"	ND-98-1827DUP	354	8	250	6
ND-98-1857	1502	20	154	42	468	9	7	29	ND-98-1857DUP	1234	101	428	10
ND-98-1869	594	1	-1	"264"	213	7	8	21	ND-98-1869DUP	602	9	229	7
ND-98-1896	166	4	399	15	182	1	8	12	ND-98-1896DUP	159	466	180	7
ND-98-1915	318	3	262	11	191	5	8	7	ND-98-1915DUP	307	294	201	8
ND-98-1941	217	5	627	14	253	2	8	5	ND-98-1941DUP	229	545	257	7
ND-98-1959	214	2	1716	4	348	4	8	46	ND-98-1959DUP	217	1781	361	13
ND-98-1983	135	2	310	3	197	15	5	"28"	ND-98-1983DUP	137	320	168	6
ND-98-2000	188	8	138	10	244	7	5	"50"	ND-98-2000DUP	174	125	228	8
ND-98-2023	223	6	20	"141"	172	8	4	"39"	ND-98-2023DUP	211	117	187	6
ND-98-2031	517	20	23	"81"	209	7	4	"12"	ND-98-2031DUP	423	54	226	4
ND-98-2053	239	1	428	16	336	5	10	12	ND-98-2053DUP	242	504	352	11
ND-98-2070	509	2	255	12	526	0	11	10	ND-98-2070DUP	497	286	524	10
ND-98-2086	232	3	283	14	343	1	11	2	ND-98-2086DUP	240	245	339	11
ND-98-2106	96	6	244	3	164	12	6	"4"	ND-98-2106DUP	101	252	146	6
Average RPD*		5		17		10		16					

*RPD average based on bulk values that are above LOQ.
** Values in quotations indicate at least one value below LOQ.

TABLE 3.2.4 Summary Results for NIST TO-8607 Internal Standard.

	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed
TO-8607-109	2510	1741	2418	19	30-Oct-98
TO-8607-110	2494	1746	2236	20	31-Oct-98
TO-8607-111	2203	1806	2282	24	1-Nov-98
TO-8607-112	2486	1832	2059	28	2-Nov-98
TO-8607-113	2471	1796	2272	22	2-Nov-98
TO-8607-114	2599	1530	1937	23	3-Nov-98
TO-8607-115	2203	1681	2318	26	3-Nov-98
TO-8607-116	2196	1922	2282	23	4-Nov-98
TO-8607-117	2483	1741	2254	22	4-Nov-98
TO-8607-118	2518	1691	2327	34	5-Nov-98
TO-8607-119	2483	1801	2318	23	5-Nov-98
TO-8607-120	2475	1776	2300	24	6-Nov-98
TO-8607-121	2471	1756	2003	21	6-Nov-98
TO-8607-122	2207	1731	2346	22	7-Nov-98
TO-8607-123	2475	1842	2097	25	8-Nov-98
TO-8607-124	2502	1902	2318	19	9-Nov-98
TO-8607-125	2203	1791	2291	22	11-Nov-98
TO-8607-126	2525	1842	2282	21	11-Nov-98
TO-8607-127	2537	1751	2318	24	12-Nov-98
TO-8607-128	2203	1877	2327	28	12-Nov-98
TO-8607-129	2506	1671	2336	23	13-Nov-98
TO-8607-130	2494	1862	2106	25	14-Nov-98
TO-8607-131	2518	1701	2327	19	14-Nov-98
TO-8607-132	2514	1706	2282	26	15-Nov-98
TO-8607-133	2211	1791	2336	20	16-Nov-98
TO-8607-134	2335	1756	2263	25	17-Nov-98
TO-8607-135	2502	1852	2124	20	17-Nov-98
TO-8607-136	2533	1716	2327	27	18-Nov-98
TO-8607-146	2525	1766	2300	24	24-Nov-98
TO-8607-147	2529	1817	2309	26	24-Nov-98
TO-8607-148	2514	1977	2400	25	25-Nov-98
TO-8607-149	2514	1887	2382	25	26-Nov-98
TO-8607-150	2502	1565	2097	26	30-Nov-98
TO-8607-151	2490	1781	2291	18	1-Dec-98
TO-8607-152	2203	1832	2300	22	1-Dec-98
TO-8607-153	2506	1751	2050	22	2-Dec-98
TO-8607-154	2510	1801	2199	21	2-Dec-98
TO-8607-155	2525	1706	2272	21	3-Dec-98
TO-8607-156	2521	1766	2291	29	3-Dec-98
TO-8607-157	2502	1741	2012	22	4-Dec-98
TO-8607-158	2200	1726	2087	24	5-Dec-98
TO-8607-159	2502	1776	2300	23	5-Dec-98
TO-8607-160	2215	1776	2327	25	6-Dec-98
TO-8607-161	2514	1786	2364	20	6-Dec-98
TO-8607-162	2552	1535	2236	26	7-Dec-98
TO-8607-163	2514	1711	2309	23	8-Dec-98
TO-8607-164	2518	1867	2087	28	8-Dec-98
TO-8607-165	2525	1756	2291	25	9-Dec-98
TO-8607-166	2525	1832	2162	25	9-Dec-98
TO-8607-167	2521	1822	2254	22	10-Dec-98
TO-8607-168	2525	1882	2327	23	10-Dec-98

TABLE 3.2.4 Summary Results for NIST TO-8607 Internal Standard.

	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed
TO-8607-169	2518	1781	2282	27	11-Dec-98
TO-8607-170	2498	1756	2097	20	12-Dec-98
TO-8607-171	2549	1726	2050	25	13-Dec-98
Average Concentration	2451	1773	2244	24	
Standard Deviation	123	85	114	3	
NIST Certified Value	2900	1800	2600	26	
Average % RPD	16	5	17	12	

4.0 FINAL EDSXRF RESULTS

All analyte results from field samples and duplicates are provided in Tables 4.0.1 as well as on magnetic media under file "PHASEIII.XLS". In addition all results for field samples are plotted in Figures 4.0.1-4.0.4 along with LOD, LOQ, and LOL limits.

All samples analyzed for zinc (Zn) fall within LOL and LOD limits. None of the data fall below the LOQ for zinc. For arsenic (As), 29% of the samples fall outside of the LOQ and LOL limits. For lead (Pb), none of the samples fall outside of the LOD and LOL limits, and none fall below the LOQ limit. Finally, cadmium (Cd), 37% of the samples fall between the LOD and LOQ limits and less than 1% of the data fall outside the LOD and LOL limits.

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1323	Core# 2-6-8	59	95	71	5	30-Oct-98	D
ND-98-1324	Core# 2-2-4	62	112	114	4	30-Oct-98	D
ND-98-1325	Core# 2-4-6	50	91	73	4	30-Oct-98	D
ND-98-1326	Core# 2-8-10	53	125	84	4	30-Oct-98	D
ND-98-1327	Core# 2-0-2?	86	108	189	4	30-Oct-98	D
ND-98-1328	Core# 2-10-12	75	83	139	4	30-Oct-98	D
ND-98-1329	Core# 1-0-2	107	57	207	6	30-Oct-98	D
ND-98-1330	Core# 1-2-4	97	103	153	4	30-Oct-98	D
ND-98-1331	Core# 1-4-6	97	82	154	5	30-Oct-98	D
ND-98-1332	Core# 1-6-8	84	58	102	3	30-Oct-98	D
ND-98-1333	Core# 1-10-12	58	68	100	2	30-Oct-98	D
ND-98-1334	Core# 1-8-10	69	46	94	4	30-Oct-98	D
ND-98-1335	G001	102	99	209	6	31-Oct-98	D
ND-98-1336	G002	78	129	137	5	31-Oct-98	D
ND-98-1337	G003	86	91	172	6	31-Oct-98	D
ND-98-1338	G004	81	51	135	6	31-Oct-98	D
ND-98-1339	G005	71	98	109	4	31-Oct-98	D
ND-98-1340	G006	87	99	138	7	31-Oct-98	
ND-98-1341	G007	86	61	160	5	31-Oct-98	D
ND-98-1342	G008	82	133	182	4	31-Oct-98	D
ND-98-1343	G009	99	92	200	4	31-Oct-98	D
ND-98-1344	G010	88	55	73	3	31-Oct-98	D
ND-98-1345	G010d	96	22	114	3	31-Oct-98	B,D
ND-98-1346	G011	109	71	168	3	31-Oct-98	D
ND-98-1347	G012	72	71	114	5	31-Oct-98	D
ND-98-1348	G013	102	56	58	4	1-Nov-98	D
ND-98-1349	G014	91	54	141	3	1-Nov-98	D
ND-98-1350	G015	81	25	104	4	1-Nov-98	B,D
ND-98-1351	G016	99	77	176	4	1-Nov-98	D
ND-98-1352	G017	94	19	118	3	1-Nov-98	B,D
ND-98-1353	G018	90	43	101	4	1-Nov-98	B,D
ND-98-1354	G019	100	70	92	3	1-Nov-98	D
ND-98-1355	G020	131	30	97	5	1-Nov-98	B,D
ND-98-1356	G020d	135	45	95	3	1-Nov-98	B,D
ND-98-1357	G021	106	55	75	4	1-Nov-98	D
ND-98-1358	G022	106	34	103	4	1-Nov-98	B,D
ND-98-1359	G023	107	92	187	7	1-Nov-98	
ND-98-1360	G024	110	134	211	6	1-Nov-98	D
ND-98-1361	G025	71	91	150	6	1-Nov-98	D
ND-98-1362	G026	69	62	116	4	2-Nov-98	D
ND-98-1363	G027	80	134	167	6	2-Nov-98	D
ND-98-1364	G028	78	42	98	4	2-Nov-98	B,D
ND-98-1365	G029	99	42	164	4	2-Nov-98	B,D
ND-98-1366	G030	80	86	90	4	2-Nov-98	D
ND-98-1367	G030d	75	94	92	4	2-Nov-98	D
ND-98-1368	G031	81	48	69	4	2-Nov-98	D
ND-98-1369	G032	96	14	66	3	2-Nov-98	B,D
ND-98-1370	G033	166	149	141	5	2-Nov-98	D
ND-98-1371	G034	107	37	119	5	2-Nov-98	B,D
ND-98-1372	G035	133	71	79	4	2-Nov-98	D
ND-98-1373	G036	100	65	158	5	2-Nov-98	D
ND-98-1374	G037	81	91	135	2	2-Nov-98	D
ND-98-1375	G038	142	52	126	3	2-Nov-98	D
ND-98-1376	G039	68	44	112	4	3-Nov-98	B,D
ND-98-1377	G040	78	66	135	7	2-Nov-98	
ND-98-1378	G040d	80	54	145	10	2-Nov-98	
ND-98-1379	G041	56	112	104	3	2-Nov-98	D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1380	G042	69	98	98	4	2-Nov-98	D
ND-98-1381	G043	75	49	83	4	2-Nov-98	D
ND-98-1382	G044	220	71	98	4	2-Nov-98	D
ND-98-1383	G045	88	51	134	7	2-Nov-98	
ND-98-1384	G046	84	69	162	5	2-Nov-98	D
ND-98-1385	G047	102	35	74	3	2-Nov-98	B,D
ND-98-1386	G048	87	58	81	6	2-Nov-98	D
ND-98-1387	G049	63	64	58	5	2-Nov-98	D
ND-98-1388	G050	132	61	136	6	3-Nov-98	D
ND-98-1389	G050d	122	56	153	3	3-Nov-98	D
ND-98-1390	G051	100	121	158	4	3-Nov-98	D
ND-98-1391	G052	72	183	82	5	3-Nov-98	D
ND-98-1392	G053	70	87	87	3	3-Nov-98	D
ND-98-1393	G054	72	117	105	3	3-Nov-98	D
ND-98-1394	G055	70	90	109	4	3-Nov-98	D
ND-98-1395	G056	80	133	172	5	3-Nov-98	D
ND-98-1396	G057	99	124	84	4	3-Nov-98	D
ND-98-1397	G058	90	34	93	3	3-Nov-98	B,D
ND-98-1398	G059	74	61	62	5	3-Nov-98	D
ND-98-1399	G060	155	101	175	4	3-Nov-98	D
ND-98-1400	G060d	108	65	190	6	3-Nov-98	D
ND-98-1401	G061	87	52	142	6	3-Nov-98	D
Nd-98-1402	G062	126	16	82	5	3-Nov-98	B,D
ND-98-1403	G063	253	31	99	5	3-Nov-98	B,D
ND-98-1404	G064	78	65	144	5	3-Nov-98	D
ND-98-1405	G065	167	135	469	5	3-Nov-98	D
ND-98-1406	G066	94	162	97	4	3-Nov-98	D
ND-98-1407	G067	84	105	113	3	3-Nov-98	D
ND-98-1408	G068	59	72	51	4	3-Nov-98	D
ND-98-1409	G069	69	131	92	4	3-Nov-98	D
ND-98-1410	G070	63	106	109	5	3-Nov-98	D
ND-98-1411	G070d	73	149	102	4	4-Nov-98	D
ND-98-1412	G071	48	89	60	3	4-Nov-98	D
ND-98-1413	G072	74	122	98	2	4-Nov-98	D
ND-98-1414	G073	93	87	116	7	4-Nov-98	
ND-98-1415	G074	79	89	136	4	4-Nov-98	D
ND-98-1416	G075	90	30	80	6	4-Nov-98	B,D
ND-98-1417	G076	113	54	113	5	4-Nov-98	D
ND-98-1418	G077	142	75	108	5	4-Nov-98	D
ND-98-1419	G078	89	93	146	4	4-Nov-98	D
ND-98-1420	G079	89	81	151	5	4-Nov-98	D
ND-98-1421	G080	78	85	124	4	4-Nov-98	D
ND-98-1422	G080d	86	67	133	6	4-Nov-98	D
ND-98-1423	G081	76	31	85	4	4-Nov-98	B,D
ND-98-1424	G082	92	11	116	4	4-Nov-98	B,D
ND-98-1425	G083	60	73	58	2	4-Nov-98	D
ND-98-1426	G084	46	89	69	2	4-Nov-98	D
ND-98-1427	G085	42	62	80	4	4-Nov-98	D
ND-98-1428	G086	85	101	105	6	4-Nov-98	D
ND-98-1429	G087	72	102	125	6	4-Nov-98	D
ND-98-1430	G088	74	88	74	3	4-Nov-98	D
ND-98-1431	G089	130	28	104	3	4-Nov-98	B,D
ND-98-1432	G090	74	112	91	2	4-Nov-98	D
ND-98-1433	G090d	88	119	109	6	4-Nov-98	D
ND-98-1434	G091	120	110	303	8	4-Nov-98	
ND-98-1435	G092	124	32	97	4	4-Nov-98	B,D
ND-98-1436	G093	88	44	137	3	4-Nov-98	B,D
ND-98-1437	G094	97	63	129	5	5-Nov-98	D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1438	G095	109	19	126	6	5-Nov-98	B,D
ND-98-1439	G096	82	82	139	3	5-Nov-98	D
ND-98-1440	G097	109	46	148	5	5-Nov-98	D
ND-98-1441	G098	96	93	161	4	5-Nov-98	D
ND-98-1442	G099	174	53	110	5	5-Nov-98	D
ND-98-1443	G100	107	71	139	5	5-Nov-98	D
ND-98-1444	G100D	131	78	136	4	5-Nov-98	D
ND-98-1445	G101	59	74	84	5	5-Nov-98	D
ND-98-1446	G102	69	124	122	4	5-Nov-98	D
ND-98-1447	G103	78	122	175	4	5-Nov-98	D
ND-98-1448	G104	66	46	93	3	5-Nov-98	D
ND-98-1449	G105	72	119	84	5	5-Nov-98	D
ND-98-1450	G106	71	97	76	4	5-Nov-98	D
ND-98-1451	G107	118	25	101	6	5-Nov-98	B,D
ND-98-1452	G108	129	118	107	5	5-Nov-98	D
ND-98-1453	G109	65	67	84	4	5-Nov-98	D
ND-98-1454	G110	59	60	58	7	5-Nov-98	
ND-98-1455	G110d	49	54	53	3	5-Nov-98	D
ND-98-1456	G111	60	37	63	4	5-Nov-98	B,D
ND-98-1457	G112	71	136	133	6	5-Nov-98	D
ND-98-1458	G113	100	154	197	3	5-Nov-98	D
ND-98-1459	G114	140	86	97	3	5-Nov-98	D
ND-98-1460	G115	76	96	151	5	5-Nov-98	D
ND-98-1461	G116	62	80	104	4	5-Nov-98	D
ND-98-1462	G117	55	120	137	3	5-Nov-98	D
ND-98-1463	G118	51	142	137	5	6-Nov-98	D
ND-98-1464	G119	59	92	109	6	6-Nov-98	D
ND-98-1465	G120	61	56	137	3	6-Nov-98	D
ND-98-1466	G120d	62	84	109	4	6-Nov-98	D
ND-98-1467	G121	102	124	213	6	6-Nov-98	D
ND-98-1468	G122	152	17	118	3	6-Nov-98	B,D
ND-98-1469	G123	81	100	142	4	6-Nov-98	D
ND-98-1470	G124	98	80	127	5	6-Nov-98	D
ND-98-1471	G125	79	72	138	5	6-Nov-98	D
ND-98-1472	G126	59	52	81	5	6-Nov-98	D
ND-98-1473	G127	89	114	106	5	6-Nov-98	D
ND-98-1474	G128	412	79	160	6	6-Nov-98	D
ND-98-1475	G129	197	13	90	6	6-Nov-98	B,D
ND-98-1476	G130	158	98	287	5	6-Nov-98	D
ND-98-1477	G130d	160	52	292	6	6-Nov-98	D
ND-98-1478	G131	111	184	348	5	6-Nov-98	D
ND-98-1479	G132	66	123	157	3	6-Nov-98	D
ND-98-1480	G133	90	148	287	6	6-Nov-98	D
ND-98-1481	G134	77	231	413	3	6-Nov-98	D
ND-98-1482	G135	101	120	276	4	6-Nov-98	D
ND-98-1483	G136	68	84	208	4	6-Nov-98	D
ND-98-1484	G137	91	109	237	4	6-Nov-98	D
ND-98-1485	G138	116	133	257	5	6-Nov-98	D
ND-98-1486	G139	177	41	124	4	6-Nov-98	B,D
ND-98-1487	G140	118	32	133	4	6-Nov-98	B,D
ND-98-1488	G140d	123	55	133	7	6-Nov-98	
ND-98-1489	G141	104	55	205	5	7-Nov-98	D
ND-98-1490	G142	57	49	75	4	7-Nov-98	D
ND-98-1491	G143	54	40	70	6	7-Nov-98	B,D
ND-98-1492	G144	112	131	147	7	7-Nov-98	
ND-98-1493	G145	136	81	80	3	7-Nov-98	D
ND-98-1494	G146	170	6	129	4	7-Nov-98	B,D
ND-98-1495	G147	104	57	226	5	7-Nov-98	D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1496	G148	129	47	264	6	7-Nov-98	D
ND-98-1497	G149	119	63	223	5	7-Nov-98	D
ND-98-1498	G150	158	113	266	7	7-Nov-98	
ND-98-1499	G150d	154	70	229	11	7-Nov-98	
ND-98-1500	G151	183	113	173	5	7-Nov-98	D
ND-98-1501	G152	190	14	115	6	7-Nov-98	B,D
ND-98-1502	G153	621	6	140	4	7-Nov-98	B,D
ND-98-1503	G154	174	11	80	3	8-Nov-98	B,D
ND-98-1504	G155	262	58	92	6	8-Nov-98	D
ND-98-1505	G156	125	89	159	6	8-Nov-98	D
ND-98-1506	G157	73	57	149	8	8-Nov-98	
ND-98-1507	G158	98	78	187	5	8-Nov-98	D
ND-98-1508	G159	83	88	140	5	8-Nov-98	D
ND-98-1509	G160	83	48	158	6	8-Nov-98	D
ND-98-1510	G160d	79	68	138	4	8-Nov-98	D
ND-98-1511	G161	105	55	151	8	8-Nov-98	
ND-98-1512	G162	84	61	134	6	8-Nov-98	D
ND-98-1513	G163	103	51	159	8	8-Nov-98	
ND-98-1514	G164	111	14	101	3	8-Nov-98	B,D
ND-98-1515	G165	164	1	92	4	9-Nov-98	B,D
ND-98-1516	G166	178	116	241	7	9-Nov-98	
ND-98-1517	G167	247	12	214	4	9-Nov-98	B,D
ND-98-1518	G168	102	60	157	4	9-Nov-98	D
ND-98-1519	G169	79	67	122	5	9-Nov-98	D
ND-98-1520	G170	88	94	172	5	9-Nov-98	D
ND-98-1521	G170d	93	49	164	5	9-Nov-98	D
ND-98-1522	G171	97	8	128	5	9-Nov-98	B,D
ND-98-1523	G172	101	95	125	6	9-Nov-98	D
ND-98-1524	G173	112	100	145	7	9-Nov-98	
ND-98-1525	G174	88	87	138	5	9-Nov-98	D
ND-98-1526	G175	110	84	170	4	9-Nov-98	D
ND-98-1527	G176	158	46	109	4	11-Nov-98	D
ND-98-1528	G177	358	33	96	6	11-Nov-98	B,D
ND-98-1529	G178	313	46	116	3	11-Nov-98	D
ND-98-1530	G179	303	27	83	3	11-Nov-98	B,D
ND-98-1531	G180	228	17	94	4	11-Nov-98	B,D
ND-98-1532	G180d	221	41	92	3	11-Nov-98	B,D
ND-98-1533	G181	232	47	60	4	11-Nov-98	D
ND-98-1534	G182	244	27	91	4	11-Nov-98	B,D
ND-98-1535	G183	238	ND	83	4	11-Nov-98	B,D
ND-98-1536	G184	216	54	79	3	11-Nov-98	D
ND-98-1537	G185	220	11	92	4	11-Nov-98	B,D
ND-98-1538	G186	220	75	95	3	11-Nov-98	D
ND-98-1539	G187	244	ND	95	4	11-Nov-98	B,D
ND-98-1540	G188	103	85	161	9	11-Nov-98	
ND-98-1541	G189	164	130	127	6	11-Nov-98	D
ND-98-1542	G190	169	100	119	5	11-Nov-98	D
ND-98-1543	G190d	168	98	135	9	11-Nov-98	
ND-98-1544	G191	151	126	150	7	11-Nov-98	
ND-98-1545	G192	137	154	150	6	11-Nov-98	D
ND-98-1546	G193	150	129	124	8	11-Nov-98	
ND-98-1547	G194	123	87	77	4	11-Nov-98	D
ND-98-1548	G195	67	42	94	8	11-Nov-98	B
ND-98-1549	G196	60	35	66	3	11-Nov-98	B,D
ND-98-1550	G197	56	33	81	3	11-Nov-98	B,D
ND-98-1551	G198	57	67	60	4	11-Nov-98	D
ND-98-1552	G199	58	29	57	5	11-Nov-98	B,D
ND-98-1553	G200	56	44	65	3	12-Nov-98	B,D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1554	G200d	62	22	58	4	12-Nov-98	B,D
ND-98-1555	G201	70	23	39	2	12-Nov-98	B,D
ND-98-1556	G202	135	25	71	3	12-Nov-98	B,D
ND-98-1557	G203	62	19	45	4	12-Nov-98	B,D
ND-98-1558	G204	65	4	57	4	12-Nov-98	B,D
ND-98-1559	G205	50	56	61	4	12-Nov-98	D
ND-98-1560	G206	57	11	37	3	12-Nov-98	B,D
ND-98-1561	G207	100	26	68	3	12-Nov-98	B,D
ND-98-1562	G208	79	98	88	4	12-Nov-98	D
ND-98-1563	G209	78	71	76	7	12-Nov-98	
ND-98-1564	G210	76	22	67	6	12-Nov-98	B,D
ND-98-1565	G210d	71	57	72	5	12-Nov-98	D
ND-98-1566	G211	105	189	106	5	12-Nov-98	D
ND-98-1567	G212	147	106	131	5	12-Nov-98	D
ND-98-1568	G213	138	151	138	6	12-Nov-98	D
ND-98-1569	G214	158	179	139	6	12-Nov-98	D
ND-98-1570	G215	176	343	273	7	12-Nov-98	
ND-98-1571	G216	68	83	58	3	12-Nov-98	D
ND-98-1572	G217	111	112	128	7	12-Nov-98	
ND-98-1573	G218	111	69	74	4	12-Nov-98	D
ND-98-1574	G219	97	137	84	4	12-Nov-98	D
ND-98-1575	G220	99	102	107	3	12-Nov-98	D
ND-98-1576	G220d	123	122	94	3	12-Nov-98	D
ND-98-1577	G221	87	105	84	4	12-Nov-98	D
ND-98-1578	G222	71	108	64	4	12-Nov-98	D
ND-98-1579	G223	62	132	64	6	13-Nov-98	D
ND-98-1580	G224	81	104	83	4	13-Nov-98	D
ND-98-1581	G225	71	123	69	3	13-Nov-98	D
ND-98-1582	F001	1036	ND	351	9	13-Nov-98	B
ND-98-1583	F002	555	29	317	6	13-Nov-98	B,D
ND-98-1584	F003	501	52	223	12	13-Nov-98	
ND-98-1585	F004	349	51	250	7	13-Nov-98	
ND-98-1586	F005	381	49	310	8	13-Nov-98	
ND-98-1587	F006	310	44	260	4	13-Nov-98	B,D
ND-98-1588	F007	282	10	215	4	13-Nov-98	B,D
ND-98-1589	F008	385	38	191	6	13-Nov-98	B,D
ND-98-1590	F009	400	123	268	7	13-Nov-98	
ND-98-1591	F010	281	11	214	5	14-Nov-98	B,D
ND-98-1592	F011	278	8	258	8	14-Nov-98	B
ND-98-1593	F012	314	37	287	5	14-Nov-98	B,D
ND-98-1594	F013	285	62	306	7	14-Nov-98	
ND-98-1595	F014	486	98	469	6	14-Nov-98	D
ND-98-1596	F015	478	18	483	7	14-Nov-98	B
ND-98-1597	F016	177	62	177	6	14-Nov-98	D
ND-98-1598	F017	284	88	254	5	14-Nov-98	D
ND-98-1599	F018	244	43	179	4	14-Nov-98	B,D
ND-98-1600	F019	455	ND	255	4	14-Nov-98	B,D
ND-98-1601	F020	819	61	391	7	14-Nov-98	
ND-98-1602	F021	594	149	338	8	14-Nov-98	
ND-98-1603	F022	439	42	199	8	14-Nov-98	B
ND-98-1604	F023	251	58	213	6	14-Nov-98	D
ND-98-1605	F024	439	51	232	7	14-Nov-98	
ND-98-1606	F025	238	19	324	5	14-Nov-98	B
ND-98-1607	F026	224	14	147	5	14-Nov-98	B,D
ND-98-1608	F027	232	40	159	3	14-Nov-98	B,D
ND-98-1609	F028	174	18	167	4	14-Nov-98	B,D
ND-98-1610	F029	210	40	176	6	14-Nov-98	B,D
ND-98-1611	F030	201	38	228	4	14-Nov-98	B,D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1612	F031	263	28	200	5	14-Nov-98	B,D
ND-98-1613	F032	282	29	230	5	14-Nov-98	B,D
ND-98-1614	F033	350	51	289	6	14-Nov-98	D
ND-98-1615	F034	350	68	432	5	14-Nov-98	D
ND-98-1616	F035	304	29	348	4	14-Nov-98	B,D
ND-98-1617	F036	358	101	333	5	15-Nov-98	D
ND-98-1618	F037	327	82	286	4	15-Nov-98	D
ND-98-1619	F038	528	39	344	6	15-Nov-98	B,D
ND-98-1620	F039	470	14	313	18	15-Nov-98	B
ND-98-1621	F039d	598	97	333	5	15-Nov-98	D
ND-98-1622	F040	520	83	340	6	15-Nov-98	D
ND-98-1623	F040d	497	101	337	8	15-Nov-98	
ND-98-1624	F041	501	68	234	19	15-Nov-98	
ND-98-1625	F041d	501	56	231	21	15-Nov-98	
ND-98-1626	F042	373	56	285	6	15-Nov-98	D
ND-98-1627	F042d	381	114	269	6	15-Nov-98	D
ND-98-1628	F043	268	3	257	5	16-Nov-98	B,D
ND-98-1629	F043d	254	29	243	7	16-Nov-98	B
ND-98-1630	F044	225	63	189	5	16-Nov-98	D
ND-98-1631	F044d	228	44	182	5	16-Nov-98	B,D
ND-98-1632	F045	234	ND	154	7	16-Nov-98	B
ND-98-1633	F045d	229	39	177	7	16-Nov-98	B
ND-98-1634	F046	250	11	145	3	16-Nov-98	B,D
ND-98-1635	F046d	224	25	115	5	16-Nov-98	B,D
ND-98-1636	F047	197	33	149	5	16-Nov-98	B,D
ND-98-1637	F047d	191	32	166	5	16-Nov-98	B,D
ND-98-1638	F048	257	28	206	5	16-Nov-98	B,D
ND-98-1639	F048d	249	0	218	8	16-Nov-98	B
ND-98-1640	F049	273	ND	212	5	16-Nov-98	B,D
ND-98-1641	F049d	277	29	268	7	16-Nov-98	B
ND-98-1642	F050d	251	25	233	7	17-Nov-98	B
ND-98-1643	F050	299	51	243	5	17-Nov-98	D
ND-98-1644	F051	354	ND	253	8	17-Nov-98	B
ND-98-1645	F051d	345	ND	213	7	17-Nov-98	B
ND-98-1646	F052	315	ND	253	6	17-Nov-98	B,D
ND-98-1647	F053	344	42	269	7	17-Nov-98	B
ND-98-1648	F054	229	76	262	6	17-Nov-98	D
ND-98-1649	F055	318	105	337	5	17-Nov-98	D
ND-98-1650	F056	361	121	376	6	17-Nov-98	D
ND-98-1651	F057	350	45	297	15	17-Nov-98	B
ND-98-1652	F058	811	71	403	8	17-Nov-98	
ND-98-1653	F059	513	120	334	9	17-Nov-98	
ND-98-1654	F060	617	33	227	15	17-Nov-98	B
ND-98-1655	F061	346	14	257	11	17-Nov-98	B
ND-98-1656	F062	614	68	373	9	17-Nov-98	
ND-98-1657	F063	308	59	230	6	17-Nov-98	D
ND-98-1658	F064	224	48	121	5	17-Nov-98	D
ND-98-1659	F065	251	68	161	5	17-Nov-98	D
ND-98-1660	F066	202	24	161	6	17-Nov-98	B,D
ND-98-1661	F067	190	50	161	8	17-Nov-98	
ND-98-1662	F068	204	25	166	4	17-Nov-98	B,D
ND-98-1663	F069	266	91	269	7	18-Nov-98	
ND-98-1664	F070	283	57	219	7	18-Nov-98	
ND-98-1665	F071	252	35	216	5	18-Nov-98	B,D
ND-98-1666	F072	256	44	237	11	18-Nov-98	B
ND-98-1667	F073	259	91	277	6	18-Nov-98	D
ND-98-1668	F074	251	76	241	6	17-Nov-98	D
ND-98-1669	F075	311	21	257	5	17-Nov-98	B,D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1670	F076	385	82	353	8	17-Nov-98	
ND-98-1671	F077	579	85	361	8	17-Nov-98	
ND-98-1672	F078	509	141	353	9	17-Nov-98	
ND-98-1800	F079	540	14	189	7	24-Nov-98	B
ND-98-1801	F080	451	3	356	7	24-Nov-98	B
ND-98-1802	F081	316	17	174	5	24-Nov-98	B,D
ND-98-1803	F082	532	ND	329	8	24-Nov-98	B
ND-98-1804	F083	326	39	244	5	24-Nov-98	B,D
ND-98-1805	041	173	320	195	9	24-Nov-98	
ND-98-1806	042	214	247	219	7	24-Nov-98	
ND-98-1807	F089	412	ND	423	7	24-Nov-98	B
ND-98-1808	F090	229	48	185	5	24-Nov-98	D
ND-98-1809	F091	242	63	212	6	24-Nov-98	D
ND-98-1810	F092	350	27	356	4	24-Nov-98	B,D
ND-98-1811	F093	300	ND	214	4	24-Nov-98	B,D
ND-98-1812	F094	408	20	293	9	24-Nov-98	B
ND-98-1813	F095	451	22	298	6	24-Nov-98	B,D
ND-98-1814	F096	489	16	320	9	24-Nov-98	B
ND-98-1815	F097	637	ND	411	6	24-Nov-98	B,D
ND-98-1816	F098	652	17	306	5	24-Nov-98	B,D
ND-98-1817	F099	672	28	348	6	24-Nov-98	B,D
ND-98-1818	F100	695	117	427	9	24-Nov-98	
ND-98-1819	F084	328	72	290	7	24-Nov-98	
ND-98-1820	F085	462	3	331	6	24-Nov-98	B,D
ND-98-1821	F086	656	109	369	7	25-Nov-98	
ND-98-1822	F087	455	32	316	8	25-Nov-98	B
ND-98-1823	F088	489	5	218	8	25-Nov-98	B
ND-98-1824	F101	482	119	325	9	25-Nov-98	
ND-98-1825	F102	730	6	454	8	25-Nov-98	B
ND-98-1826	F103	334	10	240	6	24-Nov-98	B,D
ND-98-1827	F104	345	32	260	5	25-Nov-98	B,D
ND-98-1828	F105	594	55	376	9	25-Nov-98	
ND-98-1829	F106	451	0	408	5	25-Nov-98	B,D
ND-98-1830	F107	858	164	419	13	25-Nov-98	
ND-98-1831	F108	730	87	350	8	25-Nov-98	
ND-98-1832	F109	579	ND	432	7	25-Nov-98	B
ND-98-1833	F110	590	37	377	8	25-Nov-98	B
ND-98-1834	F111	586	87	464	8	26-Nov-98	
ND-98-1835	F112	590	ND	475	10	26-Nov-98	B
ND-98-1836	F113	354	28	479	5	26-Nov-98	B,D
ND-98-1837	F114	858	129	498	9	26-Nov-98	
ND-98-1838	F115	796	84	420	9	26-Nov-98	
ND-98-1839	FA-001	893	ND	264	6	26-Nov-98	B,D
ND-98-1840	FA-002	513	101	272	6	26-Nov-98	D
ND-98-1841	FA-003	261	55	207	5	26-Nov-98	D
ND-98-1842	FA-004	249	65	122	6	26-Nov-98	D
ND-98-1843	FA-005	327	6	168	5	26-Nov-98	B,D
ND-98-1844	FA-006	221	46	191	6	26-Nov-98	D
ND-98-1845	FA-007	780	54	310	8	26-Nov-98	
ND-98-1846	FA-008	385	50	202	4	26-Nov-98	D
ND-98-1847	FA-009	349	7	178	4	30-Nov-98	B,D
ND-98-1848	FA-010	346	25	201	4	26-Nov-98	B,D
ND-98-1849	FA-011	327	2	194	4	30-Nov-98	B,D
ND-98-1850	FA-012	458	49	243	7	30-Nov-98	
ND-98-1851	FA-013	505	42	261	4	30-Nov-98	B,D
ND-98-1852	FA-014	335	13	219	5	30-Nov-98	B,D
ND-98-1853	FA-015	629	ND	261	7	30-Nov-98	B
ND-98-1854	FA-016	648	46	273	4	30-Nov-98	D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1855	FA-017	478	ND	234	4	30-Nov-98	B,D
ND-98-1856	FC1-0-2"	827	123	438	8	30-Nov-98	
ND-98-1857	FC1-2-4"	1502	154	468	7	30-Nov-98	
ND-98-1858	FC1-4-6"	1571	164	450	9	30-Nov-98	
ND-98-1859	FC1-6-8"	1416	151	468	8	30-Nov-98	
ND-98-1860	FC1-8-10"	1261	109	428	8	1-Dec-98	
ND-98-1861	FC1-10-12"	610	51	212	4	1-Dec-98	D
ND-98-1862	FC2-0-2"	245	9	181	6	1-Dec-98	B,D
ND-98-1863	FC2-2-4"	261	35	211	7	1-Dec-98	B
ND-98-1864	FC2-4-6"	261	40	211	5	1-Dec-98	B,D
ND-98-1865	FC2-6-8"	237	23	199	4	1-Dec-98	B,D
ND-98-1866	FC2-8-10"	238	41	213	6	1-Dec-98	B,D
ND-98-1867	FC2-10-12"	243	ND	250	7	1-Dec-98	B
ND-98-1868	001	327	5	239	5	1-Dec-98	B,D
ND-98-1869	002	594	ND	213	8	1-Dec-98	B
ND-98-1870	003	532	33	202	7	1-Dec-98	B
ND-98-1871	004	404	39	216	5	1-Dec-98	B,D
ND-98-1872	005	373	54	286	7	1-Dec-98	
ND-98-1873	006	221	89	175	6	1-Dec-98	D
ND-98-1874	007	218	56	172	8	1-Dec-98	
ND-98-1875	008	212	104	190	8	1-Dec-98	
ND-98-1876	009	320	137	194	10	1-Dec-98	
ND-98-1877	010	223	165	248	10	1-Dec-98	
ND-98-1878	010d	211	175	340	8	1-Dec-98	
ND-98-1879	011	187	106	175	9	1-Dec-98	
ND-98-1880	012	221	191	271	8	1-Dec-98	
ND-98-1881	013	1172	74	568	10	1-Dec-98	
ND-98-1882	014	346	8	200	5	1-Dec-98	B,D
ND-98-1883	025	206	261	219	9	1-Dec-98	
ND-98-1884	026	175	246	223	9	1-Dec-98	
ND-98-1885	027	149	199	189	7	1-Dec-98	
ND-98-1886	028	175	181	259	9	2-Dec-98	
ND-98-1887	029	215	492	260	11	2-Dec-98	
ND-98-1888	030	329	7	154	8	2-Dec-98	B
ND-98-1889	030d	268	ND	174	8	2-Dec-98	B
ND-98-1890	031	275	179	164	9	2-Dec-98	
ND-98-1891	032	181	242	165	10	2-Dec-98	
ND-98-1892	033	133	345	133	8	2-Dec-98	
ND-98-1893	034	139	423	159	8	2-Dec-98	
ND-98-1894	035	147	338	187	6	2-Dec-98	D
ND-98-1895	036	115	414	167	8	2-Dec-98	
ND-98-1896	037	166	399	182	8	2-Dec-98	
ND-98-1897	038	185	164	203	8	2-Dec-98	
ND-98-1898	039	178	330	228	6	2-Dec-98	D
ND-98-1899	040	186	246	222	9	2-Dec-98	
ND-98-1900	040d	166	205	191	8	2-Dec-98	
ND-98-1901	015	221	76	192	7	2-Dec-98	
ND-98-1902	016	169	112	138	9	2-Dec-98	
ND-98-1903	017	208	224	218	11	2-Dec-98	
ND-98-1904	018	219	421	247	7	2-Dec-98	
ND-98-1905	019	173	181	212	7	2-Dec-98	
ND-98-1906	020	187	152	255	10	2-Dec-98	
ND-98-1907	020d	178	235	233	9	2-Dec-98	
ND-98-1908	021	282	84	349	5	2-Dec-98	D
ND-98-1909	022	305	42	197	9	2-Dec-98	B
ND-98-1910	023	258	264	286	8	2-Dec-98	
ND-98-1911	024	177	279	242	7	2-Dec-98	
ND-98-1912	043	195	428	280	11	3-Dec-98	

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1913	044	166	188	148	6	3-Dec-98	D
ND-98-1914	045	959	40	321	6	3-Dec-98	B,D
ND-98-1915	046	318	262	191	8	3-Dec-98	
ND-98-1916	047	196	323	205	9	3-Dec-98	
ND-98-1917	048	129	289	139	7	3-Dec-98	
ND-98-1918	049	171	395	176	7	3-Dec-98	
ND-98-1919	050	149	368	164	8	3-Dec-98	
ND-98-1920	050d	164	408	191	12	3-Dec-98	
ND-98-1921	051	122	258	151	5	3-Dec-98	D
ND-98-1922	052	91	276	120	6	3-Dec-98	D
ND-98-1923	053	325	211	259	7	3-Dec-98	
ND-98-1924	054	204	220	241	7	3-Dec-98	
ND-98-1925	055	157	297	233	7	3-Dec-98	
ND-98-1926	056	182	340	219	6	3-Dec-98	D
ND-98-1927	057	242	342	246	8	3-Dec-98	
ND-98-1928	058	176	297	195	9	3-Dec-98	
ND-98-1929	059	317	120	184	10	3-Dec-98	
ND-98-1930	060	201	348	231	7	3-Dec-98	
ND-98-1931	060d	206	371	228	10	3-Dec-98	
ND-98-1932	061	178	253	168	11	3-Dec-98	
ND-98-1933	062	163	340	174	10	3-Dec-98	
ND-98-1934	063	154	233	165	10	3-Dec-98	
ND-98-1935	064	176	299	207	9	3-Dec-98	
ND-98-1936	065	173	378	240	9	3-Dec-98	
ND-98-1937	066	192	317	178	7	3-Dec-98	
ND-98-1938	067	159	246	209	7	4-Dec-98	
ND-98-1939	068	150	287	249	7	4-Dec-98	
ND-98-1940	069	625	491	337	13	4-Dec-98	
ND-98-1941	070	217	627	253	8	4-Dec-98	
ND-98-1942	070d	233	489	233	8	4-Dec-98	
ND-98-1943	071	385	586	404	7	4-Dec-98	
ND-98-1944	072	190	351	226	8	4-Dec-98	
ND-98-1945	073	180	259	219	9	4-Dec-98	
ND-98-1946	074	176	520	198	9	4-Dec-98	
ND-98-1947	075	145	295	142	7	4-Dec-98	
ND-98-1948	076	174	540	199	8	4-Dec-98	
ND-98-1949	077	214	391	258	8	4-Dec-98	
ND-98-1950	078	287	190	264	7	5-Dec-98	
ND-98-1951	079	280	113	174	7	5-Dec-98	
ND-98-1952	080	236	185	217	5	5-Dec-98	D
ND-98-1953	080d	329	156	270	8	5-Dec-98	
ND-98-1954	081	138	356	190	5	5-Dec-98	D
ND-98-1955	082	120	224	199	5	5-Dec-98	
ND-98-1956	083	150	392	255	11	5-Dec-98	
ND-98-1957	084	201	1257	635	11	5-Dec-98	
ND-98-1958	085	194	1115	278	11	5-Dec-98	
ND-98-1959	086	214	1716	348	8	5-Dec-98	
ND-98-1960	087	133	841	162	5	5-Dec-98	D
ND-98-1961	088	75	177	75	4	5-Dec-98	
ND-98-1962	089	160	316	237	9	5-Dec-98	
ND-98-1963	090	113	213	124	8	5-Dec-98	
ND-98-1964	090d	109	171	119	4	5-Dec-98	D
ND-98-1965	091	109	198	129	6	5-Dec-98	D
ND-98-1966	092	235	303	198	8	5-Dec-98	
ND-98-1967	093	138	145	160	4	5-Dec-98	D
ND-98-1968	094	239	136	195	5	5-Dec-98	D
ND-98-1969	095	151	113	149	6	5-Dec-98	D
ND-98-1970	096	190	118	139	5	5-Dec-98	D

TABLE 4.01 Phase III EDSXRF Final Results.

Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-1971	097	111	240	116	5	5-Dec-98	D
ND-98-1972	098	130	343	197	9	5-Dec-98	
ND-98-1973	099	144	235	214	8	5-Dec-98	
ND-98-1974	100	157	698	245	10	5-Dec-98	
ND-98-1975	100d	144	571	231	8	5-Dec-98	
ND-98-1976	101	302	201	249	10	6-Dec-98	
ND-98-1977	102	365	811	309	11	6-Dec-98	
ND-98-1978	103	287	795	418	10	6-Dec-98	
ND-98-1979	104	84	161	50	3	6-Dec-98	
ND-98-1980	105	65	169	51	3	6-Dec-98	D
ND-98-1981	106	133	394	124	5	6-Dec-98	D
ND-98-1982	107	137	337	149	5	6-Dec-98	D
ND-98-1983	108	135	310	197	5	6-Dec-98	D
ND-98-1984	109	173	176	193	8	6-Dec-98	
ND-98-1985	110	226	117	167	6	6-Dec-98	D
ND-98-1986	110d	241	85	192	6	6-Dec-98	D
ND-98-1987	111	104	66	64	4	6-Dec-98	D
ND-98-1988	112	138	243	173	6	6-Dec-98	D
ND-98-1989	113	138	299	162	7	6-Dec-98	
ND-98-1990	114	162	378	228	5	6-Dec-98	D
ND-98-1991	115	149	268	204	6	6-Dec-98	D
ND-98-1992	116	207	647	284	7	6-Dec-98	
ND-98-1993	117	358	156	222	7	6-Dec-98	
ND-98-1994	118	807	1171	563	13	6-Dec-98	
ND-98-1995	119	200	9	410	7	6-Dec-98	B
ND-98-1996	120d	123	137	203	5	6-Dec-98	D
ND-98-1997	120	141	159	260	5	6-Dec-98	D
ND-98-1998	121	95	157	84	2	6-Dec-98	D
ND-98-1999	122	143	148	180	7	6-Dec-98	
ND-98-2000	123	188	138	244	5	7-Dec-98	D
ND-98-2001	124	194	59	195	3	7-Dec-98	D
ND-98-2002	125	235	70	197	5	7-Dec-98	D
ND-98-2003	126	197	39	230	4	7-Dec-98	B,D
ND-98-2004	127	270	49	229	4	7-Dec-98	D
ND-98-2005	128	280	43	195	5	7-Dec-98	B,D
ND-98-2006	129	179	77	180	6	7-Dec-98	D
ND-98-2007	130	242	149	181	8	7-Dec-98	
ND-98-2008	131	294	219	214	5	7-Dec-98	D
ND-98-2009	132	182	67	167	5	7-Dec-98	D
ND-98-2010	133	200	91	212	7	7-Dec-98	
ND-98-2011	134	282	117	208	5	7-Dec-98	D
ND-98-2012	135	289	1	286	6	7-Dec-98	B,D
ND-98-2013	136	222	19	200	4	7-Dec-98	B,D
ND-98-2014	137	265	8	202	3	8-Dec-98	B,D
ND-98-2015	130d	210	178	234	5	8-Dec-98	D
ND-98-2016	138	285	13	209	4	8-Dec-98	B,D
ND-98-2017	139	350	35	216	6	8-Dec-98	B,D
ND-98-2018	140	265	34	243	5	8-Dec-98	B,D
ND-98-2019	140d	268	45	205	5	8-Dec-98	B,D
ND-98-2020	141	148	88	184	6	8-Dec-98	D
ND-98-2021	142	164	141	272	6	8-Dec-98	D
ND-98-2022	143	229	23	153	4	8-Dec-98	B,D
ND-98-2023	144	223	20	172	4	8-Dec-98	B,D
ND-98-2024	145	183	ND	234	6	8-Dec-98	B,D
ND-98-2025	146	206	17	177	3	8-Dec-98	B,D
ND-98-2026	147	235	32	292	6	8-Dec-98	B,D
ND-98-2027	148	221	40	336	7	8-Dec-98	B
ND-98-2028	150	217	ND	408	5	8-Dec-98	B,D

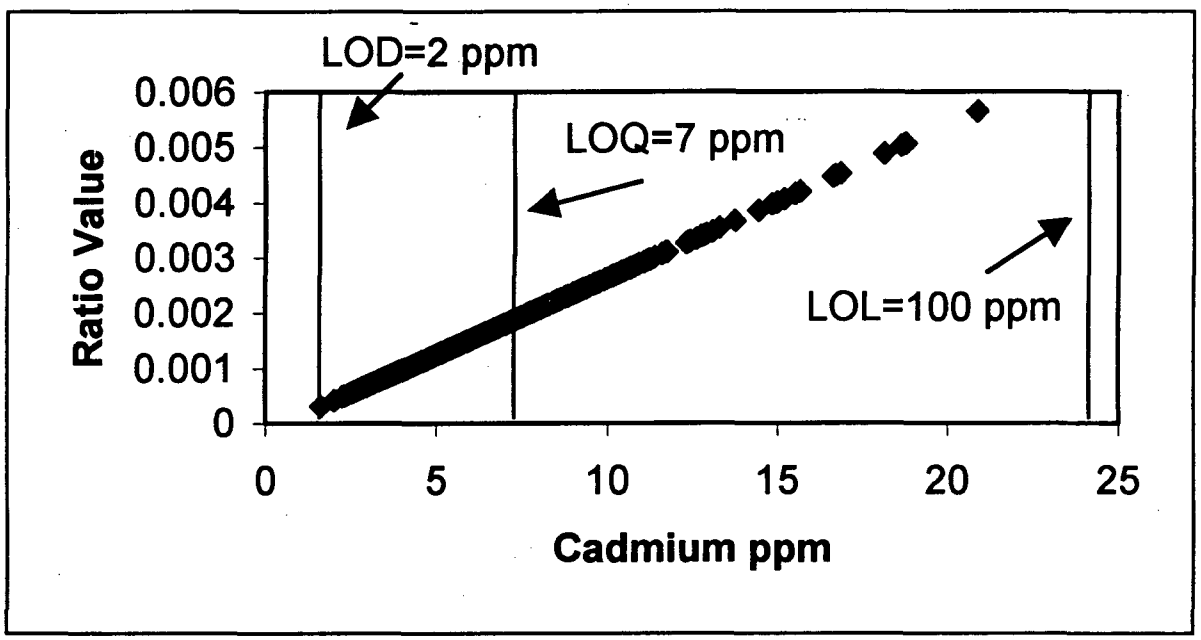
TABLE 4.01 Phase III EDSXRF Final Results.

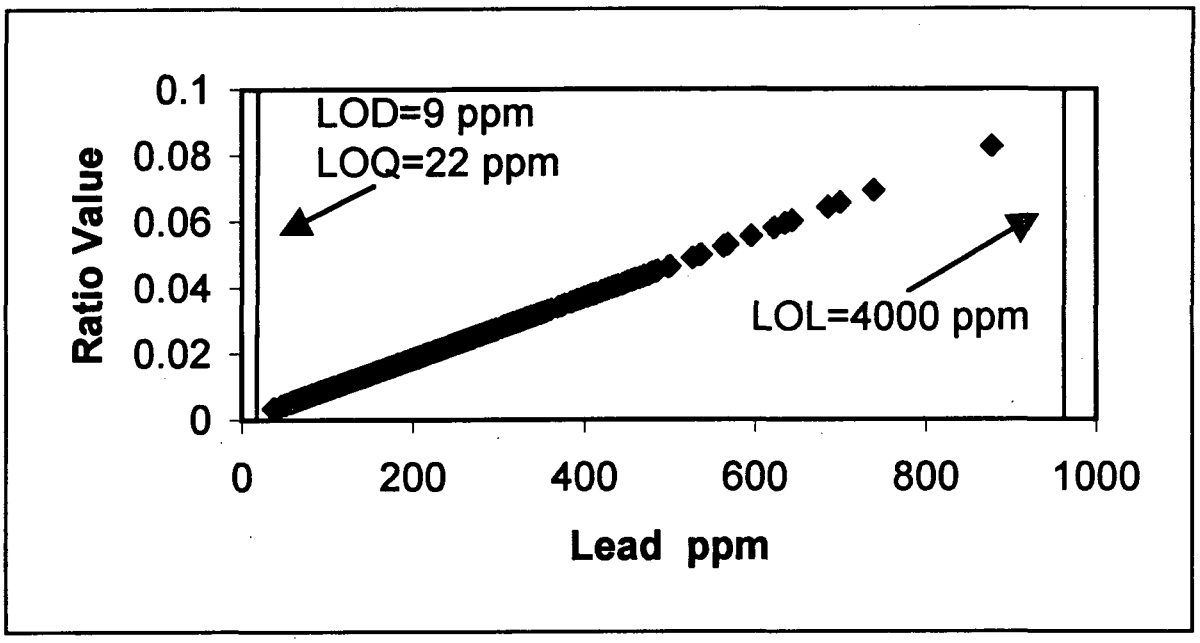
Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-2029	150d	234	32	369	4	8-Dec-98	B,D
ND-98-2030	151	257	ND	290	5	8-Dec-98	B,D
ND-98-2031	152	517	23	209	4	8-Dec-98	B,D
ND-98-2032	153	256	88	192	4	8-Dec-98	D
ND-98-2033	154	255	62	213	3	8-Dec-98	D
ND-98-2034	155	194	ND	240	4	8-Dec-98	B,D
ND-98-2035	156	203	ND	263	3	8-Dec-98	B,D
ND-98-2036	157	164	78	217	5	8-Dec-98	D
ND-98-2037	158	196	67	285	5	8-Dec-98	D
ND-98-2038	160	193	77	265	4	9-Dec-98	D
ND-98-2039	160d	202	66	262	5	9-Dec-98	D
ND-98-2040	161	149	42	189	7	9-Dec-98	B
ND-98-2041	162	174	69	306	6	9-Dec-98	D
ND-98-2042	163	171	42	292	4	9-Dec-98	B,D
ND-98-2043	164	146	68	192	5	9-Dec-98	D
ND-98-2044	165	176	68	278	6	9-Dec-98	D
ND-98-2045	166	169	109	207	5	9-Dec-98	D
ND-98-2046	167	145	ND	182	5	9-Dec-98	B,D
ND-98-2047	168	145	ND	174	4	9-Dec-98	B,D
ND-98-2048	A004	381	1600	596	16	9-Dec-98	
ND-98-2049	A005	493	350	295	10	9-Dec-98	
ND-98-2050	A006	200	1530	435	12	9-Dec-98	
ND-98-2051	A007	302	4798	877	12	9-Dec-98	
ND-98-2052	A008	361	1837	437	10	9-Dec-98	
ND-98-2053	A009	239	428	336	10	9-Dec-98	
ND-98-2054	A0010	232	800	485	17	9-Dec-98	
ND-98-2055	A0010d	216	831	447	12	9-Dec-98	
ND-98-2056	A011	201	704	456	10	9-Dec-98	
ND-98-2057	A012	178	688	399	9	9-Dec-98	
ND-98-2058	A013	244	933	444	10	9-Dec-98	
ND-98-2059	A014	178	627	458	7	9-Dec-98	
ND-98-2060	A015	164	436	320	8	9-Dec-98	
ND-98-2061	A016	240	81	128	6	9-Dec-98	D
ND-98-2062	A017	191	5	146	4	9-Dec-98	B,D
ND-98-2063	A018	582	394	346	8	9-Dec-98	
ND-98-2064	A019	474	458	644	19	10-Dec-98	
ND-98-2065	A020	396	673	740	13	10-Dec-98	
ND-98-2066	A020d	408	668	635	12	10-Dec-98	
ND-98-2067	A021	267	540	386	13	10-Dec-98	
ND-98-2068	A022	317	486	405	13	10-Dec-98	
ND-98-2069	A023	497	218	317	9	10-Dec-98	
ND-98-2070	A024	509	255	526	11	10-Dec-98	
ND-98-2071	A025	819	272	623	13	10-Dec-98	
ND-98-2072	A026	474	258	355	17	10-Dec-98	
ND-98-2073	A027	327	304	353	10	10-Dec-98	
ND-98-2074	A028	381	550	392	14	10-Dec-98	
ND-98-2075	A029	439	1267	686	16	10-Dec-98	
ND-98-2076	A030	365	785	700	17	10-Dec-98	
ND-98-2077	A030d	381	474	535	13	10-Dec-98	
ND-98-2078	A031	350	270	331	11	10-Dec-98	
ND-98-2079	A032	214	125	257	7	10-Dec-98	
ND-98-2080	A033	295	190	328	9	10-Dec-98	
ND-98-2081	A034	252	436	434	10	10-Dec-98	
ND-98-2082	A035	322	27	172	7	10-Dec-98	B
ND-98-2083	A036	381	44	201	6	10-Dec-98	B,D
ND-98-2084	A037	904	ND	250	11	10-Dec-98	B
ND-98-2085	A038	361	229	436	9	10-Dec-98	
ND-98-2086	A039	232	283	343	11	10-Dec-98	

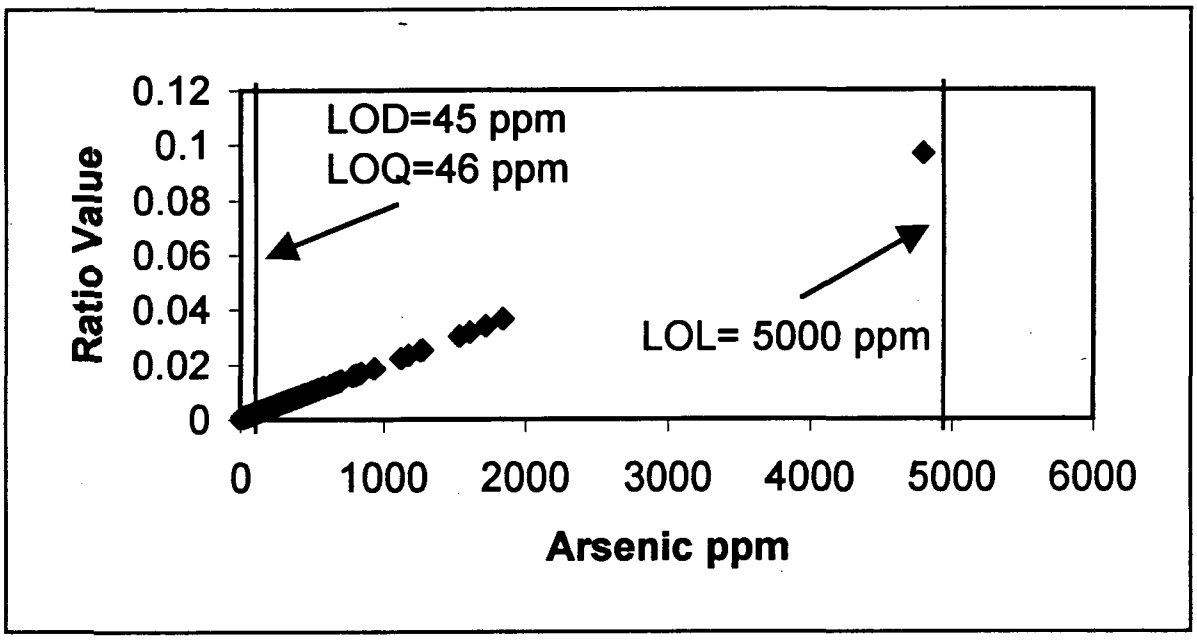
TABLE 4.01 Phase III EDSXRF Final Results.

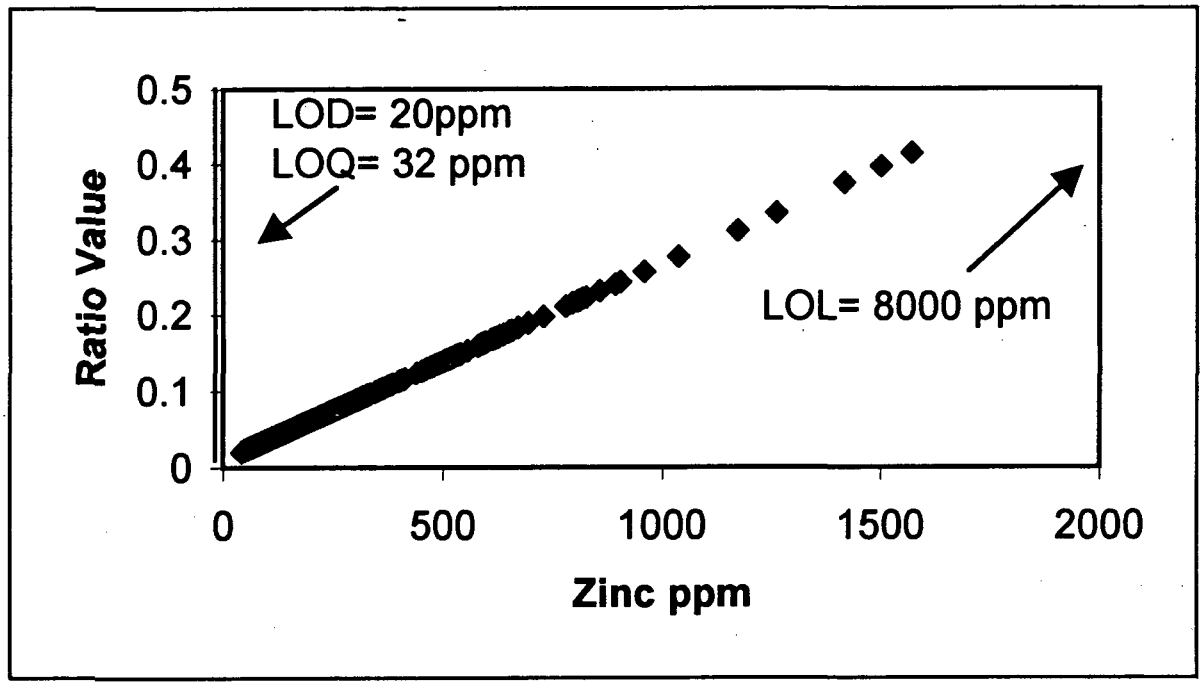
Lab ID	EPA #	Zn ppm	As ppm	Pb ppm	Cd ppm	Date Analyzed	Qualifiers
ND-98-2087	A040	195	192	500	8	10-Dec-98	
ND-98-2088	A040d	223	150	474	6	11-Dec-98	D
ND-98-2089	A041	156	282	321	8	11-Dec-98	
ND-98-2090	A042	168	323	260	8	11-Dec-98	
ND-98-2091	A043	156	218	166	9	11-Dec-98	
ND-98-2092	A044	200	437	253	6	11-Dec-98	D
ND-98-2093	A045	536	182	537	15	11-Dec-98	
ND-98-2094	A046	332	285	396	8	11-Dec-98	
ND-98-2095	A047	260	224	303	9	11-Dec-98	
ND-98-2096	A048	242	535	447	14	11-Dec-98	
ND-98-2097	A049	257	199	455	9	11-Dec-98	
ND-98-2098	A050	249	246	423	9	11-Dec-98	
ND-98-2099	A050D	245	203	383	7	11-Dec-98	
ND-98-2100	A051	204	140	209	9	11-Dec-98	
ND-98-2101	A052	224	135	259	10	11-Dec-98	
ND-98-2102	A053	201	49	189	8	12-Dec-98	
ND-98-2103	C4801 0-2" FRONT	135	499	225	7	12-Dec-98	
ND-98-2104	C4801 2-4" FRONT	120	410	195	6	12-Dec-98	D
ND-98-2105	C4801 4-6" FRONT	130	451	199	6	12-Dec-98	D
ND-98-2106	C4801 6-8" FRONT	96	244	164	6	12-Dec-98	D
ND-98-2107	C4801 8-10" FRONT	68	182	98	6	12-Dec-98	D
ND-98-2108	C4801 10-12" FRONT	78	151	99	4	12-Dec-98	D
ND-98-2109	C4801 0-2" BACK	142	191	192	9	12-Dec-98	
ND-98-2110	C4801 2-4" BACK	135	138	204	6	12-Dec-98	D
ND-98-2111	C4801 4-6" BACK	124	158	207	7	12-Dec-98	
ND-98-2112	C4801 6-8" BACK	112	81	191	6	12-Dec-98	D
ND-98-2113	C4801 8-10" BACK	102	75	173	6	12-Dec-98	D
ND-98-2114	C4801 10-12" BACK	94	104	139	6	13-Dec-98	D
ND-98-2115	A001	260	27	141	6	13-Dec-98	B,D
ND-98-2116	A002	246	45	128	5	13-Dec-98	B,D
ND-98-2117	A003	181	ND	114	5	13-Dec-98	B,D
ND-98-2118	041	239	311	185	9	16-Dec-98	
ND-98-2119	042	281	250	268	8	16-Dec-98	

ND= Not Detected (a negative concentration estimated)
Qualifiers A,B,C, and D are below Level of Quantification (LOQ) for Zn, As, Pb, and Cd respectively.


LOD=2 ppm
LOQ=7 ppm
LOL=100 ppm
Ratio Value
0.006
0.005
0.004
0.003
0.002
0.001
0
0
5
10
15
20
25
Cadmium ppm


LOD=9 ppm
LOQ=22 ppm
LOL=4000 ppm
Ratio Value
0.1
0.08
0.06
0.04
0.02
0
0
200
400
600
800
1000
Lead ppm


0.12
0.1
0.08
0.06
0.04
0.02
0
Ratio Value
LOD=45 ppm
LOQ=46 ppm
LOL= 5000 ppm
0
1000
2000
3000
4000
5000
6000
Arsenic ppm


LOD= 20ppm
LOQ= 32 ppm
LOL= 8000 ppm
Ratio Value
0.5
0.4
0.3
0.2
0.1
0
0
500
1000
1500
2000
Zinc ppm

APPENDIX I

Individual Batch Runs

CHAIN-OF-CUSTODY

Operator:	LUISZER	Date:	30-Oct-98	Time:	10:46:16			
Project:	ND	Batch	Number:	109				
Con. 1 mont.	1.3165	Con. 4 mont.	1.0949			Con. 5 mont.	0.6544	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-109	7.34E-03	-10	7.01E-04	9.80E-04	17	11	6.51E-04	3
ND-98-1323	2.49E-02	59	2.22E-03	6.53E-03	95	71	1.11E-03	5
ND-98-1324	2.59E-02	62	2.55E-03	1.05E-02	112	114	1.06E-03	4
ND-98-1325	2.27E-02	50	2.13E-03	6.70E-03	91	73	8.55E-04	4
ND-98-1326	2.35E-02	53	2.80E-03	7.70E-03	125	84	1.00E-03	4
ND-98-1327	3.20E-02	86	2.46E-03	1.74E-02	108	189	9.43E-04	4
ND-98-1328	2.92E-02	75	1.98E-03	1.28E-02	83	139	9.96E-04	4
ND-98-1329	3.74E-02	107	1.47E-03	1.91E-02	57	207	1.40E-03	6
ND-98-1330	3.47E-02	97	2.37E-03	1.41E-02	103	153	9.16E-04	4
ND-98-1331	3.47E-02	97	1.95E-03	1.42E-02	82	154	1.26E-03	5
ND-98-1332	3.15E-02	84	1.50E-03	9.32E-03	58	102	8.20E-04	3
ND-98-1333	2.48E-02	58	1.69E-03	9.16E-03	68	100	4.94E-04	2
ND-98-1333DUP	2.46E-02	57	5.25E-04	7.61E-03	8	83	1.07E-03	4
ND-98-1334	2.75E-02	69	1.25E-03	8.61E-03	46	94	9.50E-04	4
TO-8607	6.57E-01	2510	3.46E-02	2.42E-01	1741	2418	5.26E-03	19
Should be---->		2900			1800	2600		26
RPD		14			3	7		29

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	31-Oct-98	Time:	11:48:15			
Project:	ND	Batch	Number:	110				
Con. 1 mont.	1.2788	Con. 4 mont.	1.112			Con. 5 mont.	0.6529	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-110	1.40E-02	16	3.51E-04	1.38E-03	-1	15	3.57E-04	2
ND-98-1335	3.62E-02	102	2.29E-03	1.93E-02	99	209	1.47E-03	6
ND-98-1336	2.98E-02	78	2.88E-03	1.26E-02	129	137	1.36E-03	5
ND-98-1337	3.20E-02	86	2.13E-03	1.58E-02	91	172	1.40E-03	6
ND-98-1338	3.06E-02	81	1.36E-03	1.24E-02	51	135	1.47E-03	6
ND-98-1339	2.82E-02	71	2.28E-03	1.00E-02	98	109	8.65E-04	4
ND-98-1340	3.23E-02	87	2.29E-03	1.27E-02	99	138	1.69E-03	7
ND-98-1341	3.20E-02	86	1.56E-03	1.47E-02	61	160	1.37E-03	5
ND-98-1342	3.09E-02	82	2.95E-03	1.68E-02	133	182	9.11E-04	4
ND-98-1343	3.52E-02	99	2.15E-03	1.84E-02	92	200	9.01E-04	4
ND-98-1344	3.26E-02	88	1.44E-03	6.68E-03	55	73	7.73E-04	3
ND-98-1345	3.45E-02	96	7.89E-04	1.05E-02	22	114	7.33E-04	3
ND-98-1346	3.79E-02	109	1.74E-03	1.55E-02	71	168	7.82E-04	3
ND-98-1347	2.83E-02	72	1.75E-03	1.05E-02	71	114	1.30E-03	5
TO-8607	6.53E-01	2494	3.47E-02	2.22E-01	1746	2236	5.52E-03	20
Should be----->		2900			1800	2600		26
RPD		15			3	15		24

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	1-Nov-98	Time:	10:43:43			
Project:	ND	Batch	Number:	111				
Con. 1 mont.	1.2774	Con. 4 mont.	1.1113			Con. 5 mont.	0.6464	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1348	3.61E-02	102	1.46E-03	5.36E-03	56	58	8.52E-04	4
ND-98-1349	3.33E-02	91	1.42E-03	1.30E-02	54	141	6.37E-04	3
ND-98-1350	3.07E-02	81	8.42E-04	9.53E-03	25	104	8.37E-04	4
ND-98-1351	3.52E-02	99	1.87E-03	1.62E-02	77	176	9.43E-04	4
ND-98-1352	3.40E-02	94	7.32E-04	1.08E-02	19	118	6.86E-04	3
ND-98-1353	3.30E-02	90	1.21E-03	9.23E-03	43	101	9.97E-04	4
ND-98-1354	3.55E-02	100	1.73E-03	8.44E-03	70	92	8.20E-04	3
ND-98-1355	4.37E-02	131	9.51E-04	8.87E-03	30	97	1.12E-03	5
ND-98-1356	4.45E-02	135	1.24E-03	8.75E-03	45	95	6.56E-04	3
ND-98-1357	3.72E-02	106	1.43E-03	6.90E-03	55	75	1.06E-03	4
ND-98-1358	3.70E-02	106	1.03E-03	9.48E-03	34	103	9.63E-04	4
ND-98-1359	3.74E-02	107	2.16E-03	1.72E-02	92	187	1.77E-03	7
ND-98-1360	3.82E-02	110	2.97E-03	1.94E-02	134	211	1.57E-03	6
ND-98-1361	2.81E-02	71	2.13E-03	1.38E-02	91	150	1.47E-03	6
TO-8607	5.78E-01	2203	3.59E-02	2.27E-01	1806	2282	6.63E-03	24
Should be----->		2900			1800	2600		26
RPD		27			0	13		7

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	2-Nov-98	Time:	9:09:18			
Project:	ND	Batch	Number:	112				
Con. 1 mont.	1.2846	Con. 4 mont.	1.1168			Con. 5 mont.	0.6573	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK	1.21E-02	9	5.15E-04	1.54E-03	8	17	5.24E-04	2
ND-98-1362	2.76E-02	69	1.57E-03	1.07E-02	62	116	1.09E-03	4
ND-98-1363	3.04E-02	80	2.98E-03	1.54E-02	134	167	1.44E-03	6
ND-98-1364	2.98E-02	78	1.19E-03	8.99E-03	42	98	1.01E-03	4
ND-98-1365	3.52E-02	99	1.19E-03	1.51E-02	42	164	1.09E-03	4
ND-98-1366	3.04E-02	80	2.04E-03	8.27E-03	86	90	1.02E-03	4
ND-98-1366DUP	2.96E-02	77	1.26E-04	7.41E-03	-12	81	8.59E-04	4
ND-98-1367	2.92E-02	75	2.19E-03	8.42E-03	94	92	9.26E-04	4
ND-98-1368	3.08E-02	81	1.29E-03	6.29E-03	48	69	9.95E-04	4
ND-98-1369	3.45E-02	96	6.33E-04	6.06E-03	14	66	5.67E-04	3
ND-98-1370	5.26E-02	166	3.27E-03	1.30E-02	149	141	1.38E-03	5
ND-98-1371	3.73E-02	107	1.09E-03	1.09E-02	37	119	1.15E-03	5
ND-98-1372	4.41E-02	133	1.74E-03	7.23E-03	71	79	9.33E-04	4
ND-98-1373	3.56E-02	100	1.63E-03	1.45E-02	65	158	1.20E-03	5
TO-8607	6.51E-01	2486	3.64E-02	2.03E-01	1832	2059	7.57E-03	28
Should be---->		2900			1800	2600		26
RPD		15			2	23		6

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	2-Nov-98	Time:	22:16:45			
Project:	ND	Batch	Number:	113				
Con. 1 mont.	1.2967	Con. 4 mont.	1.1067			Con. 5 mont.	0.6571	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1374	3.06E-02	81	2.13E-03	1.24E-02	91	135	5.25E-04	2
ND-98-1375	4.64E-02	142	1.38E-03	1.16E-02	52	126	7.03E-04	3
ND-98-1377	3.00E-02	78	1.64E-03	1.24E-02	66	135	1.70E-03	7
ND-98-1378	3.05E-02	80	1.41E-03	1.33E-02	54	145	2.76E-03	10
ND-98-1379	2.42E-02	56	2.54E-03	9.54E-03	112	104	6.11E-04	3
ND-98-1380	2.75E-02	69	2.27E-03	9.03E-03	98	98	8.69E-04	4
ND-98-1381	2.91E-02	75	1.32E-03	7.63E-03	49	83	1.05E-03	4
ND-98-1382	6.66E-02	220	1.75E-03	8.96E-03	71	98	1.01E-03	4
ND-98-1383	3.25E-02	88	1.35E-03	1.23E-02	51	134	1.74E-03	7
ND-98-1384	3.14E-02	84	1.70E-03	1.49E-02	69	162	1.24E-03	5
ND-98-1385	3.61E-02	102	1.04E-03	6.80E-03	35	74	5.51E-04	3
ND-98-1386	3.23E-02	87	1.50E-03	7.45E-03	58	81	1.41E-03	6
ND-98-1387	2.61E-02	63	1.60E-03	5.29E-03	64	58	1.38E-03	5
TO-8607	6.47E-01	2471	3.57E-02	2.26E-01	1796	2272	5.85E-03	22
Should be----->		2900			1800	2600		26
RPD		16			0	13		19

QA/QC

Passed

Failed

Validated

Operator: LUISZER Date: 3-Nov-98 Time: 10:07:58

Project: ND Batch Number: 114

Con. 1 mont. 1.2606 Con. 4 mont. 1.1275 Con. 5 mont. 0.6536

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-114	1.54E-02	22	3.62E-04	1.21E-03	0	13	1.64E-04	1
ND-98-1387DUP	2.66E-02	65	1.98E-03	6.08E-03	83	66	1.21E-03	5
ND-98-1388	4.38E-02	132	1.56E-03	1.25E-02	61	136	1.54E-03	6
ND-98-1389	4.12E-02	122	1.45E-03	1.41E-02	56	153	6.93E-04	3
ND-98-1390	3.56E-02	100	2.71E-03	1.45E-02	121	158	9.69E-04	4
ND-98-1391	2.83E-02	72	3.93E-03	7.56E-03	183	82	1.13E-03	5
ND-98-1392	2.79E-02	70	2.05E-03	7.99E-03	87	87	5.57E-04	3
ND-98-1393	2.83E-02	72	2.65E-03	9.67E-03	117	105	5.93E-04	3
ND-98-1394	2.78E-02	70	2.11E-03	1.00E-02	90	109	1.10E-03	4
ND-98-1395	3.05E-02	80	2.95E-03	1.58E-02	133	172	1.23E-03	5
ND-98-1396	3.53E-02	99	2.78E-03	7.73E-03	124	84	9.90E-04	4
ND-98-1397	3.31E-02	90	1.02E-03	8.55E-03	34	93	6.43E-04	3
ND-98-1398	2.88E-02	74	1.55E-03	5.71E-03	61	62	1.18E-03	5
ND-98-1376	2.74E-02	68	1.22E-03	1.03E-02	44	112	9.94E-04	4
TO-8607	6.80E-01	2599	3.04E-02	1.90E-01	1530	1937	6.28E-03	23
Should be----->		2900			1800	2600		26
RPD		11			16	29		12

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	3-Nov-98	Time:	21:42:51			
Project:	ND	Batch	Number:	115				
Con. 1 mont.	1.2812	Con. 4 mont.	1.1176			Con. 5 mont.	0.6519	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-115	1.17E-02	7	6.12E-04	7.62E-04	13	8	2.61E-04	1
ND-98-1399	4.97E-02	155	2.33E-03	1.61E-02	101	175	9.14E-04	4
ND-98-1400	3.76E-02	108	1.63E-03	1.75E-02	65	190	1.60E-03	6
ND-98-1401	3.22E-02	87	1.37E-03	1.31E-02	52	142	1.46E-03	6
ND-98-1402	4.22E-02	126	6.85E-04	7.55E-03	16	82	1.28E-03	5
ND-98-1403	7.51E-02	253	9.77E-04	9.12E-03	31	99	1.38E-03	5
ND-98-1404	3.00E-02	78	1.62E-03	1.32E-02	65	144	1.17E-03	5
ND-98-1405	5.29E-02	167	2.99E-03	4.36E-02	135	469	1.35E-03	5
ND-98-1406	3.40E-02	94	3.52E-03	8.88E-03	162	97	9.12E-04	4
ND-98-1406DUP	3.34E-02	92	3.27E-03	1.17E-02	149	127	2.02E-03	8
ND-98-1407	3.14E-02	84	2.40E-03	1.04E-02	105	113	7.92E-04	3
ND-98-1408	2.50E-02	59	1.77E-03	4.71E-03	72	51	1.00E-03	4
ND-98-1409	2.77E-02	69	2.92E-03	8.40E-03	131	92	9.47E-04	4
ND-98-1410	2.61E-02	63	2.43E-03	9.99E-03	106	109	1.16E-03	5
TO-8607	5.78E-01	2203	3.34E-02	2.31E-01	1681	2318	7.05E-03	26
Should be----->		2900			1800	2600		26
RPD		27			7	11		1

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	4-Nov-98	Time:	9:36:46			
Project:	ND	Batch	Number:	116				
Con. 1 mont.	1.2732	Con. 4 mont.	1.1259			Con. 5 mont.	0.6571	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1411	2.85E-02	73	3.27E-03	9.33E-03	149	102	9.05E-04	4
ND-98-1412	2.22E-02	48	2.09E-03	5.46E-03	89	60	7.05E-04	3
ND-98-1413	2.89E-02	74	2.73E-03	8.99E-03	122	98	5.31E-04	2
ND-98-1414	3.37E-02	93	2.05E-03	1.07E-02	87	116	1.75E-03	7
ND-98-1415	3.01E-02	79	2.09E-03	1.25E-02	89	136	9.14E-04	4
ND-98-1416	3.29E-02	90	9.48E-04	7.30E-03	30	80	1.48E-03	6
ND-98-1417	3.89E-02	113	1.41E-03	1.04E-02	54	113	1.31E-03	5
ND-98-1418	4.64E-02	142	1.82E-03	9.90E-03	75	108	1.12E-03	5
ND-98-1419	3.27E-02	89	2.18E-03	1.34E-02	93	146	8.43E-04	4
ND-98-1420	3.28E-02	89	1.94E-03	1.39E-02	81	151	1.33E-03	5
ND-98-1421	3.00E-02	78	2.01E-03	1.14E-02	85	124	8.72E-04	4
ND-98-1422	3.19E-02	86	1.66E-03	1.22E-02	67	133	1.40E-03	6
ND-98-1423	2.95E-02	76	9.65E-04	7.76E-03	31	85	8.60E-04	4
ND-98-1424	3.34E-02	92	5.85E-04	1.07E-02	11	116	9.84E-04	4
TO-8607	5.76E-01	2196	3.82E-02	2.27E-01	1922	2282	6.29E-03	23
Should be----->		2900			1800	2600		26
RPD		28			7	13		12

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	4-Nov-98	Time:	23:31:46			
Project:	ND	Batch	Number:	117				
Con. 1 mont.	1.2958	Con. 4 mont.	1.1227			Con. 5 mont.	0.657	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-117	7.46E-03	-9	5.66E-04	6.75E-04	10	7	2.69E-04	1
ND-98-1425	2.52E-02	60	1.79E-03	5.31E-03	73	58	4.81E-04	2
ND-98-1426	2.17E-02	46	2.09E-03	6.37E-03	89	69	4.14E-04	2
ND-98-1427	2.06E-02	42	1.58E-03	7.32E-03	62	80	9.64E-04	4
ND-98-1427DUP	2.06E-02	42	1.74E-03	5.48E-03	71	60	8.99E-04	4
ND-98-1428	3.16E-02	85	2.32E-03	9.61E-03	101	105	1.59E-03	6
ND-98-1429	2.83E-02	72	2.35E-03	1.15E-02	102	125	1.49E-03	6
ND-98-1430	2.90E-02	74	2.08E-03	6.77E-03	88	74	7.79E-04	3
ND-98-1431	4.34E-02	130	9.19E-04	9.58E-03	28	104	6.86E-04	3
ND-98-1432	2.89E-02	74	2.55E-03	8.38E-03	112	91	5.02E-04	2
ND-98-1433	3.24E-02	88	2.68E-03	1.00E-02	119	109	1.63E-03	6
ND-98-1434	4.08E-02	120	2.51E-03	2.80E-02	110	303	1.97E-03	8
ND-98-1435	4.17E-02	124	9.78E-04	8.89E-03	32	97	1.01E-03	4
ND-98-1436	3.26E-02	88	1.22E-03	1.26E-02	44	137	6.75E-04	3
TO-8607	6.50E-01	2483	3.46E-02	2.24E-01	1741	2254	6.06E-03	22
Should be---->		2900			1800	2600		26
RPD		16			3	14		15

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	5-Nov-98	Time:	12:11:25			
Project:	ND	Batch	Number:	118				
Con. 1 mont.	1.2778	Con. 4 mont.	1.1105			Con. 5 mont.	0.6598	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1437	3.47E-02	97	1.59E-03	1.19E-02	63	129	1.24E-03	5
ND-98-1438	3.78E-02	109	7.34E-04	1.16E-02	19	126	1.53E-03	6
ND-98-1439	3.10E-02	82	1.95E-03	1.28E-02	82	139	7.33E-04	3
ND-98-1440	3.79E-02	109	1.25E-03	1.36E-02	46	148	1.28E-03	5
ND-98-1441	3.45E-02	96	2.17E-03	1.48E-02	93	161	1.09E-03	4
ND-98-1442	5.47E-02	174	1.39E-03	1.01E-02	53	110	1.24E-03	5
ND-98-1443	3.74E-02	107	1.74E-03	1.28E-02	71	139	1.23E-03	5
ND-98-1444	4.36E-02	131	1.88E-03	1.25E-02	78	136	1.04E-03	4
ND-98-1445	2.49E-02	59	1.81E-03	7.69E-03	74	84	1.34E-03	5
ND-98-1446	2.76E-02	69	2.78E-03	1.12E-02	124	122	9.52E-04	4
ND-98-1447	2.99E-02	78	2.73E-03	1.61E-02	122	175	8.75E-04	4
ND-98-1448	2.68E-02	66	1.25E-03	8.52E-03	46	93	5.56E-04	3
ND-98-1449	2.84E-02	72	2.67E-03	7.74E-03	119	84	1.20E-03	5
ND-98-1450	2.82E-02	71	2.25E-03	6.99E-03	97	76	1.04E-03	4
TO-8607	6.59E-01	2518	3.36E-02	2.32E-01	1691	2327	9.30E-03	34
Should be----->		2900			1800	2600		26
RPD		14			6	11		26

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	5-Nov-98	Time:	23:43:10			
Project:	ND	Batch	Number:	119				
Con. 1 mont.	1.2731	Con. 4 mont.	1.1082			Con. 5 mont.	0.6545	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK	1.32E-02	13	1.72E-04	6.47E-04	-10	7	1.10E-03	4
ND-98-1451	4.03E-02	118	8.53E-04	9.26E-03	25	101	1.47E-03	6
ND-98-1452	4.31E-02	129	2.66E-03	9.83E-03	118	107	1.38E-03	5
ND-98-1453	2.66E-02	65	1.66E-03	7.72E-03	67	84	9.35E-04	4
ND-98-1454	2.50E-02	59	1.53E-03	5.34E-03	60	58	1.67E-03	7
ND-98-1455	2.24E-02	49	1.42E-03	4.88E-03	54	53	5.78E-04	3
ND-98-1456	2.52E-02	60	1.08E-03	5.79E-03	37	63	9.22E-04	4
ND-98-1456DUP	2.54E-02	61	4.79E-04	6.11E-03	6	67	1.35E-03	5
ND-98-1457	2.82E-02	71	3.01E-03	1.22E-02	136	133	1.43E-03	6
ND-98-1458	3.55E-02	100	3.37E-03	1.81E-02	154	197	5.55E-04	3
ND-98-1459	4.59E-02	140	2.03E-03	8.89E-03	86	97	7.04E-04	3
ND-98-1460	2.95E-02	76	2.24E-03	1.39E-02	96	151	1.22E-03	5
ND-98-1461	2.57E-02	62	1.92E-03	9.52E-03	80	104	9.61E-04	4
ND-98-1462	2.41E-02	55	2.70E-03	1.26E-02	120	137	6.85E-04	3
TO-8607	6.50E-01	2483	3.58E-02	2.31E-01	1801	2318	6.20E-03	23
Should be---->		2900			1800	2600		26
RPD		16			0	11		13

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	6-Nov-98	Time:	11:34:25			
Project:	ND	Batch	Number:	120				
Con. 1 mont.	1.2776	Con. 4 mont.	1.1111			Con. 5 mont.	0.6547	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK	1.35E-02	14	4.14E-04	8.08E-04	3	9	6.58E-04	3
ND-98-1463	2.29E-02	51	3.12E-03	1.26E-02	142	137	1.23E-03	5
ND-98-1464	2.51E-02	59	2.15E-03	1.00E-02	92	109	1.54E-03	6
ND-98-1465	2.56E-02	61	1.46E-03	1.26E-02	56	137	7.37E-04	3
ND-98-1466	2.57E-02	62	2.00E-03	1.00E-02	84	109	9.46E-04	4
ND-98-1467	3.61E-02	102	2.77E-03	1.96E-02	124	213	1.42E-03	6
ND-98-1468	4.91E-02	152	7.04E-04	1.08E-02	17	118	6.17E-04	3
ND-98-1469	3.08E-02	81	2.30E-03	1.31E-02	100	142	1.00E-03	4
ND-98-1470	3.50E-02	98	1.92E-03	1.17E-02	80	127	1.22E-03	5
ND-98-1471	3.01E-02	79	1.76E-03	1.27E-02	72	138	1.29E-03	5
ND-98-1472	2.49E-02	59	1.38E-03	7.45E-03	52	81	1.36E-03	5
ND-98-1473	3.28E-02	89	2.58E-03	9.72E-03	114	106	1.29E-03	5
ND-98-1474	1.16E-01	412	1.90E-03	1.47E-02	79	160	1.41E-03	6
ND-98-1474DUP	1.14E-01	404	2.35E-03	1.35E-02	102	147	1.47E-03	6
TO-8607	6.48E-01	2475	3.53E-02	2.29E-01	1776	2300	6.44E-03	24
Should be---->		2900			1800	2600		26
RPD		16			1	12		10

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	6-Nov-98	Time:	23:50:05			
Project:	ND	Batch	Number:	121				
Con. 1 mont.	1.2763	Con. 4 mont.	1.1109			Con. 5 mont.	0.655	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1475	6.07E-02	197	6.26E-04	8.29E-03	13	90	1.40E-03	6
ND-98-1476	5.06E-02	158	2.28E-03	2.65E-02	98	287	1.19E-03	5
ND-98-1477	5.10E-02	160	1.37E-03	2.70E-02	52	292	1.50E-03	6
ND-98-1478	3.85E-02	111	3.95E-03	3.22E-02	184	348	1.25E-03	5
ND-98-1479	2.67E-02	66	2.76E-03	1.44E-02	123	157	6.46E-04	3
ND-98-1480	3.30E-02	90	3.25E-03	2.65E-02	148	287	1.53E-03	6
ND-98-1481	2.97E-02	77	4.87E-03	3.83E-02	231	413	7.62E-04	3
ND-98-1482	3.59E-02	101	2.69E-03	2.55E-02	120	276	9.80E-04	4
ND-98-1483	2.72E-02	68	1.99E-03	1.92E-02	84	208	1.04E-03	4
ND-98-1484	3.32E-02	91	2.49E-03	2.19E-02	109	237	1.04E-03	4
ND-98-1485	3.98E-02	116	2.95E-03	2.37E-02	133	257	1.11E-03	5
ND-98-1486	5.55E-02	177	1.16E-03	1.14E-02	41	124	8.84E-04	4
ND-98-1487	4.02E-02	118	9.87E-04	1.22E-02	32	133	1.09E-03	4
ND-98-1488	4.14E-02	123	1.43E-03	1.22E-02	55	133	1.71E-03	7
TO-8607	6.47E-01	2471	3.49E-02	1.97E-01	1756	2003	5.55E-03	21
Should be---->		2900			1800	2600		26
RPD		16			2	26		24

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	7-Nov-98	Time:	13:12:24			
Project:	ND	Batch	Number:	122				
Con. 1 mont.	1.2986	Con. 4 mont.	1.0881			Con. 5 mont.	0.6581	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1488	5.05E-02	158	2.57E-03	2.46E-02	113	266	1.75E-03	7
ND-98-1489	3.67E-02	104	1.44E-03	1.89E-02	55	205	1.26E-03	5
ND-98-1490	2.45E-02	57	1.31E-03	6.88E-03	49	75	9.09E-04	4
ND-98-1491	2.37E-02	54	1.15E-03	6.43E-03	40	70	1.41E-03	6
ND-98-1492	3.88E-02	112	2.92E-03	1.35E-02	131	147	1.72E-03	7
ND-98-1493	4.48E-02	136	1.94E-03	7.32E-03	81	80	6.01E-04	3
ND-98-1494	5.37E-02	170	4.90E-04	1.19E-02	6	129	1.03E-03	4
ND-98-1495	3.65E-02	104	1.47E-03	2.08E-02	57	226	1.19E-03	5
ND-98-1496	4.31E-02	129	1.28E-03	2.44E-02	47	264	1.42E-03	6
ND-98-1497	4.05E-02	119	1.59E-03	2.06E-02	63	223	1.16E-03	5
ND-98-1499	4.94E-02	154	1.72E-03	2.11E-02	70	229	2.92E-03	11
ND-98-1500	5.71E-02	183	2.57E-03	1.59E-02	113	173	1.28E-03	5
ND-98-1501	5.88E-02	190	6.38E-04	1.06E-02	14	115	1.52E-03	6
ND-98-1502	1.70E-01	621	4.73E-04	1.29E-02	6	140	1.10E-03	4
TO-8607	5.79E-01	2207	3.44E-02	2.34E-01	1731	2346	5.97E-03	22
Should be---->		2900			1800	2600		26
RPD		27			4	10		17

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	8-Nov-98	Time:	11:48:51
Project:	ND	Batch	Number:	123	
Con. 1 mont.	1.2958	Con. 4 mont.	1.1003		Con. 5 mont. 0.668

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-123	8.67E-03	-4	5.14E-04	9.97E-04	8	11	3.94E-04	2
ND-98-1503	5.47E-02	174	5.70E-04	7.37E-03	11	80	6.34E-04	3
ND-98-1504	7.73E-02	262	1.50E-03	8.45E-03	58	92	1.47E-03	6
ND-98-1505	4.21E-02	125	2.10E-03	1.46E-02	89	159	1.57E-03	6
ND-98-1506	2.87E-02	73	1.47E-03	1.37E-02	57	149	1.97E-03	8
ND-98-1507	3.50E-02	98	1.88E-03	1.72E-02	78	187	1.21E-03	5
ND-98-1508	3.13E-02	83	2.08E-03	1.29E-02	88	140	1.12E-03	5
ND-98-1509	3.12E-02	83	1.29E-03	1.45E-02	48	158	1.57E-03	6
ND-98-1510	3.02E-02	79	1.69E-03	1.27E-02	68	138	8.34E-04	4
ND-98-1511	3.69E-02	105	1.43E-03	1.39E-02	55	151	2.10E-03	8
ND-98-1512	3.14E-02	84	1.56E-03	1.23E-02	61	134	1.50E-03	6
ND-98-1513	3.64E-02	103	1.36E-03	1.46E-02	51	159	2.02E-03	8
ND-98-1514	3.84E-02	111	6.36E-04	9.23E-03	14	101	5.68E-04	3
ND-98-1514DUP	3.95E-02	115	8.13E-04	8.79E-03	23	96	1.05E-03	4
TO-8607	6.48E-01	2475	3.66E-02	2.07E-01	1842	2097	6.78E-03	25
Should be----->		2900			1800	2600		26
RPD		16			2	21		5

QA/QC

Passed

Failed

Validated

Operator: DREXLER Date: 8-Nov-98 Time: 23:50:05

Project: ND Batch Number: 124

Con. 1 mont. 1.2668 Con. 4 mont. 1.0906 Con. 5 mont. 0.6499

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-124	1.23E-02	10	4.12E-04	1.26E-03	2	14	5.12E-04	2
ND-98-1515	5.21E-02	164	3.83E-04	8.42E-03	1	92	8.43E-04	4
ND-98-1516	5.58E-02	178	2.62E-03	2.22E-02	116	241	1.82E-03	7
ND-98-1517	7.35E-02	247	6.00E-04	1.97E-02	12	214	9.43E-04	4
ND-98-1518	3.62E-02	102	1.53E-03	1.44E-02	60	157	1.04E-03	4
ND-98-1519	3.01E-02	79	1.66E-03	1.12E-02	67	122	1.31E-03	5
ND-98-1520	3.26E-02	88	2.20E-03	1.58E-02	94	172	1.13E-03	5
ND-98-1521	3.37E-02	93	1.32E-03	1.51E-02	49	164	1.21E-03	5
ND-98-1521DUP	3.23E-02	87	1.82E-03	1.66E-02	75	180	1.11E-03	5
ND-98-1522	3.48E-02	97	5.20E-04	1.18E-02	8	128	1.31E-03	5
ND-98-1523	3.59E-02	101	2.22E-03	1.15E-02	95	125	1.54E-03	6
ND-98-1524	3.87E-02	112	2.31E-03	1.33E-02	100	145	1.68E-03	7
ND-98-1525	3.25E-02	88	2.05E-03	1.27E-02	87	138	1.35E-03	5
ND-98-1526	3.81E-02	110	2.00E-03	1.56E-02	84	170	8.97E-04	4
TO-8607	6.55E-01	2502	3.78E-02	2.31E-01	1902	2318	5.14E-03	19
Should be----->		2900			1800	2600		26
RPD		15			5	11		31

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	11-Nov-98	Time:	9:00:49			
Project:	ND	Batch	Number:	125				
Con. 1 mont.	1.2656	Con. 4 mont.	1.1147			Con. 5 mont.	0.6489	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-125	1.54E-02	22	4.81E-04	8.32E-04	6	9	5.16E-04	2
ND-98-1527	5.06E-02	158	1.26E-03	1.00E-02	46	109	9.85E-04	4
ND-98-1528	1.02E-01	358	1.00E-03	8.85E-03	33	96	1.60E-03	6
ND-98-1529	9.04E-02	313	1.25E-03	1.07E-02	46	116	8.00E-04	3
ND-98-1530	8.80E-02	303	8.86E-04	7.66E-03	27	83	7.01E-04	3
ND-98-1531	6.85E-02	228	6.87E-04	8.61E-03	17	94	8.43E-04	4
ND-98-1532	6.69E-02	221	1.17E-03	8.42E-03	41	92	7.88E-04	3
ND-98-1533	6.97E-02	232	1.28E-03	5.50E-03	47	60	9.38E-04	4
ND-98-1534	7.27E-02	244	8.93E-04	8.37E-03	27	91	8.92E-04	4
ND-98-1535	7.12E-02	238	3.26E-04	7.66E-03	-2	83	1.06E-03	4
ND-98-1536	6.55E-02	216	1.42E-03	7.23E-03	54	79	7.83E-04	3
ND-98-1537	6.66E-02	220	5.86E-04	8.41E-03	11	92	8.30E-04	4
ND-98-1537DUP	7.08E-02	237	1.96E-03	9.02E-03	82	98	8.84E-04	4
ND-98-1538	6.65E-02	220	1.83E-03	8.68E-03	75	95	7.34E-04	3
TO-8607	5.78E-01	2203	3.56E-02	2.28E-01	1791	2291	5.89E-03	22
Should be---->		2900			1800	2600		26
RPD		27			0	13		18

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	11-Nov-98	Time:	22:22:48			
Project:	ND	Batch	Number:	126				
Con. 1 mont.	1.2839	Con. 4 mont.	1.1125			Con. 5 mont.	0.6441	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1539	7.26E-02	244	3.10E-04	8.71E-03	-3	95	9.02E-04	4
ND-98-1540	3.63E-02	103	2.02E-03	1.48E-02	85	161	2.22E-03	9
ND-98-1541	5.22E-02	164	2.90E-03	1.17E-02	130	127	1.51E-03	6
ND-98-1542	5.33E-02	169	2.31E-03	1.09E-02	100	119	1.25E-03	5
ND-98-1543	5.30E-02	168	2.28E-03	1.24E-02	98	135	2.35E-03	9
ND-98-1544	4.87E-02	151	2.81E-03	1.38E-02	126	150	1.86E-03	7
ND-98-1545	4.51E-02	137	3.37E-03	1.38E-02	154	150	1.42E-03	6
ND-98-1546	4.85E-02	150	2.88E-03	1.14E-02	129	124	2.19E-03	8
ND-98-1547	4.16E-02	123	2.05E-03	7.03E-03	87	77	1.04E-03	4
ND-98-1548	2.71E-02	67	1.19E-03	8.63E-03	42	94	2.16E-03	8
ND-98-1549	2.52E-02	60	1.05E-03	6.02E-03	35	66	7.76E-04	3
ND-98-1550	2.43E-02	56	1.00E-03	7.47E-03	33	81	8.25E-04	3
ND-98-1551	2.46E-02	57	1.66E-03	5.51E-03	67	60	8.67E-04	4
ND-98-1552	2.47E-02	58	9.21E-04	5.19E-03	29	57	1.11E-03	5
TO-8607	6.61E-01	2525	3.66E-02	2.27E-01	1842	2282	5.66E-03	21
Should be----->		2900			1800	2600		26
RPD		14			2	13		22

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	12-Nov-98	Time:	10:56:48			
Project:	ND	Batch	Number:	127				
Con. 1 mont.	1.2796	Con. 4 mont.	1.1091			Con. 5 mont.	0.6516	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-127	1.13E-02	6	7.96E-04	1.20E-03	22	13	2.34E-04	1
ND-98-1553	2.42E-02	56	1.22E-03	5.92E-03	44	65	6.85E-04	3
ND-98-1554	2.58E-02	62	8.00E-04	5.34E-03	22	58	8.28E-04	4
ND-98-1555	2.79E-02	70	8.13E-04	3.56E-03	23	39	4.16E-04	2
ND-98-1556	4.45E-02	135	8.54E-04	6.51E-03	25	71	7.13E-04	3
ND-98-1557	2.59E-02	62	7.35E-04	4.17E-03	19	45	1.09E-03	4
ND-98-1558	2.66E-02	65	4.41E-04	5.26E-03	4	57	9.31E-04	4
ND-98-1559	2.26E-02	50	1.46E-03	5.60E-03	56	61	1.02E-03	4
ND-98-1559DUP	2.28E-02	50	1.05E-03	3.23E-03	35	35	8.24E-04	3
ND-98-1560	2.44E-02	57	5.72E-04	3.39E-03	11	37	6.50E-04	3
ND-98-1561	3.57E-02	100	8.79E-04	6.22E-03	26	68	7.27E-04	3
ND-98-1562	3.02E-02	79	2.28E-03	8.05E-03	98	88	1.03E-03	4
ND-98-1563	2.98E-02	78	1.74E-03	6.99E-03	71	76	1.70E-03	7
ND-98-1564	2.94E-02	76	7.85E-04	6.10E-03	22	67	1.56E-03	6
TO-8607	6.64E-01	2537	3.48E-02	2.31E-01	1751	2318	6.54E-03	24
Should be---->		2900			1800	2600		26
RPD		13			3	11		8

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	12-Nov-98	Time:	22:21:10			
Project:	ND	Batch	Number:	128				
Con. 1 mont.	1.2929	Con. 4 mont.	1.1017			Con. 5 mont.	0.6524	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1565	2.81E-02	71	1.47E-03	6.59E-03	57	72	1.15E-03	5
ND-98-1566	3.68E-02	105	4.04E-03	9.75E-03	189	106	1.14E-03	5
ND-98-1567	4.77E-02	147	2.42E-03	1.20E-02	106	131	1.22E-03	5
ND-98-1568	4.54E-02	138	3.31E-03	1.27E-02	151	138	1.58E-03	6
ND-98-1569	5.06E-02	158	3.84E-03	1.28E-02	179	139	1.56E-03	6
ND-98-1570	5.51E-02	176	7.04E-03	2.52E-02	343	273	1.84E-03	7
ND-98-1571	2.72E-02	68	1.98E-03	5.28E-03	83	58	6.97E-04	3
ND-98-1572	3.85E-02	111	2.55E-03	1.18E-02	112	128	1.73E-03	7
ND-98-1573	3.85E-02	111	1.71E-03	6.75E-03	69	74	1.09E-03	4
ND-98-1574	3.49E-02	97	3.03E-03	7.74E-03	137	84	8.80E-04	4
ND-98-1575	3.52E-02	99	2.34E-03	9.80E-03	102	107	8.06E-04	3
ND-98-1576	4.15E-02	123	2.73E-03	8.62E-03	122	94	7.99E-04	3
ND-98-1577	3.21E-02	87	2.41E-03	7.69E-03	105	84	9.62E-04	4
ND-98-1578	2.80E-02	71	2.47E-03	5.87E-03	108	64	1.10E-03	4
TO-8607	5.78E-01	2203	3.73E-02	2.32E-01	1877	2327	7.55E-03	28
Should be---->		2900			1800	2600		26
RPD		27			4	11		6

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	13-Nov-98	Time:	9:48:56			
Project:	ND	Batch	Number:	129				
Con. 1 mont.	1.2949	Con. 4 mont.	1.0974			Con. 5 mont.	0.6557	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-129	8.19E-03	-6	4.48E-04	6.72E-04	4	7	4.31E-04	2
ND-98-1579	2.57E-02	62	2.94E-03	5.85E-03	132	64	1.40E-03	6
ND-98-1580	3.08E-02	81	2.39E-03	7.64E-03	104	83	1.10E-03	4
ND-98-1581	2.81E-02	71	2.75E-03	6.31E-03	123	69	6.55E-04	3
ND-98-1582	2.77E-01	1036	3.18E-04	3.25E-02	-2	351	2.43E-03	9
ND-98-1583	1.53E-01	555	9.34E-04	2.93E-02	29	317	1.44E-03	6
ND-98-1584	1.39E-01	501	1.38E-03	2.06E-02	52	223	3.27E-03	12
ND-98-1584DUP	1.40E-01	505	2.13E-03	2.18E-02	91	236	4.13E-03	15
ND-98-1585	9.97E-02	349	1.36E-03	2.31E-02	51	250	1.84E-03	7
ND-98-1586	1.08E-01	381	1.32E-03	2.87E-02	49	310	2.11E-03	8
ND-98-1587	8.97E-02	310	1.22E-03	2.40E-02	44	260	8.86E-04	4
ND-98-1588	8.25E-02	282	5.57E-04	1.98E-02	10	215	1.04E-03	4
ND-98-1589	1.09E-01	385	1.11E-03	1.76E-02	38	191	1.41E-03	6
ND-98-1590	1.13E-01	400	2.75E-03	2.47E-02	123	268	1.79E-03	7
TO-8607	6.56E-01	2506	3.32E-02	2.33E-01	1671	2336	6.24E-03	23
Should be----->		2900			1800	2600		26
RPD		15			7	11		13

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	14-Nov-98	Time:	8:34:49			
Project:	ND	Batch	Number:	130				
Con. 1 mont.	1.2757	Con. 4 mont.	1.1006			Con. 5 mont.	0.648	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-130	1.31E-02	13	4.44E-04	6.46E-04	4	7	6.95E-04	3
ND-98-1591	8.22E-02	281	5.80E-04	1.97E-02	11	214	1.13E-03	5
ND-98-1592	8.15E-02	278	5.22E-04	2.38E-02	8	258	2.14E-03	8
ND-98-1593	9.07E-02	314	1.08E-03	2.65E-02	37	287	1.36E-03	5
ND-98-1594	8.33E-02	285	1.57E-03	2.83E-02	62	306	1.76E-03	7
ND-98-1595	1.35E-01	486	2.27E-03	4.36E-02	98	469	1.42E-03	6
ND-98-1596	1.33E-01	478	7.10E-04	4.49E-02	18	483	1.86E-03	7
ND-98-1597	5.55E-02	177	1.57E-03	1.63E-02	62	177	1.62E-03	6
ND-98-1598	8.31E-02	284	2.08E-03	2.34E-02	88	254	1.36E-03	5
ND-98-1599	7.28E-02	244	1.21E-03	1.65E-02	43	179	8.71E-04	4
ND-98-1600	1.27E-01	455	2.39E-04	2.35E-02	-6	255	9.72E-04	4
ND-98-1601	2.21E-01	819	1.56E-03	3.62E-02	61	391	1.84E-03	7
ND-98-1602	1.63E-01	594	3.26E-03	3.13E-02	149	338	1.95E-03	8
ND-98-1606	7.12E-02	238	7.36E-04	3.00E-02	19	324	1.34E-03	5
TO-8607	6.53E-01	2494	3.70E-02	2.08E-01	1862	2106	6.68E-03	25
Should be----->		2900			1800	2600		26
RPD		15			3	21		6

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	14-Nov-98	Time:	20:28:25			
Project:	ND	Batch	Number:	131				
Con. 1 mont.	1.2941	Con. 4 mont.	1.1054			Con. 5 mont.	0.6587	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1603	1.23E-01	439	1.19E-03	1.83E-02	42	199	2.03E-03	8
ND-98-1604	7.45E-02	251	1.49E-03	1.96E-02	58	213	1.45E-03	6
ND-98-1605	1.23E-01	439	1.35E-03	2.14E-02	51	232	1.89E-03	7
ND-98-1606	7.14E-02	239	2.98E-04	3.20E-02	-3	346	1.43E-03	6
ND-98-1607	6.75E-02	224	6.43E-04	1.35E-02	14	147	1.36E-03	5
ND-98-1608	6.97E-02	232	1.14E-03	1.46E-02	40	159	7.72E-04	3
ND-98-1609	5.47E-02	174	7.19E-04	1.54E-02	18	167	8.44E-04	4
ND-98-1610	6.39E-02	210	1.14E-03	1.62E-02	40	176	1.55E-03	6
ND-98-1611	6.17E-02	201	1.11E-03	2.10E-02	38	228	1.01E-03	4
ND-98-1612	7.75E-02	263	9.08E-04	1.84E-02	28	200	1.32E-03	5
ND-98-1613	8.24E-02	282	9.24E-04	2.12E-02	29	230	1.15E-03	5
ND-98-1614	1.00E-01	350	1.36E-03	2.67E-02	51	289	1.53E-03	6
ND-98-1615	1.00E-01	350	1.68E-03	4.01E-02	68	432	1.28E-03	5
ND-98-1616	8.83E-02	304	9.30E-04	3.22E-02	29	348	9.70E-04	4
TO-8607	6.59E-01	2518	3.38E-02	2.32E-01	1701	2327	5.21E-03	19
Should be---->		2900			1800	2600		26
RPD		14			6	11		30

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	15-Nov-98	Time:	11:54:17			
Project:	ND	Batch	Number:	132				
Con. 1 mont.	1.2938	Con. 4 mont.	1.1123			Con. 5 mont.	0.6564	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-132	8.22E-03	-6	1.02E-03	6.14E-04	34	7	2.60E-04	1
ND-98-1617	1.02E-01	358	2.33E-03	3.08E-02	101	333	1.24E-03	5
ND-98-1618	9.41E-02	327	1.95E-03	2.64E-02	82	286	1.05E-03	4
ND-98-1619	1.46E-01	528	1.12E-03	3.18E-02	39	344	1.64E-03	6
ND-98-1620	1.31E-01	470	6.37E-04	2.89E-02	14	313	4.89E-03	18
ND-98-1621	1.64E-01	598	2.26E-03	3.08E-02	97	333	1.37E-03	5
ND-98-1622	1.44E-01	520	1.97E-03	3.15E-02	83	340	1.56E-03	6
ND-98-1623	1.38E-01	497	2.33E-03	3.12E-02	101	337	1.94E-03	8
ND-98-1624	1.39E-01	501	1.68E-03	2.16E-02	68	234	5.03E-03	19
ND-98-1624DUP	1.38E-01	497	2.55E-04	2.18E-02	-6	236	6.35E-03	23
ND-98-1625	1.39E-01	501	1.46E-03	2.13E-02	56	231	5.65E-03	21
ND-98-1626	1.06E-01	373	1.46E-03	2.63E-02	56	285	1.50E-03	6
ND-98-1627	1.08E-01	381	2.59E-03	2.48E-02	114	269	1.44E-03	6
ND-98-1626DUP	1.30E-01	466	1.89E-03	2.39E-02	78	259	2.09E-03	8
TO-8607	6.58E-01	2514	3.39E-02	2.27E-01	1706	2282	7.18E-03	26
Should be---->		2900			1800	2600		26
RPD		14			5	13		1

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	16-Nov-98	Time:	22:36:52
Project:	ND	Batch	Number:	133	
Con. 1 mont.	1.2938	Con. 4 mont.	1.0991		Con. 5 mont. 0.6549

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1628	7.89E-02	268	4.27E-04	2.37E-02	3	257	1.16E-03	5
ND-98-1629	7.53E-02	254	9.21E-04	2.24E-02	29	243	1.77E-03	7
ND-98-1630	6.77E-02	225	1.59E-03	1.74E-02	63	189	1.38E-03	5
ND-98-1631	6.86E-02	228	1.23E-03	1.68E-02	44	182	1.12E-03	5
ND-98-1632	7.02E-02	234	1.84E-04	1.42E-02	-9	154	1.69E-03	7
ND-98-1633	6.88E-02	229	1.13E-03	1.63E-02	39	177	1.87E-03	7
ND-98-1634	7.42E-02	250	5.74E-04	1.33E-02	11	145	7.30E-04	3
ND-98-1635	6.76E-02	224	8.59E-04	1.06E-02	25	115	1.29E-03	5
ND-98-1636	6.05E-02	197	1.01E-03	1.37E-02	33	149	1.11E-03	5
ND-98-1637	5.90E-02	191	9.84E-04	1.53E-02	32	166	1.16E-03	5
ND-98-1638	7.60E-02	257	9.05E-04	1.90E-02	28	206	1.31E-03	5
ND-98-1639	7.39E-02	249	3.60E-04	2.01E-02	0	218	2.05E-03	8
ND-98-1640	8.03E-02	273	3.39E-04	1.95E-02	-1	212	1.29E-03	5
ND-98-1641	8.11E-02	277	9.26E-04	2.47E-02	29	268	1.69E-03	7
TO-8607	5.80E-01	2211	3.56E-02	2.33E-01	1791	2336	5.52E-03	20
Should be----->		2900			1800	2600		26
RPD		27			0	11		24

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	17-Nov-98	Time:	10:12:26			
Project:	ND	Batch	Number:	134				
Con. 1 mont.	1.2692	Con. 4 mont.	1.1078			Con. 5 mont.	0.6537	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-134	1.67E-02	27	1.33E-04	8.44E-04	-12	9	4.00E-04	2
ND-98-1642	7.46E-02	251	8.42E-04	2.15E-02	25	233	1.86E-03	7
ND-98-1643	8.70E-02	299	1.35E-03	2.24E-02	51	243	1.35E-03	5
ND-98-1644	1.01E-01	354	2.37E-04	2.33E-02	-7	253	1.94E-03	8
ND-98-1645	9.88E-02	345	3.45E-04	1.96E-02	-1	213	1.67E-03	7
ND-98-1646	9.10E-02	315	2.72E-04	2.33E-02	-5	253	1.43E-03	6
ND-98-1646DUP	9.39E-02	326	2.09E-04	2.52E-02	-8	273	1.65E-03	6
ND-98-1647	9.86E-02	344	1.19E-03	2.48E-02	42	269	1.81E-03	7
ND-98-1648	6.88E-02	229	1.84E-03	2.42E-02	76	262	1.51E-03	6
ND-98-1649	9.17E-02	318	2.41E-03	3.12E-02	105	337	1.13E-03	5
ND-98-1650	1.03E-01	361	2.71E-03	3.48E-02	121	376	1.62E-03	6
ND-98-1651	1.00E-01	350	1.24E-03	2.74E-02	45	297	3.97E-03	15
ND-98-1652	2.19E-01	811	1.74E-03	3.74E-02	71	403	1.94E-03	8
ND-98-1653	1.42E-01	513	2.70E-03	3.09E-02	120	334	2.44E-03	9
TO-8607	6.12E-01	2335	3.49E-02	2.25E-01	1756	2263	6.74E-03	25
Should be----->		2900			1800	2600		26
RPD		22			2	14		5

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	17-Nov-98	Time:	22:00:30			
Project:	ND	Batch	Number:	135				
Con. 1 mont.	1.3148	Con. 4 mont.	1.0917			Con. 5 mont.	0.6542	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1654	1.69E-01	617	1.00E-03	2.09E-02	33	227	4.07E-03	15
ND-98-1655	9.91E-02	346	6.33E-04	2.37E-02	14	257	2.85E-03	11
ND-98-1656	1.68E-01	614	1.68E-03	3.46E-02	68	373	2.23E-03	9
ND-98-1657	8.91E-02	308	1.52E-03	2.12E-02	59	230	1.61E-03	6
ND-98-1658	6.75E-02	224	1.30E-03	1.11E-02	48	121	1.17E-03	5
ND-98-1659	7.46E-02	251	1.68E-03	1.48E-02	68	161	1.26E-03	5
ND-98-1660	6.18E-02	202	8.40E-04	1.48E-02	24	161	1.42E-03	6
ND-98-1661	5.89E-02	190	1.33E-03	1.48E-02	50	161	2.13E-03	8
ND-98-1662	6.25E-02	204	8.47E-04	1.53E-02	25	166	9.37E-04	4
ND-98-1668	7.45E-02	251	1.85E-03	2.22E-02	76	241	1.42E-03	6
ND-98-1669	9.00E-02	311	7.65E-04	2.37E-02	21	257	1.35E-03	5
ND-98-1670	1.09E-01	385	1.96E-03	3.27E-02	82	353	2.05E-03	8
ND-98-1671	1.59E-01	579	2.01E-03	3.34E-02	85	361	2.09E-03	8
ND-98-1672	1.41E-01	509	3.10E-03	3.27E-02	141	353	2.40E-03	9
TO-8607	6.55E-01	2502	3.68E-02	2.10E-01	1852	2124	5.50E-03	20
Should be----->		2900			1800	2600		26
RPD		15			3	20		25

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	18-Nov-98	Time:	9:32:12			
Project:	ND	Batch	Number:	136				
Con. 1 mont.	1.2817	Con. 4 mont.	1.0984			Con. 5 mont.	0.6563	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-136	1.17E-02	7	5.83E-04	7.37E-04	11	8	7.78E-04	3
ND-98-1663	7.85E-02	266	2.14E-03	2.48E-02	91	269	1.82E-03	7
ND-98-1664	8.28E-02	283	1.48E-03	2.02E-02	57	219	1.66E-03	7
ND-98-1665	7.49E-02	252	1.04E-03	1.99E-02	35	216	1.27E-03	5
ND-98-1666	7.57E-02	256	1.22E-03	2.19E-02	44	237	2.96E-03	11
ND-98-1667	7.67E-02	259	2.14E-03	2.56E-02	91	277	1.52E-03	6
ND-98-1673	9.56E-02	333	8.32E-02	2.39E-01	4142	2391	2.63E-03	10
ND-98-1674	1.09E-01	385	5.71E-02	2.96E-01	2863	2896	5.54E-03	20
ND-98-1674DUP	1.09E-01	385	5.70E-02	2.98E-01	2858	2914	4.60E-03	17
ND-98-1675	8.51E-02	292	2.66E-02	1.47E-01	1338	1523	3.43E-03	13
ND-98-1676	1.23E-01	439	4.02E-02	1.98E-01	2022	2012	4.00E-03	15
ND-98-1677	1.04E-01	365	3.95E-03	4.02E-02	184	433	1.69E-03	7
ND-98-1678	1.08E-01	381	1.84E-03	1.31E-02	76	142	1.10E-03	4
ND-98-1679	1.47E-01	532	2.50E-01	2.00E-01	11742	2031	5.71E-03	21
TO-8607	6.63E-01	2533	3.41E-02	2.32E-01	1716	2327	7.30E-03	27
Should be----->		2900			1800	2600		26
RPD		14			5	11		3

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	18-Nov-98	Time:	21:36:21			
Project:	ND	Batch	Number:	137				
Con. 1 mont.	1.275	Con. 4 mont.	1.1059			Con. 5 mont.	0.6623	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1680	1.11E-01	392	1.38E-01	2.02E-01	6748	2050	4.15E-03	15
ND-98-1681	1.42E-01	513	6.74E-02	1.35E-01	3370	1405	3.98E-03	15
ND-98-1682	9.67E-02	337	6.99E-02	2.18E-01	3493	2199	3.42E-03	13
ND-98-1683	1.81E-01	664	2.13E-02	4.17E-02	1070	449	3.02E-03	11
ND-98-1684	9.47E-02	329	4.62E-02	3.63E-02	2322	392	2.81E-03	11
ND-98-1685	7.81E-02	265	3.47E-03	1.81E-02	160	197	1.18E-03	5
ND-98-1686	7.31E-02	245	1.81E-03	1.48E-02	74	161	1.25E-03	5
ND-98-1687	6.69E-02	221	1.79E-03	1.44E-02	73	157	1.69E-03	7
ND-98-1688	1.22E-01	435	1.08E-03	1.17E-02	37	127	1.94E-03	8
ND-98-1689	1.83E-01	672	2.44E-03	2.11E-02	107	229	1.49E-03	6
ND-98-1690	1.23E-01	439	9.58E-04	1.81E-02	31	197	1.23E-03	5
ND-98-1691	1.01E-01	354	1.97E-04	2.29E-02	-9	248	2.02E-03	8
ND-98-1692	8.01E-02	273	2.21E-04	2.00E-02	-7	217	1.77E-03	7
ND-98-1693	1.08E-01	381	1.20E-03	2.37E-02	43	257	2.02E-03	8
TO-8607	6.53E-01	2494	3.45E-02	2.01E-01	1736	2040	5.06E-03	19
Should be----->		2900			1800	2600		26
RPD		15			4	24		33

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	19-Nov-98	Time:	10:11:41
Project:	ND	Batch	Number:	138	

Con. 1 mont. 1.2685 Con. 4 mont. 1.1114 Con. 5 mont. 0.6483

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-138	1.41E-02	17	9.03E-04	4.72E-04	28	5	6.40E-04	3
ND-98-1694	4.05E-01	1533	1.74E-03	2.02E-02	71	219	1.24E-03	5
ND-98-1694DUP	4.20E-01	1591	2.93E-03	2.23E-02	132	242	8.94E-04	4
ND-98-1695	6.03E-02	196	1.88E-03	1.22E-02	78	133	1.25E-03	5
ND-98-1696	6.35E-02	208	9.05E-04	1.37E-02	28	149	1.40E-03	6
ND-98-1697	6.25E-02	204	7.70E-04	1.36E-02	21	148	1.27E-03	5
ND-98-1698	6.08E-02	198	9.25E-04	1.48E-02	29	161	1.46E-03	6
ND-98-1699	6.11E-02	199	1.45E-03	1.56E-02	56	170	1.01E-03	4
ND-98-1700	5.90E-02	191	1.80E-03	1.49E-02	74	162	1.32E-03	5
ND-98-1701	6.62E-02	219	1.80E-03	1.69E-02	74	184	1.55E-03	6
ND-98-1702	6.97E-02	232	1.86E-03	1.95E-02	77	212	1.42E-03	6
ND-98-1703	8.76E-02	302	2.19E-03	2.18E-02	94	236	1.08E-03	4
ND-98-1707	6.41E-02	211	2.02E-03	1.95E-02	85	212	1.11E-03	5
ND-98-1608	7.02E-02	234	1.93E-03	1.63E-02	80	177	1.15E-03	5
TO-8607	6.63E-01	2533	3.04E-02	2.00E-01	1530	2031	5.57E-03	21
Should be----->		2900			1800	2600		26
RPD		14			16	25		24

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	19-Nov-98	Time:	21:49:02			
Project:	ND	Batch	Number:	139				
Con. 1 mont.	1.2959	Con. 4 mont.	1.1083			Con. 5 mont.	0.65	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-139	9.60E-03	-1	4.71E-04	1.30E-03	5	14	4.87E-04	2
ND-98-1704	7.59E-02	256	1.42E-03	1.68E-02	54	182	1.06E-03	4
ND-98-1705	6.22E-02	203	1.36E-03	1.57E-02	51	171	1.65E-03	6
ND-98-1706	6.19E-02	202	5.02E-03	2.06E-02	239	223	1.33E-03	5
ND-98-1709	5.56E-02	178	1.20E-03	1.39E-02	43	151	1.06E-03	4
ND-98-1710DUP	1.03E-01	361	4.29E-02	2.42E-01	2157	2418	3.08E-03	12
ND-98-1710	1.03E-01	361	4.50E-02	2.47E-01	2262	2464	4.26E-03	16
ND-98-1711	8.61E-02	296	1.00E-02	2.72E-02	494	294	2.04E-03	8
ND-98-1712	1.46E-01	528	2.57E-02	7.28E-02	1293	775	3.26E-03	12
ND-98-1713	4.97E-02	155	2.30E-02	5.16E-02	1156	554	1.96E-03	8
ND-98-1714	9.00E-02	311	1.30E-01	1.33E-01	6374	1385	3.39E-03	13
ND-98-1715	8.50E-02	292	8.48E-02	1.86E-01	4219	1899	3.91E-03	15
ND-98-1716	7.58E-02	256	2.80E-02	1.53E-01	1409	1581	3.19E-03	12
ND-98-1716	7.77E-02	263	5.31E-02	2.30E-01	2665	2309	4.16E-03	16
TO-8607	6.55E-01	2502	3.34E-02	2.31E-01	1681	2318	6.44E-03	24
Should be----->		2900			1800	2600		26
RPD		15			7	11		10

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	20-Nov-98	Time:	9:51:31			
Project:	ND	Batch	Number:	140				
Con. 1 mont.	1.2745	Con. 4 mont.	1.1064			Con. 5 mont.	0.646	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1718	1.79E-01	656	3.90E-02	1.69E-01	1962	1736	2.99E-03	11
ND-98-1719	8.62E-02	296	8.68E-02	1.52E-01	4316	1572	2.94E-03	11
ND-98-1720	5.66E-02	182	2.96E-02	6.06E-02	1489	648	1.89E-03	7
ND-98-1721	5.31E-02	168	3.41E-02	1.08E-01	1716	1135	3.69E-03	14
ND-98-1722	8.71E-02	300	6.41E-02	3.24E-01	3208	3135	3.06E-03	12
ND-98-1723	5.54E-02	177	3.33E-02	2.62E-01	1676	2598	2.16E-03	8
ND-98-1724	6.21E-02	203	4.04E-02	2.15E-01	2032	2171	3.08E-03	12
ND-98-1725	4.12E-02	122	6.89E-03	5.21E-02	335	559	1.88E-03	7
ND-98-1726	1.04E-01	365	1.41E-01	5.57E-01	6887	4889	4.88E-03	18
ND-98-1727	5.04E-02	157	3.43E-02	9.74E-02	1726	1028	1.17E-03	5
ND-98-1728	6.96E-02	232	6.90E-02	2.48E-01	3449	2473	2.68E-03	10
ND-98-1729	6.08E-02	198	5.42E-02	8.24E-02	2719	874	2.56E-03	10
ND-98-1730	5.89E-02	190	3.81E-02	1.31E-01	1917	1365	3.82E-03	14
ND-98-1731	7.45E-02	251	4.95E-02	1.82E-01	2486	1861	3.11E-03	12
TO-8607	6.57E-01	2510	3.51E-02	2.01E-01	1766	2040	5.84E-03	22
Should be----->		2900			1800	2600		26
RPD		14			2	24		19

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	21-Nov-98	Time:	20:21:39			
Project:	ND	Batch	Number:	141				
Con. 1 mont.	1.3263	Con. 4 mont.	1.048			Con. 5 mont.	0.6431	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-141	5.85E-03	-15	3.27E-04	6.13E-04	-2	7	5.33E-04	2
ND-98-1732	5.36E-02	170	4.15E-02	9.90E-02	2087	1044	3.06E-03	12
ND-98-1733	3.30E-02	90	1.38E-02	3.46E-02	688	373	1.45E-03	6
ND-98-1734	3.23E-02	87	1.22E-02	2.71E-02	607	293	1.24E-03	5
ND-98-1735	2.81E-02	71	8.25E-03	1.70E-02	405	185	1.28E-03	5
ND-98-1736	2.77E-02	69	9.20E-03	1.59E-02	453	173	1.06E-03	4
ND-98-1737	8.03E-02	273	1.09E-01	3.18E-01	5382	3085	5.11E-03	19
ND-98-1738	1.78E-01	652	1.40E-02	5.88E-02	698	629	2.45E-03	9
ND-98-1739	6.25E-02	204	8.91E-03	3.80E-02	438	410	1.48E-03	6
ND-98-1740	6.63E-02	219	1.61E-01	2.00E-01	7810	2031	3.73E-03	14
ND-98-1740DUP	6.55E-02	216	1.60E-01	1.97E-01	7764	2003	2.03E-03	8
ND-98-1741	6.53E-02	215	1.17E-02	3.28E-02	581	354	1.77E-03	7
ND-98-1742	6.81E-02	226	4.48E-02	6.44E-02	2252	688	2.36E-03	9
ND-98-1744	6.66E-02	220	1.16E-01	1.54E-01	5714	1591	2.64E-03	10
TO-8607	6.62E-01	2529	3.68E-02	2.37E-01	1852	2373	5.31E-03	20
Should be----->		2900			1800	2600		26
RPD		14			3	9		28

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	22-Nov-98	Time:	11:48:36			
Project:	ND	Batch	Number:	142				
Con. 1 mont.	1.286	Con. 4 mont.	1.1071			Con. 5 mont.	0.6496	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1743	6.97E-02	232	6.62E-02	2.00E-01	3311	2031	3.85E-03	14
ND-98-1745	1.32E-01	474	5.58E-03	5.19E-02	268	557	2.14E-03	8
ND-98-1746	5.71E-02	183	2.27E-02	5.28E-02	1141	566	1.45E-03	6
ND-98-1747	6.88E-02	229	3.31E-02	5.47E-02	1666	586	2.19E-03	8
ND-98-1748	8.57E-02	294	6.83E-03	2.91E-02	332	315	2.28E-03	9
ND-98-1749	6.76E-02	224	1.57E-02	3.66E-02	785	395	1.53E-03	6
ND-98-1750	6.01E-02	195	6.42E-02	1.17E-01	3213	1226	3.07E-03	12
ND-98-1751	7.04E-02	235	2.50E-02	5.81E-02	1257	622	1.83E-03	7
ND-98-1752	6.06E-02	197	4.69E-03	3.30E-02	222	356	1.35E-03	5
ND-98-1753	5.40E-02	171	6.55E-03	1.05E-01	318	1105	2.38E-03	9
ND-98-1754	2.22E-02	48	2.12E-03	6.16E-03	90	67	7.85E-04	3
ND-98-1755	6.30E-02	206	3.42E-02	4.25E-02	1721	457	2.55E-03	10
ND-98-1756	8.32E-02	285	7.09E-02	1.86E-01	3542	1899	3.90E-03	15
ND-98-1757	7.51E-02	253	6.87E-02	2.50E-01	3434	2491	4.83E-03	18
TO-8607	6.54E-01	2498	3.67E-02	2.01E-01	1847	2040	6.58E-03	24
Should be----->		2900			1800	2600		26
RPD		15			3	24		7

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	22-Nov-98	Time:	23:09:00			
Project:	ND	Batch	Number:	143				
Con. 1 mont.	1.2976	Con. 4 mont.	1.1068			Con. 5 mont.	0.6515	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-143	8.53E-03	-5	5.05E-04	6.66E-04	7	7	2.54E-04	1
ND-98-1758	9.76E-02	341	8.73E-02	1.67E-01	4340	1717	3.75E-03	14
ND-98-1759	1.14E-01	404	1.27E-02	3.95E-02	632	426	2.64E-03	10
ND-98-1760	5.82E-02	188	6.19E-03	4.64E-02	299	499	2.01E-03	8
ND-98-1761	8.49E-02	291	4.05E-02	1.50E-01	2037	1552	3.14E-03	12
ND-98-1762	6.47E-02	213	2.68E-02	8.16E-02	1348	866	2.36E-03	9
ND-98-1763	8.58E-02	295	4.61E-02	1.70E-01	2317	1746	2.66E-03	10
ND-98-1764	8.34E-02	285	4.41E-02	1.70E-01	2217	1746	3.77E-03	14
ND-98-1765	6.85E-02	228	3.07E-02	1.68E-01	1545	1727	3.03E-03	11
ND-98-1766	1.09E-01	385	1.00E-01	3.05E-01	4952	2974	3.42E-03	13
ND-98-1766DUP	1.07E-01	377	1.00E-01	3.17E-01	4952	3076	3.25E-03	12
ND-98-1767	5.89E-02	190	1.19E-02	5.82E-02	591	623	2.85E-03	11
ND-98-1768	7.30E-02	245	3.84E-02	1.76E-01	1932	1804	2.87E-03	11
ND-98-1769	7.92E-02	269	5.23E-02	1.20E-01	2625	1256	3.21E-03	12
TO-8607	6.55E-01	2502	3.51E-02	2.33E-01	1766	2336	5.88E-03	22
Should be----->		2900			1800	2600		26
RPD		15			2	11		18

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	23-Nov-98	Time:	10:58:57			
Project:	ND	Batch	Number:	144				
Con. 1 mont.	1.2799	Con. 4 mont.	1.1117			Con. 5 mont.	0.6545	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1770	1.04E-01	365	6.10E-02	2.91E-01	3055	2853	4.66E-03	17
ND-98-1771	8.92E-02	308	1.10E-02	3.58E-02	545	386	2.02E-03	8
ND-98-1772	1.16E-01	412	7.41E-02	2.27E-01	3698	2282	5.36E-03	20
ND-98-1773	1.38E-01	497	6.04E-02	7.89E-02	3026	838	3.12E-03	12
ND-98-1774	5.93E-02	192	1.01E-02	9.09E-02	499	961	2.75E-03	10
ND-98-1775	8.84E-02	305	3.91E-02	1.49E-01	1967	1542	3.31E-03	12
ND-98-1776	6.80E-02	226	3.62E-02	1.32E-01	1822	1375	3.77E-03	14
ND-98-1777	7.75E-02	263	1.94E-02	5.55E-02	973	595	1.88E-03	7
ND-98-1778	6.73E-02	223	4.31E-02	1.28E-01	2167	1335	3.19E-03	12
ND-98-1779	6.05E-02	197	4.51E-02	9.99E-02	2267	1053	2.92E-03	11
ND-98-1780	3.39E-02	93	1.47E-02	3.26E-02	734	352	1.43E-03	6
ND-98-1781	2.81E-02	71	9.21E-03	2.11E-02	454	229	1.60E-03	6
ND-98-1782	2.56E-02	61	4.09E-03	1.10E-02	191	120	7.78E-04	3
ND-98-1783	2.61E-02	63	3.62E-03	1.17E-02	167	127	1.13E-03	5
TO-8607	5.80E-01	2211	3.21E-02	2.29E-01	1615	2300	7.35E-03	27
Should be----->		2900			1800	2600		26
RPD		27			11	12		3

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	23-Nov-98	Time:	22:49:14			
Project:	ND	Batch	Number:	145				
Con. 1 mont.	1.2745	Con. 4 mont.	1.1207			Con. 5 mont.	0.6465	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-145	1.44E-02	18	7.10E-04	1.11E-03	18	12	6.03E-04	3
ND-98-1784	1.04E-01	365	1.10E-01	1.76E-01	5429	1804	2.66E-03	10
ND-98-1785	6.83E-02	227	6.52E-02	1.22E-01	3262	1276	1.99E-03	8
ND-98-1786	7.48E-02	252	1.81E-02	1.42E-01	907	1474	2.16E-03	8
ND-98-1786DUP	7.70E-02	261	1.86E-02	1.49E-01	933	1542	2.12E-03	8
ND-98-1787	5.27E-02	166	1.63E-02	7.91E-02	816	840	2.69E-03	10
ND-98-1788	6.14E-02	200	2.84E-02	2.43E-01	1429	2427	2.95E-03	11
ND-98-1789	8.48E-02	291	6.38E-02	3.23E-01	3193	3127	3.32E-03	12
ND-98-1790	5.14E-02	161	2.46E-02	1.41E-01	1237	1464	3.16E-03	12
ND-98-1791	1.25E-01	447	1.64E-02	4.90E-02	821	526	3.00E-03	11
ND-98-1792	6.74E-02	223	1.91E-02	4.09E-02	958	440	1.49E-03	6
ND-98-1793	5.76E-02	185	6.91E-03	8.28E-02	336	878	1.80E-03	7
ND-98-1794	1.00E-01	350	1.04E-02	2.34E-01	515	2346	3.20E-03	12
ND-98-1795	7.83E-02	266	5.17E-03	2.10E-01	247	2124	3.54E-03	13
TO-8607	6.56E-01	2506	3.26E-02	2.24E-01	1641	2254	6.26E-03	23
Should be----->		2900			1800	2600		26
RPD		15			9	14		12

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	24-Nov-98	Time:	10:56:48			
Project:	ND	Batch	Number:	146				
Con. 1 mont.	1.2748	Con. 4 mont.	1.1153			Con. 5 mont.	0.6517	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-146	1.39E-02	16	8.89E-04	7.89E-04	27	9	8.40E-04	4
ND-98-1796	7.30E-02	245	9.33E-03	2.77E-01	460	2731	3.52E-03	13
ND-98-1797	6.97E-02	232	7.48E-03	2.55E-01	365	2535	4.53E-03	17
ND-98-1798	6.26E-02	205	1.53E-02	2.04E-01	765	2069	3.47E-03	13
ND-98-1799	2.69E-02	66	3.95E-03	9.08E-03	184	99	1.51E-03	6
ND-98-1800	1.49E-01	540	6.31E-04	1.74E-02	14	189	1.76E-03	7
ND-98-1801	1.26E-01	451	4.14E-04	3.30E-02	3	356	1.85E-03	7
ND-98-1802	9.14E-02	316	6.91E-04	1.60E-02	17	174	1.18E-03	5
ND-98-1803	1.47E-01	532	2.36E-04	3.04E-02	-7	329	1.96E-03	8
ND-98-1804	9.39E-02	326	1.13E-03	2.25E-02	39	244	1.17E-03	5
ND-98-1805	5.43E-02	173	6.60E-03	1.80E-02	320	195	2.46E-03	9
ND-98-1805DUP	5.60E-02	179	6.68E-03	1.88E-02	324	204	2.31E-03	9
ND-98-1806	6.50E-02	214	5.18E-03	2.02E-02	247	219	1.75E-03	7
ND-98-1807	1.16E-01	412	2.49E-04	3.93E-02	-6	423	1.73E-03	7
TO-8607	6.61E-01	2525	3.51E-02	2.29E-01	1766	2300	6.41E-03	24
Should be----->		2900			1800	2600		26
RPD		14			2	12		10

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	24-Nov-98	Time:	22:43:50			
Project:	ND	Batch	Number:	147				
Con. 1 mont.	1.2898	Con. 4 mont.	1.1194			Con. 5 mont.	0.6536	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1808	6.88E-02	229	1.30E-03	1.70E-02	48	185	1.13E-03	5
ND-98-1809	7.21E-02	242	1.59E-03	1.95E-02	63	212	1.46E-03	6
ND-98-1810	1.00E-01	350	8.93E-04	3.30E-02	27	356	9.88E-04	4
ND-98-1811	8.72E-02	300	1.51E-04	1.97E-02	-11	214	1.04E-03	4
ND-98-1812	1.15E-01	408	7.62E-04	2.71E-02	20	293	2.26E-03	9
ND-98-1813	1.26E-01	451	7.89E-04	2.75E-02	22	298	1.51E-03	6
ND-98-1814	1.36E-01	489	6.72E-04	2.96E-02	16	320	2.35E-03	9
ND-98-1815	1.74E-01	637	2.24E-04	3.81E-02	-7	411	1.53E-03	6
ND-98-1816	1.78E-01	652	6.99E-04	2.83E-02	17	306	1.32E-03	5
ND-98-1817	1.83E-01	672	9.07E-04	3.22E-02	28	348	1.42E-03	6
ND-98-1818	1.89E-01	695	2.64E-03	3.96E-02	117	427	2.41E-03	9
ND-98-1819	9.44E-02	328	1.77E-03	2.68E-02	72	290	1.83E-03	7
ND-98-1820	1.29E-01	462	4.21E-04	3.06E-02	3	331	1.63E-03	6
ND-98-1826	9.60E-02	334	5.67E-04	2.21E-02	10	240	1.52E-03	6
TO-8607	6.62E-01	2529	3.61E-02	2.30E-01	1817	2309	6.94E-03	26
Should be---->		2900			1800	2600		26
RPD		14			1	12		2

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	25-Nov-98	Time:	10:55:35			
Project:	ND	Batch	Number:	148				
Con. 1 mont.	1.287	Con. 4 mont.	1.1015			Con. 5 mont.	0.6556	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-148	1.09E-02	4	5.00E-04	1.30E-03	7	14	4.19E-04	2
ND-98-1821	1.79E-01	656	2.49E-03	3.42E-02	109	369	1.92E-03	7
ND-98-1822	1.27E-01	455	9.94E-04	2.92E-02	32	316	1.99E-03	8
ND-98-1823	1.36E-01	489	4.58E-04	2.01E-02	5	218	2.11E-03	8
ND-98-1824	1.34E-01	482	2.68E-03	3.01E-02	119	325	2.36E-03	9
ND-98-1825	1.98E-01	730	4.78E-04	4.22E-02	6	454	2.05E-03	8
ND-98-1827	9.87E-02	345	9.86E-04	2.40E-02	32	260	1.29E-03	5
ND-98-1827DUP	1.01E-01	354	5.29E-04	2.31E-02	8	250	1.59E-03	6
ND-98-1828	1.63E-01	594	1.44E-03	3.48E-02	55	376	2.32E-03	9
ND-98-1829	1.26E-01	451	3.69E-04	3.78E-02	0	408	1.38E-03	5
ND-98-1830	2.31E-01	858	3.55E-03	3.89E-02	164	419	3.35E-03	13
ND-98-1831	1.98E-01	730	2.05E-03	3.24E-02	87	350	2.11E-03	8
ND-98-1832	1.59E-01	579	3.33E-04	4.01E-02	-2	432	1.79E-03	7
ND-98-1833	1.62E-01	590	1.08E-03	3.49E-02	37	377	2.15E-03	8
TO-8607	6.58E-01	2514	3.93E-02	2.40E-01	1977	2400	6.70E-03	25
Should be----->		2900			1800	2600		26
RPD		14			9	8		6

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	26-Nov-98	Time:	19:30:38			
Project:	ND	Batch	Number:	149				
Con. 1 mont.	1.291	Con. 4 mont.	1.0876			Con. 5 mont.	0.6511	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1834	1.61E-01	586	2.06E-03	4.31E-02	87	464	1.99E-03	8
ND-98-1835	1.62E-01	590	2.92E-04	4.42E-02	-4	475	2.68E-03	10
ND-98-1836	1.01E-01	354	9.14E-04	4.45E-02	28	479	1.36E-03	5
ND-98-1837	2.31E-01	858	2.88E-03	4.63E-02	129	498	2.32E-03	9
ND-98-1838	2.15E-01	796	2.00E-03	3.90E-02	84	420	2.25E-03	9
ND-98-1839	2.40E-01	893	1.98E-04	2.44E-02	-9	264	1.40E-03	6
ND-98-1840	1.42E-01	513	2.32E-03	2.51E-02	101	272	1.58E-03	6
ND-98-1841	7.70E-02	261	1.44E-03	1.91E-02	55	207	1.18E-03	5
ND-98-1842	7.39E-02	249	1.63E-03	1.12E-02	65	122	1.47E-03	6
ND-98-1843	9.42E-02	327	4.83E-04	1.55E-02	6	168	1.29E-03	5
ND-98-1844	6.69E-02	221	1.26E-03	1.76E-02	46	191	1.39E-03	6
ND-98-1845	2.11E-01	780	1.41E-03	2.87E-02	54	310	1.98E-03	8
ND-98-1846	1.09E-01	385	1.33E-03	1.86E-02	50	202	8.67E-04	4
ND-98-1848	9.90E-02	346	8.42E-04	1.85E-02	25	201	9.40E-04	4
TO-8607	6.58E-01	2514	3.75E-02	2.38E-01	1887	2382	6.77E-03	25
Should be----->		2900			1800	2600		26
RPD		14			5	9		5

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	30-Nov-98	Time:	8:33:49			
Project:	ND	Batch	Number:	150				
Con. 1 mont.	1.2877	Con. 4 mont.	1.0913			Con. 5 mont.	0.6459	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-150	9.81E-03	0	6.32E-04	7.29E-04	14	8	2.08E-04	1
ND-98-1847	9.97E-02	349	5.07E-04	1.64E-02	7	178	9.96E-04	4
ND-98-1849	9.42E-02	327	4.13E-04	1.79E-02	2	194	9.45E-04	4
ND-98-1850	1.28E-01	458	1.32E-03	2.24E-02	49	243	1.67E-03	7
ND-98-1851	1.40E-01	505	1.18E-03	2.41E-02	42	261	1.07E-03	4
ND-98-1852	9.62E-02	335	6.09E-04	2.02E-02	13	219	1.25E-03	5
ND-98-1853	1.72E-01	629	2.40E-04	2.41E-02	-6	261	1.83E-03	7
ND-98-1854	1.77E-01	648	1.26E-03	2.52E-02	46	273	8.75E-04	4
ND-98-1855	1.33E-01	478	2.71E-04	2.16E-02	-5	234	1.04E-03	4
ND-98-1856	2.23E-01	827	2.76E-03	4.07E-02	123	438	2.01E-03	8
ND-98-1857	3.97E-01	1502	3.36E-03	4.35E-02	154	468	1.93E-03	7
ND-98-1857DUP	3.28E-01	1234	2.32E-03	3.97E-02	101	428	2.62E-03	10
ND-98-1858	4.15E-01	1571	3.55E-03	4.18E-02	164	450	2.31E-03	9
ND-98-1859	3.75E-01	1416	3.31E-03	4.35E-02	151	468	1.97E-03	8
TO-8607	6.55E-01	2502	3.11E-02	2.07E-01	1565	2097	7.15E-03	26
Should be---->		2900			1800	2600		26
RPD		15			14	21		1

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	1-Dec-98	Time:	9:35:48			
Project:	ND	Batch	Number:	151				
Con. 1 mont.	1.2697	Con. 4 mont.	1.1049			Con. 5 mont.	0.6401	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-151	1.30E-02	12	6.74E-04	1.42E-03	16	16	5.24E-04	2
ND-98-1860	3.35E-01	1261	2.49E-03	3.97E-02	109	428	2.13E-03	8
ND-98-1861	1.67E-01	610	1.35E-03	1.95E-02	51	212	8.60E-04	4
ND-98-1862	7.29E-02	245	5.43E-04	1.67E-02	9	181	1.65E-03	6
ND-98-1863	7.72E-02	261	1.04E-03	1.94E-02	35	211	1.70E-03	7
ND-98-1864	7.70E-02	261	1.15E-03	1.94E-02	40	211	1.23E-03	5
ND-98-1865	7.08E-02	237	8.08E-04	1.83E-02	23	199	9.07E-04	4
ND-98-1866	7.11E-02	238	1.17E-03	1.96E-02	41	213	1.45E-03	6
ND-98-1867	7.25E-02	243	5.61E-05	2.31E-02	-16	250	1.72E-03	7
ND-98-1868	9.40E-02	327	4.54E-04	2.20E-02	5	239	1.29E-03	5
ND-98-1869	1.63E-01	594	3.40E-04	1.96E-02	-1	213	2.11E-03	8
ND-98-1869DUP	1.65E-01	602	5.49E-04	2.11E-02	9	229	1.69E-03	7
ND-98-1870	1.47E-01	532	1.00E-03	1.86E-02	33	202	1.84E-03	7
ND-98-1871	1.14E-01	404	1.13E-03	1.99E-02	39	216	1.35E-03	5
TO-8607	6.52E-01	2490	3.54E-02	2.28E-01	1781	2291	4.84E-03	18
Should be----->		2900			1800	2600		26
RPD		15			1	13		37

QA/QC	
Passed	JZ
Failed	
Validated	

Operator:	LUISZER	Date:	1-Dec-98	Time:	23:15:28
Project:	ND	Batch	Number:	152	

Con. 1 mont. 1.2742 Con. 4 mont. 1.1143 Con. 5 mont. 0.6469

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1872	1.06E-01	373	1.41E-03	2.64E-02	54	286	1.68E-03	7
ND-98-1873	6.69E-02	221	2.09E-03	1.61E-02	89	175	1.39E-03	6
ND-98-1874	6.60E-02	218	1.45E-03	1.58E-02	56	172	2.04E-03	8
ND-98-1875	6.44E-02	212	2.39E-03	1.75E-02	104	190	2.12E-03	8
ND-98-1876	9.22E-02	320	3.03E-03	1.79E-02	137	194	2.56E-03	10
ND-98-1877	6.74E-02	223	3.57E-03	2.29E-02	165	248	2.52E-03	10
ND-98-1878	6.42E-02	211	3.77E-03	3.15E-02	175	340	2.16E-03	8
ND-98-1879	5.81E-02	187	2.42E-03	1.61E-02	106	175	2.29E-03	9
ND-98-1880	6.68E-02	221	4.08E-03	2.50E-02	191	271	2.12E-03	8
ND-98-1881	3.12E-01	1172	1.81E-03	5.30E-02	74	568	2.54E-03	10
ND-98-1882	9.91E-02	346	5.30E-04	1.84E-02	8	200	1.14E-03	5
ND-98-1883	6.29E-02	206	5.45E-03	2.02E-02	261	219	2.23E-03	9
ND-98-1884	5.50E-02	175	5.16E-03	2.06E-02	246	223	2.39E-03	9
ND-98-1885	4.83E-02	149	4.23E-03	1.74E-02	199	189	1.76E-03	7
TO-8607	5.78E-01	2203	3.64E-02	2.29E-01	1832	2300	5.84E-03	22
Should be---->		2900			1800	2600		26
RPD		27			2	12		19

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	2-Dec-98	Time:	10:58:29			
Project:	ND	Batch	Number:	153				
Con. 1 mont.	1.2625	Con. 4 mont.	1.1194			Con. 5 mont.	0.6343	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-153	1.44E-02	18	6.97E-04	9.87E-04	17	11	2.38E-04	1
ND-98-1886	5.48E-02	175	3.89E-03	2.39E-02	181	259	2.44E-03	9
ND-98-1887	6.52E-02	215	9.95E-03	2.40E-02	492	260	2.78E-03	11
ND-98-1888	9.46E-02	329	5.06E-04	1.42E-02	7	154	2.13E-03	8
ND-98-1889	7.89E-02	268	6.85E-05	1.60E-02	-15	174	2.10E-03	8
ND-98-1890	8.08E-02	275	3.84E-03	1.51E-02	179	164	2.36E-03	9
ND-98-1891	5.65E-02	181	5.07E-03	1.52E-02	242	165	2.61E-03	10
ND-98-1892	4.42E-02	133	7.08E-03	1.22E-02	345	133	1.99E-03	8
ND-98-1893	4.56E-02	139	8.61E-03	1.46E-02	423	159	2.00E-03	8
ND-98-1894	4.78E-02	147	6.94E-03	1.72E-02	338	187	1.57E-03	6
ND-98-1895	3.94E-02	115	8.44E-03	1.54E-02	414	167	2.00E-03	8
ND-98-1896	5.27E-02	166	8.14E-03	1.68E-02	399	182	2.05E-03	8
ND-98-1896DUP	5.09E-02	159	9.45E-03	1.66E-02	466	180	1.80E-03	7
ND-98-1897	5.76E-02	185	3.56E-03	1.87E-02	164	203	2.02E-03	8
TO-8607	6.56E-01	2506	3.48E-02	2.02E-01	1751	2050	5.98E-03	22
Should be----->		2900			1800	2600		26
RPD		15			3	24		17

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	2-Dec-98	Time:	22:32:07			
Project:	ND	Batch	Number:	154				
Con. 1 mont.	1.2734	Con. 4 mont.	1.116			Con. 5 mont.	0.6469	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1898	5.57E-02	178	6.80E-03	2.10E-02	330	228	1.63E-03	6
ND-98-1899	5.77E-02	186	5.15E-03	2.05E-02	246	222	2.25E-03	9
ND-98-1900	5.26E-02	166	4.35E-03	1.76E-02	205	191	2.08E-03	8
ND-98-1901	6.67E-02	221	1.85E-03	1.77E-02	76	192	1.77E-03	7
ND-98-1902	5.34E-02	169	2.54E-03	1.27E-02	112	138	2.25E-03	9
ND-98-1903	6.34E-02	208	4.72E-03	2.01E-02	224	218	3.01E-03	11
ND-98-1904	6.63E-02	219	8.57E-03	2.28E-02	421	247	1.74E-03	7
ND-98-1905	5.44E-02	173	3.89E-03	1.95E-02	181	212	1.79E-03	7
ND-98-1906	5.81E-02	187	3.32E-03	2.35E-02	152	255	2.56E-03	10
ND-98-1907	5.58E-02	178	4.94E-03	2.15E-02	235	233	2.30E-03	9
ND-98-1908	8.25E-02	282	1.99E-03	3.23E-02	84	349	1.24E-03	5
ND-98-1909	8.85E-02	305	1.18E-03	1.81E-02	42	197	2.42E-03	9
ND-98-1910	7.62E-02	258	5.51E-03	2.64E-02	264	286	2.04E-03	8
ND-98-1911	5.55E-02	177	5.80E-03	2.23E-02	279	242	1.90E-03	7
TO-8607	6.57E-01	2510	3.58E-02	2.18E-01	1801	2199	5.72E-03	21
Should be----->		2900			1800	2600		26
RPD		14			0	17		21

QA/QC	
Passed	
Failed	
Validated	

Operator:	LUISZER	Date:	3-Dec-98	Time:	10:18:42			
Project:	ND	Batch	Number:	155				
Con. 1 mont.	1.2764	Con. 4 mont.	1.1164			Con. 5 mont.	0.6473	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-155	1.32E-02	13	2.90E-04	8.22E-04	-4	9	1.96E-04	1
ND-98-1912	6.00E-02	195	8.71E-03	2.59E-02	428	280	2.97E-03	11
ND-98-1913	5.25E-02	166	4.03E-03	1.36E-02	188	148	1.61E-03	6
ND-98-1914	2.57E-01	959	1.14E-03	2.97E-02	40	321	1.64E-03	6
ND-98-1915	9.17E-02	318	5.47E-03	1.76E-02	262	191	2.14E-03	8
ND-98-1915DUP	8.89E-02	307	6.09E-03	1.85E-02	294	201	1.98E-03	8
ND-98-1916	6.04E-02	196	6.66E-03	1.89E-02	323	205	2.25E-03	9
ND-98-1917	4.31E-02	129	5.99E-03	1.28E-02	289	139	1.86E-03	7
ND-98-1918	5.40E-02	171	8.07E-03	1.62E-02	395	176	1.85E-03	7
ND-98-1919	4.81E-02	149	7.54E-03	1.51E-02	368	164	1.94E-03	8
ND-98-1920	5.21E-02	164	8.31E-03	1.76E-02	408	191	3.11E-03	12
ND-98-1921	4.12E-02	122	5.38E-03	1.39E-02	258	151	1.16E-03	5
ND-98-1922	3.33E-02	91	5.73E-03	1.10E-02	276	120	1.50E-03	6
ND-98-1923	9.35E-02	325	4.47E-03	2.39E-02	211	259	1.90E-03	7
TO-8607	6.61E-01	2525	3.39E-02	2.26E-01	1706	2272	5.68E-03	21
Should be----->		2900			1800	2600		26
RPD		14			5	13		22

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	3-Dec-98	Time:	21:38:38			
Project:	ND	Batch	Number:	156				
Con. 1 mont.	1.2952	Con. 4 mont.	1.1054			Con. 5 mont.	0.654	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1924	6.25E-02	204	4.65E-03	2.22E-02	220	241	1.88E-03	7
ND-98-1925	5.02E-02	157	6.14E-03	2.15E-02	297	233	1.92E-03	7
ND-98-1926	5.66E-02	182	6.99E-03	2.02E-02	340	219	1.60E-03	6
ND-98-1927	7.23E-02	242	7.03E-03	2.27E-02	342	246	2.06E-03	8
ND-98-1928	5.53E-02	176	6.14E-03	1.80E-02	297	195	2.43E-03	9
ND-98-1929	9.16E-02	317	2.70E-03	1.69E-02	120	184	2.52E-03	10
ND-98-1930	6.17E-02	201	7.14E-03	2.13E-02	348	231	1.90E-03	7
ND-98-1931	6.29E-02	206	7.59E-03	2.10E-02	371	228	2.63E-03	10
ND-98-1932	5.58E-02	178	5.29E-03	1.55E-02	253	168	2.88E-03	11
ND-98-1933	5.17E-02	163	6.98E-03	1.60E-02	340	174	2.67E-03	10
ND-98-1934	4.96E-02	154	4.89E-03	1.52E-02	233	165	2.68E-03	10
ND-98-1935	5.52E-02	176	6.19E-03	1.91E-02	299	207	2.41E-03	9
ND-98-1936	5.45E-02	173	7.72E-03	2.21E-02	378	240	2.31E-03	9
ND-98-1937	5.93E-02	192	6.53E-03	1.64E-02	317	178	1.67E-03	7
TO-8607	6.60E-01	2521	3.51E-02	2.28E-01	1766	2291	7.86E-03	29
Should be----->		2900			1800	2600		26
RPD		14			2	13		10

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	4-Dec-98	Time:	9:48:02			
Project:	ND	Batch	Number:	157				
Con. 1 mont.	1.2764	Con. 4 mont.	1.1127			Con. 5 mont.	0.6476	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-157	1.29E-02	12	6.11E-04	3.80E-04	13	4	4.66E-04	2
ND-98-1938	5.07E-02	159	5.15E-03	1.93E-02	246	209	1.84E-03	7
ND-98-1939	4.85E-02	150	5.95E-03	2.30E-02	287	249	1.83E-03	7
ND-98-1940	1.71E-01	625	9.94E-03	3.12E-02	491	337	3.43E-03	13
ND-98-1941	6.57E-02	217	1.26E-02	2.33E-02	627	253	2.02E-03	8
ND-98-1941DUP	6.88E-02	229	1.10E-02	2.37E-02	545	257	1.92E-03	7
ND-98-1942	6.99E-02	233	9.90E-03	2.15E-02	489	233	2.05E-03	8
ND-98-1943	1.09E-01	385	1.18E-02	3.75E-02	586	404	1.91E-03	7
ND-98-1944	5.89E-02	190	7.21E-03	2.08E-02	351	226	2.11E-03	8
ND-98-1945	5.62E-02	180	5.41E-03	2.02E-02	259	219	2.39E-03	9
ND-98-1946	5.53E-02	176	1.05E-02	1.82E-02	520	198	2.38E-03	9
ND-98-1947	4.72E-02	145	6.10E-03	1.31E-02	295	142	1.73E-03	7
ND-98-1948	5.46E-02	174	1.09E-02	1.83E-02	540	199	2.20E-03	8
ND-98-1949	6.51E-02	214	7.98E-03	2.38E-02	391	258	2.13E-03	8
TO-8607	6.55E-01	2502	3.46E-02	1.98E-01	1741	2012	5.86E-03	22
Should be----->		2900			1800	2600		26
RPD		15			3	25		19

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	5-Dec-98	Time:	12:12:27			
Project:	ND	Batch	Number:	158				
Con. 1 mont.	1.2922	Con. 4 mont.	1.0991			Con. 5 mont.	0.6536	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-158	9.47E-03	-1	8.55E-04	8.66E-04	25	9	5.45E-04	2
ND-98-1950	8.37E-02	287	4.06E-03	2.44E-02	190	264	1.72E-03	7
ND-98-1951	8.21E-02	280	2.57E-03	1.60E-02	113	174	1.78E-03	7
ND-98-1952	7.06E-02	236	3.96E-03	2.00E-02	185	217	1.37E-03	5
ND-98-1953	9.46E-02	329	3.40E-03	2.49E-02	156	270	2.02E-03	8
ND-98-1954	4.54E-02	138	7.29E-03	1.75E-02	356	190	1.14E-03	5
ND-98-1955	4.08E-02	120	4.72E-03	1.83E-02	224	199	1.13E-03	5
ND-98-1956	4.85E-02	150	8.01E-03	2.35E-02	392	255	2.94E-03	11
ND-98-1957	6.15E-02	201	2.50E-02	5.94E-02	1257	635	2.96E-03	11
ND-98-1958	5.98E-02	194	2.22E-02	2.57E-02	1115	278	2.84E-03	11
ND-98-1959	6.49E-02	214	3.41E-02	3.22E-02	1716	348	2.02E-03	8
ND-98-1959DUP	6.58E-02	217	3.54E-02	3.34E-02	1781	361	3.33E-03	13
ND-98-1960	4.42E-02	133	1.68E-02	1.49E-02	841	162	1.13E-03	5
ND-98-1961	2.92E-02	75	3.81E-03	6.92E-03	177	75	1.05E-03	4
TO-8607	5.77E-01	2200	3.43E-02	2.06E-01	1726	2087	6.64E-03	24
Should be----->		2900			1800	2600		26
RPD		27			4	22		7

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	5-Dec-98	Time:	23:09:11			
Project:	ND	Batch	Number:	159				
Con. 1 mont.	1.2956	Con. 4 mont.	1.1184			Con. 5 mont.	0.6552	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-1962	5.11E-02	160	6.51E-03	2.19E-02	316	237	2.22E-03	9
ND-98-1963	3.90E-02	113	4.50E-03	1.14E-02	213	124	2.12E-03	8
ND-98-1964	3.79E-02	109	3.70E-03	1.09E-02	171	119	8.72E-04	4
ND-98-1965	3.80E-02	109	4.21E-03	1.19E-02	198	129	1.40E-03	6
ND-98-1966	7.04E-02	235	6.26E-03	1.82E-02	303	198	2.20E-03	8
ND-98-1967	4.55E-02	138	3.18E-03	1.47E-02	145	160	9.99E-04	4
ND-98-1968	7.13E-02	239	3.01E-03	1.80E-02	136	195	1.19E-03	5
ND-98-1969	4.88E-02	151	2.57E-03	1.37E-02	113	149	1.56E-03	6
ND-98-1970	5.87E-02	190	2.66E-03	1.28E-02	118	139	1.16E-03	5
ND-98-1971	3.85E-02	111	5.04E-03	1.07E-02	240	116	1.21E-03	5
ND-98-1972	4.32E-02	130	7.04E-03	1.81E-02	343	197	2.31E-03	9
ND-98-1973	4.70E-02	144	4.94E-03	1.97E-02	235	214	2.10E-03	8
ND-98-1974	5.04E-02	157	1.40E-02	2.26E-02	698	245	2.74E-03	10
ND-98-1975	4.68E-02	144	1.15E-02	2.13E-02	571	231	1.98E-03	8
TO-8607	6.55E-01	2502	3.53E-02	2.29E-01	1776	2300	6.18E-03	23
Should be----->		2900			1800	2600		26
RPD		15			1	12		14

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	6-Dec-98	Time:	10:49:10			
Project:	ND	Batch	Number:	160				
Con. 1 mont.	1.2975	Con. 4 mont.	1.0989			Con. 5 mont.	0.6571	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-160	9.87E-03	0	1.28E-03	6.54E-04	47	7	3.50E-04	2
ND-98-1976	8.77E-02	302	4.28E-03	2.30E-02	201	249	2.52E-03	10
ND-98-1977	1.04E-01	365	1.62E-02	2.86E-02	811	309	2.92E-03	11
ND-98-1978	8.39E-02	287	1.59E-02	3.88E-02	795	418	2.66E-03	10
ND-98-1979	3.15E-02	84	3.49E-03	4.57E-03	161	50	7.93E-04	3
ND-98-1980	2.65E-02	65	3.65E-03	4.67E-03	169	51	6.78E-04	3
ND-98-1981	4.42E-02	133	8.04E-03	1.14E-02	394	124	1.38E-03	5
ND-98-1982	4.50E-02	137	6.93E-03	1.37E-02	337	149	1.25E-03	5
ND-98-1983	4.45E-02	135	6.40E-03	1.81E-02	310	197	1.15E-03	5
ND-98-1983DUP	4.51E-02	137	6.60E-03	1.55E-02	320	168	1.57E-03	6
ND-98-1984	5.43E-02	173	3.78E-03	1.78E-02	176	193	1.94E-03	8
ND-98-1985	6.81E-02	226	2.65E-03	1.54E-02	117	167	1.50E-03	6
ND-98-1986	7.20E-02	241	2.01E-03	1.77E-02	85	192	1.55E-03	6
ND-98-1988	4.55E-02	138	5.10E-03	1.59E-02	243	173	1.43E-03	6
TO-8607	5.81E-01	2215	3.53E-02	2.32E-01	1776	2327	6.91E-03	25
Should be---->		2900			1800	2600		26
RPD		27			1	11		3

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	6-Dec-98	Time:	22:15:09			
Project:	ND	Batch	Number:	161				
Con. 1 mont.	1.2837	Con. 4 mont.	1.1007			Con. 5 mont.	0.6517	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-161	1.08E-02	4	1.01E-05	7.34E-04	-18	8	4.64E-04	2
ND-98-1987	3.67E-02	104	1.64E-03	5.83E-03	66	64	9.93E-04	4
ND-98-1989	4.54E-02	138	6.18E-03	1.49E-02	299	162	1.83E-03	7
ND-98-1990	5.15E-02	162	7.73E-03	2.10E-02	378	228	1.30E-03	5
ND-98-1991	4.82E-02	149	5.59E-03	1.88E-02	268	204	1.58E-03	6
ND-98-1992	6.31E-02	207	1.30E-02	2.62E-02	647	284	1.92E-03	7
ND-98-1993	1.02E-01	358	3.40E-03	2.05E-02	156	222	1.92E-03	7
ND-98-1994	2.18E-01	807	2.33E-02	5.25E-02	1171	563	3.41E-03	13
ND-98-1995	6.14E-02	200	5.40E-04	3.80E-02	9	410	1.66E-03	7
ND-98-1996	4.16E-02	123	3.02E-03	1.87E-02	137	203	1.30E-03	5
ND-98-1997	4.62E-02	141	3.45E-03	2.40E-02	159	260	1.11E-03	5
ND-98-1998	3.43E-02	95	3.41E-03	7.69E-03	157	84	3.08E-04	2
ND-98-1999	4.67E-02	143	3.24E-03	1.66E-02	148	180	1.90E-03	7
ND-98-2000DUP	5.46E-02	174	2.80E-03	2.10E-02	125	228	2.09E-03	8
TO-8607	6.58E-01	2514	3.55E-02	2.36E-01	1786	2364	5.46E-03	20
Should be----->		2900			1800	2600		26
RPD		14			1	10		26

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	7-Dec-98	Time:	17:33:24			
Project:	ND	Batch	Number:	162				
Con. 1 mont.	1.2666	Con. 4 mont.	1.1166			Con. 5 mont.	0.6477	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-2000	5.83E-02	188	3.05E-03	2.25E-02	138	244	1.19E-03	5
ND-98-2001	5.98E-02	194	1.52E-03	1.80E-02	59	195	6.00E-04	3
ND-98-2002	7.04E-02	235	1.73E-03	1.81E-02	70	197	1.33E-03	5
ND-98-2003	6.05E-02	197	1.12E-03	2.12E-02	39	230	8.49E-04	4
ND-98-2004	7.94E-02	270	1.31E-03	2.11E-02	49	229	1.08E-03	4
ND-98-2005	8.21E-02	280	1.20E-03	1.80E-02	43	195	1.31E-03	5
ND-98-2006	5.59E-02	179	1.87E-03	1.66E-02	77	180	1.52E-03	6
ND-98-2007	7.23E-02	242	3.26E-03	1.67E-02	149	181	2.14E-03	8
ND-98-2008	8.56E-02	294	4.62E-03	1.97E-02	219	214	1.35E-03	5
ND-98-2009	5.68E-02	182	1.66E-03	1.54E-02	67	167	1.16E-03	5
ND-98-2010	6.13E-02	200	2.13E-03	1.95E-02	91	212	1.71E-03	7
ND-98-2011	8.26E-02	282	2.65E-03	1.92E-02	117	208	1.20E-03	5
ND-98-2012	8.44E-02	289	3.87E-04	2.64E-02	1	286	1.45E-03	6
ND-98-2013	6.70E-02	222	7.41E-04	1.84E-02	19	200	9.69E-04	4
TO-8607	6.68E-01	2552	3.05E-02	2.22E-01	1535	2236	7.13E-03	26
Should be----->		2900			1800	2600		26
RPD		13			16	15		0

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	8-Dec-98	Time:	9:04:35			
Project:	ND	Batch	Number:	163				
Con. 1 mont.	1.2801	Con. 4 mont.	1.1117			Con. 5 mont.	0.6526	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-163	1.40E-02	16	7.43E-04	4.92E-04	19	5	5.70E-04	3
ND-98-2014	7.81E-02	265	5.18E-04	1.86E-02	8	202	7.85E-04	3
ND-98-2015	6.39E-02	210	3.83E-03	2.16E-02	178	234	1.35E-03	5
ND-98-2016	8.34E-02	285	6.22E-04	1.93E-02	13	209	1.07E-03	4
ND-98-2017	1.00E-01	350	1.04E-03	1.99E-02	35	216	1.57E-03	6
ND-98-2018	7.81E-02	265	1.03E-03	2.24E-02	34	243	1.23E-03	5
ND-98-2019	7.90E-02	268	1.24E-03	1.89E-02	45	205	1.33E-03	5
ND-98-2020	4.79E-02	148	2.07E-03	1.69E-02	88	184	1.60E-03	6
ND-98-2021	5.22E-02	164	3.10E-03	2.51E-02	141	272	1.48E-03	6
ND-98-2022	6.88E-02	229	8.20E-04	1.41E-02	23	153	1.04E-03	4
ND-98-2023	6.74E-02	223	7.62E-04	1.58E-02	20	172	9.65E-04	4
ND-98-2023DUP	6.43E-02	211	2.65E-03	1.72E-02	117	187	1.51E-03	6
ND-98-2024	5.69E-02	183	2.79E-04	2.16E-02	-4	234	1.41E-03	6
ND-98-2025	6.30E-02	206	6.95E-04	1.63E-02	17	177	7.20E-04	3
TO-8607	6.58E-01	2514	3.40E-02	2.30E-01	1711	2309	6.18E-03	23
Should be----->		2900			1800	2600		26
RPD		14			5	12		14

QA/QC

Passed

Failed

Validated

Operator: LUISZER Date: 8-Dec-98 Time: 21:00:04

Project: ND Batch Number: 164

Con. 1 mont. 1.2755 Con. 4 mont. 1.1009 Con. 5 mont. 0.6552

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-164	1.37E-02	15	6.06E-04	7.78E-04	12	8	3.71E-04	2
ND-98-2026	7.05E-02	235	9.90E-04	2.70E-02	32	292	1.54E-03	6
ND-98-2027	6.67E-02	221	1.14E-03	3.11E-02	40	336	1.81E-03	7
ND-98-2028	6.57E-02	217	0.00E+00	3.78E-02	-19	408	1.23E-03	5
ND-98-2029	7.01E-02	234	9.93E-04	3.42E-02	32	369	9.09E-04	4
ND-98-2030	7.61E-02	257	3.08E-04	2.68E-02	-3	290	1.37E-03	5
ND-98-2031	1.43E-01	517	8.08E-04	1.93E-02	23	209	8.89E-04	4
ND-98-2031DUP	1.19E-01	423	1.41E-03	2.08E-02	54	226	1.02E-03	4
ND-98-2032	7.58E-02	256	2.08E-03	1.77E-02	88	192	9.85E-04	4
ND-98-2033	7.55E-02	255	1.58E-03	1.96E-02	62	213	7.46E-04	3
ND-98-2034	5.99E-02	194	3.42E-04	2.21E-02	-1	240	8.97E-04	4
ND-98-2035	6.22E-02	203	3.01E-04	2.43E-02	-3	263	7.20E-04	3
ND-98-2036	5.21E-02	164	1.88E-03	2.00E-02	78	217	1.32E-03	5
ND-98-2037	6.04E-02	196	1.66E-03	2.63E-02	67	285	1.18E-03	5
TO-8607	6.59E-01	2518	3.71E-02	2.06E-01	1867	2087	7.68E-03	28
Should be---->		2900			1800	2600		26
RPD		14			4	22		8

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	9-Dec-98	Time:	8:57:24			
Project:	ND	Batch	Number:	165				
Con. 1 mont.	1.2702	Con. 4 mont.	1.1145			Con. 5 mont.	0.6616	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-165	1.23E-02	10	2.25E-04	7.90E-04	-7	9	2.89E-04	2
ND-98-2038	5.95E-02	193	1.87E-03	2.45E-02	77	265	1.03E-03	4
ND-98-2039	6.18E-02	202	1.65E-03	2.42E-02	66	262	1.31E-03	5
ND-98-2040	4.81E-02	149	1.19E-03	1.74E-02	42	189	1.76E-03	7
ND-98-2041	5.46E-02	174	1.71E-03	2.83E-02	69	306	1.57E-03	6
ND-98-2042	5.39E-02	171	1.19E-03	2.70E-02	42	292	1.06E-03	4
ND-98-2043	4.75E-02	146	1.69E-03	1.77E-02	68	192	1.13E-03	5
ND-98-2044	5.51E-02	176	1.69E-03	2.57E-02	68	278	1.39E-03	6
ND-98-2045	5.33E-02	169	2.49E-03	1.91E-02	109	207	1.37E-03	5
ND-98-2046	4.72E-02	145	1.34E-04	1.68E-02	-12	182	1.17E-03	5
ND-98-2047	4.72E-02	145	3.35E-04	1.60E-02	-2	174	1.09E-03	4
ND-98-2048	1.08E-01	381	3.18E-02	5.56E-02	1600	596	4.20E-03	16
ND-98-2051	8.76E-02	302	9.68E-02	8.27E-02	4798	877	3.30E-03	12
ND-98-2053DUP	7.21E-02	242	1.02E-02	3.26E-02	504	352	2.97E-03	11
TO-8607	6.61E-01	2525	3.49E-02	2.28E-01	1756	2291	6.86E-03	25
Should be----->		2900			1800	2600		26
RPD		14			2	13		3

QA/QC	
Passed	
Failed	
Validated	

Operator:	DREXLER	Date:	9-Dec-98	Time:	20:40:22			
Project:	ND	Batch	Number:	166				
Con. 1 mont.	1.292	Con. 4 mont.	1.1081			Con. 5 mont.	0.6476	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-2049	1.37E-01	493	7.18E-03	2.73E-02	350	295	2.72E-03	10
ND-98-2050	6.14E-02	200	3.04E-02	4.04E-02	1530	435	3.07E-03	12
ND-98-2052	1.03E-01	361	3.65E-02	4.06E-02	1837	437	2.66E-03	10
ND-98-2053	7.15E-02	239	8.71E-03	3.11E-02	428	336	2.61E-03	10
ND-98-2054	6.97E-02	232	1.60E-02	4.51E-02	800	485	4.49E-03	17
ND-98-2055	6.56E-02	216	1.66E-02	4.15E-02	831	447	3.10E-03	12
ND-98-2056	6.16E-02	201	1.41E-02	4.24E-02	704	456	2.72E-03	10
ND-98-2057	5.56E-02	178	1.38E-02	3.70E-02	688	399	2.31E-03	9
ND-98-2058	7.28E-02	244	1.86E-02	4.12E-02	933	444	2.67E-03	10
ND-98-2059	5.58E-02	178	1.26E-02	4.26E-02	627	458	1.80E-03	7
ND-98-2060	5.22E-02	164	8.86E-03	2.96E-02	436	320	2.06E-03	8
ND-98-2061	7.18E-02	240	1.94E-03	1.18E-02	81	128	1.41E-03	6
ND-98-2062	5.91E-02	191	4.67E-04	1.34E-02	5	146	1.02E-03	4
ND-98-2063	1.60E-01	582	8.04E-03	3.20E-02	394	346	2.05E-03	8
TO-8607	6.61E-01	2525	3.64E-02	2.14E-01	1832	2162	6.68E-03	25
Should be---->		2900			1800	2600		26
RPD		14			2	18		6

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	10-Dec-98	Time:	8:59:45			
Project:	ND	Batch	Number:	167				
Con. 1 mont.	1.2821	Con. 4 mont.	1.1133			Con. 5 mont.	0.6465	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-167	1.26E-02	11	8.14E-04	1.00E-03	23	11	3.48E-04	2
ND-98-2064	1.32E-01	474	9.29E-03	6.02E-02	458	644	5.07E-03	19
ND-98-2065	1.12E-01	396	1.35E-02	6.94E-02	673	740	3.41E-03	13
ND-98-2066	1.15E-01	408	1.34E-02	5.94E-02	668	635	3.28E-03	12
ND-98-2067	7.87E-02	267	1.09E-02	3.58E-02	540	386	3.54E-03	13
ND-98-2068	9.15E-02	317	9.84E-03	3.76E-02	486	405	3.35E-03	13
ND-98-2069	1.38E-01	497	4.61E-03	2.93E-02	218	317	2.39E-03	9
ND-98-2070	1.41E-01	509	5.32E-03	4.90E-02	255	526	2.80E-03	11
ND-98-2070DUP	1.38E-01	497	5.93E-03	4.88E-02	286	524	2.51E-03	10
ND-98-2071	2.21E-01	819	5.66E-03	5.82E-02	272	623	3.39E-03	13
ND-98-2072	1.32E-01	474	5.39E-03	3.29E-02	258	355	4.47E-03	17
ND-98-2073	9.41E-02	327	6.28E-03	3.27E-02	304	353	2.57E-03	10
ND-98-2074	1.08E-01	381	1.11E-02	3.63E-02	550	392	3.86E-03	14
ND-98-2075	1.23E-01	439	2.52E-02	6.42E-02	1267	686	4.16E-03	16
TO-8607	6.60E-01	2521	3.62E-02	2.24E-01	1822	2254	5.95E-03	22
Should be---->		2900			1800	2600		26
RPD		14			1	14		17

QA/QC	
Passed	JNL
Failed	
Validated	

Operator:	DREXLER	Date:	10-Dec-98	Time:	21:06:54			
Project:	ND	Batch	Number:	168				
Con. 1 mont.	1.2906	Con. 4 mont.	1.0976			Con. 5 mont.	0.6456	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-168	9.45E-03	-1	1.00E-03	9.60E-04	33	10	5.25E-04	2
ND-98-2076	1.04E-01	365	1.57E-02	6.56E-02	785	700	4.53E-03	17
ND-98-2077	1.08E-01	381	9.61E-03	4.98E-02	474	535	3.48E-03	13
ND-98-2078	1.00E-01	350	5.63E-03	3.06E-02	270	331	2.81E-03	11
ND-98-2079	6.50E-02	214	2.80E-03	2.37E-02	125	257	1.92E-03	7
ND-98-2080	8.58E-02	295	4.06E-03	3.03E-02	190	328	2.43E-03	9
ND-98-2081	7.48E-02	252	8.87E-03	4.03E-02	436	434	2.70E-03	10
ND-98-2082	9.29E-02	322	8.92E-04	1.58E-02	27	172	1.79E-03	7
ND-98-2086DUP	7.18E-02	240	5.13E-03	3.14E-02	245	339	2.88E-03	11
ND-98-2083	1.08E-01	381	1.22E-03	1.85E-02	44	201	1.51E-03	6
ND-98-2084	2.43E-01	904	3.40E-04	2.31E-02	-1	250	2.80E-03	11
ND-98-2085	1.03E-01	361	4.83E-03	4.05E-02	229	436	2.29E-03	9
ND-98-2086	6.97E-02	232	5.87E-03	3.17E-02	283	343	2.82E-03	11
ND-98-2087	6.01E-02	195	4.11E-03	4.65E-02	192	500	2.21E-03	8
TO-8607	6.61E-01	2525	3.74E-02	2.32E-01	1882	2327	6.31E-03	23
Should be----->		2900			1800	2600		26
RPD		14			4	11		12

QA/QC

Passed

Failed

Validated

Operator:	LUISZER	Date:	11-Dec-98	Time:	8:56:49			
Project:	ND	Batch	Number:	169				
Con. 1 mont.	1.2701	Con. 4 mont.	1.118			Con. 5 mont.	0.6387	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-2088	6.72E-02	223	3.28E-03	4.41E-02	150	474	1.52E-03	6
ND-98-2089	4.99E-02	156	5.85E-03	2.97E-02	282	321	2.09E-03	8
ND-98-2090	5.31E-02	168	6.66E-03	2.40E-02	323	260	2.02E-03	8
ND-98-2091	5.01E-02	156	4.61E-03	1.53E-02	218	166	2.46E-03	9
ND-98-2092	6.14E-02	200	8.88E-03	2.33E-02	437	253	1.48E-03	6
ND-98-2093	1.48E-01	536	3.90E-03	5.00E-02	182	537	4.01E-03	15
ND-98-2094	9.53E-02	332	5.91E-03	3.67E-02	285	396	2.14E-03	8
ND-98-2095	7.69E-02	260	4.73E-03	2.80E-02	224	303	2.44E-03	9
ND-98-2096	7.22E-02	242	1.08E-02	4.15E-02	535	447	3.67E-03	14
ND-98-2097	7.61E-02	257	4.24E-03	4.23E-02	199	455	2.48E-03	9
ND-98-2098	7.39E-02	249	5.15E-03	3.93E-02	246	423	2.29E-03	9
ND-98-2099	7.30E-02	245	4.31E-03	3.55E-02	203	383	1.74E-03	7
ND-98-2100	6.24E-02	204	3.08E-03	1.93E-02	140	209	2.49E-03	9
ND-98-2101	6.75E-02	224	2.99E-03	2.39E-02	135	259	2.73E-03	10
TO-8607	6.59E-01	2518	3.54E-02	2.27E-01	1781	2282	7.34E-03	27
Should be----->		2900			1800	2600		26
RPD		14			1	13		3

QA/QC	
Passed	
Failed	
Validated	

Operator: DREXLER Date: 12-Dec-98 Time: 11:48:43

Project: ND Batch Number: 170

Con. 1 mont. 1.2854 Con. 4 mont. 1.1056 Con. 5 mont. 0.6411

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-170	9.33E-03	-2	6.46E-04	8.20E-04	14	9	7.84E-04	3
ND-98-2102	6.17E-02	201	1.32E-03	1.74E-02	49	189	1.98E-03	8
ND-98-2103	4.47E-02	135	1.01E-02	2.07E-02	499	225	1.76E-03	7
ND-98-2104	4.07E-02	120	8.35E-03	1.80E-02	410	195	1.52E-03	6
ND-98-2105	4.34E-02	130	9.16E-03	1.83E-02	451	199	1.64E-03	6
ND-98-2106	3.45E-02	96	5.12E-03	1.51E-02	244	164	1.47E-03	6
ND-98-2106DUP	3.59E-02	101	5.27E-03	1.34E-02	252	146	1.53E-03	6
ND-98-2107	2.73E-02	68	3.91E-03	8.99E-03	182	98	1.39E-03	6
ND-98-2108	3.00E-02	78	3.31E-03	9.11E-03	151	99	1.05E-03	4
ND-98-2109	4.65E-02	142	4.09E-03	1.77E-02	191	192	2.24E-03	9
ND-98-2110	4.46E-02	135	3.05E-03	1.88E-02	138	204	1.53E-03	6
ND-98-2111	4.17E-02	124	3.44E-03	1.91E-02	158	207	1.84E-03	7
ND-98-2112	3.86E-02	112	1.94E-03	1.76E-02	81	191	1.58E-03	6
ND-98-2113	3.61E-02	102	1.82E-03	1.59E-02	75	173	1.41E-03	6
TO-8607	6.54E-01	2498	3.49E-02	2.07E-01	1756	2097	5.34E-03	20
Should be---->		2900			1800	2600		26
RPD		15			2	21		28

QA/QC

Passed

Failed

Validated

Operator:	DREXLER	Date:	13-Dec-98	Time:	11:51:52			
Project:	ND	Batch	Number:	171				
Con. 1 mont.	1.2807	Con. 4 mont.	1.1205			Con. 5 mont.	0.6491	
	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
ND-98-2114	3.40E-02	94	2.39E-03	1.28E-02	104	139	1.55E-03	6
ND-98-2115	7.68E-02	260	8.82E-04	1.30E-02	27	141	1.53E-03	6
ND-98-2116	7.32E-02	246	1.24E-03	1.18E-02	45	128	1.27E-03	5
ND-98-2117	5.65E-02	181	1.88E-04	1.05E-02	-9	114	1.29E-03	5
TO-8607	6.67E-01	2549	3.43E-02	2.02E-01	1726	2050	6.93E-03	25
Should be----->		2900			1800	2600		26
RPD		13			4	24		2

QA/QC	
Passed	
Failed	
Validated	

Operator: LUISZER Date: 16-Dec-98 Time: 9:50:40

Project: ND Batch Number: 172

Con. 1 mont. 1.3322 Con. 4 mont. 1.0968 Con. 5 mont. 0.655

	Zn ratio	Zn ppm	As ratio	Pb ratio	As ppm	Pb ppm	Cd ratio	Cd ppm
BLANK-172	5.68E-03	-16	6.09E-04	7.72E-04	13	8	3.63E-04	2
ND-98-2118	7.14E-02	239	6.42E-03	1.70E-02	311	185	2.25E-03	9
ND-98-2119	8.23E-02	281	5.23E-03	2.47E-02	250	268	2.19E-03	8
MS-2711	9.59E-02	334	1.35E-03	1.32E-01	51	1375	1.24E-02	45
TO-8607	6.65E-01	2541	3.70E-02	2.34E-01	1862	2346	6.06E-03	22
Should be----->		2900			1800	2600		26
RPD		13			3	10		15

QA/QC

Passed

Failed

Validated

Chain of Custody Record

Quanterra

QUA-4124

Client: Roy F. Weston, Inc./Corps of Eng	Project Manager: Gerald Almquist	Date: 10/7/98 ~~10/5~~ mr	Chain Of Custody Number: 40258
Address: 215 Union Blvd, Suite 600	Telephone Number (Area Code)/Fax Number: (303) 980-6800 / (303) 980-1622	Lab Number:	Page 2 of
City: Lakewood; State: CO; Zip Code: 80401	Site Contact: James Jackson		
Project Name: I-70 & Vasquez Project	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
3818 Madison-A	10/7/98	1347	dust	0.6 g	filter cartridge	1		
3818 Madison-H		1325		<0.1 g		1		
~~3818 Madison-Mint~~		~~1350~~	~~vegetable~~					
~~3818 Madison-Pot~~		~~1350~~				1		
~~3818 Madison-Soil~~		~~1350~~	~~Soil~~			1		
4044 Steele-H	10/7/98	1515	dust	0.2 g		1		
4044 Steele-~~A~~ B	10/7/98	1550		0.5 g		1		
3535 Humbolt-A	10/8/98	1540		0.5 g		1		
3535 Humbolt-~~B~~ H		1530		0.5 g		1		
~~4760 St. Paul Ct.-A~~		~~1540~~ mr						
4760 St. Paul Ct.-H2		1620		0.8 g		1		
FB-1	10/12/98	8:54	Dust	Ø g		1		
~~2711-2~~ 3029 Steele-A		9:09		0.5 g		1		
~~2710-2~~ 4750 Vine-A		9:20		0.5 g		1		
~~2710-H~~ 4750 Vine-H		9:02		0.8 g		1		
~~2711-1~~ 3029 Steele-H		8:35		0.3 g		1		

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	10/23/98	1530	1. Received By	10/23/98	1530
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Note: There is a problem with samples 3535 Humboldt A & H - bag labels do not match. C.O.C.; 4760 St. Paul Ct.-H1 is not listed

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124

Client: Roy F. Weston, Inc. / Corps of Eng / CPA	Project Manager: Gerald Almquist	Date: 10/12/91	Chain Of Custody Number: 40261
Address: 215 Union Blvd Suite 600	Telephone Number (Area Code)/Fax Number: (303) 980-6800 / (303) 980-1622	Lab Number:	Page 3 of
City: Lakewood; State: CO; Zip Code: 80228	Site Contact: James Jackson		
Project Name: I-70 + Vasquez	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total ~~Volume~~ mass	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
4940 Steele - H	10/9/98	1510	dust	0.2 g	Filter & Strap	1			
4940 Steele - A	↓	1530	↓	0.6 g	↓	↓			
4715 St. Paul Ct - H	10/9/98	1600		0.5 g					
4715 St. Paul Ct - A	↓	1620	↓	1.8 g		↓			
FB-2	10/12/98	1630	dust	0.1 g					
4980 Steele - A	10/12/98	1610	↓	0.5 g					
4980 Steele - H	10/12/98	1620	↓	0.3 g	↓	↓			
~~4715 St. Paul Ct - S~~	~~10/12/98~~	~~1430~~	~~soil~~						

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/23/98	1530	1. Received By	10/23/98	1530
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124

Client: Roy F. Weston, Inc. / Corps of Eng.	Project Manager: Gerald Almquist	Date: 10/5/98	Chain Of Custody Number: 40257
Address: 215 Union Blvd, Suite 600	Telephone Number (Area Code)/Fax Number: (303)980-6800 / (303)980-1622	Lab Number:	Page 1 of
City: Lakewood; State: CO; Zip Code: 80401	Site Contact: James Jackson		
Project Name: I-70 + Vasquez Project	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
✓4691 Vine - A	10/5/98	930	Dust	0.7gm	filtercartridge	1	none		
✓4691 Vine - H	↓	910	↓	0.7gm	↓	↓	↓		
✓5195 St. Paul - A		1252		0.5gm					
✓5195 St. Paul - H		1214		0.6gm					
✓2000 E. 47th - H	↓	1315	↓	0.6g	↓	↓	↓		
✓4850 Adams - H	10/6/98	1430		0.7g					
✓4850 Adams - A	↓	1410		0.7g					
✓3825 Adams - A	10-5-98	1553		0.6g					
✓3825 Adams - H	↓	1535		0.5g					
✓4641 Clayton - H	10/6/98	1551		0.5g					
✓4690 Clayton - A		1312		0.2g					
✓4690 Clayton - H		1247		0.2g					
✓4936 Steele - A		8:57		1.3g					
✓4936 Steele - H	↓	8:35		0.3g					
✓4771 Vine - A	10/7/98	12:45		0.5					
✓4771 Vine - H	↓	12:28	↓	0.5g	↓	↓	↓		

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/23/98	1530	1. Received By	10/23/98	1530
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Weston		10/15/98	40
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of __**

City	State	Zip Code	Site Contact

Project Name: Globeville / Vasquez-I70

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Initial Preservative	Date Condition on Receipt	Analysis: XRF Lead
Core #2 0-2	10/14/98	15:20	Soil		baggies	1	EH	10/19/98	
2-4		1522				1	EH	10/19/98	
4-6		1524				1	EH	10/19/98	
6-8		1526				1	EH	10/19/98	
8-10		1528				1	EH	10/19/98	
10-12		1530				1	EH	10/19/98	

Special Instructions:

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [X] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	10/15/98	13:00	1. Received By	10/15/98	13:
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Weston	Gerald Almquist	10/15/98	4[illegible]
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of**
215 Union Blvd	303 980 6800		

City	State	Zip Code	Site Contact
Lakewood	CO	80228	James Jackson

Project Name: Globeville - Vasquez / I-70

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Initials Preservative	Date Condition on Receipt	Analysis: XRF Lead
G001 - G050	10/14/98	1300-1350	Soil		baggies	50	NAF4	10-28-98	
G051 - G100		1351-1440				50	F.L.	10-28-98	
G101 - G150		1441-1530				50	F.L.	10-28-98	
G151 - G200		1531-1620				50	F.L.	10-28-98	
G201 - G225		1621-1645				25	F.L.	10-28-98	
Core #1 0-2		1525				1	EH	10/19/98	
2-4		1527				1	EH	10/19/98	
4-6		1529				1	EH	10/19/98	
6-8		1531				1	EH	10/19/98	
8-10		1534				1	EH	10/19/98	
10-12		1537				1	EH	10/19/98	

Special Instructions:

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [X] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	10/15/98	13:00	1. Received By	10/15/98	13[illegible]
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECI LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																
#/Type Container	Liquid															
	Solid															
Volume	Liquid															
	Solid															
Preservatives																
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/ PCB	Herb	Chlorinated			Metal	CN						

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only												
	F044D			Soil	10/6/98	1437					F4	10/28/98							
	F045D					1435													
	F046D					1434													
	F047D					1438													
	F048D					1439													
	F049D					1440													
	F050D					1446													
	F051D					1441													

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1245

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page _____ of _____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #
#/Type Container: Liquid / Solid
Volume: Liquid / Solid
Preservatives

ANALYSES REQUESTED →

ORGANIC: VOA, BNA, Pest/PCB, Herb
INORG: Metal, CN, XRF Lead Arsenic

checked in

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb				Metal	CN	XRF Lead Arsenic				
	F001			Soil	10/4/98	0920					EL	10/28/98				X				
	F002					0922														
	F003					0925														
	F004					0927														
	F005					0929														
	F006					0932														
	F007					0935														
	F008					0937														
	F009					0941														
	F010					0943										X				

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
[signature]	[signature]	10/5/98	1241

Relinquished by	Received by	Date	Time
[signature]			

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECR
LabN

Client
Est. Final Proj. Sampling Date
Project #
Project Contact/Phone #
RECRA Project Manager
QC ____ Del ____ TAT ____
Date Rec'd ____ Date Due ____
Account #

Refrigerator #																	
#/Type Container	Liquid																
	Solid																
Volume	Liquid																
	Solid																
Preservatives																	
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/ PCB	Herb				Metal	CN							

Checked in

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only												
S - Soil		F011			Soil	10/6/98	0943						Ek	10/8/98						
SE - Sediment		F012					0945													
SO - Solid		F013					0947													
SL - Sludge		F014					0949													
W - Water		F015					0952													
O - Oil		F016					0955													
A - Air		F017					0957													
DS - Drum Solids		F018					0959													
DL - Drum Liquids		F019					1002													
L - EP/TCLP Leachate		F020					1004													
WI - Wipe																				
X - Other																				
F - Fish																				

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # ____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[signature]	[signature]	10/15/98	1241

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page ____ of ____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNe

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																	
#/Type Container	Liquid																
	Solid																
Volume	Liquid																
	Solid																
Preservatives																	
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/PCB	Herb	Chlorid in			Metal	CN							
		RECRA LabNet Use Only															

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
	F021			Soil	10/06/98	1007						F. 10/28/98						
	F022					1009												
	F023					1011												
	F024					1013												
	F025					1015												
	F026					1018												
	F027					1020												
	F028					1022												
	F029					1024												
	F030					1026						10/28/98						

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec'd Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1242

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page ____ of ____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client _____

Est. Final Proj. Sampling Date _____

Project # _____

Project Contact/Phone # _____

RECRA Project Manager _____

QC _____ Del _____ TAT _____

Date Rec'd _____ Date Due _____

Account # _____

Refrigerator #

#/Type Container: Liquid / Solid

Volume: Liquid / Solid

Preservatives

ANALYSES REQUESTED →

ORGANIC: VOA, BNA, Pest/PCB, Herb

Chlorinated

INORG: Metal, CN

Arsenic

RECRA LabNet Use Only

MATRIX CODES:
- S - Soil
- SE - Sediment
- SO - Solid
- SL - Sludge
- W - Water
- O - Oil
- A - Air
- DS - Drum Solids
- DL - Drum Liquids
- L - EP/TCLP Leachate
- WI - Wipe
- X - Other
- F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
	F031			Soil	10/6/98	1029					F4	10/8/98				N			
	F032					1033													
	F033					1035													
	F034					1039													
	F035					1041													
	F036					1044													
	F037					1046													
	F038					1049													
	F039					1050													
	F040					1053													

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1242

Relinquished by	Received by	Date	Time

Page ___ of ___

Reorder from CURTIN 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #		
#/Type Container	Liquid	
	Solid	
Volume	Liquid	
	Solid	
Preservatives		

ANALYSES REQUESTED →

ORGANIC								INORG							
VOA	BNA	Pest/ PCB	Herb	checked in				Metal	CN	Total Lead Arsenic					

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected															
	F041			Soil	10/6/98	1055															
	F042					1057															
	F043					1100															
	F044					1102															
	F045					1105															
	F046					1107															
	F047					1109															
	F048					1111															
	F049					1139															
	F050					1127															

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1242

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page ___ of ___

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECR
LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																	
#/Type Container	Liquid																
	Solid																
Volume	Liquid																
	Solid																
Preservatives																	
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/ PCB	Herb				Metal	CN							

Checked in

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only												
S - Soil		F051			Soil	10/4/98	1029					F.L.	10/28/98							
SE - Sediment		F052					1030													
SO - Solid		F053					1032													
SL - Sludge		F054					1034													
W - Water		F055					1036													
O - Oil		F056					1038													
A - Air		F057					1046													
DS - Drum Solids		F058					1113													
DL - Drum Liquids		F059					1115													
L - EP/TCLP Leachate		F060					1042													
WI - Wipe																				
X - Other																				
F - Fish																				

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
[signature]	[signature]	10/15/98	1242

Relinquished by	Received by	Date	Time

Page ____ of ____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECR
LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #		
#/Type Container	Liquid	
	Solid	
Volume	Liquid	
	Solid	
Preservatives		

ANALYSES REQUESTED →

ORGANIC				INORG		
VOA	BNA	Pest/PCB	Herb	Metal	CN	

Checked IN

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only											
	F061			Soil	10/6/98	1043						F1/0/28/98						
	F062					1045												
	F063					1048												
	F064					1051												
	F065					1054												
	F066					1055												
	F067					1057												
	F068					1059												
	F069					1103												
	F070					1105												

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec'd Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
[signature]	[signature]	10/15/98	1243

Relinquished by	Received by	Date	Time

Page ____ of ____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECR
LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																	
#/Type Container	Liquid																
	Solid																
Volume	Liquid																
	Solid																
Preservatives																	
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/ PCB	Herb	Checked in			Metal	CN	TAF Lab/AB						
						RECRA LabNet Use Only											

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
	F071			Soil	10/6/98	1107					Fh	10/28/98			X			
	F072					1109												
	F073					1113												
	F074					1115												
	F075					1117												
	F076					1119												
	F077					1120												
	F078					1123												
	F079					1130												
	F080					1131												

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
1243	[illegible]	10/3/98	1243

Relinquished by	Received by	Date	Time

Page _____ of _____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECI
LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																	
#/Type Container	Liquid																
	Solid																
Volume	Liquid																
	Solid																
Preservatives																	
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/ PCB	Herb				Metal	CN							

Checked in

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
	F081			Soil	10/6/94	1132													
	F082					~~1135~~ 1134													
	F083					1134													
	F084					1136													
	F085					1137													
	F086					1125													
	F087					1127													
	F088					1139													
	F089					1140													
	F090					1143													

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/13/98	1243

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page _____ of _

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECI LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #
#/Type Container: Liquid / Solid
Volume: Liquid / Solid
Preservatives

ANALYSES REQUESTED →

ORGANIC: VOA, BNA, Pest/PCB, Herb
INORG: Metal, CN, Arsenic

Check box in

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Herb	Arsenic
	F091			Soil	10/4/98	1145	F. 10/08/98	X
	F092					1150		
	F093					1155		
	F094					1155		
	F095					1156		
	F096					1156		
	F097					1157		
	F098					1158		
	F099					1159		
	F100					1129		

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1244

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page ____ of ____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																		
#/Type Container	Liquid																	
	Solid																	
Volume	Liquid																	
	Solid																	
Preservatives																		
ANALYSES REQUESTED →		ORGANIC							INORG									
		VOA	BNA	Pest/ PCB	Herb				Metal	CN								

Checked in

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only													
	F101			Soil	10/4/98	1130														
	F102					1240														
	F103					1242														
	F104					1245														
	F105					1246														
	F106					1247														
	F107					1131														
	F108					1133														
	F109					1252														
	F110					1255														

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1244

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page ____ of ____

Reorder from CURTIN 1-800-888-6882 Midwest Operations

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #
#/Type Container — Liquid / Solid
Volume — Liquid / Solid
Preservatives

ANALYSES REQUESTED →

ORGANIC: VOA, BNA, Pest/PCB, Herb
INORG: Metal, CN

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
	F111			Soil	10/6/98	1251					F1 10/28/98								
	F112					1256													
	F113					1248													
	F114					1135													
	F115					1137													
	FA-001					1247													
	FA-002					1244													
	FA-003					1255													
	FA-004					1252													
	FA-005					1254					F1 10/28/98								

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/15/98	1244

Relinquished by	Received by	Date	Time

Page ____ of ____

Reorder from CURTS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECF LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																	
#/Type Container	Liquid																
	Solid																
Volume	Liquid																
	Solid																
Preservatives																	
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/ PCB	Herb				Metal	CN							

Checked in

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
	FA-006			Soil	10/6/98	1257													
	~~FA-007~~ FA-007					1256													
	FA-008					1258													
	FC1/0-2					1315													
	FC1/2-4					1316													
	FC1/4-6					1317													
	FC1/6-8					1319													
	FC1/8-10					1320													
	FC1/10-12					1321													
	FC2/0-2					1339													

FC 10/28/98

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[signature]	[signature]	10/15/98	1244

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page ____ of ____

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECR LabN

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #
#/Type Container: Liquid / Solid
Volume: Liquid / Solid
Preservatives

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN

checked in

RECRA LabNet Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb				Metal	CN		
	FC2/2-4			Soil	10/6/98	1341					FL	10/28/98				D	
	FC2/4-6					1343											
	FC2/6-8					1345											
	FC2/8-10					1352											
	FC2/10-12					1354											
	FA009					1400											
	FA010					1401											
	FA011					1402											
	FA012					1404											
	FA013					1406											

FA013 listed Twice

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/6/98	1245

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Page _____ of ___

Reorder from CURTIS 1000 Midwest Operations 1-800-888-6882

RECRA LabNet Use Only

Custody Transfer Record/Lab Work Request

RECRA LabNet

Client _____
Est. Final Proj. Sampling Date _____
Project # _____
Project Contact/Phone # _____
RECRA Project Manager _____
QC _____ Del _____ TAT _____
Date Rec'd _____ Date Due _____
Account # _____

Refrigerator #																		
#/Type Container	Liquid																	
	Solid																	
Volume	Liquid																	
	Solid																	
Preservatives																		
ANALYSES REQUESTED →		ORGANIC							INORG									
		VOA	BNA	Pest/ PCB	Herb	Checked in			Metal	CN	Arsenic							
						RECRA LabNet Use Only												

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
S - Soil		FA013			Soil	6/6/98	1406					FL 18/28/98			X				
SE - Sediment		FA014					1407												
SO - Solid		FA015					1409												
SL - Sludge		FA016					1410												
W - Water		FA017					1412												
O - Oil		F039D					1427												
A - Air		F040D					1428												
DS - Drum Solids		F041D					1429												
DL - Drum Liquids		F042D					1430												
L - EP/TCLP Leachate		F043D					1431												
WI - Wipe																			
X - Other																			
F - Fish																			

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Lables and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
[illegible]	[illegible]	6/6/98	1245				

Page ____ of ____

Reorder from CURTIN 1000 Midwest Operations 1-800-888-6982

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: G.L. Almquist	Date: 10/8/98	Chain Of Custody Number: 40
Address: 215 Union	Telephone Number (Area Code)/Fax Number: 303 980 6800 303980 1622	Lab Number:	Page 1 of 1
City: Lakewood; State: Co; Zip Code: 80228	Site Contact: Same		
Project Name: I-70 - VASQUEZ	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
001	10/8/98	0930	S	NA	GM	1	NA	OK FL. 10/20/98
002	↓	↓	↓	↓	↓	↓		↓
003								
004								
005								
006								
007								
008								
009								
010								
010 D								
011								
012								
013								
014								
015								

Special Instructions: 4801 Milwaukee /.

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	10/15	1235	1. Received By: [signature]	10/15/98	12 30
2. Relinquished By: [signature]	~~10/14~~	~~12 30~~	2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

2

OUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE/WESTON	G C Almquist	10/8/98	40
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
215 Union Blvd	303 980 6800 303 980 1622		Page 2 of ___
City / State / Zip Code	**Site Contact**		
Lakewood / Co / 80228	Gerald Almquist		
Project Name	**Carrier/Waybill Number**		
I-70 / VASQUEZ			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
016	10/8/98	0930	S	NA	BAG	1	NA	OK Fig 10/28/98	
017									
018									
019									
020									
020 D									
021									
022									
023									
024									
025									
026									
027									
028									
029									
030									

Special Instructions

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☐ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15	1235	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	G.C. Almquist	10/8/98	41

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 3 of _
215 Union Blvd	303 980 6800 303 980 1622		

City	State	Zip Code	Site Contact
Lakewood	Co	80228	Gerald Almquist

Project Name	Carrier/Waybill Number
I-70 / VASQUEZ	

Contract/Purchase Order/Quote No.

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
030D	10/8/98	0930	Soil	N/A	BAG	1	N/A	OK, FL 10/28/98
031								
032								
033								
034								
035								
036								
037								
038								
039								
040								
040D								
041								
042								
043								
044								

Special Instructions

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required

☐ Normal ☐ Rush

QC Level

☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1234	1. Received By	10/15/98	12[illegible]
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

OUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	G. L. Hinquist	10/8/98	41
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 4 of**
215 Union Blvd	303 980 6800 303 980 1622		
City / State / Zip Code	**Site Contact**		
Lakewood / Co / 80228	Same		
Project Name	**Carrier/Waybill Number**		
I-70 / VASQUEZ			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
045	10/8/98		Soil	NA	BAG	1	NA	OK FL 10/28/98	
046									
047									
048									
049									
050									
050 D									
051									
052									
053									
054									
055									
056									
057									
058									
059									

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1236	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	G. L. Almquist	10/8/98	40
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 5 of**
215 Union Blvd	303 980 6800 303 980 1622		
City / **State** / **Zip Code**	**Site Contact**		
Lakewood / Co / 80228	Same		
Project Name	**Carrier/Waybill Number**		
I-70 / VASQUEZ			
Contract/Purchase Order/Quote No.			

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
060	10/8/98		Soil	N/A	BAG	1	N/A	OK, FK 10/28/98
060D								
061								
062								
063								
064								
065								
066								
067								
068								
069								
070								
070D								
071								
072								
073								

Special Instructions

Possible Hazard Identification: [x] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	1237	1237	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: G.C. Almquist	Date: 10/8/98	Chain Of Custody Number: 40
Address: 215 Union Blvd	Telephone Number (Area Code)/Fax Number: 303 980 6800 303 980 1622	Lab Number:	Page 6 of 1
City: LAKEWOOD State: Co Zip Code: 80228	Site Contact: Same		
Project Name: I-70 / VASQUEZ	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
074	10/8/98		Soil	NA	BAG	1	NA	OK. EL 10/28/98	
075									
076									
077									
078									
~~078~~ 079									
079D									
080									
081									
082									
083									
084									
085									
086									
087									
088									

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1237	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COB/WESTON	GL ALMQUIST	10/8/98	402
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 7 of 1**
215 UNION	303-980-6800 303-980-1622		
City / **State** / **Zip Code**	**Site Contact**		
LAKEWOOD / CO / 80228	SMO		
Project Name	**Carrier/Waybill Number**		
I-70 - VASQUEZ			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
089	10/8/98	0930	Soil	NA	1 BAG		NA	OK, FL. 10/8/98	
090									
090d									
091									
092									
093									
094									
095									
096									
097									
099									
100									
100d									
101									
102									
103									

Special Instructions
4801 Milwaukee

Possible Hazard Identification
[x] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal
[ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required
[ ] Normal [x] Rush

QC Level
[ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1237	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: G. L. Almquist	Date: 10/8/98	Chain Of Custody Number: 4(
Address: 215 Union Blvd	Telephone Number (Area Code)/Fax Number: 303 980 6800 303 980 1622	Lab Number:	Page 8 of
City: Lakewood; State: Co; Zip Code: 80228	Site Contact: Same		
Project Name: I-70 / VASQUEZ	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
104	10/8/98		SOIL	NA	BAG	1	NA	OK, FL, 10/28/98
105								
106								
107								
108								
109								
110								
110 D								
111								
112								
113								
114								
115								
116								
117								
118								

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1238	1. Received By	10/15/98	1
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	G.C. Almquist	10/8/98	40
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 9 of
215 Union Blvd	303 980 6800 303 980 1622		
City / **State** / **Zip Code**	**Site Contact**		
Lakewood / CO / 80228	Same		
Project Name	**Carrier/Waybill Number**		
I-70 / VASQUEZ			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
119	10/8/98		SOIL	N/A	BAG	1	N/A	OK, F-L 10/28/98	
120									
120 D									
121									
122									
123									
124									
125									
126									
127									
128									
129									
130									
130 D									
131									
132									

Special Instructions

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☐ Normal ☒ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1238	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

[redacted]

Chain of Custody Record

Quanterra

OUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	GL ALMQUIST	10/8/98	4[illegible]
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 10 of**
215 WESTON	303-980-6800 303-980-1622		

City	State	Zip Code	Site Contact
LAKEWOOD	CO	80228	SAME

Project Name	Carrier/Waybill Number
I-70 - VASQUEZ	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
133	10/2/98	0930	soil	NA	1 BAG		NA	OK, FL 10/28/98	
134									
135									
136									
137									
138									
139									
140									
140d									
141									
142									
143									
144									
145									
146									
147									

Special Instructions: 481 Milwaukee

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	~~10/15/98~~	1238	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: GL Almquist	Date: 10/8/98	Chain Of Custody Number: 40
Address: 215 Union Blvd	Telephone Number (Area Code)/Fax Number: 303 980 6800 303 980 1622	Lab Number:	Page 1 of 1
City: Lakewood; State: Co; Zip Code: 80228	Site Contact: Same		
Project Name: I-70 / VASQUEZ	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
148	10/8/98		SOIL	NA	BAG	1	NA	OK, EL 10/28/98	
150									
150D									
151									
152									
153									
154									
155									
156									
157									
158									
160									
160D									
161									
162									
163									

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1239	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: GL Almquist	Date: 10/8/98	Chain Of Custody Number: 4
Address: 215 Union Blvd	Telephone Number (Area Code) / Fax Number: 303 980 6800 / 303 980 1622	Lab Number:	Page 12 of
City: Lakewood; State: Co; Zip Code: 80228	Site Contact: Same		
Project Name: I-70 / VASQUEZ	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
164	10/8/98		SOIL	NA	BAG	1	NA	OK, F.L. 10/28/98	
165						1			
166						1			
167						1			
168						1			
C4801 FRONT (0-12")						6			
C4801 BACK (0-12")						6			

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn-Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1239	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: G.L. ALMQUIST	Date: 10/8/98	Chain Of Custody Number: 40268
Address: 215 UNION	Telephone Number (Area Code)/Fax Number: 303-980-6800 303 980/1622	Lab Number	Page 13 of 16
City: LAKEWOOD; State: CO; Zip Code: 80228	Site Contact: SAME		
Project Name: I-70 + VASQUEZ	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
A001	10/8/98	0930	Soil	NA	1	SAE	NA	OK FL 10/28/98	
A002									
A003									
A004									
A005									
A006									
A007									
A008									
A009									
A010									
A010d									
A011									
A012									
A013									
A014									
A015									

Special Instructions: 4801 Milwaukee

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For ____ Months

Turn Around Time Required: [ ] Normal [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

1. Relinquished By	Date 10/15/98	Time 1239	1. Received By	Date 10/15/98	Time 1241
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	GL ALMQUIST	10/8/98	40
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 14 of**
215 UNION	303-980-6800 303-980-1622		

City	State	Zip Code	Site Contact
LAKEWOOD	CO	80228	Same

Project Name: I-70 + VASQUEZ

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
A016	10/8/98	0930	Soil	NA	1 BAG		NA	OK EL 10/28/98	
A017									
A018									
A019									
A020									
A020d									
A021									
A022									
A023									
A024									
A025									
A026									
A027									
A028									
A029									
A030									

Special Instructions: 4801 Milwaukee

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1240	1. Received By	10/15/98	12
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

GBS Printed Products & Systems North Canton, Ohio 44720

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
COE / WESTON	GL ALMQUIST	10/8/98	40270
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 15 of 16**
215 UNION	303-980-6800 303-980-1622		
City / State / Zip Code	**Site Contact**		
LAKEWOOD / CO / 80228	Same		
Project Name	**Carrier/Waybill Number**		
I-70 + VASQUEZ			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
A030d	10/8/98	0930	SOIL	NA	1	BAG	NA	OK, F.L. 10/28/98	
A031									
A032									
A033									
A034									
A035									
A036									
A037									
A038									
A039									
A040									
A040d									
A041									
A042									
A043									
A044									

Special Instructions

4801 Milwaukee

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required

☐ Normal ☐ Rush

QC Level

☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/15/98	1240	1. Received By	10/15/98	1252
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: W[illegible] Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124

Client: COE / WESTON	Project Manager: GL ALMQUIST	Date: 10/8/98	Chain Of Custody Number: 40271
Address: 215 UNION	Telephone Number (Area Code)/Fax Number: 303-980-6800 303-980-1622	Lab Number	Page 16 of 16
City: LAKEWOOD; State: CO; Zip Code: 80228	Site Contact: SAME		
Project Name: I-70 + VASQUEZ	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis
A045	10/8/98	0930	soil	NA	1 BAG		NA	OK, FL 10/28/98	
A046									
A047									
A048									
A049									
A050									
A050d									
A051									
A052									
A053									
~~A054~~									
~~A055~~ H.M.									
~~A056~~									
~~A057~~									
~~A058~~									
~~A059~~									

Special Instructions: 4801 Milwaukee

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months

Turn Around Time Required: [ ] Normal [X] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify)

1. Relinquished By	Date: 10/15/98	Time: 1240	1. Received By	Date: 10/15/98	Time: 12:41
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

QUANTERRA ANALYTICAL DATA
(SOILS)

Quanterra Incorporated
4955 Yarrow Street
Arvada, Colorado 80002

303 421-6611 Telephone
303 431-7171 Fax

ANALYTICAL REPORT

Vasquez & I-70

Lot #: D9A130133

Gerald Almquist

Roy F. Weston, Inc.

QUANTERRA INCORPORATED

Ellen La Riviere
Project Manager

February 12, 1999

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Standard Deliverables With Supporting Documentation

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	Standard Deliverables	
A.	**Introduction**	72
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	• Case Narrative	
	• Executive Summary – Detection	
	• Analytical Methods Summary	
	• Method/Analyst Summary	
	• Lot Sample Summary	
	• Analytical Results by Sample	
	• QC Data Association Summary	
	• Chain-of-Custody	
	Supporting Documentation	
	[Please Note: A one-page "Description of Supporting Documentation" is provided in the Supporting Documentation section(s).]	
B.	• Volatile GC/MS	
C.	• Semivolatile GC/MS	
D.	• Volatile GC	
E.	• Semivolatile GC	
F.	• LC/MS or HPLC	
G.	• Metals	
H.	• General Chemistry	
I.	• Subcontracted Data	
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Project Narrative

(D9A130133)

With the exceptions noted on the data sheets, standard analytical protocols were followed in the analyses of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within acceptable limits.

Contact: Gearl Almquist @ R.F. Weston (303) 980-6900
215 Union Blvd Ste. 600 Fax (303) 980-1622
Lakewood, CO 80228

D9A130133

OF 6

CHAIN OF CUSTODY RECORD

LEGS Laboratory for Environmental and Geological Studies
University of Colorado, Boulder CO 80501-0250

PROJECT NAME N-I70

PROJECT NO. EPA 0098

Field Log Book Reference No.

	SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	ANALYSIS	REMARKS
-1	ND-98-1438				IcP/ICPMS SW846 6010/6020	Weston Splits
-2	ND-98-1431					
-3	ND-98-1591					
-4	ND-98-1574					
-5	ND-98-1570					
-6	ND-98-1619					
-7	ND-98-2103					
-8	ND-98-2115					
	ND-98-1653					
	ND-98-1819					
	ND-98-1312					
-12	ND-98-2101					
-13	ND-98-2059					

SAMPLED BY (SIGN)

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
DATE/TIME	DATE/TIME 1/12/99 0936	DATE/TIME	DATE/TIME

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Hand Carrier			1/12/99 0940

3

Quanterra - Denver
Sample Receiving Checklist

Lot #: D9A130133 Date/Time Received: 1/12/99 0940

Company Name & Sampling Site: R.F Weston - Legs Laboratories

*Cooler #(s): —

Temperatures: —

Unpacking & Labeling Check Points:

N/A	Yes	No		Initials
	☐	☐	1. Radiation checked, record if reading > 0.5 mR/hr. (_____mR/hr)	NZ
	☑	☐	2. Cooler seals intact.	
	☑	☐	3. Chain of custody present.	
	☐	☑	4. Bottles broken and/or are leaking, comment if yes.	
			PHOTOGRAPH BROKEN BOTTLES	
	☑	☐	5. Containers labeled, comment if no.	
	☐	☑	6. pH of all samples checked and meet requirements, note exceptions.	
	☑	☐	7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.	
	☐	☑	8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☑	☐	9. Chain of custody agrees with bottle count, comment if no.	
	☑	☐	10. Chain of custody agrees with labels, comment if no.	
☑	☐	☐	11. VOA samples filled completely, comment if no.	
☑	☐	☐	12. VOA bottles preserved, check for labels.	
	☐	☑	13. Did samples require preservation with sodium thiosulfate?	
☐	☐	☑	14. If yes to #12, did the samples contain residual chlorine?	
☐	☐	☑	15. Sediment present in "D," dissolved, bottles.	
	☐	☑	16. Are analyses with short holding times requested?	
☐	☐	☑	17. Is extra sample volume provided for MS, MSD or matrix duplicates?	
	☐	☑	18. Multiphase samples present? If yes, comment below.	
	☐	☑	19. Any subsampling for volatiles? If yes, list samples.	
			PHOTOGRAPH MULTIPHASE SAMPLES	
☐	☐	☐	20. Clear picture taken, labeled, and stapled to project folder.	
☐	☐	☐	21. Subcontract COC signed and sent with samples to bottle prep?	
	☐	☐	22. Was sample labeling double checked by a second person?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1438 01/12/99 001				
Silver	0.26	0.10	mg/kg	SW846 6020
Arsenic	28.2	1.0	mg/kg	SW846 6020
Barium	118	0.10	mg/kg	SW846 6020
Cobalt	10.8	0.50	mg/kg	SW846 6020
Chromium	11.4	0.50	mg/kg	SW846 6020
Manganese	278	0.50	mg/kg	SW846 6020
Nickel	7.5	0.50	mg/kg	SW846 6020
Lead	109	25.0	mg/kg	SW846 6020
Antimony	0.10 B	6.0	mg/kg	SW846 6020
Selenium	0.45 B	0.50	mg/kg	SW846 6020
Thallium	0.29 B	1.0	mg/kg	SW846 6020
Vanadium	16.1	2.5	mg/kg	SW846 6020
Aluminum	8870	10.0	mg/kg	SW846 6010B
Beryllium	0.48	0.20	mg/kg	SW846 6010B
Calcium	3130	20.0	mg/kg	SW846 6010B
Cadmium	3.1	0.50	mg/kg	SW846 6010B
Copper	22.0	2.0	mg/kg	SW846 6010B
Iron	14700	10.0	mg/kg	SW846 6010B
Potassium	1940	500	mg/kg	SW846 6010B
Magnesium	2380	20.0	mg/kg	SW846 6010B
Sodium	200 B	500	mg/kg	SW846 6010B
Zinc	103	2.0	mg/kg	SW846 6010B
ND-98-1431 01/12/99 002				
Silver	0.21	0.10	mg/kg	SW846 6020
Arsenic	43.8	1.0	mg/kg	SW846 6020
Barium	114	0.10	mg/kg	SW846 6020
Cobalt	13.3	0.50	mg/kg	SW846 6020
Chromium	9.9	0.50	mg/kg	SW846 6020
Manganese	246	0.50	mg/kg	SW846 6020
Nickel	6.4	0.50	mg/kg	SW846 6020
Lead	99.2	25.0	mg/kg	SW846 6020
Antimony	0.10 B	6.0	mg/kg	SW846 6020
Selenium	0.41 B	0.50	mg/kg	SW846 6020
Thallium	0.24 B	1.0	mg/kg	SW846 6020
Vanadium	14.4	2.5	mg/kg	SW846 6020
Aluminum	8600	10.0	mg/kg	SW846 6010B
Beryllium	0.48	0.20	mg/kg	SW846 6010B
Calcium	3020	20.0	mg/kg	SW846 6010B
Cadmium	2.9	0.50	mg/kg	SW846 6010B
Copper	12.7	2.0	mg/kg	SW846 6010B
Iron	14900	10.0	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1431 01/12/99 002				
Potassium	2020	500	mg/kg	SW846 6010B
Magnesium	2290	20.0	mg/kg	SW846 6010B
Sodium	174 B	500	mg/kg	SW846 6010B
Zinc	125	2.0	mg/kg	SW846 6010B
ND-98-1591 01/12/99 003				
Silver	0.79	0.10	mg/kg	SW846 6020
Arsenic	12.7	1.0	mg/kg	SW846 6020
Barium	173	0.10	mg/kg	SW846 6020
Cobalt	25.4	0.50	mg/kg	SW846 6020
Chromium	12.1	0.50	mg/kg	SW846 6020
Manganese	300	0.50	mg/kg	SW846 6020
Nickel	7.9	0.50	mg/kg	SW846 6020
Lead	175	25.0	mg/kg	SW846 6020
Antimony	0.20 B	6.0	mg/kg	SW846 6020
Selenium	0.53	0.50	mg/kg	SW846 6020
Thallium	0.27 B	1.0	mg/kg	SW846 6020
Vanadium	15.7	2.5	mg/kg	SW846 6020
Aluminum	11600	10.0	mg/kg	SW846 6010B
Beryllium	0.79	0.20	mg/kg	SW846 6010B
Calcium	4540	20.0	mg/kg	SW846 6010B
Cadmium	4.7	0.50	mg/kg	SW846 6010B
Copper	27.7	2.0	mg/kg	SW846 6010B
Iron	17900	10.0	mg/kg	SW846 6010B
Potassium	3290	500	mg/kg	SW846 6010B
Magnesium	2960	20.0	mg/kg	SW846 6010B
Sodium	254 B	500	mg/kg	SW846 6010B
Zinc	273	2.0	mg/kg	SW846 6010B
ND-98-1574 01/12/99 004				
Silver	0.47	0.10	mg/kg	SW846 6020
Arsenic	44.1	1.0	mg/kg	SW846 6020
Barium	116	0.10	mg/kg	SW846 6020
Cobalt	12.4	0.50	mg/kg	SW846 6020
Chromium	11.6	0.50	mg/kg	SW846 6020
Manganese	270	0.50	mg/kg	SW846 6020
Nickel	6.7	0.50	mg/kg	SW846 6020
Lead	65.8	25.0	mg/kg	SW846 6020
Antimony	0.077 B	6.0	mg/kg	SW846 6020
Selenium	0.38 B	0.50	mg/kg	SW846 6020
Thallium	0.26 B	1.0	mg/kg	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1574 01/12/99 004				
Vanadium	15.8	2.5	mg/kg	SW846 6020
Aluminum	9660	10.0	mg/kg	SW846 6010B
Beryllium	0.56	0.20	mg/kg	SW846 6010B
Calcium	2810	20.0	mg/kg	SW846 6010B
Cadmium	3.1	0.50	mg/kg	SW846 6010B
Copper	12.0	2.0	mg/kg	SW846 6010B
Iron	16100	10.0	mg/kg	SW846 6010B
Potassium	2340	500	mg/kg	SW846 6010B
Magnesium	2420	20.0	mg/kg	SW846 6010B
Sodium	119 B	500	mg/kg	SW846 6010B
Zinc	106	2.0	mg/kg	SW846 6010B
ND-98-1570 01/12/99 005				
Silver	0.73	0.10	mg/kg	SW846 6020
Arsenic	193	5.0	mg/kg	SW846 6020
Barium	102	0.10	mg/kg	SW846 6020
Cobalt	12.4	0.50	mg/kg	SW846 6020
Chromium	17.8	0.50	mg/kg	SW846 6020
Manganese	265	0.50	mg/kg	SW846 6020
Nickel	7.7	0.50	mg/kg	SW846 6020
Lead	192	25.0	mg/kg	SW846 6020
Antimony	0.75 B	6.0	mg/kg	SW846 6020
Selenium	0.83	0.50	mg/kg	SW846 6020
Thallium	0.37 B	1.0	mg/kg	SW846 6020
Vanadium	16.8	2.5	mg/kg	SW846 6020
Aluminum	9430	10.0	mg/kg	SW846 6010B
Beryllium	0.52	0.20	mg/kg	SW846 6010B
Calcium	5370	20.0	mg/kg	SW846 6010B
Cadmium	6.4	0.50	mg/kg	SW846 6010B
Copper	28.0	2.0	mg/kg	SW846 6010B
Iron	15000	10.0	mg/kg	SW846 6010B
Potassium	1730	500	mg/kg	SW846 6010B
Magnesium	2710	20.0	mg/kg	SW846 6010B
Sodium	270 B	500	mg/kg	SW846 6010B
Zinc	152	2.0	mg/kg	SW846 6010B
ND-98-1619 01/12/99 006				
Silver	0.79	0.10	mg/kg	SW846 6020
Arsenic	44.0	1.0	mg/kg	SW846 6020
Barium	181	0.10	mg/kg	SW846 6020
Cobalt	15.4	1.0	mg/kg	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1619 01/12/99 006				
Chromium	13.7	1.0	mg/kg	SW846 6020
Manganese	369	1.0	mg/kg	SW846 6020
Nickel	9.0	1.0	mg/kg	SW846 6020
Lead	266	50.0	mg/kg	SW846 6020
Antimony	0.18 B	6.0	mg/kg	SW846 6020
Selenium	0.61	0.50	mg/kg	SW846 6020
Thallium	0.28 B	1.0	mg/kg	SW846 6020
Vanadium	18.8	5.0	mg/kg	SW846 6020
Aluminum	9380	10.0	mg/kg	SW846 6010B
Beryllium	0.59	0.20	mg/kg	SW846 6010B
Calcium	4260	20.0	mg/kg	SW846 6010B
Cadmium	5.0	0.50	mg/kg	SW846 6010B
Copper	40.1	2.0	mg/kg	SW846 6010B
Iron	15900	10.0	mg/kg	SW846 6010B
Potassium	2400	500	mg/kg	SW846 6010B
Magnesium	2380	20.0	mg/kg	SW846 6010B
Sodium	184 B	500	mg/kg	SW846 6010B
Zinc	447	2.0	mg/kg	SW846 6010B
ND-98-2103 01/12/99 007				
Silver	0.61	0.10	mg/kg	SW846 6020
Arsenic	321	5.0	mg/kg	SW846 6020
Barium	129	0.10	mg/kg	SW846 6020
Cobalt	11.1	0.50	mg/kg	SW846 6020
Chromium	32.7	0.50	mg/kg	SW846 6020
Manganese	284	0.50	mg/kg	SW846 6020
Nickel	7.4	0.50	mg/kg	SW846 6020
Lead	183	25.0	mg/kg	SW846 6020
Antimony	0.42 B	6.0	mg/kg	SW846 6020
Selenium	0.58	0.50	mg/kg	SW846 6020
Thallium	0.28 B	1.0	mg/kg	SW846 6020
Vanadium	15.0	2.5	mg/kg	SW846 6020
Aluminum	8550	10.0	mg/kg	SW846 6010B
Beryllium	0.45	0.20	mg/kg	SW846 6010B
Calcium	3250	20.0	mg/kg	SW846 6010B
Cadmium	5.4	0.50	mg/kg	SW846 6010B
Copper	17.9	2.0	mg/kg	SW846 6010B
Iron	14600	10.0	mg/kg	SW846 6010B
Potassium	2270	500	mg/kg	SW846 6010B
Magnesium	2210	20.0	mg/kg	SW846 6010B
Sodium	156 B	500	mg/kg	SW846 6010B
Zinc	129	2.0	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-2115 01/12/99 008				
Silver	0.34	0.10	mg/kg	SW846 6020
Arsenic	8.7	1.0	mg/kg	SW846 6020
Barium	168	0.10	mg/kg	SW846 6020
Cobalt	18.3	0.50	mg/kg	SW846 6020
Chromium	14.1	0.50	mg/kg	SW846 6020
Manganese	293	0.50	mg/kg	SW846 6020
Nickel	8.2	0.50	mg/kg	SW846 6020
Lead	111	25.0	mg/kg	SW846 6020
Antimony	0.10 B	6.0	mg/kg	SW846 6020
Selenium	0.58	0.50	mg/kg	SW846 6020
Thallium	0.23 B	1.0	mg/kg	SW846 6020
Vanadium	18.9	2.5	mg/kg	SW846 6020
Aluminum	9820	10.0	mg/kg	SW846 6010B
Beryllium	0.59	0.20	mg/kg	SW846 6010B
Calcium	5150	20.0	mg/kg	SW846 6010B
Cadmium	2.6	0.50	mg/kg	SW846 6010B
Copper	24.4	2.0	mg/kg	SW846 6010B
Iron	15600	10.0	mg/kg	SW846 6010B
Potassium	2970	500	mg/kg	SW846 6010B
Magnesium	2470	20.0	mg/kg	SW846 6010B
Sodium	132 B	500	mg/kg	SW846 6010B
Zinc	209	2.0	mg/kg	SW846 6010B
ND-98-1653 01/12/99 009				
Silver	0.85	0.10	mg/kg	SW846 6020
Arsenic	71.0	1.0	mg/kg	SW846 6020
Barium	179	0.10	mg/kg	SW846 6020
Cobalt	21.2	1.0	mg/kg	SW846 6020
Chromium	13.2	1.0	mg/kg	SW846 6020
Manganese	352	1.0	mg/kg	SW846 6020
Nickel	8.0	1.0	mg/kg	SW846 6020
Lead	260	50.0	mg/kg	SW846 6020
Antimony	0.21 B	6.0	mg/kg	SW846 6020
Selenium	0.59	0.50	mg/kg	SW846 6020
Thallium	0.28 B	1.0	mg/kg	SW846 6020
Vanadium	17.2	5.0	mg/kg	SW846 6020
Aluminum	9560	10.0	mg/kg	SW846 6010B
Beryllium	0.63	0.20	mg/kg	SW846 6010B
Calcium	4270	20.0	mg/kg	SW846 6010B
Cadmium	6.7	0.50	mg/kg	SW846 6010B
Copper	38.8	2.0	mg/kg	SW846 6010B
Iron	16200	10.0	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1653 01/12/99 009				
Potassium	2400	500	mg/kg	SW846 6010B
Magnesium	2350	20.0	mg/kg	SW846 6010B
Sodium	140 B	500	mg/kg	SW846 6010B
Zinc	413	2.0	mg/kg	SW846 6010B
ND-98-1819 01/12/99 010				
Silver	0.58	0.10	mg/kg	SW846 6020
Arsenic	35.3	1.0	mg/kg	SW846 6020
Barium	209	1.0	mg/kg	SW846 6020
Cobalt	15.4	1.0	mg/kg	SW846 6020
Chromium	18.1	1.0	mg/kg	SW846 6020
Manganese	312	1.0	mg/kg	SW846 6020
Nickel	7.8	1.0	mg/kg	SW846 6020
Lead	232	50.0	mg/kg	SW846 6020
Antimony	0.13 B	6.0	mg/kg	SW846 6020
Selenium	0.51	0.50	mg/kg	SW846 6020
Thallium	0.28 B	1.0	mg/kg	SW846 6020
Vanadium	15.3	5.0	mg/kg	SW846 6020
Aluminum	8900	10.0	mg/kg	SW846 6010B
Beryllium	0.58	0.20	mg/kg	SW846 6010B
Calcium	3720	20.0	mg/kg	SW846 6010B
Cadmium	5.0	0.50	mg/kg	SW846 6010B
Copper	25.1	2.0	mg/kg	SW846 6010B
Iron	15100	10.0	mg/kg	SW846 6010B
Potassium	2380	500	mg/kg	SW846 6010B
Magnesium	2290	20.0	mg/kg	SW846 6010B
Sodium	109 B	500	mg/kg	SW846 6010B
Zinc	262	2.0	mg/kg	SW846 6010B
ND-98-1512 01/12/99 011				
Silver	0.20	0.10	mg/kg	SW846 6020
Arsenic	34.4	1.0	mg/kg	SW846 6020
Barium	114	0.10	mg/kg	SW846 6020
Cobalt	14.1	0.50	mg/kg	SW846 6020
Chromium	10.4	0.50	mg/kg	SW846 6020
Manganese	254	0.50	mg/kg	SW846 6020
Nickel	6.9	0.50	mg/kg	SW846 6020
Lead	109	25.0	mg/kg	SW846 6020
Antimony	0.063 B	6.0	mg/kg	SW846 6020
Selenium	0.39 B	0.50	mg/kg	SW846 6020
Thallium	0.24 B	1.0	mg/kg	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1512 01/12/99 011				
Vanadium	14.5	2.5	mg/kg	SW846 6020
Aluminum	8670	10.0	mg/kg	SW846 6010B
Beryllium	0.50	0.20	mg/kg	SW846 6010B
Calcium	3260	20.0	mg/kg	SW846 6010B
Cadmium	3.0	0.50	mg/kg	SW846 6010B
Copper	14.0	2.0	mg/kg	SW846 6010B
Iron	15100	10.0	mg/kg	SW846 6010B
Potassium	2020	500	mg/kg	SW846 6010B
Magnesium	2490	20.0	mg/kg	SW846 6010B
Sodium	105 B	500	mg/kg	SW846 6010B
Zinc	89.4	2.0	mg/kg	SW846 6010B
ND-98-2101 01/12/99 012				
Silver	0.23	0.10	mg/kg	SW846 6020
Arsenic	50.4	1.0	mg/kg	SW846 6020
Barium	152	0.10	mg/kg	SW846 6020
Cobalt	14.0	0.50	mg/kg	SW846 6020
Chromium	14.4	0.50	mg/kg	SW846 6020
Manganese	235	0.50	mg/kg	SW846 6020
Nickel	7.4	0.50	mg/kg	SW846 6020
Lead	175	25.0	mg/kg	SW846 6020
Antimony	0.59 B	6.0	mg/kg	SW846 6020
Selenium	0.53	0.50	mg/kg	SW846 6020
Thallium	0.27 B	1.0	mg/kg	SW846 6020
Vanadium	14.9	2.5	mg/kg	SW846 6020
Aluminum	6530	10.0	mg/kg	SW846 6010B
Beryllium	0.33	0.20	mg/kg	SW846 6010B
Calcium	4790	20.0	mg/kg	SW846 6010B
Cadmium	5.3	0.50	mg/kg	SW846 6010B
Copper	26.3	2.0	mg/kg	SW846 6010B
Iron	12700	10.0	mg/kg	SW846 6010B
Potassium	1870	500	mg/kg	SW846 6010B
Magnesium	1970	20.0	mg/kg	SW846 6010B
Sodium	210 B	500	mg/kg	SW846 6010B
Zinc	186	2.0	mg/kg	SW846 6010B
ND-98-2059 01/12/99 013				
Silver	0.27	0.10	mg/kg	SW846 6020
Arsenic	434	10.0	mg/kg	SW846 6020
Barium	140	0.10	mg/kg	SW846 6020
Cobalt	15.3	1.0	mg/kg	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9A130133

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-2059 01/12/99 013				
Chromium	15.5	1.0	mg/kg	SW846 6020
Manganese	188	1.0	mg/kg	SW846 6020
Nickel	8.1	1.0	mg/kg	SW846 6020
Lead	380	50.0	mg/kg	SW846 6020
Antimony	1.7 B	6.0	mg/kg	SW846 6020
Selenium	0.75	0.50	mg/kg	SW846 6020
Thallium	0.39 B	1.0	mg/kg	SW846 6020
Vanadium	18.2	5.0	mg/kg	SW846 6020
Aluminum	8660	10.0	mg/kg	SW846 6010B
Beryllium	0.46	0.20	mg/kg	SW846 6010B
Calcium	2980	20.0	mg/kg	SW846 6010B
Cadmium	5.4	0.50	mg/kg	SW846 6010B
Copper	19.0	2.0	mg/kg	SW846 6010B
Iron	14900	10.0	mg/kg	SW846 6010B
Potassium	1970	500	mg/kg	SW846 6010B
Magnesium	2220	20.0	mg/kg	SW846 6010B
Sodium	183 B	500	mg/kg	SW846 6010B
Zinc	149	2.0	mg/kg	SW846 6010B

ANALYTICAL METHODS SUMMARY

D9A130133

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
ICP-MS (6020)	SW846 6020

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9A130133

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6010B	William G. Logan	002179
SW846 6020	Dave B. Roberts	002871

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9A130133

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CPWT0	001	ND-98-1438	01/12/99	
CPWT4	002	ND-98-1431	01/12/99	
CPWT6	003	ND-98-1591	01/12/99	
CPWT7	004	ND-98-1574	01/12/99	
CPWT8	005	ND-98-1570	01/12/99	
CPWT9	006	ND-98-1619	01/12/99	
CPWTD	007	ND-98-2103	01/12/99	
CPWTE	008	ND-98-2115	01/12/99	
CPWTG	009	ND-98-1653	01/12/99	
CPWTH	010	ND-98-1819	01/12/99	
CPWTJ	011	ND-98-1512	01/12/99	
CPWTK	012	ND-98-2101	01/12/99	
CPWTL	013	ND-98-2059	01/12/99	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D9A130133

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
002	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
003	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
004	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
005	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
006	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
007	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
008	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
009	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
010	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
011	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
012	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068
013	SOLID	SW846 6020		9014235	9019022
	SOLID	SW846 6010B		9014214	9014068

Quanterra, Inc.

Cover Page - Inorganic Analysis Data Package

Client ID	Lab Sample ID:
ND-98-1431	CPWT4
ND-98-1438	CPWT0
ND-98-1512	CPWTJ
ND-98-1570	CPWT8
ND-98-1574	CPWT7
ND-98-1591	CPWT6
ND-98-1619	CPWT9
ND-98-1653	CPWTG
ND-98-1819	CPWTH
ND-98-2059	CPWTL
ND-98-2101	CPWTK
ND-98-2103	CPWTD
ND-98-2115	CPWTE

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data combined in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Richard Clinkscales Name: Richard Clinkscales

Date: 2/10/99 Title: MetGrpLdr

WESTON, ROY F.

Client Sample ID: ND-98-1438

TOTAL Metals

Lot-Sample #...: D9A130133-001 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	8870	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0101
Beryllium	0.48	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0102
Calcium	3130	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0103
Cadmium	3.1	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0104
Copper	22.0	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0105
Iron	14700	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0106
Potassium	1940	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0107
Magnesium	2380	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0108
Sodium	200 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT0109
Zinc	103	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT010A
Prep Batch #...: 9014235						
Silver	0.26	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT010C
Arsenic	28.2	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT010D
Barium	118	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT010E
Cobalt	10.8	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT010F
Chromium	11.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT010G
Manganese	278	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT010H
Nickel	7.5	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT010J
Lead	109	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT010K
Antimony	0.10 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT010L
Selenium	0.45 B	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT010M
Thallium	0.29 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT010N
Vanadium	16.1	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWT010P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1431

TOTAL Metals

Lot-Sample #...: D9A130133-002 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	8600	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4101
Beryllium	0.48	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4102
Calcium	3020	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4103
Cadmium	2.9	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4104
Copper	12.7	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4105
Iron	14900	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4106
Potassium	2020	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4107
Magnesium	2290	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4108
Sodium	174 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT4109
Zinc	125	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT410A
Prep Batch #...: 9014235						
Silver	0.21	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT410C
Arsenic	43.8	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT410D
Barium	114	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT410E
Cobalt	13.3	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT410F
Chromium	9.9	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT410G
Manganese	246	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT410H
Nickel	6.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT410J
Lead	99.2	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT410K
Antimony	0.10 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT410L
Selenium	0.41 B	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT410M
Thallium	0.24 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT410N
Vanadium	14.4	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWT410P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1591

TOTAL Metals

Lot-Sample #...: D9A130133-003 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	11600	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6101
Beryllium	0.79	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6102
Calcium	4540	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6103
Cadmium	4.7	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6104
Copper	27.7	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6105
Iron	17900	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6106
Potassium	3290	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6107
Magnesium	2960	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6108
Sodium	254 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT6109
Zinc	273	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT610A
Prep Batch #...: 9014235						
Silver	0.79	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT610C
Arsenic	12.7	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT610D
Barium	173	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT610E
Cobalt	25.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT610F
Chromium	12.1	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT610G
Manganese	300	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT610H
Nickel	7.9	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT610J
Lead	175	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT610K
Antimony	0.20 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT610L
Selenium	0.53	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT610M
Thallium	0.27 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT610N
Vanadium	15.7	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWT610P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1574

TOTAL Metals

Lot-Sample #...: D9A130133-004 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	9660	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7101
Beryllium	0.56	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7102
Calcium	2810	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7103
Cadmium	3.1	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7104
Copper	12.0	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7105
Iron	16100	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7106
Potassium	2340	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7107
Magnesium	2420	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7108
Sodium	119 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT7109
Zinc	106	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT710A
Prep Batch #...: 9014235						
Silver	0.47	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT710C
Arsenic	44.1	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT710D
Barium	116	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT710E
Cobalt	12.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT710F
Chromium	11.6	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT710G
Manganese	270	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT710H
Nickel	6.7	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT710J
Lead	65.8	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT710K
Antimony	0.077 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT710L
Selenium	0.38 B	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT710M
Thallium	0.26 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT710N
Vanadium	15.8	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWT710P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1570

TOTAL Metals

Lot-Sample #...: D9A130133-005 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	9430	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8101
Beryllium	0.52	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8102
Calcium	5370	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8103
Cadmium	6.4	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8104
Copper	28.0	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8105
Iron	15000	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8106
Potassium	1730	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8107
Magnesium	2710	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8108
Sodium	270 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT8109
Zinc	152	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT810A
Prep Batch #...: 9014235						
Silver	0.73	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT810C
Arsenic	193	5.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT810D
Barium	102	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT810E
Cobalt	12.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT810F
Chromium	17.8	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT810G
Manganese	265	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT810H
Nickel	7.7	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT810J
Lead	192	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT810K
Antimony	0.75 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT810L
Selenium	0.83	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT810M
Thallium	0.37 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT810N
Vanadium	16.8	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWT810P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1619

TOTAL Metals

Lot-Sample #...: D9A130133-006 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	9380	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9101
Beryllium	0.59	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9102
Calcium	4260	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9103
Cadmium	5.0	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9104
Copper	40.1	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9105
Iron	15900	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9106
Potassium	2400	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9107
Magnesium	2380	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9108
Sodium	184 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWT9109
Zinc	447	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWT910A
Prep Batch #...: 9014235						
Silver	0.79	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT910C
Arsenic	44.0	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910D
Barium	181	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWT910E
Cobalt	15.4	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910F
Chromium	13.7	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910G
Manganese	369	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910H
Nickel	9.0	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910J
Lead	266	50.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910K
Antimony	0.18 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910L
Selenium	0.61	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWT910M
Thallium	0.28 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910N
Vanadium	18.8	5.0	mg/kg	SW846 6020	01/19-01/27/99	CPWT910P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-2103

TOTAL Metals

Lot-Sample #...: D9A130133-007 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	8550	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD101
Beryllium	0.45	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD102
Calcium	3250	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD103
Cadmium	5.4	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD104
Copper	17.9	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD105
Iron	14600	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD106
Potassium	2270	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD107
Magnesium	2210	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD108
Sodium	156 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD109
Zinc	129	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTD10A
Prep Batch #...: 9014235						
Silver	0.61	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10C
Arsenic	321	5.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10D
Barium	129	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10E
Cobalt	11.1	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10F
Chromium	32.7	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10G
Manganese	284	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10H
Nickel	7.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10J
Lead	183	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10K
Antimony	0.42 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10L
Selenium	0.58	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10M
Thallium	0.28 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10N
Vanadium	15.0	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWTD10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-2115

TOTAL Metals

Lot-Sample #...: D9A130133-008 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	9820	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE101
Beryllium	0.59	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE102
Calcium	5150	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE103
Cadmium	2.6	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE104
Copper	24.4	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE105
Iron	15600	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE106
Potassium	2970	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE107
Magnesium	2470	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE108
Sodium	132 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE109
Zinc	209	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTE10A
Prep Batch #...: 9014235						
Silver	0.34	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10C
Arsenic	8.7	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10D
Barium	168	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10E
Cobalt	18.3	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10F
Chromium	14.1	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10G
Manganese	293	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10H
Nickel	8.2	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10J
Lead	111	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10K
Antimony	0.10 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10L
Selenium	0.58	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10M
Thallium	0.23 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10N
Vanadium	18.9	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWTE10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1653

TOTAL Metals

Lot-Sample #...: D9A130133-009 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	9560	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG101
Beryllium	0.63	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG102
Calcium	4270	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG103
Cadmium	6.7	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG104
Copper	38.8	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG105
Iron	16200	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG106
Potassium	2400	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG107
Magnesium	2350	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG108
Sodium	140 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG109
Zinc	413	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTG10A
Prep Batch #...: 9014235						
Silver	0.85	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10C
Arsenic	71.0	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10D
Barium	179	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10E
Cobalt	21.2	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10F
Chromium	13.2	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10G
Manganese	352	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10H
Nickel	8.0	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10J
Lead	260	50.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10K
Antimony	0.21 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10L
Selenium	0.59	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10M
Thallium	0.28 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10N
Vanadium	17.2	5.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTG10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1819

TOTAL Metals

Lot-Sample #...: D9A130133-010 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	8900	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH101
Beryllium	0.58	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH102
Calcium	3720	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH103
Cadmium	5.0	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH104
Copper	25.1	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH105
Iron	15100	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH106
Potassium	2380	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH107
Magnesium	2290	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH108
Sodium	109 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH109
Zinc	262	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTH10A
Prep Batch #...: 9014235						
Silver	0.58	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10C
Arsenic	35.3	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10D
Barium	209	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10E
Cobalt	15.4	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10F
Chromium	18.1	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10G
Manganese	312	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10H
Nickel	7.8	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10J
Lead	232	50.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10K
Antimony	0.13 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10L
Selenium	0.51	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10M
Thallium	0.28 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10N
Vanadium	15.3	5.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTH10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1512

TOTAL Metals

Lot-Sample #...: D9A130133-011 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	8670	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ101
Beryllium	0.50	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ102
Calcium	3260	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ103
Cadmium	3.0	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ104
Copper	14.0	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ105
Iron	15100	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ106
Potassium	2020	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ107
Magnesium	2490	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ108
Sodium	105 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ109
Zinc	89.4	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTJ10A
Prep Batch #...: 9014235						
Silver	0.20	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10C
Arsenic	34.4	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10D
Barium	114	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10E
Cobalt	14.1	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10F
Chromium	10.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10G
Manganese	254	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10H
Nickel	6.9	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10J
Lead	109	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10K
Antimony	0.063 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10L
Selenium	0.39 B	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10M
Thallium	0.24 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10N
Vanadium	14.5	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWTJ10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-2101

TOTAL Metals

Lot-Sample #...: D9A130133-012 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	6530	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK101
Beryllium	0.33	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK102
Calcium	4790	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK103
Cadmium	5.3	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK104
Copper	26.3	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK105
Iron	12700	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK106
Potassium	1870	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK107
Magnesium	1970	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK108
Sodium	210 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK109
Zinc	186	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTK10A
Prep Batch #...: 9014235						
Silver	0.23	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10C
Arsenic	50.4	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10D
Barium	152	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10E
Cobalt	14.0	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10F
Chromium	14.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10G
Manganese	235	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10H
Nickel	7.4	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10J
Lead	175	25.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10K
Antimony	0.59 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10L
Selenium	0.53	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10M
Thallium	0.27 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10N
Vanadium	14.9	2.5	mg/kg	SW846 6020	01/19-01/27/99	CPWTK10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-2059

TOTAL Metals

Lot-Sample #...: D9A130133-013 Matrix.....: SOLID
Date Sampled...: 01/12/99 Date Received..: 01/12/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9014214						
Aluminum	8660	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL101
Beryllium	0.46	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL102
Calcium	2980	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL103
Cadmium	5.4	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL104
Copper	19.0	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL105
Iron	14900	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL106
Potassium	1970	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL107
Magnesium	2220	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL108
Sodium	183 B	500	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL109
Zinc	149	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CPWTL10A
Prep Batch #...: 9014235						
Silver	0.27	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10C
Arsenic	434	10.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10D
Barium	140	0.10	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10E
Cobalt	15.3	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10F
Chromium	15.5	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10G
Manganese	188	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10H
Nickel	8.1	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10J
Lead	380	50.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10K
Antimony	1.7 B	6.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10L
Selenium	0.75	0.50	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10M
Thallium	0.39 B	1.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10N
Vanadium	18.2	5.0	mg/kg	SW846 6020	01/19-01/27/99	CPWTL10P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICP

Units: ug/L

Chart Number: 01251.arc

Acceptable Range: 90% - 110%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICV 1/25/99 9:25 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4896.5	**97.9**								
Beryllium	313.042	500	503.78	**100.8**								
Cadmium	228.802	500	511.76	**102.4**								
Calcium	317.933	20000	20210	**101.1**								
Copper	324.754	500	504.92	**101.0**								
Iron	259.94	500	4996.5	**999.3**								
Magnesium	279.079	20000	19945	**99.7**								
Potassium	766.491	50000	49527	**99.1**								
Sodium	330.223	200000	201490	**100.7**								
Zinc	213.856	500	505.84	**101.2**								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPMS

Units: ug/L

Chart Number: 012799.rep

Acceptable Range: 90% - 110%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	QC Std 1 1/27/99 8:43 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	200	205.81	**102.9**								
Arsenic	75	200	196.63	**98.3**								
Barium	135	200	200.83	**100.4**								
Beryllium	9	200	198.63	**99.3**								
Cadmium	111	200	199.75	**99.9**								
Chromium	52	200	198.01	**99.0**								
Cobalt	59	200	195.78	**97.9**								
Copper	65	200	200.62	**100.3**								
Lead	208	200	197.59	**98.8**								
Manganese	55	200	193.67	**96.8**								
Nickel	60	200	200.05	**100.0**								
Selenium	82	200	198.32	**99.2**								
Silver	107	200	190.28	**95.1**								
Thallium	205	200	199.88	**99.9**								
Vanadium	51	200	193.95	**97.0**								
Zinc	68	200	201.67	**100.8**								

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICP

Units: ug/L

Chart Number: 01251.arc

Acceptable Range: 90% - 110%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	CCV1 1/25/99 9:45 AM		CCV2 1/25/99 10:41 AM		CCV3 1/25/99 11:22 AM		CCV4 1/25/99 12:43 PM		CCV5 1/25/99 1:28 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4900.7	**98.0**	4870.1	**97.4**	4852.2	**97.0**	4815.7	**96.3**	4813	**96.3**
Beryllium	313.042	500	510.25	**102.1**	507.86	**101.6**	508.53	**101.7**	504.21	**100.8**	508.67	**101.7**
Cadmium	228.802	500	525.64	**105.1**	524.02	**104.8**	524.43	**104.9**	506.41	**101.3**	509.98	**102.0**
Calcium	317.933	20000	20899	**104.5**	20835	**104.2**	20826	**104.1**	20215	**101.1**	20427	**102.1**
Copper	324.754	500	497.18	**99.4**	490.79	**98.2**	490.43	**98.1**	489.81	**98.0**	489.12	**97.8**
Iron	259.94	5000	5084	**101.7**	5035.9	**100.7**	5021.4	**100.4**	4937.1	**98.7**	4955.7	**99.1**
Magnesium	279.079	20000	19837	**99.2**	19669	**98.3**	19599	**98.0**	19455	**97.3**	19401	**97.0**
Potassium	766.491	50000	97833	**195.7**	97349	**194.7**	97520	**195.0**	97596	**195.2**	97863	**195.7**
Sodium	330.223	200000	199590	**99.8**	198310	**99.2**	197950	**99.0**	196000	**98.0**	195160	**97.6**
Zinc	213.856	500	515.56	**103.1**	515.6	**103.1**	513.49	**102.7**	498.32	**99.7**	496.51	**99.3**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICP

Units: ug/L

Chart Number: 01251.arc

Acceptable Range: 90% - 110%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	CCV6 1/25/99 2:25 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4835.5	**96.7**								
Beryllium	313.042	500	505.6	**101.1**								
Cadmium	228.802	500	511.62	**102.3**								
Calcium	317.933	20000	20182	**100.9**								
Copper	324.754	500	489.22	**97.8**								
Iron	259.94	5000	4942	**98.8**								
Magnesium	279.079	20000	19570	**97.9**								
Potassium	766.491	50000	98580	**197.2**								
Sodium	330.223	200000	195860	**97.9**								
Zinc	213.856	500	496.47	**99.3**								

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPMS **Units:** ug/L

Chart Number: 012799.rep **Acceptable Range:** 90% - 110%

Standard Source: **Standard ID:**

Element	WL/ Mass	True Conc	QC Std 3 1/27/99 9:08 AM		QC Std 3 1/27/99 9:58 AM		QC Std 3 1/27/99 10:39 AM		QC Std 3 1/27/99 11:09 AM		QC Std 3 1/27/99 11:31 AM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	100	100.29	**100.3**	100.13	**100.1**	101.98	**102.0**	101.1	**101.1**	101.49	**101.5**
Arsenic	75	100	99.6	**99.6**	101.49	**101.5**	101.71	**101.7**	101.49	**101.5**	100.82	**100.8**
Barium	135	100	98.578	**98.6**	101.71	**101.7**	105.16	**105.2**	103.97	**104.0**	98.764	**98.8**
Beryllium	9	100	95.407	**95.4**	96.178	**96.2**	99.467	**99.5**	98.282	**98.3**	98.139	**98.1**
Cadmium	111	100	100.22	**100.2**	98.291	**98.3**	98.853	**98.9**	98.432	**98.4**	101.2	**101.2**
Chromium	52	100	100.35	**100.3**	100.92	**100.9**	102.03	**102.0**	100.93	**100.9**	97.104	**97.1**
Cobalt	59	100	99.323	**99.3**	97.979	**98.0**	99.319	**99.3**	97.635	**97.6**	97.63	**97.6**
Copper	65	100	97.794	**97.8**	97.734	**97.7**	97.093	**97.1**	96.599	**96.6**	97.404	**97.4**
Lead	208	100	97.081	**97.1**	96.348	**96.3**	97.217	**97.2**	97.712	**97.7**	99.736	**99.7**
Manganese	55	100	101.47	**101.5**	97.703	**97.7**	99.095	**99.1**	99.164	**99.2**	98.335	**98.3**
Nickel	60	100	98.853	**98.9**	98.197	**98.2**	98.9	**98.9**	95.66	**95.7**	97.28	**97.3**
Selenium	82	100	99.389	**99.4**	98.264	**98.3**	97.341	**97.3**	96.054	**96.1**	104.01	**104.0**
Silver	107	100	100.5	**100.5**	98.776	**98.8**	100.37	**100.4**	100.68	**100.7**	98.922	**98.9**
Thallium	205	100	96.572	**96.6**	95.328	**95.3**	96.427	**96.4**	96.679	**96.7**	99.417	**99.4**
Vanadium	51	100	101.67	**101.7**	101.77	**101.8**	103.87	**103.9**	100.66	**100.7**	97.866	**97.9**
Zinc	68	100	98.656	**98.7**	98.931	**98.9**	98.245	**98.2**	98.677	**98.7**	100.77	**100.8**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPMS **Units:** ug/L

Chart Number: 012799.rep **Acceptable Range:** 90% - 110%

Standard Source: **Standard ID:**

Element	WL/ Mass	True Conc	QC Std 3 1/27/99 12:17 PM		QC Std 3 1/27/99 1:07 PM							
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	100	100.17	**100.2**	100.43	**100.4**						
Arsenic	75	100	102.2	**102.2**	99.484	**99.5**						
Barium	135	100	98.914	**98.9**	99.716	**99.7**						
Beryllium	9	100	96.692	**96.7**	98.92	**98.9**						
Cadmium	111	100	100.63	**100.6**	100.16	**100.2**						
Chromium	52	100	99.835	**99.8**	102.25	**102.2**						
Cobalt	59	100	98.593	**98.6**	103.21	**103.2**						
Copper	65	100	97.212	**97.2**	99.625	**99.6**						
Lead	208	100	99.96	**100.0**	99.749	**99.7**						
Manganese	55	100	98.835	**98.8**	101.95	**102.0**						
Nickel	60	100	97.667	**97.7**	100.61	**100.6**						
Selenium	82	100	104.41	**104.4**	101.72	**101.7**						
Silver	107	100	99.658	**99.7**	99.234	**99.2**						
Thallium	205	100	98.923	**98.9**	99.146	**99.1**						
Vanadium	51	100	99.588	**99.6**	104.31	**104.3**						
Zinc	68	100	101.23	**101.2**	98.624	**98.6**						

Quanterra, Inc.

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: ICP

Units: ug/L

Chart Number: 01251.arc

Acceptable Range: 50% - 150%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	CRI 1/25/99 9:33 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	0	14.79	**0.0**								
Beryllium	313.042	10	9.87	**98.7**								
Cadmium	228.802	10	10.02	**100.2**								
Calcium	317.933	0	14.71	**0.0**								
Copper	324.754	50	51.85	**103.7**								
Iron	259.94	100	3.23	**3.2**								
Magnesium	279.079	0	4.28	**0.0**								
Potassium	766.491	0	210.02	**0.0**								
Sodium	330.223	0	149.67	**0.0**								
Zinc	213.856	40	36.62	**91.5**								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICP **Units:** ug/L

Chart Number: 0125l.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	ICB 1/25/99 9:29 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U								
Beryllium	313.042	2	2	U								
Cadmium	228.802	5	5	U								
Calcium	317.933	200	200	U								
Copper	324.754	20	10	U								
Iron	259.94	100	100	U								
Magnesium	279.079	200	200	U								
Potassium	766.491	5000	5000	U								
Sodium	330.223	5000	5000	U								
Zinc	213.856	20	20	U								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: 012799.rep

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	QC Std 2 1/27/99 8:48 AM									
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	121	1	1	U								
Arsenic	75	5	5	U								
Barium	135	1	1	U								
Beryllium	9	1	1	U								
Cadmium	111	1	1	U								
Chromium	52	1	1	U								
Cobalt	59	1	1	U								
Copper	65	1	1	U								
Lead	208	1	1	U								
Manganese	55	1	1	U								
Nickel	60	1	1	U								
Selenium	82	5	5	U								
Silver	107	1	1	U								
Thallium	205	1	1	U								
Vanadium	51	5	5	U								
Zinc	68	10	10	U								

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICP **Units:** ug/L

Chart Number: 01251.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB1 1/25/99 9:48 AM		CCB2 1/25/99 10:45 AM		CCB3 1/25/99 11:26 AM		CCB4 1/25/99 12:47 PM		CCB5 1/25/99 1:32 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U	100	U	100	U	100	U
Beryllium	313.042	2	2	U	2	U	2	U	2	U	2	U
Cadmium	228.802	5	5	U	5	U	5	U	5	U	5	U
Calcium	317.933	200	200	U	200	U	200	U	200	U	200	U
Copper	324.754	20	10	U	10	U	10	U	10	U	10	U
Iron	259.94	100	100	U	100	U	100	U	100	U	100	U
Magnesium	279.079	200	200	U	200	U	200	U	200	U	200	U
Potassium	766.491	5000	5000	U	5000	U	5000	U	5000	U	5000	U
Sodium	330.223	5000	5000	U	5000	U	5000	U	5000	U	5000	U
Zinc	213.856	20	20	U	20	U	20	U	20	U		

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICP **Units:** ug/L

Chart Number: 01251.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB6 1/25/99 2:29 PM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U								
Beryllium	313.042	2	2	U								
Cadmium	228.802	5	5	U								
Calcium	317.933	200	200	U								
Copper	324.754	20	10	U								
Iron	259.94	100	100	U								
Magnesium	279.079	200	200	U								
Potassium	766.491	5000	5000	U								
Sodium	330.223	5000	5000	U								
Zinc	213.856	20	20	U								

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: 012799.rep

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	QC Std 5 1/27/99 9:13 AM		QC Std 4 1/27/99 10:02 AM		QC Std 4 1/27/99 10:44 AM		QC Std 5 1/27/99 11:14 AM		QC Std 4 1/27/99 11:36 AM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	121	1	1	U	1	U	1		1	U	1	U
Arsenic	75	5	5	U	5	U	5	U	5	U	5	U
Barium	135	1	1	U	1	U	1	U	1	U	1	U
Beryllium	9	1	1	U	1	U	1	U	1	U	1	U
Cadmium	111	1	1	U	1	U	1	U	1	U	1	U
Chromium	52	1	1	U	1	U	1	U	1	U	1	U
Cobalt	59	1	1	U	1	U	1	U	1	U	1	U
Copper	65	1	1	U	1	U	1	U	1	U	1	U
Lead	208	1	1	U	1	U	1	U	1	U	1	U
Manganese	55	1	1	U	1	U	1	U	1	U	1	U
Nickel	60	1	1	U	1	U	1	U	1	U	1	U
Selenium	82	5	5	U	5	U	5	U	5	U	5	U
Silver	107	1	1	U	1	U	1	U	1	U	1	U
Thallium	205	1	1	U	1	U	1	U	1	U	1	U
Vanadium	51	5	5	U	5	U	5	U	5	U	5	U
Zinc	68	10	10	U	10	U	10	U	10	U	10	U

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: 012799.rep

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	QC Std 4 1/27/99 12:21 PM		QC Std 5 1/27/99 1:12 PM							
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	121	1	1	U	1	U						
Arsenic	75	5	5	U	5	U						
Barium	135	1	1	U	1	U						
Beryllium	9	1	1	U	1	U						
Cadmium	111	1	1	U	1	U						
Chromium	52	1	1	U	1	U						
Cobalt	59	1	1	U	1	U						
Copper	65	1	1	U	1	U						
Lead	208	1	1	U	1	U						
Manganese	55	1	1	U	1	U						
Nickel	60	1	1	U	1	U						
Selenium	82	5	5	U	5	U						
Silver	107	1	1	U	1	U						
Thallium	205	1	1	U	1	U						
Vanadium	51	5	5	U	5	U						
Zinc	68	10	10	U	10	U						

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: D9A130133 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D9A140000-235 Prep Batch #....: 9014235						
Silver	ND	0.10	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK101
Arsenic	ND	1.0	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK102
Barium	**0.042 B**	**0.10**	**mg/kg**	**SW846 6020**	**01/19-01/27/99**	**CQ0AK103**
Cobalt	ND	0.10	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK104
Chromium	**0.041 B**	**0.10**	**mg/kg**	**SW846 6020**	**01/19-01/27/99**	**CQ0AK105**
Manganese	ND	0.10	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK106
Nickel	ND	0.10	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK107
Lead	ND	5.0	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK108
Antimony	**0.011 B**	**6.0**	**mg/kg**	**SW846 6020**	**01/19-01/27/99**	**CQ0AK109**
Selenium	ND	0.50	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK10A
Thallium	ND	1.0	mg/kg	SW846 6020	01/19-01/27/99	CQ0AK10C
Vanadium	**0.013 B**	**0.50**	**mg/kg**	**SW846 6020**	**01/19-01/27/99**	**CQ0AK10D**
MB Lot-Sample #: D9A140000-214 Prep Batch #....: 9014214						
Aluminum	ND	10.0	mg/kg	SW846 6010B	01/19-01/25/99	CQ029102
Beryllium	ND	0.20	mg/kg	SW846 6010B	01/19-01/25/99	CQ029103
Calcium	**18.3 B**	**20.0**	**mg/kg**	**SW846 6010B**	**01/19-01/25/99**	**CQ029104**
Cadmium	ND	0.50	mg/kg	SW846 6010B	01/19-01/25/99	CQ029105
Copper	ND	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CQ029106
Iron	**1.4 B**	**10.0**	**mg/kg**	**SW846 6010B**	**01/19-01/25/99**	**CQ029107**
Potassium	ND	500	mg/kg	SW846 6010B	01/19-01/25/99	CQ029108
Magnesium	ND	20.0	mg/kg	SW846 6010B	01/19-01/25/99	CQ029109
Sodium	ND	500	mg/kg	SW846 6010B	01/19-01/25/99	CQ02910A
Zinc	ND	2.0	mg/kg	SW846 6010B	01/19-01/25/99	CQ029101

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

FORM 3
Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICP **Units:** ug/L

Chart Number: 01251.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 1/25/99 9:37 AM		ICSA 1/25/99 2:17 PM							
				Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215		500000	474000		468000							
Beryllium	313.042	2		2	U	2	U						
Cadmium	228.802	5		5	U	5	U						
Calcium	317.933		500000	487000		472000							
Copper	324.754	20		10	U	10	U						
Iron	259.94		200000	180000		175000							
Magnesium	279.079		500000	509000		503000							
Potassium	766.491	5000		5000	U	5000	U						
Sodium	330.223	5000		5000	U	5000	U						
Zinc	213.856	20		20	U	20	U						

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPMS **Units:** ug/L

Chart Number: 012799.rep

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 1/27/99 8:53 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	121	1		1.6									
Arsenic	75	5		5	U								
Barium	135	1		1	U								
Beryllium	9	1		1	U								
Cadmium	111	1		1	U								
Chromium	52	1		8.2									
Cobalt	59	1		1	U								
Copper	65	1		1	U								
Lead	208	1		1.1									
Manganese	55	1		3.4									
Nickel	60	1		1	U								
Selenium	82	5		5	U								
Silver	107	1		1	U								
Thallium	205	1		1	U								
Vanadium	51	5		5	U								
Zinc	68	10		10	U								

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICP

Units: ug/L

Chart Number: 01251.arc

Acceptable Range: 80% - 120%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 1/25/99 9:41 AM Found	% Rec	ICSAB 1/25/99 2:20 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	500000	466830	**93.4**	461550	**92.3**						
Beryllium	313.042	500	486.02	**97.2**	483.81	**96.8**						
Cadmium	228.802	1000	981.36	**98.1**	956.66	**95.7**						
Calcium	317.933	500000	478430	**95.7**	463380	**92.7**						
Copper	324.754	500	471.05	**94.2**	468.43	**93.7**						
Iron	259.94	200000	176710	**88.4**	172160	**86.1**						
Magnesium	279.079	500000	500640	**100.1**	496010	**99.2**						
Potassium	766.491	50000	47796	**95.6**	48672	**97.3**						
Sodium	330.223	50000	47426	**94.9**	46340	**92.7**						
Zinc	213.856	1000	961.26	**96.1**	916.77	**91.7**						

R Spike recovery failed

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPMS

Units: ug/L

Chart Number: 012799.rep

Acceptable Range: 70% - 130%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 1/27/99 8:59 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	100	103.87	**103.9**								
Arsenic	75	100	100.82	**100.8**								
Barium	135	100	100.45	**100.5**								
Beryllium	9	100	90.736	**90.7**								
Cadmium	111	100	98.68	**98.7**								
Chromium	52	100	106	**106.0**								
Cobalt	59	100	97.474	**97.5**								
Copper	65	100	92.019	**92.0**								
Lead	208	100	92.45	**92.4**								
Manganese	55	100	101.87	**101.9**								
Nickel	60	100	94.697	**94.7**								
Selenium	82	100	101.01	**101.0**								
Silver	107	100	95.227	**95.2**								
Thallium	205	100	91.194	**91.2**								
Vanadium	51	100	100.51	**100.5**								
Zinc	68	100	98.099	**98.1**								

R Spike recovery failed

Form 4 Equivalent

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9A130133 **Matrix.....:** SOLID
Date Sampled...: 01/12/99 **Date Received..:** 01/12/99

Percnt Moisture: 100

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9A130133-001 **Prep Batch #...:** 9014214								
Aluminum	8870	200	12800	mg/kg		SW846 6010B	01/19-01/25/99	CPWT010T
			Qualifiers: NC,MSB					
Beryllium	0.48	5.00	5.29	mg/kg	96	SW846 6010B	01/19-01/25/99	CPWT010V
Calcium	3130	5000	8020	mg/kg	98	SW846 6010B	01/19-01/25/99	CPWT010X
Cadmium	3.1	5.00	8.16	mg/kg	101	SW846 6010B	01/19-01/25/99	CPWT0111
Copper	22.0	25.0	44.6	mg/kg	90	SW846 6010B	01/19-01/25/99	CPWT0113
Iron	14700	100	15500	mg/kg		SW846 6010B	01/19-01/25/99	CPWT0115
			Qualifiers: NC,MSB					
Potassium	1940	5000	6890	mg/kg	99	SW846 6010B	01/19-01/25/99	CPWT0117
Magnesium	2380	5000	7170	mg/kg	96	SW846 6010B	01/19-01/25/99	CPWT0119
Sodium	200	5000	4740	mg/kg	91	SW846 6010B	01/19-01/25/99	CPWT011C
Zinc	103	50.0	152	mg/kg	98	SW846 6010B	01/19-01/25/99	CPWT010Q

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9A130133 **Matrix.....:** SOLID
Date Sampled...: 01/12/99 **Date Received..:** 01/12/99

Percnt Moisture: 100

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9A130133-002 **Prep Batch #...:** 9014235								
Silver	0.21	20.0	18.3	mg/kg	90	SW846 6020	01/19-01/27/99	CPWT410Q
Arsenic	43.8	20.0	56.8 N	mg/kg	65	SW846 6020	01/19-01/27/99	CPWT410R
Barium	114	20.0	122	mg/kg		SW846 6020	01/19-01/27/99	CPWT410T
			Qualifiers: NC,MSB					
Cobalt	13.3	20.0	30.1	mg/kg	84	SW846 6020	01/19-01/27/99	CPWT410U
Chromium	9.9	20.0	27.1	mg/kg	86	SW846 6020	01/19-01/27/99	CPWT410V
Manganese	246	20.0	249	mg/kg		SW846 6020	01/19-01/27/99	CPWT410W
			Qualifiers: NC,MSB					
Nickel	6.4	20.0	23.4	mg/kg	85	SW846 6020	01/19-01/27/99	CPWT410X
Lead	99.2	20.0	107	mg/kg		SW846 6020	01/19-01/27/99	CPWT4110
			Qualifiers: NC,MSB					
Antimony	0.10	20.0	4.46 N	mg/kg	22	SW846 6020	01/19-01/27/99	CPWT4111
Selenium	0.41	20.0	17.1	mg/kg	83	SW846 6020	01/19-01/27/99	CPWT4112
Thallium	0.24	20.0	17.0	mg/kg	84	SW846 6020	01/19-01/27/99	CPWT4113
Vanadium	14.4	20.0	31.1	mg/kg	83	SW846 6020	01/19-01/27/99	CPWT4114

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9A130133 **Matrix.....:** SOLID
Date Sampled...: 01/12/99 **Date Received..:** 01/12/99

Percnt Moisture: 100

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9A130133-001		**Prep Batch #...:** 9014214			
Aluminum	NC,MSB	(88 - 120)	SW846 6010B	01/19-01/25/99	CPWT010T
Beryllium	96	(78 - 118)	SW846 6010B	01/19-01/25/99	CPWT010V
Calcium	98	(85 - 114)	SW846 6010B	01/19-01/25/99	CPWT010X
Cadmium	101	(80 - 120)	SW846 6010B	01/19-01/25/99	CPWT0111
Copper	90	(84 - 115)	SW846 6010B	01/19-01/25/99	CPWT0113
Iron	NC,MSB	(87 - 117)	SW846 6010B	01/19-01/25/99	CPWT0115
Potassium	99	(82 - 110)	SW846 6010B	01/19-01/25/99	CPWT0117
Magnesium	96	(84 - 113)	SW846 6010B	01/19-01/25/99	CPWT0119
Sodium	91	(85 - 117)	SW846 6010B	01/19-01/25/99	CPWT011C
Zinc	98	(80 - 120)	SW846 6010B	01/19-01/25/99	CPWT010Q

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: D9A130133 **Matrix.....:** SOLID
Date Sampled...: 01/12/99 **Date Received..:** 01/12/99

Percnt Moisture: 100

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9A130133-002		**Prep Batch #...:** 9014235			
Silver	90	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410Q
Arsenic	65 N	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410R
Barium	NC,MSB	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410T
Cobalt	84	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410U
Chromium	86	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410V
Manganese	NC,MSB	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410W
Nickel	85	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT410X
Lead	NC,MSB	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT4110
Antimony	22 N	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT4111
Selenium	83	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT4112
Thallium	84	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT4113
Vanadium	83	(70 - 130)	SW846 6020	01/19-01/27/99	CPWT4114

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

FORM 5A
Equivalent

SAMPLE DUPLICATE EVALUATION REPORT

Metals

Client Lot #...: D9A130133 **Work Order #...:** CPWT0-SMP CPWT0-DUP **Matrix.....:** SOLID

Date Sampled...: 01/12/99 **Date Received..:** 01/12/99

% Moisture.....:

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum						SD Lot-Sample #:	D9A130133-001	
	8870	9110	mg/kg	2.7	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Beryllium						SD Lot-Sample #:	D9A130133-001	
	0.48	0.52	mg/kg	6.5	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Calcium						SD Lot-Sample #:	D9A130133-001	
	3130	3150	mg/kg	0.50	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Cadmium						SD Lot-Sample #:	D9A130133-001	
	3.1	3.4	mg/kg	9.5	(0-16)	SW846 6010B	01/19-01/25/99	9014214
Copper						SD Lot-Sample #:	D9A130133-001	
	22.0	22.8	mg/kg	3.3	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Iron						SD Lot-Sample #:	D9A130133-001	
	14700	15200	mg/kg	3.4	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Potassium						SD Lot-Sample #:	D9A130133-001	
	1940	1970	mg/kg	1.6	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Magnesium						SD Lot-Sample #:	D9A130133-001	
	2380	2460	mg/kg	3.1	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Sodium						SD Lot-Sample #:	D9A130133-001	
	200 B	153	mg/kg	27	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Zinc						SD Lot-Sample #:	D9A130133-001	
	103	104	mg/kg	1.5	(0-10)	SW846 6010B	01/19-01/25/99	9014214

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

FORM 6
Equivalent

SAMPLE DUPLICATE EVALUATION REPORT

Metals

Client Lot #...: D9A130133 **Work Order #...:** CPWT4-SMP CPWT4-DUP **Matrix.....:** SOLID

Date Sampled...: 01/12/99 **Date Received..:** 01/12/99

% Moisture.....:

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH
Silver						SD Lot-Sample #:	D9A130133-002	
	0.21	0.22	mg/kg	5.0	(0-20)	SW846 6020	01/19-01/27/99	9014235
Arsenic						SD Lot-Sample #:	D9A130133-002	
	43.8	45.7	mg/kg	4.1	(0-20)	SW846 6020	01/19-01/27/99	9014235
Barium						SD Lot-Sample #:	D9A130133-002	
	114	120	mg/kg	4.9	(0-20)	SW846 6020	01/19-01/27/99	9014235
Cobalt						SD Lot-Sample #:	D9A130133-002	
	13.3	13.9	mg/kg	4.5	(0-20)	SW846 6020	01/19-01/27/99	9014235
Chromium						SD Lot-Sample #:	D9A130133-002	
	9.9	10.3	mg/kg	3.9	(0-20)	SW846 6020	01/19-01/27/99	9014235
Manganese						SD Lot-Sample #:	D9A130133-002	
	246	261	mg/kg	5.6	(0-20)	SW846 6020	01/19-01/27/99	9014235
Nickel						SD Lot-Sample #:	D9A130133-002	
	6.4	6.7	mg/kg	4.3	(0-20)	SW846 6020	01/19-01/27/99	9014235
Lead						SD Lot-Sample #:	D9A130133-002	
	99.2	102	mg/kg	2.6	(0-20)	SW846 6020	01/19-01/27/99	9014235
Antimony						SD Lot-Sample #:	D9A130133-002	
	0.10 B	0.11	mg/kg	7.0	(0-20)	SW846 6020	01/19-01/27/99	9014235
Selenium						SD Lot-Sample #:	D9A130133-002	
	0.41 B	0.42	mg/kg	2.3	(0-20)	SW846 6020	01/19-01/27/99	9014235
Thallium						SD Lot-Sample #:	D9A130133-002	
	0.24 B	0.25	mg/kg	2.8	(0-20)	SW846 6020	01/19-01/27/99	9014235
Vanadium						SD Lot-Sample #:	D9A130133-002	
	14.4	14.9	mg/kg	3.6	(0-20)	SW846 6020	01/19-01/27/99	9014235

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

FORM 6
Equivalent

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D9A130133 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum	200	201	mg/kg	100		SW846 6010B	01/19-01/25/99	9014214
	200	198	mg/kg	99	1.3	SW846 6010B	01/19-01/25/99	9014214
Beryllium	5.00	5.34	mg/kg	107		SW846 6010B	01/19-01/25/99	9014214
	5.00	5.27	mg/kg	105	1.3	SW846 6010B	01/19-01/25/99	9014214
Cadmium	5.00	5.37	mg/kg	107		SW846 6010B	01/19-01/25/99	9014214
	5.00	5.47	mg/kg	109	1.7	SW846 6010B	01/19-01/25/99	9014214
Calcium	5000	5250	mg/kg	105		SW846 6010B	01/19-01/25/99	9014214
	5000	5190	mg/kg	104	1.1	SW846 6010B	01/19-01/25/99	9014214
Copper	25.0	25.2	mg/kg	101		SW846 6010B	01/19-01/25/99	9014214
	25.0	24.7	mg/kg	99	1.9	SW846 6010B	01/19-01/25/99	9014214
Iron	100	105	mg/kg	105		SW846 6010B	01/19-01/25/99	9014214
	100	100	mg/kg	100	4.7	SW846 6010B	01/19-01/25/99	9014214
Magnesium	5000	5030	mg/kg	101		SW846 6010B	01/19-01/25/99	9014214
	5000	4960	mg/kg	99	1.3	SW846 6010B	01/19-01/25/99	9014214
Potassium	5000	4940	mg/kg	99		SW846 6010B	01/19-01/25/99	9014214
	5000	4880	mg/kg	98	1.3	SW846 6010B	01/19-01/25/99	9014214
Sodium	5000	5160	mg/kg	103		SW846 6010B	01/19-01/25/99	9014214
	5000	5030	mg/kg	101	2.6	SW846 6010B	01/19-01/25/99	9014214
Zinc	50.0	51.6	mg/kg	103		SW846 6010B	01/19-01/25/99	9014214
	50.0	51.5	mg/kg	103	0.25	SW846 6010B	01/19-01/25/99	9014214
Antimony	20.0	20.7	mg/kg	104		SW846 6020	01/19-01/27/99	9014235
	20.0	20.9	mg/kg	105	1.1	SW846 6020	01/19-01/27/99	9014235
Arsenic	20.0	20.3	mg/kg	102		SW846 6020	01/19-01/27/99	9014235
	20.0	20.4	mg/kg	102	0.33	SW846 6020	01/19-01/27/99	9014235
Barium	20.0	20.7	mg/kg	104		SW846 6020	01/19-01/27/99	9014235
	20.0	21.0	mg/kg	105	1.5	SW846 6020	01/19-01/27/99	9014235
Chromium	20.0	20.5	mg/kg	102		SW846 6020	01/19-01/27/99	9014235
	20.0	20.9	mg/kg	105	2.0	SW846 6020	01/19-01/27/99	9014235
Cobalt	20.0	19.8	mg/kg	99		SW846 6020	01/19-01/27/99	9014235
	20.0	20.0	mg/kg	100	0.78	SW846 6020	01/19-01/27/99	9014235
Lead	20.0	19.8	mg/kg	99		SW846 6020	01/19-01/27/99	9014235
	20.0	19.8	mg/kg	99	0.22	SW846 6020	01/19-01/27/99	9014235
Manganese	20.0	21.0	mg/kg	105		SW846 6020	01/19-01/27/99	9014235
	20.0	21.4	mg/kg	107	1.7	SW846 6020	01/19-01/27/99	9014235
Nickel	20.0	19.8	mg/kg	99		SW846 6020	01/19-01/27/99	9014235
	20.0	19.7	mg/kg	99	0.28	SW846 6020	01/19-01/27/99	9014235
Selenium	20.0	19.7	mg/kg	99		SW846 6020	01/19-01/27/99	9014235
	20.0	19.8	mg/kg	99	0.39	SW846 6020	01/19-01/27/99	9014235
Silver	20.0	20.9	mg/kg	104		SW846 6020	01/19-01/27/99	9014235
	20.0	21.6	mg/kg	108	3.2	SW846 6020	01/19-01/27/99	9014235

(Continued on next page)

FORM 7
Equivalent

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D9A130133 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Thallium	20.0	19.4	mg/kg	97		SW846 6020	01/19-01/27/99	9014235
	20.0	19.5	mg/kg	98	0.80	SW846 6020	01/19-01/27/99	9014235
Vanadium	20.0	20.5	mg/kg	102		SW846 6020	01/19-01/27/99	9014235
	20.0	20.9	mg/kg	104	1.9	SW846 6020	01/19-01/27/99	9014235

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM 7
Equivalent

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D9A130133 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Aluminum	100	(88 - 120)			SW846 6010B	01/19-01/25/99	9014214
	99	(88 - 120)	1.3	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Beryllium	107	(78 - 118)			SW846 6010B	01/19-01/25/99	9014214
	105	(78 - 118)	1.3	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Cadmium	107	(80 - 120)			SW846 6010B	01/19-01/25/99	9014214
	109	(80 - 120)	1.7	(0-16)	SW846 6010B	01/19-01/25/99	9014214
Calcium	105	(85 - 114)			SW846 6010B	01/19-01/25/99	9014214
	104	(85 - 114)	1.1	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Copper	101	(84 - 115)			SW846 6010B	01/19-01/25/99	9014214
	99	(84 - 115)	1.9	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Iron	105	(87 - 117)			SW846 6010B	01/19-01/25/99	9014214
	100	(87 - 117)	4.7	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Magnesium	101	(84 - 113)			SW846 6010B	01/19-01/25/99	9014214
	99	(84 - 113)	1.3	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Potassium	99	(82 - 110)			SW846 6010B	01/19-01/25/99	9014214
	98	(82 - 110)	1.3	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Sodium	103	(85 - 117)			SW846 6010B	01/19-01/25/99	9014214
	101	(85 - 117)	2.6	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Zinc	103	(80 - 120)			SW846 6010B	01/19-01/25/99	9014214
	103	(80 - 120)	0.25	(0-10)	SW846 6010B	01/19-01/25/99	9014214
Antimony	104	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	105	(70 - 130)	1.1	(0-20)	SW846 6020	01/19-01/27/99	9014235
Arsenic	102	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	102	(70 - 130)	0.33	(0-20)	SW846 6020	01/19-01/27/99	9014235
Barium	104	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	105	(70 - 130)	1.5	(0-20)	SW846 6020	01/19-01/27/99	9014235
Chromium	102	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	105	(70 - 130)	2.0	(0-20)	SW846 6020	01/19-01/27/99	9014235
Cobalt	99	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	100	(70 - 130)	0.78	(0-20)	SW846 6020	01/19-01/27/99	9014235
Lead	99	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	99	(70 - 130)	0.22	(0-20)	SW846 6020	01/19-01/27/99	9014235
Manganese	105	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	107	(70 - 130)	1.7	(0-20)	SW846 6020	01/19-01/27/99	9014235
Nickel	99	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	99	(70 - 130)	0.28	(0-20)	SW846 6020	01/19-01/27/99	9014235
Selenium	99	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	99	(70 - 130)	0.39	(0-20)	SW846 6020	01/19-01/27/99	9014235
Silver	104	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	108	(70 - 130)	3.2	(0-20)	SW846 6020	01/19-01/27/99	9014235

(Continued on next page)

FORM 7
Equivalent

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D9A130133 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Thallium	97	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	98	(70 - 130)	0.80	(0-20)	SW846 6020	01/19-01/27/99	9014235
Vanadium	102	(70 - 130)			SW846 6020	01/19-01/27/99	9014235
	104	(70 - 130)	1.9	(0-20)	SW846 6020	01/19-01/27/99	9014235

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM 7
Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Serial Dilution RPD Report

Serial Dilution Sample ID: CPWT0P

Original Sample ID: CPWT0 **Client ID:** ND-98-1438

Matrix: Solid **Units:** ug/L **Prep Date:** 1/19/99 **Prep Batch:** 9014214

Weight: 1 **Volume:** 100 **Percent Moisture:**

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Aluminum	308.215	88700		93100		5.0 %	1	5	ICP	1/25/99	10:15	1/25/99	10:18
Beryllium	313.042	4.8		10	U		1	5	ICP	1/25/99	10:15	1/25/99	10:18
Cadmium	228.802	31		30.4			1	5	ICP	1/25/99	10:15	1/25/99	10:18
Calcium	317.933	31300		33300		6.3 %	1	5	ICP	1/25/99	10:15	1/25/99	10:18
Copper	324.754	220		238			1	5	ICP	1/25/99	10:15	1/25/99	10:18
Iron	259.94	147000		159000		8.0 %	1	5	ICP	1/25/99	10:15	1/25/99	10:18
Magnesium	279.079	23800		25300			1	5	ICP	1/25/99	10:15	1/25/99	10:18
Potassium	766.491	19400		25000	U		1	5	ICP	1/25/99	10:15	1/25/99	10:18
Sodium	330.223	5000	U	25000	U		1	5	ICP	1/25/99	10:15	1/25/99	10:18
Zinc	213.856	1030		1070			1	5	ICP	1/25/99	10:15	1/25/99	10:18

Comments:

Version 1.60

* Duplicate analysis RPD was not within limits

Form 9 Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Serial Dilution RPD Report

Serial Dilution Sample ID: CPWT4 L

Original Sample ID: CPWT4 **Client ID:** ND-98-1431

Matrix: Solid **Units:** ug/L **Prep Date:** 1/19/99 **Prep Batch:** 9014235

Weight: 1 **Volume:** 100 **Percent Moisture:**

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Antimony	121	500	U	2500	U		5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Arsenic	75	45600		46400			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Barium	135	114000		118000		3.5 %	5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Beryllium	9	500	U	2500	U		5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Cadmium	111	3090		3100			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Chromium	52	9870		10300			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Cobalt	59	13300		14900			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Copper	65	11500		12900			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Lead	208	99200		104000		5.2 %	5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Manganese	55	247000		256000		3.9 %	5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Nickel	60	6440		7150			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Selenium	82	500	U	2500	U		5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Silver	107	500		2500	U		5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Thallium	205	500	U	2500	U		5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Vanadium	51	14400		16000			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50
Zinc	68	123000		128000			5	25	ICPMS	1/27/99	11:45	1/27/99	11:50

Comments:

Version 1.60

* Duplicate analysis RPD was not within limits

Form 9 Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICP **Units:** ug/L

Element	Wavelength /Mass	Reporting Limit	IDL	Date of IDL
Aluminum	308.21	100	12.8	4/14/98
Beryllium	313.04	2	0.2	4/14/98
Cadmium	228.80	5	2.55	4/14/98
Calcium	317.93	200	6.1	4/14/98
Copper	324.75	20	1.99	4/14/98
Iron	259.94	100	4.67	4/14/98
Magnesium	279.08	200	18.1	4/14/98
Potassium	766.49	5000	339	4/14/98
Sodium	330.22	5000	943	4/14/98
Zinc	213.86	20	1.58	4/14/98

Quanterra, Inc.

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPMS **Units:** ug/L

Element	Wavelength /Mass	Reporting Limit	IDL	Date of IDL
Antimony	121.00	1	0.1705	12/11/98
Arsenic	75.00	5	0.0818	12/11/98
Barium	135.00	1	0.0127	12/11/98
Chromium	52.00	1	0.06	12/11/98
Cobolt	59.00	1	0.0025	12/11/98
Lead	208.00	3	0.0356	12/11/98
Manganese	55.00	1	0.0123	12/11/98
Nickel	60.00	1	0.0669	12/11/98
Selenium	82.00	5	0.2602	12/11/98
Silver	107.00	1	0.0113	12/11/98
Thallium	205.00	1	0.004	12/11/98
Vanadium	51.00	5	0.029	12/11/98

Quanterra, Inc.

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICP **Date of IEC's:**

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	As(0.005206), Ca(0.000121), Fe(0.00001), Mg(0.00007), Mn(0.000016), Pb(0.00074), Sn(-0.00003)
Antimony	206.838	Fe(0.00014), Ni(-0.000958), Pb(-0.00092), Sn(-0.00379)
Arsenic	193.696	Cd(0.00576)
Barium	493.409	Co(0.000548)
Beryllium	313.042	Cd(0.00469)
Cadmium	228.802	Co(0.00077)
Calcium	317.933	Cr(-0.00001)
Chromium	267.716	As(0.00125), Co(0.000124), Fe(0.00012), Pb(0.00002), Sb(0.0094), Ti(0.000271), V(0.00256)
Cobolt	228.616	Al(-0.0136), B(0.0022), Cd(0.000723), Cu(-0.000123), Fe(0.00009), Ni(0.000526), Pb(-0.0191), Sb(-0.00033), Se(0.0027)
Copper	324.754	Fe(0.00215), Mg(-0.00002), Zn(0.0042)
Iron	259.94	Ag(-0.000353), As(0.00042), B(-0.000107), Ca(0.000029), Cd(0.000017), Co(0.00005), Cu(-0.000159), Mg(0.000159), Mn(-0.000036), Mo(-0.00015), Na(-0.00175), Ni(-0.000016), Pb(0.000285), Sn(-0.000111), Tl(0.000577), V(0.000013), Zn(0.000114)
Magnesium	279.079	Al(0.000026), As(-0.000517), B(-0.000026), Cd(0.000004), Fe(0.000069), Mo(-0.000048), Pb(0.000027), Sb(0.000057), Sn(0.000151), Tl(0.00028), V(0.000004), Zn(0.000019)
Manganese	257.61	Ag(0.000156), Al(0.00043), Cr(0.00011), Fe(-0.00024), Mg(-0.0068), V(-0.00015)
Molybdenum	202.03	Al(0.00876), As(0.00114), B(-0.00041), Be(-0.000056), Co(0.00012), Cr(-0.000224), Cu(0.000479), Mg(-0.0141), Mn(-0.000291), Sb(0.00095), V(-0.0195), Zn(-0.000112)
Nickel	231.604	Cd(0.00017), Co(0.000526), Mo(-0.000057), Pb(0.000596), Sb(-0.00176), Zn(0.00373)
Tin	189.989	Sb(-0.0058)
Titanium	334.941	Ag(-0.000662), Al(0.00395), Be(0.000026), Co(0.00179), Cu(0.00039), Fe(-0.0029), Mg(-0.0026), Na(-0.743), Pb(0.000679), Sb(0.00191), Sn(0.00271), Tl(-0.0433), V(0.000342)

Quanterra, Inc.

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICP **Date of IEC's:**

Vanadium	292.402	Al(-0.0124), As(0.0123), Be(0.00451), Cd(0.000135), Cr(0.00059), Fe(0.000177), Mn(-0.00015), Sb(-0.00859), Tl(-0.0252)
Zinc	213.856	Na(0.554)

Quanterra, Inc.

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICP **Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Aluminum	308.21	1000000	4/15/98
Beryllium	313.04	50000	4/15/98
Cadmium	228.80	100000	4/15/98
Calcium	317.93	1000000	4/15/98
Copper	324.75	100000	4/15/98
Iron	259.94	500000	4/15/98
Magnesium	279.08	1000000	4/15/98
Potassium	766.49	500000	4/15/98
Sodium	330.22	2000000	4/15/98
Zinc	213.86	100000	4/15/98

Quanterra, Inc.

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPMS **Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Antimony	121.00	2000	2/15/98
Arsenic	75.00	1000	2/15/98
Barium	135.00	2000	2/15/98
Chromium	52.00	1000	2/15/98
Cobolt	59.00	1000	2/15/98
Lead	208.00	500	2/15/98
Manganese	55.00	10000	2/15/98
Nickel	60.00	500	2/15/98
Selenium	82.00	2000	2/15/98
Silver	107.00	200	2/15/98
Thallium	205.00	2000	2/15/98
Vanadium	51.00	500	2/15/98

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9014214 **Matrix:** SOLID

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CQ029B	1/19/99	1	100	
CQ029C	1/19/99	1	100	
CQ029L	1/19/99	1	100	
CPWT0	1/19/99	1	100	
CPWT4	1/19/99	1	100	
CPWT6	1/19/99	1	100	
CPWT7	1/19/99	1	100	
CPWT8	1/19/99	1	100	
CPWT9	1/19/99	1	100	
CPWTD	1/19/99	1	100	
CPWTE	1/19/99	1	100	
CPWTG	1/19/99	1	100	
CPWTH	1/19/99	1	100	
CPWTJ	1/19/99	1	100	
CPWTK	1/19/99	1	100	
CPWTL	1/19/99	1	100	

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9014235 **Matrix:** SOLID

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CQ0AKB	1/19/99	1	100	
CQ0AKC	1/19/99	1	100	
CQ0AKL	1/19/99	1	100	
CPWT0	1/19/99	1	100	
CPWT4	1/19/99	1	100	
CPWT6	1/19/99	1	100	
CPWT7	1/19/99	1	100	
CPWT8	1/19/99	1	100	
CPWT9	1/19/99	1	100	
CPWTD	1/19/99	1	100	
CPWTE	1/19/99	1	100	
CPWTG	1/19/99	1	100	
CPWTH	1/19/99	1	100	
CPWTJ	1/19/99	1	100	
CPWTK	1/19/99	1	100	
CPWTL	1/19/99	1	100	

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: 01251.arc

Sample Name	Date of Analysis	Time of Analysis
CAL BLK	1/25/99	9:14 AM
CAL STD	1/25/99	9:17 AM
HIGHSTD	1/25/99	9:22 AM
ICV	1/25/99	9:25 AM
ICB	1/25/99	9:29 AM
CRI	1/25/99	9:33 AM
ICSA	1/25/99	9:37 AM
ICSAB	1/25/99	9:41 AM
CCV1	1/25/99	9:45 AM
CCB1	1/25/99	9:48 AM
CQ029B	1/25/99	10:04 AM
CQ029C	1/25/99	10:07 AM
CQ029L	1/25/99	10:11 AM
CPWT0	1/25/99	10:15 AM
CPWT0P	1/25/99	10:18 AM
CPWT0S	1/25/99	10:22 AM
CPWT0D	1/25/99	10:26 AM
CPWT4	1/25/99	10:29 AM
CPWT6	1/25/99	10:33 AM
CPWT7	1/25/99	10:36 AM
CCV2	1/25/99	10:41 AM
CCB2	1/25/99	10:45 AM
CPWT8	1/25/99	10:49 AM
CPWT9	1/25/99	10:52 AM
CPWTD	1/25/99	10:56 AM
CPWTE	1/25/99	11:00 AM
CPWTG	1/25/99	11:03 AM
CPWTH	1/25/99	11:07 AM
CPWTJ	1/25/99	11:11 AM
CPWTK	1/25/99	11:14 AM
CPWTL	1/25/99	11:18 AM
CCV3	1/25/99	11:22 AM
CCB3	1/25/99	11:26 AM
CQ5T8F	1/25/99	12:05 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: 01251.arc

Sample Name	Date of Analysis	Time of Analysis
CQ5T8PF	1/25/99	12:09 PM
CQ5T8SF	1/25/99	12:13 PM
CQ5T8DF	1/25/99	12:16 PM
CQ5TAF	1/25/99	12:20 PM
CQ5TCF	1/25/99	12:24 PM
CQ5TFF	1/25/99	12:27 PM
CQ5VQF	1/25/99	12:31 PM
CQ5PNF	1/25/99	12:35 PM
CQ5PTF	1/25/99	12:38 PM
CCV4	1/25/99	12:43 PM
CCB4	1/25/99	12:47 PM
CQ6GRF	1/25/99	12:51 PM
CQ6H1F	1/25/99	12:54 PM
CQ6H2F	1/25/99	12:58 PM
CQ6H5F	1/25/99	1:02 PM
C16H7F	1/25/99	1:05 PM
CQ6H9F	1/25/99	1:09 PM
C16HDF	1/25/99	1:13 PM
CQ6HFF	1/25/99	1:16 PM
CQ6HHF	1/25/99	1:20 PM
CQ6HJF	1/25/99	1:24 PM
CCV5	1/25/99	1:28 PM
CCB5	1/25/99	1:32 PM
C16HMF	1/25/99	2:06 PM
CQ6HQF	1/25/99	2:09 PM
CURT'S H2O	1/25/99	2:13 PM
ICSA	1/25/99	2:17 PM
ICSAB	1/25/99	2:20 PM
CCV6	1/25/99	2:25 PM
CCB6	1/25/99	2:29 PM

Version 1.60

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPMS

Chart Number: 012799.rep

Sample Name	Date of Analysis	Time of Analysis
Blank	1/27/99	8:34 AM
Standard 1	1/27/99	8:38 AM
QC Std 1	1/27/99	8:43 AM
QC Std 2	1/27/99	8:48 AM
ICSA	1/27/99	8:53 AM
ICSA	1/27/99	8:59 AM
BLANK	1/27/99	9:03 AM
QC Std 3	1/27/99	9:08 AM
QC Std 5	1/27/99	9:13 AM
CQ0AKB	1/27/99	9:17 AM
CQ0AKC	1/27/99	9:22 AM
CQ0AKL	1/27/99	9:26 AM
CPWT0	1/27/99	9:31 AM
CPWT4	1/27/99	9:35 AM
CPWT4 L	1/27/99	9:40 AM
CPWT4 PDS	1/27/99	9:44 AM
CPWT4S	1/27/99	9:48 AM
CPWT4X	1/27/99	9:53 AM
QC Std 3	1/27/99	9:58 AM
QC Std 4	1/27/99	10:02 AM
CPWT6	1/27/99	10:07 AM
CPWT7	1/27/99	10:11 AM
CPWT8	1/27/99	10:16 AM
CPWT9	1/27/99	10:20 AM
CPWTD	1/27/99	10:25 AM
CPWTE	1/27/99	10:30 AM
CPWTG	1/27/99	10:34 AM
QC Std 3	1/27/99	10:39 AM
QC Std 4	1/27/99	10:44 AM
CPWTH	1/27/99	10:51 AM
CPWTJ	1/27/99	10:56 AM
CPWTK	1/27/99	11:00 AM
CPWTL	1/27/99	11:04 AM
QC Std 3	1/27/99	11:09 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPMS

Chart Number: 012799.rep

Sample Name	Date of Analysis	Time of Analysis
QC Std 5	1/27/99	11:14 AM
Blank	1/27/99	11:22 AM
Standard 1	1/27/99	11:26 AM
QC Std 3	1/27/99	11:31 AM
QC Std 4	1/27/99	11:36 AM
CPWT0	1/27/99	11:41 AM
CPWT4	1/27/99	11:45 AM
CPWT4 L	1/27/99	11:50 AM
CPWT4 PDS	1/27/99	11:54 AM
CPWT4S	1/27/99	11:58 AM
CPWT4X	1/27/99	12:03 PM
CPWT6	1/27/99	12:07 PM
CPWT7	1/27/99	12:12 PM
QC Std 3	1/27/99	12:17 PM
QC Std 4	1/27/99	12:21 PM
CPWT8	1/27/99	12:26 PM
CPWT9	1/27/99	12:30 PM
CPWTD	1/27/99	12:35 PM
CPWTE	1/27/99	12:40 PM
CPWTG	1/27/99	12:44 PM
CPWTH	1/27/99	12:49 PM
CPWTJ	1/27/99	12:53 PM
CPWTK	1/27/99	12:58 PM
CPWTL	1/27/99	1:02 PM
QC Std 3	1/27/99	1:07 PM
QC Std 5	1/27/99	1:12 PM

ANALYTICAL RAW DATA

FOR

ROY F. WESTON

QUANTERRA INCORPORATED

DENVER NO. D9A130133

Description of Supporting Documentation

The enclosed ***Expanded*** raw data package is arranged in the order in which the initial calibration curve, internal quality control samples, and the samples for this lot were analyzed. Also included are any client requested batch quality control samples. When applicable, the data is organized alphabetically by instrument ID, then chronologically by analysis date.

GC/MS

I. Initial Calibration
   A. Run log pages.
   B. Tuning data (summary, bar graph spectrum, and mass listings).
   C. Initial calibration summary (listing response factors, %RSDs), target compound report, internal standard summary, and chromatograms (RIC).

II. Sample Data
   A. Preparation logs (when applicable), run log pages, target compound report, IS summary, and chromatograms (RIC).
   B. Tuning data (summary, bar graph spectrum, and mass listing).
   C. Continuing calibration summary (response factors, %RSDs, and %Ds).
   D. Quality control sample raw data and sample raw data.*

GC

I. Initial Calibration Data
   A. Initial calibration summary, analysis report, and chromatograms for each column used in analysis.

II. Sample Data
   A. Preparation logs (when applicable) and run log pages.
   B. Bracketing continuing calibration standards (when applicable).
   C. Quality control sample raw data and sample raw data.**

Metals

I. Preparation Logs

II. ICP and/or ICP/MS Data
   A. Computer printouts listing all calibrations.
   B. Quality control sample raw data and sample raw data.

III. GFAA and/or CVAA Raw Data
   A. Analysis bench sheets listing all calibrations.
   B. Quality control sample raw data and sample raw data.

Wet Chemistry

I. Preparation Logs

II. Sample Data
   A. Analysis bench sheets listing all calibration.
   B. Quality control sample raw data and sample raw data.

* Raw data includes the target compound report, IS summary, surrogate recovery report, chromatograms (RIC), spectra, and Tentatively Identified Compound (TIC) report with library searches (when applicable).

** Raw data includes the analysis report and chromatograms for each column.

Sample Data

Metals—Supporting Documentation

D9A130133

Roy F. Weston

Method	Element	CRA/CRI (mg/L)	ICV icp/icptra (mg/L)	DCS (Aq Diss) CCV icp/icptra (mg/L)	HIGH STANDARD icp/icptra (mg/L)	ICSA (mg/L)	ICSAB icp/icptra (mg/L)	LCS / DCS MS, SD Aq Total (mg/L)	LCS / DCS MS, SD Soil (mg/kg)
7041 / 204.2	Antimony	0.010	0.030	0.040	NA	NA	NA	0.040	4.0
7060 / 206.2	Arsenic	0.005	0.040	0.050	NA	NA	NA	0.040	4.0
7131 / 213.3	Cadmium	0.0005	0.004	0.005	NA	NA	NA	0.004	0.4
7191 / 218.2	Chromium	0.005	0.020	0.040	NA	NA	NA	0.010	1.0
7421 / 239.2	Lead	0.003	0.030	0.040	NA	NA	NA	0.040	4.0
7470 / 245.1	Mercury-AQ	NA	0.002	0.005	NA	NA	NA	0.005	--
7471 / 245.3	Mercury-SOIL	NA	0.1667	0.4167	NA	NA	NA	--	0.4167
7761 / 272.2	Silver	0.0005	0.004	0.005	NA	NA	NA	0.005	0.5
7740 / 270.2	Selenium	0.005	0.030	0.040	NA	NA	NA	0.040	4.0
7841 / 279.2	Thallium	0.005	0.030	0.040	NA	NA	NA	0.040	4.0
6010 / 200.7	Aluminum	NA	5.0	5.0	10.0	500	500	2.00	200
6010 / 200.7	Antimony	0.120	0.50/0.50	0.50/0.50	1.0/1.0	NA	1.0/1.0	0.500	50
6010 / 200.7	Arsenic	0.020	0.50/0.50	1.00/0.50	2.0/1.0	NA	2.0/1.0	2.00	200
6010 / 200.7	Barium	NA	0.500	0.500	1.0	NA	0.500	2.00	200
6010 / 200.7	Beryllium	0.010	0.500	0.500	1.0	NA	0.500	0.050	5
6010 / 200.7	Boron	NA	0.500	0.500	1.0	NA	2.0	1.00	100
6010 / 200.7	Cadmium	0.010	0.50/0.50	0.50/0.50	1.0/1.0	NA	1.0/1.0	0.050	5
6010 / 200.7	Calcium	NA	20.0	50.0	100.0	500	500	50.0	5000
6010 / 200.7	Chromium	0.020	0.500	0.500	1.0	NA	0.500	0.200	20
6010 / 200.7	Cobalt	0.100	0.500	0.500	1.0	NA	0.500	0.500	50
6010 / 200.7	Copper	0.050	0.500	0.500	1.0	NA	0.500	0.250	25
6010 / 200.7	Iron	NA	5.00	5.00	10.0	200	200	1.00	100
6010 / 200.7	Lead	0.006	0.50/0.50	0.50/0.50	1.0/1.0	NA	1.0/1.0	0.500	50
6010 / 200.7	Lithium	NA	5.00	5.00	10.0	NA	1.0	1.00	100
6010 / 200.7	Magnesium	NA	20.0	50.0	100.0	500	500	50.0	5000
6010 / 200.7	Manganese	0.030	0.500	0.500	1.0	NA	0.500	0.500	50
6010 / 200.7	Molybdenum	NA	0.500	0.500	1.0	NA	1.0	1.00	100
6010 / 200.7	Nickel	0.080	0.500	0.500	1.0	NA	1.00	0.500	50
6010 / 200.7	Phosphorus	NA	2.00	2.00	10.0	NA	2.0	10.0	1000
6010 / 200.7	Potassium	NA	50.0	50.0	100.0	NA	50.0	50.0	5000
6010 / 200.7	Selenium	0.010	5.0/0.50	5.0/0.50	10.0/1.0	NA	5.0/1.0	2.00	200
6010 / 200.7	Silver	0.020	0.500	0.500	1.0	NA	1.00	0.050	5
6010 / 200.7	Sodium	NA	200.0	50.0	100.0	NA	50.0	50.0	5000
6010 / 200.7	Strontium	NA	0.500	0.500	1.0	NA	1.0	1.00	100
6010 / 200.7	Silicon	NA	50.0	50.0	100.0	NA	10.0	10.0	1000
6010 / 200.7	Thallium	0.020	5.0/0.50	5.0/0.50	10.0/1.0	NA	10.0/1.0	2.00	200
6010 / 200.7	Tin	NA	0.50	5.00	10.0	NA	10.0	2.00	200
6010 / 200.7	Titanium	NA	0.500	0.500	1.0	NA	1.0	1.00	100
6010 / 200.7	Vanadium	0.100	0.500	0.500	1.0	NA	0.500	0.500	50
6010 / 200.7	Zinc	0.040	0.500	0.500	1.0	NA	1.00	0.500	50

Quanterra

ICP WORKING STANDARDS
6010A/6010B/200.7

Standard ID.	*Verification #*	*Exp. Date*	*Dilution Factor*
Cal. Std.			
Cal. Std. #1	*11763*	*10/99*	*100X*
Cal. Std. #2	*11685*	*7/99*	*100X*
Cal. Std. #3	*11686*	*7/99*	*100X*
Cal. Std. #4	*11799*	*11/99*	*25X*
Cal. Std. #5	*11632*	*7/99*	*100X*
ICV			
ICV-1A	*11400*	*2/99*	*200X*
ICV-2A	*11665*	*7/99*	*200X*
ICV-3A	*11707*	*9/99*	*50X*
1000 PPM Sn	*6-81SN*	*7/15/99*	*222X*
CCV			
Cal. Std. #1	*11763*	*10/99*	*200X*
Cal. Std. #2	*11685*	*7/99*	*200X*
Cal. Std. #3	*11686*	*7/99*	*200X*
Cal. Std. #4	*11799*	*11/99*	*50X*
Cal. Std. #5	*11632*	*7/99*	*200X*
CRI			
CRI	*11504*	*3/99*	*1000X*
ICSA			
ICSA	*11695*	*3/00*	*10X*
ICSAB			
ICSA	*11628*	*3/00*	*10X*
ICSAB	*11695*	*7/30/99*	*100X*
ICSAB #1	*11687*	*7/99*	*100X*
ICSAB #2	*11688*	*7/99*	*100X*
1000 PPM Si	*11727*	*8/99*	*100X*

QUANTERRA-DENVER

ICP IDL -1998-qt 2

ICP-1 Effective 04/15/98

ICP-3 Effective 04/14/98

All units are mg/L

ANALYTE	IDL ICP-1	IDL ICP-3	MDL aqueous	MDL soil	QRL	CRDL	LINEAR RANGE ICP-1	LINEAR RANGE ICP-3
Aluminum	0.0324	0.0128	0.052	3.6	0.1	0.2	600	1000
Antimony	0.0257	0.035	0.02	4.8	0.06	0.06	100	100
Arsenic	0.0393	0.0563	0.027	5	0.1	Trace/GFAA	100	100
Barium	0.00186	0.00056	0.0018	0.57	0.01	0.2	100	100
Beryllium	0.00049	0.0002	0.00092	0.14	0.002	0.005	50	50
Boron	0.0578	0.00475	0.01	1.7	0.1	--	100	100
Cadmium	0.00424	0.00255	0.0034	0.22	0.005	0.005	100	100
Calcium	0.0825	0.0061	0.034	4.8	0.2	5	1000	1000
Chromium	0.00394	0.00276	0.0041	0.38	0.01	0.01	100	100
Cobalt	0.00412	0.00289	0.0035	0.79	0.01	0.05	100	100
Copper	0.0034	0.00199	0.0021	0.87	0.02	0.025	100	100
Iron	0.02	0.00467	0.026	1	0.1	0.1	500	500
Lead	0.0296	0.0264	0.019	3.6	0.05	Trace/GFAA	100	100
Lithium	0.00266	0.00281	0.005	0.5	0.05	--	50	50
Magnesium	0.0395	0.0181	0.07	5.1	0.2	5	1000	1000
Manganese	0.00509	0.00061	0.004	0.37	0.01	0.015	100	100
Molybdenum	0.00903	0.00679	0.0025	0.79	0.02	--	100	100
Nickel	0.00963	0.00838	0.0097	1.3	0.04	0.04	100	100
Phosphorus	0.117	0.0717	0.084	16	0.3	--	200	200
Potassium	0.136	0.339	0.5	50	5	5	500	500
Selenium	0.0674	0.062	0.073	6.7	0.2	Trace/GFAA	100	100
Silica (SiO_2)	0.0552	0.0237	0.16	17	0.5	--	428	428
Silicon	0.0287	0.0118	N/A	N/A	0.1	0.1	200	200
Silver	0.00484	0.00241	0.0025	0.29	0.01	0.01	100	100
Sodium	1.26	0.943	0.72	110	5	5	2000	2000
Strontium	0.0221	0.00273	0.012	1.2	0.05	--	50	50
Thallium	0.0812	0.0758	0.2	20	2	Trace/GFAA	100	100
Tin	0.00832	0.0775	0.01	4.9	0.1	--	100	100
Titanium	0.00201	0.00146	0.0015	0.17	0.015	--	20	100
Vanadium	0.00304	0.00176	0.0031	0.41	0.01	0.05	100	100
Zinc	0.00248	0.00158	0.014	0.68	0.02	0.02	100	100

RQC057

Quanterra Incorporated
METALS PREP LOG/BATCH SUMMARY

Run Date: 1/18/99
Time: 9:46:17

BATCH NUMBER: 9014214

PREP DATE: 1/19/99
DUE DATE 2/01/99

INITIALS: AL/RJ

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
D9A130133	CPWT0	01	X .97 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
	CPWT0S		.99 g	____ g	____ g	____ g
	CPWT0X		1.00 g	____ g	____ g	____ g
D9A130133	CPWT4	01	X .98 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
* D9A130133	CPWT6	01	X .51 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWT7	01	X .98 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWT8	01	X 1.00 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
- D9A130133	CPWT9	01	X 1.01 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTD	01	X 1.00 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTE	01	X .98 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTG	01	X 1.01 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTH	01	X .99 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTJ	01	X 1.03 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTK	01	X .99 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTL	01	X .97 g	____ g	____ g	____ g
SOLID	TO DUE DATE:		2/01/99			
D9A140000	CQ029B	01	X 1.00 g	____ g	____ g	____ g
SOLID	DUE DATE:		0/00/00			
	CQ029C		1.00 g	____ g	____ g	____ g

RQC057

Quanterra Incorporated
METALS PREP LOG/BATCH SUMMARY

Run Date: 1/18/99
Time: 9:46:17

BATCH NUMBER: 9014214

PREP DATE: 1/19/99
DUE DATE 2/01/99

INITIALS: AWG/KJ

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
	CQ029L		100 g	_____ g	_____ g	_____ g

LEVEL 2
BLANK AND CHECK STANDARD ON BATCH ✓
MS/MSD AND PDS ON BATCH ✓
CURVE PREPPED FOR HG
CORRECT SPIKES ADDED ✓
SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG ✓

COMMENTS: Samples brought to 100.0g except CPW T6 brought to 50.0g

B-BLANK/C-LCS/D-MSD/I-REANALYSIS/L-LCSD/P-SERIAL DLTN/S-MS/X-SAMP DUP/Y-SAMP CONF/Z-PDS

SPIKING WITNESSED BY _____

ICP ELEMENTS WITHIN THE BATCH:

AG AL AS BA BE CA CD CO CR CU FE KX MG MN NA NI PB SB SE TL VX ZN

	ICP - 1	ICP - 2	GFAA	HG	ODD
MS/MSD 1:					
MS/MSD 2:					
MS/MSD 3:					
CHECK :					
CHECK DUP:					
STANDARD NUMBERS					

Batch - 901414

Sop - CORP-IP-0002

Spiking Information

Verification Number	Spike amount (ul)	Expiration Date
11705	1000	6/2000
11819	1000	12/2000
11759	1060	10/99

Acid Lot Information

HNO3 6623 KXRZ

HCl 5587 KXML

H2O2 5240 KXHA

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-----------------------------------------------------------------------------
:       Instrument Upload                                   Run Log - Page  1 :
:       Started Tue Jan 26 14:35:39 1999 by LOGANW                            :
:       Data File: UPL$DEN_DATA_ROOT:<TJA>0125L.ASP;1                         :
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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	CAL	1	25-JAN-1999	09:14:00			002
2	CAL	1	25-JAN-1999	09:17:00			002
3	HIGHSTD	1	25-JAN-1999	09:22:00			002
4	ICV	1	25-JAN-1999	09:25:00			002
5	ICB	1	25-JAN-1999	09:29:00			002
6	CRI	1	25-JAN-1999	09:33:00			002
7	ICSA	1	25-JAN-1999	09:37:00			002
8	ICSAB	1	25-JAN-1999	09:41:00			002
9	CCV1	1	25-JAN-1999	09:45:00			002
10	CCB1	1	25-JAN-1999	09:48:00			002
11	CQ029B	1	25-JAN-1999	10:04:00	9014214	D9A140000	002
12	CQ029C	1	25-JAN-1999	10:07:00	9014214	D9A140000	002
13	CQ029L	1	25-JAN-1999	10:11:00	9014214	D9A140000	002
14	CPWT0	1	25-JAN-1999	10:15:00	9014214	D9A130133	002
15	CPWT0P	5	25-JAN-1999	10:18:00			002
16	CPWT0X	1	25-JAN-1999	10:22:00	9014214	D9A130133	002
17	CPWT0S	1	25-JAN-1999	10:26:00	9014214	D9A130133	002
18	CPWT4	1	25-JAN-1999	10:29:00	9014214	D9A130133	002
19	CPWT6	1	25-JAN-1999	10:33:00	9014214	D9A130133	002
20	CPWT7	1	25-JAN-1999	10:36:00	9014214	D9A130133	002
21	CCV2	1	25-JAN-1999	10:41:00			002
22	CCB2	1	25-JAN-1999	10:45:00			002
23	CPWT8	1	25-JAN-1999	10:49:00	9014214	D9A130133	002
24	CPWT9	1	25-JAN-1999	10:52:00	9014214	D9A130133	002
25	CPWTD	1	25-JAN-1999	10:56:00	9014214	D9A130133	002
26	CPWTE	1	25-JAN-1999	11:00:00	9014214	D9A130133	002
27	CPWTG	1	25-JAN-1999	11:03:00	9014214	D9A130133	002
28	CPWTH	1	25-JAN-1999	11:07:00	9014214	D9A130133	002
29	CPWTJ	1	25-JAN-1999	11:11:00	9014214	D9A130133	002
30	CPWTK	1	25-JAN-1999	11:14:00	9014214	D9A130133	002
31	CPWTL	1	25-JAN-1999	11:18:00	9014214	D9A130133	002
32	CQ7AWCF	CCV3	25-JAN-1999	11:22:00	9025168	D9A250000	002
33	CQ7AWBF	CCB3	25-JAN-1999	11:26:00	9025168	D9A250000	002
34	CQ5T8F	1	25-JAN-1999	12:05:00	9025168	W64591A	002
35	CQ5T8PF	5	25-JAN-1999	12:09:00			002
36	CQ5T8SF	1	25-JAN-1999	12:13:00	9025168	W64591A	002
37	CQ5T8DF	1	25-JAN-1999	12:16:00	9025168	W64591A	002
38	CQ5TAF	1	25-JAN-1999	12:20:00	9025168	W64591A	002
39	CQ5TCF	1	25-JAN-1999	12:24:00	9025168	W64591A	002
40	CQ5TFF	1	25-JAN-1999	12:27:00	9025168	W64591A	002
41	CQ5VQF	1	25-JAN-1999	12:31:00	9025168	W64591B	002
42	CQ5PNF	1	25-JAN-1999	12:35:00	9025168	W56591A	002
43	CQ5PTF	1	25-JAN-1999	12:38:00	9025168	W56591A	002
44	CQ7AWLF	CCV4	25-JAN-1999	12:43:00	9025168	D9A250000	002

D9A22057

D9A22016

D9A22015

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Instrument Upload — Run Log - Page 2

Started Tue Jan 26 14:35:40 1999 by LOGANW

Data File: UPL$DEN_DATA_ROOT:<TJA>0125L.ASP;1

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	CCB4	CCB4	25-JAN-1999	12:47:00			002
46	CQ6GRF	1	25-JAN-1999	12:51:00	9025168	W59091	002
47	CQ6H1F	1	25-JAN-1999	12:54:00	9025168	W59091	002
48	CQ6H2F	1	25-JAN-1999	12:58:00	9025168	W59091	002
49	CQ6H5F	1	25-JAN-1999	13:02:00	9025168	W59091	002
50	CQ6H7F	1	25-JAN-1999	13:05:00	9025168	W59091	002
51	CQ6H9F	1	25-JAN-1999	13:09:00	9025168	W59091	002
52	CQ6HDF	1	25-JAN-1999	13:13:00	9025168	W59091	002
53	CQ6HFF	1	25-JAN-1999	13:16:00	9025168	W59091	002
54	CQ6HHF	1	25-JAN-1999	13:20:00	9025168	W59091	002
55	CQ6HJF	1	25-JAN-1999	13:24:00	9025168	W59091	002
56	CCV5	1	25-JAN-1999	13:28:00			002
57	CCB5	1	25-JAN-1999	13:32:00			002
58	CQ6HMF	1	25-JAN-1999	14:06:00	9025168	W59091	002
59	CQ6HQF	1	25-JAN-1999	14:09:00	9025168	W59091	002
60	CURT'S	NOT USED	25-JAN-1999	14:13:00			002
61	ICSA	1	25-JAN-1999	14:17:00			002
62	ICSAB	1	25-JAN-1999	14:20:00			002
63	CCV6	1	25-JAN-1999	14:25:00			002
64	CCB6	1	25-JAN-1999	14:29:00			002

D 9472023

End of Report

Standardization Rpt. Mon 01-25-99 09:17:43 AM page 1

Method: ICP3Y Standard: CAL BLK

Elem	Ag	Al	As	B	Ba	Be	Ca
Avge	.00167	.02372	-.00288	-.00056	.00000	-.00306	.30790
SDev	.00028	.00093	.00154	.00073	.00000	.00003	.00093
%RSD	16.745	3.9409	53.560	131.84	.00000	.84724	.30163
#1	.00168	.02413	-.00393	-.00084	.00000	-.00309	.30891
#2	.00194	.02437	-.00111	.00028	.00000	-.00305	.30769
#3	.00138	.02265	-.00359	-.00110	.00000	-.00304	.30709

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Avge	.00213	.00001	.00370	.00056	.00000	.00734	.00000
SDev	.00113	.00144	.00014	.00049	.00000	.00350	.00000
%RSD	52.997	27686.	3.8304	87.434	.00000	47.755	.00000
#1	.00281	.00084	.00365	.00112	.00000	.01122	.00000
#2	.00277	.00083	.00360	.00028	.00000	.00637	.00000
#3	.00083	-.00166	.00387	.00028	.00000	.00442	.00000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Avge	-.00073	.00130	.00536	.01779	-.00260	-.02446	.00630
SDev	.00181	.00017	.00282	.00015	.00347	.00090	.00475
%RSD	247.24	12.887	52.486	.84724	133.36	3.6969	75.374
#1	.00098	.00140	.00337	.01796	-.00421	-.02525	.00561
#2	-.00055	.00138	.00859	.01772	-.00499	-.02465	.01135
#3	-.00262	.00110	.00414	.01767	.00138	-.02347	.00193

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Avge	-.01733	-.00131	.01575	-.00185	.00083	.00009	-.00009
SDev	.00831	.00226	.00119	.00178	.00001	.00016	.00043
%RSD	47.945	172.53	7.5245	96.081	.84724	173.21	449.14
#1	-.01992	-.00337	.01712	-.00112	.00084	.00000	-.00056
#2	-.00803	-.00166	.01496	-.00388	.00083	.00028	.00000
#3	-.02403	.00110	.01519	-.00055	.00083	.00000	.00028

Elem	V	Zn
Avge	.00130	.00787
SDev	.00065	.00023
%RSD	49.791	2.8859
#1	.00168	.00814
#2	.00166	.00775
#3	.00055	.00773

WLOg
1-26-99
ICP-016002
SOP# CORP-MT-000106N

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3599	--	--	--	--	--	--
SDev	30.35930	--	--	--	--	--	--
%RSD	.8436269	--	--	--	--	--	--
#1	3564	--	--	--	--	--	--
#2	3611	--	--	--	--	--	--
#3	3621	--	--	--	--	--	--

Standardization Rpt. Mon 01-25-99 09:21:14 AM page 1

Method: ICP3Y Standard: CAL STD

Elem	Ag	Al	As	B	Ba	Be	Ca
Avge	.70685	1.2843	.31152	.23097	1.4688	1.4747	11.358
SDev	.00251	.0024	.01470	.00032	.0026	.0009	.031
%RSD	.35500	.18563	4.7180	.13618	.17476	.05988	.27671
#1	.70399	1.2853	.32846	.23062	1.4717	1.4742	11.322
#2	.70872	1.2859	.30204	.23105	1.4681	1.4757	11.381
#3	.70782	1.2815	.30408	.23124	1.4668	1.4741	11.371

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Avge	.82854	.53479	.84492	.32067	.86271	4.2427	3.0859
SDev	.00436	.00423	.00325	.00020	.00124	.0137	.0070
%RSD	.52627	.79093	.38461	.06128	.14388	.32279	.22599
#1	.82353	.53004	.84130	.32084	.86131	4.2423	3.0940
#2	.83061	.53620	.84758	.32070	.86370	4.2565	3.0820
#3	.83149	.53814	.84589	.32046	.86311	4.2292	3.0817

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Avge	6.8015	1.1410	1.1965	1.6087	1.3154	.96398	.58685
SDev	.0077	.0012	.0082	.0053	.0077	.00716	.01354
%RSD	.11382	.10904	.68517	.33142	.58373	.74262	2.3067
#1	6.7928	1.1396	1.1881	1.6121	1.3186	.96168	.57261
#2	6.8038	1.1417	1.1968	1.6114	1.3210	.97201	.59955
#3	6.8078	1.1418	1.2045	1.6026	1.3067	.95826	.58840

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Avge	.71097	.79889	29.789	.96013	1.6333	.52830	.25846
SDev	.01815	.00329	.045	.00541	.0013	.00024	.00606
%RSD	2.5524	.41204	.15041	.56393	.07736	.04485	2.3444
#1	.73134	.80267	29.740	.95548	1.6347	.52807	.25149
#2	.70504	.79667	29.829	.96607	1.6329	.52829	.26245
#3	.69653	.79733	29.798	.95882	1.6322	.52854	.26145

Elem	V	Zn
Avge	.53583	.42844
SDev	.00182	.00281
%RSD	.34043	.65461
#1	.53511	.42544
#2	.53790	.43100
#3	.53447	.42887

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3542	--	--	--	--	--	--
SDev	5.474235	--	--	--	--	--	--
%RSD	.1545709	--	--	--	--	--	--
#1	3547	--	--	--	--	--	--
#2	3536	--	--	--	--	--	--
#3	3542	--	--	--	--	--	--

Standardization Report Mon 01-25-99 09:21:20 AM page 1

Method: ICP3Y Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag	328.068	CAL STD	CAL BLK	1.41145	-.002354	01/25/99 09:17:53
Al	308.215	CAL STD	CAL BLK	7.92281	-.187892	01/25/99 09:17:53
As	193.696	CAL STD	CAL BLK	6.44329	.018526	01/25/99 09:17:53
B	249.678	CAL STD	CAL BLK	4.30234	.002394	01/25/99 09:17:53
Ba	493.409	CAL STD	CAL BLK	.680810	.000000	01/25/99 09:17:53
Be	313.042	CAL STD	CAL BLK	.679744	.002078	01/25/99 09:17:53
Ca	317.933	CAL STD	CAL BLK	3.62007	-1.11461	01/25/99 09:17:53
Cd	228.802	CAL STD	CAL BLK	1.23126	-.002628	01/25/99 09:17:53
Co	228.616	CAL STD	CAL BLK	1.87808	-.000010	01/25/99 09:17:53
Cr	267.716	CAL STD	CAL BLK	1.18885	-.004404	01/25/99 09:17:53
Cu	324.754	CAL STD	CAL BLK	3.11884	-.001742	01/25/99 09:17:53
Fe	259.940	CAL STD	CAL BLK	11.5885	.000000	01/25/99 09:17:53
K	766.491	CAL STD	CAL BLK	47.2218	-.346472	01/25/99 09:17:53
Li	670.784	CAL STD	CAL BLK	3.24053	.000000	01/25/99 09:17:53
Mg	279.079	CAL STD	CAL BLK	5.87694	.004301	01/25/99 09:17:53
Mn	257.610	CAL STD	CAL BLK	.876844	-.001138	01/25/99 09:17:53
Mo	202.030	CAL STD	CAL BLK	.836359	-.004487	01/25/99 09:17:53
Na	330.223	CAL STD	CAL BLK	251.297	-4.46938	01/25/99 09:17:53
Ni	231.604	CAL STD	CAL BLK	.758259	.001975	01/25/99 09:17:53
P	214.914	CAL STD	CAL BLK	9.55880	.233788	01/25/99 09:17:53
Pb	220.353	CAL STD	CAL BLK	1.71060	-.010776	01/25/99 09:17:53
Sb	206.838	CAL STD	CAL BLK	1.29860	.022500	01/25/99 09:17:53
Se	196.026	CAL STD	CAL BLK	12.4872	.016333	01/25/99 09:17:53
SiO2	251.611	CAL STD	CAL BLK	7.18797	-.113232	01/25/99 09:17:53
Sn	189.989	CAL STD	CAL BLK	10.3997	.019246	01/25/99 09:17:53
Sr	407.771	CAL STD	CAL BLK	.612582	-.000511	01/25/99 09:17:53
Ti	334.941	CAL STD	CAL BLK	1.89309	-.000175	01/25/99 09:17:53
Tl	190.864	CAL STD	CAL BLK	38.5388	.003661	01/25/99 09:17:53
V	292.402	CAL STD	CAL BLK	1.83008	-.002378	01/25/99 09:17:53
Zn	213.856	CAL STD	CAL BLK	2.40087	-.018906	01/25/99 09:17:53

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Method: ICP3Y Sample Name: HIGHSTD Operator: WGL
Run Time: 01/25/99 09:22:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0143	9.9473	1.9849	1.0150	.99842	.99974	40.748
SDev	.0046	.0082	.0386	.0035	.00230	.00196	.185
%RSD	.45022	.08234	1.9472	.34530	.23017	.19628	.45394
#1	1.0169	9.9446	1.9575	1.0190	.99983	1.0015	40.776
#2	1.0090	9.9409	1.9680	1.0126	.99966	.99762	40.551
#3	1.0170	9.9565	2.0291	1.0134	.99577	1.0001	40.918
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.0500	10.500	2.1000	1.0500	1.0500	1.0500	42.000
Low	.95000	9.5000	1.9000	.95000	.95000	.95000	38.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0185	1.0244	.99966	1.0008	9.9184	200.24	9.9560
SDev	.0089	.0034	.00574	.0024	.0142	.49	.0435
%RSD	.87252	.33291	.57443	.23481	.14328	.24691	.43726
#1	1.0215	1.0249	1.0015	1.0018	9.9207	200.69	9.9602
#2	1.0085	1.0276	.99323	1.0024	9.9032	200.32	9.9972
#3	1.0254	1.0208	1.0043	.99807	9.9314	199.71	9.9105
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.0500	1.0500	1.0500	1.0500	10.500	210.00	10.500
Low	.95000	.95000	.95000	.95000	9.5000	190.00	9.5000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	39.714	1.0119	1.0027	402.35	1.0208	10.052	.98174
SDev	.083	.0033	.0110	.65	.0062	.072	.01161
%RSD	.21009	.32779	1.0990	.16115	.60256	.71188	1.1827
#1	39.722	1.0138	.99216	403.02	1.0279	10.111	.99341
#2	39.627	1.0081	1.0017	401.72	1.0170	9.9725	.97019
#3	39.793	1.0139	1.0141	402.31	1.0174	10.074	.98163
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	42.000	1.0500	1.0500	420.00	1.0500	10.500	1.0500
Low	38.000	.95000	.95000	380.00	.95000	9.5000	.95000

Elem	Sb	Se	SiO2 100.5%	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0051	9.9364	215.02	10.018	1.0033	.99843	10.062
SDev	.0290	.1076	.98	.102	.0010	.00081	.122
%RSD	2.8895	1.0833	.45604	1.0202	.10037	.08133	1.2090
#1	1.0317	9.9469	215.06	10.100	1.0041	.99845	10.060
#2	.97414	9.8239	214.01	9.9035	1.0036	.99760	9.9409
#3	1.0095	10.038	215.97	10.051	1.0021	.99923	10.184
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	1.0500	10.500	pass	10.500	1.0500	1.0500	10.500

Low	.95000	9.5000	9.5000	.95000	.95000	9.5000

Elem	V	Zn
Units	ppm	ppm
Avge	1.0016	1.0184
SDev	.0048	.0052
%RSD	.48176	.50945
#1	1.0029	1.0214
#2	.99624	1.0124
#3	1.0056	1.0214
Errors	LC Pass	LC Pass
High	1.0500	1.0500
Low	.95000	.95000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3521	--	--	--	--	--	--
SDev	38.25357	--	--	--	--	--	--
%RSD	1.086364	--	--	--	--	--	--
#1	3496	--	--	--	--	--	--
#2	3565	--	--	--	--	--	--
#3	3503	--	--	--	--	--	--

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Method: ICP3Y Sample Name: ICV Operator: WGL
Run Time: 01/25/99 09:25:50
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As NR	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51379	4.8965	.51453	.53882	.50194	.50378	20.210
SDev	.00493	.0312	.02959	.00564	.00121	.00088	.122
%RSD	.96006	.63679	5.7514	1.0477	.24204	.17420	.60147
#1	.51107	4.8868	.48071	.53240	.50331	.50329	20.107
#2	.51948	4.9314	.52723	.54105	.50153	.50479	20.344
#3	.51082	4.8713	.53566	.54301	.50098	.50326	20.179
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	.55200	.55200	.55200	.55200	22.100
Low	.44800	4.4800	.44800	.44800	.44800	.44800	17.920

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51176	.51132	.51111	.50492	4.9965	49.527	4.7984
SDev	.00369	.00832	.00330	.00181	.0308	.297	.0409
%RSD	.72166	1.6266	.64581	.35918	.61573	.60015	.85164
#1	.50751	.51332	.50797	.50634	4.9702	49.700	4.8437
#2	.51414	.51845	.51081	.50555	5.0303	49.696	4.7643
#3	.51364	.50219	.51455	.50288	4.9889	49.183	4.7873
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	.55200	.55200	.55200	5.5200	55.200	5.5200
Low	.44800	.44800	.44800	.44800	4.4800	44.800	4.4800

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.945	.50863	.50260	201.49	.51749	1.9566	.53491
SDev	.014	.00415	.01044	.77	.00575	.0310	.01447
%RSD	.07046	.81540	2.0773	.38322	1.1108	1.5862	2.7053
#1	19.953	.50651	.49859	201.67	.52411	1.9268	.54226
#2	19.953	.51341	.49476	202.15	.51384	1.9542	.54424
#3	19.929	.50597	.51445	200.64	.51450	1.9887	.51824
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	22.100	.55200	.55200	221.00	.55200	2.2100	.55200
Low	17.920	.44800	.44800	179.20	.44800	1.7920	.44800

Elem	Sb NR	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50237	5.0093	110.31	5.0601	.49940	.50314	5.1485
SDev	.02967	.0444	.63	.0814	.00091	.00104	.0696
%RSD	5.9051	.88616	.56805	1.6088	.18137	.20718	1.3526
#1	.49853	5.0400	109.67	5.0072	.50038	.50368	5.1394
#2	.47481	5.0294	110.92	5.1539	.49859	.50381	5.2223
#3	.53377	4.9584	110.33	5.0193	.49923	.50194	5.0839
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	117.70	5.5190	.55200	.55200	5.5200

Low	.44800	4.4800	96.300	4.4810	.44800	.44800	4.4800

Elem	V	Zn
Units	ppm	ppm
Avge	.50300	.50584
SDev	.00189	.00655
%RSD	.37529	1.2953
#1	.50373	.50190
#2	.50442	.51341
#3	.50086	.50223
Errors	LC Pass	LC Pass
High	.55200	.55200
Low	.44800	.44800

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3566	--	--	--	--	--	--
SDev	27.05435	--	--	--	--	--	--
%RSD	.7587073	--	--	--	--	--	--
#1	3585	--	--	--	--	--	--
#2	3535	--	--	--	--	--	--
#3	3578	--	--	--	--	--	--

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Method: ICP3Y Sample Name: ICB Operator: WGL
Run Time: 01/25/99 09:29:40
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00023	.02214	.01175	.00402	.00019	-.00022	.00593
SDev	.00121	.00408	.00821	.00140	.00019	.00001	.00270
%RSD	527.74	18.417	69.852	34.933	99.916	3.5638	53.715
#1	.00004	.02684	.01109	.00483	.00019	-.00022	.00804
#2	.00083	.01965	.02027	.00240	.00038	-.00021	.00420
#3	-.00155	.01992	.00389	.00483	.00000	-.00022	.00284
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.10000	.10000	.10000	.01000	.00200	.20000
Low	-.01000	-.10000	-.10000	-.10000	-.01000	-.00200	-.20000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00066	-.00213	-.00015	.00001	.00327	.19076	-.00030
SDev	.00171	.00053	.00214	.00088	.00327	.09380	.00053
%RSD	258.73	24.881	1394.4	6450.6	100.22	49.173	173.21
#1	-.00095	-.00160	.00231	.00001	-.00000	.10700	.00000
#2	.00246	-.00213	-.00139	.00089	.00326	.29211	.00000
#3	.00048	-.00266	-.00138	-.00087	.00654	.17317	-.00091
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.01000	.01000	.02000	.10000	5.0000	.05000
Low	-.00500	-.01000	-.01000	-.02000	-.10000	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00490	.00010	.00299	.73303	.00093	.01715	-.00326
SDev	.00314	.00000	.00454	.59078	.00221	.01485	.00120
%RSD	64.159	2.9752	151.97	80.594	238.33	86.586	36.821
#1	.00274	.00010	.00709	1.2124	.00222	.02586	-.00452
#2	.00345	.00010	-.00189	.91374	-.00163	.00000	-.00213
#3	.00850	.00010	.00377	.07301	.00219	.02557	-.00312
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.01000	.02000	5.0000	.04000	.30000	.05000
Low	-.20000	-.01000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02232	-.01419	.08681	.03497	.00001	.00054	.03989
SDev	.01611	.02668	.02139	.00333	.00000	.00082	.02740
%RSD	72.191	188.04	24.643	9.5314	8.4962	151.56	68.702
#1	.03439	-.03304	.10797	.03113	.00001	.00036	.06897
#2	.02856	-.02588	.08726	.03693	.00001	-.00017	.03615
#3	.00402	.01634	.06520	.03686	.00001	.00143	.01454
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.01500	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	-.00129	-.00559
SDev	.00113	.00077
%RSD	87.558	13.787
#1	-.00017	-.00603
#2	-.00242	-.00470
#3	-.00128	-.00604

Errors	LC Pass	LC Pass
High	.01000	.02000
Low	-.01000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3545	--	--	--	--	--	--
SDev	4.501286	--	--	--	--	--	--
%RSD	.1269854	--	--	--	--	--	--
#1	3541	--	--	--	--	--	--
#2	3550	--	--	--	--	--	--
#3	3544	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CRI Operator: WGL
Run Time: 01/25/99 09:33:31
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02031	.01480	.01178	.00421	.00006	.00988	.01471
SDev	.00030	.00861	.05092	.00186	.00011	.00003	.00519
%RSD	1.4862	58.208	432.33	44.216	173.21	.35805	35.263
#1	.02040	.00700	-.04640	.00461	.00000	.00987	.00876
#2	.02055	.02404	.04824	.00584	.00019	.00992	.01715
#3	.01997	.01334	.03350	.00218	.00000	.00985	.01824
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High	.03000					.01500	
Low	.01000					.00500	

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01002	.10625	.01949	.05185	.00323	.21003	.00000
SDev	.00104	.00169	.00109	.00063	.00002	.43733	.00159
%RSD	10.356	1.5863	5.5844	1.2062	.49233	208.23	103750.
#1	.01069	.10431	.01934	.05118	.00322	-.29319	-.00183
#2	.00883	.10712	.01849	.05241	.00325	.49829	.00092
#3	.01055	.10732	.02065	.05197	.00323	.42499	.00091
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	NOCHECK
High	.01500	.15000	.03000	.07500			
Low	.00500	.05000	.01000	.02500			

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00429	.03192	.00220	.14967	.08955	-.00528	.00957
SDev	.01063	.00036	.00689	.15119	.00099	.02588	.00137
%RSD	247.90	1.1278	312.54	101.01	1.1043	490.12	14.335
#1	-.00795	.03153	-.00236	.04837	.09065	.01554	.00955
#2	.01118	.03224	-.00116	.07719	.08925	-.03425	.00821
#3	.00963	.03198	.01012	.32345	.08874	.00287	.01095
Errors	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK
High		.04500			.12000		
Low		.01500			.04000		

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.14176	-.04288	.03538	.04535	-.00016	.00036	.03885
SDev	.03371	.04719	.00306	.04182	.00000	.00054	.02168
%RSD	23.778	110.06	8.6493	92.212	.90302	150.88	55.816
#1	.17737	-.05441	.03316	.00818	-.00017	-.00018	.06055
#2	.13757	-.08324	.03411	.09064	-.00016	.00090	.01719
#3	.11035	.00901	.03887	.03724	-.00017	.00035	.03880
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.18000						

Low	.06000	
Elem	V	Zn
Units	ppm	ppm
Avge	.10150	.03663
SDev	.00056	.00166
%RSD	.55669	4.5416
#1	.10089	.03472
#2	.10159	.03781
#3	.10201	.03735
Errors	LC Pass	LC Pass
High	.15000	.06000
Low	.05000	.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3539	--	--	--	--	--	--
SDev	15.15190	--	--	--	--	--	--
%RSD	.4281527	--	--	--	--	--	--
#1	3545	--	--	--	--	--	--
#2	3522	--	--	--	--	--	--
#3	3550	--	--	--	--	--	--

Analysis Report Mon 01-25-99 09:40:44 AM page 1

Method: ICP3Y Sample Name: ICSA Operator: WGL
Run Time: 01/25/99 09:37:22
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00344	474.42	H.16444	.02226	.00220	-.00018	487.06
SDev	.00239	.28	.04633	.00317	.00026	.00005	3.81
%RSD	69.524	.05901	28.171	14.251	11.664	25.644	.78174
#1	-.00069	474.74	H.12818	.02174	.00249	-.00024	491.32
#2	-.00462	474.22	H.21663	.01937	.00206	-.00016	485.85
#3	-.00502	474.30	H.14852	.02565	.00204	-.00015	484.00
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	600.00	.10000	.10000	.02000	.00400	600.00
Low	-.02000	400.00	-.10000	-.10000	-.02000	-.00400	400.00

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00733	.00005	.00257	-.00220	179.59	-.03330	.00001
SDev	.00189	.00382	.00233	.00153	.81	.38665	.00090
%RSD	25.815	7368.1	90.574	69.730	.45077	1161.0	9300.4
#1	-.00598	.00419	.00519	-.00078	180.52	.41219	.00091
#2	-.00651	-.00072	.00176	-.00382	179.22	-.28161	.00000
#3	-.00949	-.00332	.00076	-.00199	179.03	-.23049	-.00088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.02000	.02000	.02000	240.00	5.0000	.05000
Low	-.01000	-.02000	-.02000	-.02000	160.00	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	509.04	.00153	-.01304	-1.5705	.00690	.08288	H.07779
SDev	.98	.00006	.00142	.6520	.00216	.06679	.02622
%RSD	.19233	3.6270	10.889	41.514	31.273	80.591	33.703
#1	510.16	.00147	-.01406	-.81774	.00777	.15329	H.10767
#2	508.37	.00158	-.01365	-1.9385	.00849	.07493	H.06702
#3	508.59	.00154	-.01142	-1.9553	.00444	.02041	H.05867
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	600.00	.02000	.02000	5.0000	.04000	.30000	.05000
Low	400.00	-.02000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.06132	-.00265	.02494	H.12054	.01896	.00188	.34012
SDev	.06765	.10122	.02180	.03501	.00022	.00032	.12462
%RSD	110.33	3814.6	87.414	29.045	1.1625	16.957	36.638
#1	L-.08940	-.10746	.04902	H.11383	.01883	.00215	.32119
#2	L-.11041	.00494	.01923	H.15841	.01884	.00195	.22606
#3	.01585	.09456	.00656	.08937	.01922	.00153	.47313
Errors	LC Low	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.15000	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	.00112	-.01013
SDev	.00188	.00170
%RSD	167.94	16.742
#1	.00329	-.00928
#2	.00004	-.01208
#3	.00003	-.00902
Errors	LC Pass	LC Pass
High	.02000	.02000
Low	-.02000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3617	--	--	--	--	--	--
SDev	61.38876	--	--	--	--	--	--
%RSD	1.697037	--	--	--	--	--	--
#1	3548	--	--	--	--	--	--
#2	3640	--	--	--	--	--	--
#3	3664	--	--	--	--	--	--

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Method: ICP3Y Sample Name: ICSAB Operator: WGL
Run Time: 01/25/99 09:41:13
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96329	466.83	1.8782	2.0385	.46569	.48602	478.43
SDev	.00642	.66	.0265	.0131	.00092	.00035	1.66
%RSD	.66689	.14224	1.4097	.64412	.19749	.07137	.34655
#1	.95712	466.14	1.9010	2.0234	.46671	.48606	477.51
#2	.96280	466.88	1.8844	2.0473	.46543	.48566	477.43
#3	.96994	467.46	1.8491	2.0448	.46493	.48635	480.34
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.2000	600.00	2.4000	2.4000	.60000	.60000	600.00
Low	.80000	400.00	1.5900	1.5900	.40000	.40000	400.00

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98136	.46404	.46986	.47105	176.71	47.796	.94140
SDev	.00654	.00293	.00363	.00084	.48	.437	.00207
%RSD	.66647	.63161	.77344	.17844	.26895	.91380	.21944
#1	.97611	.46741	.46970	.47196	176.40	47.313	.94185
#2	.97929	.46216	.46631	.47090	176.47	48.162	.94320
#3	.98869	.46254	.47357	.47030	177.26	47.914	.93914
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.2000	.60000	.60000	.60000	240.00	60.000	1.2000
Low	.80000	.40000	.40000	.40000	160.00	40.000	.80000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	500.64	.46901	.90480	47.426	.92583	1.8692	.97019
SDev	1.01	.00089	.01615	.310	.01277	.1007	.04213
%RSD	.20097	.18981	1.7849	.65319	1.3798	5.3886	4.3427
#1	499.86	.46813	.89769	47.767	.92420	1.9734	1.0178
#2	500.28	.46991	.89343	47.161	.91395	1.8617	.95497
#3	501.78	.46899	.92329	47.350	.93934	1.7724	.93778
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	600.00	.60000	1.2000	60.000	1.2000		1.2000
Low	400.00	.40000	.80000	40.000	.80000		.80000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.94020	4.7595	21.229	9.6518	.94336	.93380	9.6235
SDev	.02602	.0178	.092	.1482	.00054	.00107	.1989
%RSD	2.7672	.37499	.43219	1.5358	.05703	.11446	2.0663
#1	.93383	4.7494	21.150	9.5402	.94377	.93490	9.8135
#2	.96882	4.7490	21.207	9.5951	.94357	.93276	9.6401
#3	.91796	4.7801	21.330	9.8200	.94275	.93374	9.4168
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.2000	6.0000	25.680	12.000	1.2000	1.2000	12.000

Low	.80000	4.0000	17.120	8.0000	.80000	.80000	8.0000

Elem	V	Zn
Units	ppm	ppm
Avge	.46324	.96126
SDev	.00142	.00543
%RSD	.30560	.56479
#1	.46203	.95976
#2	.46289	.95674
#3	.46479	.96728

Errors	LC Pass	LC Pass
High	.60000	1.2000
Low	.40000	.80000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3618	--	--	--	--	--	--
SDev	22.73967	--	--	--	--	--	--
%RSD	.6285521	--	--	--	--	--	--
#1	3626	--	--	--	--	--	--
#2	3635	--	--	--	--	--	--
#3	3592	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CCV1 Operator: WGL
Run Time: 01/25/99 09:45:05
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51344	4.9007	1.0331	.51105	.49279	.51025	20.899
SDev	.00435	.0105	.0414	.00623	.00145	.00031	.141
%RSD	.84734	.21368	4.0081	1.2189	.29346	.06105	.67507
#1	.50922	4.8919	1.0760	.51291	.49370	.50997	20.783
#2	.51319	4.8979	.99331	.51614	.49355	.51021	20.859
#3	.51791	4.9123	1.0301	.50410	.49112	.51058	21.056
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	1.1000	.55200	.55200	.55200	22.000
Low	.44800	4.4800	.90000	.44800	.44800	.44800	18.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52565	.52332	.51424	.49719	5.0840	97.833	4.7612
SDev	.00475	.00201	.00330	.00151	.0142	.430	.0317
%RSD	.90275	.38355	.64071	.30267	.28009	.43973	.66599
#1	.52101	.52227	.51078	.49707	5.0750	97.484	4.7945
#2	.52544	.52206	.51460	.49874	5.0767	98.314	4.7580
#3	.53049	.52564	.51734	.49574	5.1005	97.700	4.7313
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	.55200	.55200	.55200	5.5200	110.50	5.5200
Low	.44800	.44800	.44800	.44800	4.4800	89.511	4.4800

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.837	.51597	.51080	199.59	.52881	5.0946	.52833
SDev	.047	.00292	.00439	.53	.00448	.0984	.02561
%RSD	.23772	.56647	.85878	.26617	.84778	1.9305	4.8466
#1	19.785	.51309	.50643	199.32	.53397	5.2035	.51803
#2	19.850	.51588	.51075	200.21	.52660	5.0123	H.55748
#3	19.877	.51893	.51520	199.26	.52586	5.0680	.50947
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	22.000	.55200	.55200	220.00	.55200	5.5200	.55200
Low	17.920	.44800	.44800	180.00	.44800	4.4800	.44800

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50394	5.0759	108.92	5.2560	.49699	.49796	5.2452
SDev	.02224	.1324	1.00	.0081	.00066	.00043	.1490
%RSD	4.4136	2.6090	.92055	.15343	.13358	.08690	2.8400
#1	.48563	5.0323	107.96	5.2530	.49721	.49747	5.0811
#2	.49750	4.9708	108.85	5.2499	.49751	.49827	5.2827
#3	.52869	5.2246	109.96	5.2652	.49624	.49815	5.3719
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	117.70	5.5200	.55200	.55200	5.5200

Low	.44800	4.4800	96.300	4.4800	.44800	.44800	4.4800

Elem	V	Zn
Units	ppm	ppm
Avge	.50277	.51556
SDev	.00214	.00533
%RSD	.42485	1.0334
#1	.50041	.51238
#2	.50334	.51260
#3	.50457	.52171
Errors	LC Pass	LC Pass
High	.55200	.55200
Low	.44800	.44800

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3571	--	--	--	--	--	--
SDev	36.37248	--	--	--	--	--	--
%RSD	1.018486	--	--	--	--	--	--
#1	3595	--	--	--	--	--	--
#2	3589	--	--	--	--	--	--
#3	3529	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CCB1 Operator: WGL
Run Time: 01/25/99 09:48:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00079	.02056	.01190	.00241	.00000	-.00048	.00356
SDev	.00039	.01289	.01342	.00411	.00019	.00010	.00629
%RSD	49.411	62.728	112.76	170.83	68743.	21.458	176.79
#1	-.00118	.00627	.00253	.00003	-.00019	-.00054	-.00370
#2	-.00040	.02408	.02728	.00003	.00000	-.00036	.00721
#3	-.00079	.03133	.00590	.00716	.00019	-.00055	.00716
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.10000	.10000	.10000	.01000	.00200	.20000
Low	-.01000	-.10000	-.10000	-.10000	-.01000	-.00200	-.20000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00122	-.00087	-.00145	-.00002	.01492	.14481	.00060
SDev	.00112	.00167	.00087	.00087	.00185	.30588	.00137
%RSD	91.645	190.91	59.913	4341.5	12.426	211.23	228.53
#1	-.00230	-.00156	-.00211	-.00089	.01596	-.20338	-.00089
#2	-.00007	-.00208	-.00047	-.00003	.01278	.37022	.00089
#3	-.00130	.00103	-.00177	.00085	.01603	.26759	.00179
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.01000	.01000	.02000	.10000	5.0000	.05000
Low	-.00500	-.01000	-.01000	-.02000	-.10000	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00789	-.00001	.00436	.25193	.00249	.03679	-.00669
SDev	.00833	.00014	.00607	.49102	.00249	.04099	.00631
%RSD	105.65	2062.2	139.23	194.91	100.22	111.42	94.375
#1	-.00129	.00007	.00542	-.03445	.00535	-.00374	-.00513
#2	.01498	-.00017	.00982	-.02867	.00139	.03588	-.01363
#3	.00997	.00007	-.00217	.81890	.00073	.07822	-.00130
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.01000	.02000	5.0000	.04000	.30000	.05000
Low	-.20000	-.01000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03019	.00036	.02360	.02886	-.00012	.00000	.00706
SDev	.01250	.07238	.01518	.04777	.00010	.00080	.07974
%RSD	41.400	20275.	64.341	165.50	84.932	58824.	1129.1
#1	.02871	-.07310	.03125	.08238	-.00017	-.00017	.09914
#2	.04336	.00256	.03344	.01367	-.00017	-.00070	-.03892
#3	.01850	.07161	.00611	-.00946	-.00000	.00087	-.03903
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.01500	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	-.00061	-.00677
SDev	.00126	.00140
%RSD	205.97	20.708
#1	-.00127	-.00834
#2	.00084	-.00566
#3	-.00141	-.00629
Errors	LC Pass	LC Pass
High	.01000	.02000
Low	-.01000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3623	--	--	--	--	--	--
SDev	7.960043	--	--	--	--	--	--
%RSD	.2197215	--	--	--	--	--	--
#1	3630	--	--	--	--	--	--
#2	3624	--	--	--	--	--	--
#3	3614	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CQ029B Operator: WGL
Run Time: 01/25/99 10:04:08
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al ND	As	B	Ba	Be ND	Ca J
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02676	1.9151	4.8639	.35951	.14411	-.04831	18.316
SDev	.06151	1.1829	1.5385	.11957	.01131	.00830	.477
%RSD	229.85	61.764	31.630	33.259	7.8473	17.189	2.6021
#1	.04051	2.6218	3.8139	.47968	.15176	-.03876	18.860
#2	-.04065	2.5740	4.1479	.35831	.13112	-.05387	18.118
#3	-.08014	.54956	6.6298	.24055	.14945	-.05229	17.971
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.0000	10.000	10.000	10.000	1.0000	.20000	20.000
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd ND	Co	Cr	Cu ND	Fe J	K ND	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.09811	-.00079	-.03448	.14124	1.3856	13.594	-.00046
SDev	.12687	.13694	.23351	.04739	.1804	24.703	.08961
%RSD	129.31	17320.	677.30	33.550	13.019	181.72	19575.
#1	-.07906	.10317	.18920	.08653	1.2915	20.615	-.09029
#2	.01816	.05041	-.27671	.16936	1.5937	-13.860	.00000
#3	-.23343	-.15595	-.01592	.16784	1.2718	34.028	.08892
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.50000	1.0000	1.0000	2.0000	10.000	500.00	5.0000
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg ND	Mn	Mo	Na ND	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.4052	.04773	.30640	27.380	.30462	7.4597	-.02762
SDev	.7308	.01458	.35571	20.948	.19763	2.2910	1.25041
%RSD	21.460	30.543	116.09	76.508	64.879	30.711	4527.0
#1	2.5665	.05742	.48376	50.434	.17947	10.105	-1.3135
#2	3.7437	.03097	-.10312	9.5116	.20192	6.1145	1.1840
#3	3.9053	.05482	.53855	22.195	.53246	6.1597	.04657
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.000	1.0000	2.0000	500.00	4.0000	30.000	5.0000
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.3385	3.9427	4.8079	4.2471	.02219	.07002	-.00088
SDev	1.2906	2.6185	.6314	3.9823	.00955	.06130	2.20953
%RSD	38.658	66.413	13.132	93.766	43.032	87.543	252260.
#1	3.2995	5.8089	4.0932	6.5728	.01720	.14080	-1.7774
#2	4.6482	5.0698	5.2900	6.5197	.03320	.03477	-.69849
#3	2.0679	.94945	5.0403	-.35119	.01617	.03449	2.4733
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	6.0000	20.000	50.000	10.000	5.0000	1.5000	200.00

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm ND
Avge	-.06280	-.25747
SDev	.15408	.10690
%RSD	245.33	41.520
#1	.07809	-.21934
#2	-.03916	-.17486
#3	-.22733	-.37821
Errors	LC Pass	LC Pass
High	1.0000	2.0000
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3623	--	--	--	--	--	--
SDev	29.59334	--	--	--	--	--	--
%RSD	.8169015	--	--	--	--	--	--
#1	3589	--	--	--	--	--	--
#2	3635	--	--	--	--	--	--
#3	3644	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CQ029C Operator: WGL
Run Time: 01/25/99 10:07:51
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.3197	200.51	206.13	110.05	202.53	5.3387	5249.1
SDev	.0521	1.54	.82	.49	.29	.0059	12.2
%RSD	1.2065	.76908	.39745	.44429	.14350	.10977	.23333
#1	4.3752	200.44	206.22	109.54	202.71	5.3431	5239.4
#2	4.3120	202.09	206.91	110.51	202.68	5.3411	5262.9
#3	4.2718	199.01	205.27	110.11	202.19	5.3321	5245.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.7500	240.00	216.00	125.00	224.00	5.9000	5700.0
Low	4.0000	176.00	176.00	85.000	170.00	4.0000	4250.0

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.3727	53.761	20.243	25.202	105.35	4944.0	96.059
SDev	.0463	.222	.149	.158	.40	35.2	.136
%RSD	.86239	.41236	.73750	.62806	.37651	.71243	.14202
#1	5.3203	53.714	20.071	25.192	104.90	4956.0	95.981
#2	5.4082	54.002	20.340	25.366	105.57	4971.7	96.216
#3	5.3897	53.566	20.318	25.050	105.59	4904.4	95.979
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	6.0000	58.000	22.400	28.750	117.00	5500.0	120.00
Low	4.0000	40.000	16.600	21.000	87.000	4100.0	80.000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5027.4	52.316	103.03	5161.3	53.005	1042.4	51.675
SDev	10.9	.187	.79	46.1	.122	13.9	1.749
%RSD	.21664	.35754	.76700	.89350	.22961	1.3361	3.3848
#1	5022.6	52.135	103.40	5165.5	53.100	1027.3	51.449
#2	5039.9	52.509	103.57	5205.2	53.046	1045.2	50.050
#3	5019.7	52.302	102.13	5113.3	52.868	1054.8	53.526
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	5650.0	57.000	120.00	5850.0	56.000		57.000
Low	4200.0	42.000	80.000	4250.0	42.000		41.000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.498	200.06	L1417.6	196.93	100.76	99.831	212.73
SDev	1.551	4.12	1.8	4.44	.10	.167	6.38
%RSD	3.1332	2.0595	.12712	2.2560	.10215	.16713	3.0014
#1	48.846	199.04	L1418.1	195.91	100.72	99.783	206.10
#2	48.380	204.59	L1419.1	201.80	100.88	100.02	213.26
#3	51.269	196.55	L1415.6	193.09	100.68	99.693	218.84
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	56.500	240.00	2568.0	240.00	120.00	120.00	240.00

Low	41.000	160.00	1712.0	160.00	80.000	80.000	160.00

Elem	V	Zn
Units	ppm	ppm
Avge	50.593	51.611
SDev	.191	.524
%RSD	.37702	1.0151
#1	50.535	51.361
#2	50.807	52.213
#3	50.439	51.259
Errors	LC Pass	LC Pass
High	58.000	60.000
Low	42.500	40.000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3592	--	--	--	--	--	--
SDev	16.41322	--	--	--	--	--	--
%RSD	.4569813	--	--	--	--	--	--
#1	3589	--	--	--	--	--	--
#2	3577	--	--	--	--	--	--
#3	3609	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CQ029L Operator: WGL
Run Time: 01/25/99 10:11:24
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.1150	197.85	200.37	109.83	199.58	5.2711	5190.4
SDev	.0989	.50	5.57	.23	.36	.0052	14.1
%RSD	2.4034	.25485	2.7814	.20645	.17969	.09904	.27125
#1	4.0012	197.96	206.56	109.78	199.96	5.2650	5174.5
#2	4.1795	197.30	195.74	109.62	199.54	5.2739	5201.3
#3	4.1643	198.29	198.82	110.07	199.24	5.2742	5195.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.7500	240.00	216.00	125.00	224.00	5.9000	5700.0
Low	4.0000	176.00	176.00	85.000	170.00	4.0000	4250.0

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.4668	52.911	19.731	24.734	100.49	4881.0	95.782
SDev	.0774	.333	.104	.112	.24	7.5	.650
%RSD	1.4151	.62899	.52710	.45372	.23850	.15348	.67872
#1	5.5293	53.122	19.752	24.650	100.27	4887.6	96.470
#2	5.4908	53.082	19.823	24.691	100.46	4882.5	95.700
#3	5.3803	52.527	19.618	24.861	100.74	4872.8	95.177
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	6.0000	58.000	22.400	28.750	117.00	5500.0	120.00
Low	4.0000	40.000	16.600	21.000	87.000	4100.0	80.000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4960.6	51.768	103.08	5029.6	51.931	1044.3	51.652
SDev	3.0	.121	.72	44.0	.759	3.0	1.544
%RSD	.06050	.23301	.69916	.87576	1.4625	.28493	2.9887
#1	4957.9	51.645	103.44	5064.2	51.675	1045.6	50.418
#2	4963.8	51.886	103.56	4980.0	52.786	1040.9	51.156
#3	4960.1	51.772	102.25	5044.7	51.333	1046.5	53.383
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	5650.0	57.000	120.00	5850.0	56.000		57.000
Low	4200.0	42.000	80.000	4250.0	42.000		41.000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm 1-26-99	ppm	ppm	ppm	ppm
Avge	48.656	201.39	L1371.9	193.39	100.22	98.682	215.65
SDev	.548	7.94	5.7	3.79	.07	.071	2.41
%RSD	1.1266	3.9432	.41812	1.9585	.07048	.07244	1.1160
#1	48.869	198.88	L1365.7	195.66	100.27	98.726	213.76
#2	49.066	195.01	L1373.0	195.50	100.24	98.600	214.83
#3	48.033	210.28	L1377.0	189.02	100.14	98.721	218.36
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	56.500	240.00	2568.0	240.00	120.00	120.00	240.00

Low	41.000	160.00	1712.0	160.00	80.000	80.000	160.00

Elem	V	Zn
Units	ppm	ppm
Avge	50.088	51.480
SDev	.128	.008
%RSD	.25605	.01642
#1	50.225	51.474
#2	50.068	51.478
#3	49.971	51.490
Errors	LC Pass	LC Pass
High	58.000	60.000
Low	42.500	40.000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3596	--	--	--	--	--	--
SDev	9.445122	--	--	--	--	--	--
%RSD	.2626306	--	--	--	--	--	--
#1	3604	--	--	--	--	--	--
#2	3586	--	--	--	--	--	--
#3	3599	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT0 Operator: WGL
Run Time: 01/25/99 10:15:04
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06079	8865.4	24.740	4.8939	113.87	.48269	3131.5
SDev	.09874	9.5	2.666	.2406	.17	.00095	6.9
%RSD	162.44	.10726	10.777	4.9160	.14804	.19638	.22036
#1	.09654	8855.2	22.850	4.6243	114.07	.48262	3125.1
#2	-.05085	8866.8	27.790	4.9706	113.81	.48178	3130.7
#3	.13668	8874.1	23.581	5.0867	113.75	.48367	3138.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0985	11.547	16.231	22.033	14727.	1937.3	6.8865
SDev	.2303	.366	.037	.106	19.	13.3	.0880
%RSD	7.4335	3.1712	.22659	.48171	.12859	.68633	1.2776
#1	2.8896	11.746	16.272	22.141	14707.	1952.6	6.8779
#2	3.0603	11.124	16.203	21.929	14730.	1930.7	6.8031
#3	3.3455	11.771	16.216	22.028	14745.	1928.5	6.9785
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2379.3	285.06	2.3245	200.40	8.9353	645.98	111.91
SDev	2.5	.23	.7146	54.48	.4333	3.17	1.05
%RSD	.10398	.08001	30.741	27.185	4.8490	.49013	.93575
#1	2377.1	284.84	3.1397	142.21	9.4299	642.94	113.10
#2	2378.7	285.03	1.8061	208.80	8.6227	645.74	111.15
#3	2382.0	285.29	2.0278	250.19	8.7533	649.26	111.47
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.72046	-1.9256	675.57	4.3782	44.687	410.22	6.2567
SDev	3.1881	4.9189	2.94	3.3426	.015	1.17	11.253
%RSD	442.51	255.45	.43456	76.345	.03360	.28585	179.85
#1	2.7358	-1.7045	678.10	7.2912	44.701	409.51	-5.8822
#2	-2.9551	-6.9513	672.35	.72889	44.671	409.58	16.340
#3	2.3807	2.8791	676.26	5.1146	44.689	411.58	8.3123
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	27.658	102.67
SDev	.193	.09
%RSD	.69941	.08365
#1	27.575	102.77
#2	27.879	102.61
#3	27.519	102.63
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3812	--	--	--	--	--	--
SDev	4.344717	--	--	--	--	--	--
%RSD	.1139876	--	--	--	--	--	--
#1	3816	--	--	--	--	--	--
#2	3811	--	--	--	--	--	--
#3	3808	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT0P Operator: WGL
Run Time: 01/25/99 10:18:43
Comment: 9014214
Mode: CONC Corr. Factor: 500

Elem	Ag NC	Al 105%	As	B	Ba 104	Be NC	Ca 106%
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05327	9311.7	36.785	2.7362	119.59	.24956	3327.6
SDev	.47344	20.2	22.003	.8855	.12	.00681	8.2
%RSD	888.74	.21703	59.798	32.361	.09878	2.7268	.24686
#1	.48391	9314.1	12.147	2.5294	119.72	.24176	3337.1
#2	-.45369	9330.6	54.455	3.7067	119.56	.25259	3323.7
#3	.12960	9290.4	43.784	1.9724	119.49	.25432	3322.1
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	500000.	50000.	50000.	50000.	25000.	500000.
Low	-5.0000	-50.000	-50.000	-50.000	-5.0000	-1.0000	-100.00

Elem	Cd NC	Co NC	Cr 104	Cu 108	Fe 108	K 105	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0374	11.891	16.909	23.764	15904.	2025.3	7.1565
SDev	.1159	.933	.807	.496	23.	80.5	.6809
%RSD	3.8150	7.8450	4.7722	2.0860	.14472	3.9728	9.5139
#1	3.1481	12.891	17.814	24.310	15923.	2117.8	7.0462
#2	3.0472	11.044	16.264	23.341	15911.	1971.8	7.8858
#3	2.9170	11.739	16.649	23.641	15879.	1986.1	6.5376
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	50000.	250000.	250000.	25000.
Low	-2.5000	-5.0000	-5.0000	-10.000	-50.000	-2500.0	-25.000

Elem	Mg 106	Mn 106	Mo	Na NC	Ni NC	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2532.5	303.33	1.7341	185.37	12.419	687.33	119.08
SDev	13.0	.44	2.6894	229.64	4.701	22.74	3.08
%RSD	.51519	.14412	155.09	123.88	37.852	3.3089	2.5857
#1	2547.1	303.25	.12912	446.43	16.994	694.03	116.36
#2	2522.0	303.81	.23410	95.149	7.6018	705.98	118.46
#3	2528.4	302.94	4.8390	14.548	12.661	661.99	122.43
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500000.	50000.	50000.	1000000.	50000.	100000.	50000.
Low	-100.00	-5.0000	-10.000	-2500.0	-20.000	-150.00	-25.000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2679	.96963	701.84	9.6521	46.896	433.35	3.1601
SDev	9.2525	15.947	20.90	1.5973	.125	1.58	18.298
%RSD	407.98	1644.6	2.9777	16.549	.26692	.36357	579.03
#1	-7.8562	18.979	725.95	10.561	46.864	434.23	-15.911
#2	10.286	-4.7107	690.78	7.8078	47.034	434.28	20.572
#3	4.3741	-11.359	688.80	10.588	46.789	431.53	4.8203
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	107000.	50000.	25000.	50000.	50000.

Low	-30.000	-100.00	-250.00	-50.000	-25.000	-7.5000	-1000.0

Elem	V	Zn 10 50/6
Units	ppm	ppm
Avge	29.914	107.45
SDev	.859	.78
%RSD	2.8716	.72599
#1	30.875	108.26
#2	29.220	106.71
#3	29.646	107.37
Errors	LC Pass	LC Pass
High	50000.	50000.
Low	-5.0000	-10.000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3698	--	--	--	--	--	--
SDev	19.20960	--	--	--	--	--	--
%RSD	.5194054	--	--	--	--	--	--
#1	3679	--	--	--	--	--	--
#2	3698	--	--	--	--	--	--
#3	3718	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT08X Operator: WGL
Run Time: 01/25/99 10:22:24
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11608	9110.3	27.302	5.2581	116.62	.51525	3147.2
SDev	.12669	4.0	4.382	.4012	.28	.01777	5.3
%RSD	109.14	.04394	16.049	7.6309	.24027	3.4480	.16707
#1	.26237	9108.7	24.102	4.8769	116.93	.53272	3141.3
#2	.04372	9114.9	32.296	5.6768	116.53	.49720	3151.1
#3	.04215	9107.4	25.509	5.2207	116.39	.51584	3149.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.4072	12.055	17.101	22.772	15231.	1969.2	7.0081
SDev	.0941	.392	.154	.114	13.	7.7	.0824
%RSD	2.7628	3.2555	.89826	.50069	.08750	.39224	1.1764
#1	3.3160	11.603	17.093	22.897	15217.	1963.4	7.0905
#2	3.4016	12.309	16.951	22.673	15243.	1966.3	6.9256
#3	3.5040	12.254	17.258	22.745	15234.	1978.0	7.0083
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2455.0	292.83	1.2017	152.68	9.6549	644.02	115.53
SDev	3.0	.29	1.0463	26.96	1.3979	5.27	2.87
%RSD	.12058	.10000	87.069	17.657	14.479	.81824	2.4847
#1	2451.6	292.50	2.0310	137.48	10.854	642.98	118.83
#2	2456.7	293.03	.02617	183.81	8.1193	639.34	113.67
#3	2456.8	292.98	1.5479	136.76	9.9918	649.73	114.07
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.3559	-4.1270	765.14	2.8597	45.671	435.52	10.193
SDev	3.4796	4.6295	1.56	6.1942	.055	.31	6.102
%RSD	256.63	112.18	.20390	216.61	.12127	.07185	59.866
#1	4.4953	.26669	763.40	6.7098	45.699	435.66	4.4604
#2	1.9579	-8.9609	765.61	6.1548	45.706	435.74	9.5105
#3	-2.3854	-3.6867	766.41	-4.2856	45.607	435.16	16.607
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	28.705	104.18
SDev	.105	.51
%RSD	.36568	.48536
#1	28.773	103.60
#2	28.758	104.40
#3	28.584	104.54
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3792	--	--	--	--	--	--
SDev	1.635174	--	--	--	--	--	--
%RSD	.0431259	--	--	--	--	--	--
#1	3793	--	--	--	--	--	--
#2	3790	--	--	--	--	--	--
#3	3792	--	--	--	--	--	--

Analysis Report Mon 01-25-99 10:29:14 AM page 1

S THA 1-26-99

Method: ICP3Y Sample Name: CPWT0~~P~~ Operator: WGL
Run Time: 01/25/99 10:26:03
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm MSB NC	ppm	ppm	ppm	ppm 96%	ppm 98%
Avge	3.8083	12772.	197.43	102.74	300.83	5.2926	8020.3
SDev	.2233	11.	1.32	.59	.41	.0057	17.3
%RSD	5.7145	.08483	.67023	.57715	.13719	.10687	.21540
#1	4.1509	12759.	196.83	102.07	300.66	5.2932	8022.7
#2	3.8630	12778.	196.51	102.96	301.30	5.2979	8001.9
#3	3.7112	12778.	198.94	103.19	300.52	5.2867	8036.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm 101%	ppm	ppm	ppm 90%	ppm MSB NC	ppm 99%	ppm
Avge	8.1570	59.707	37.149	44.585	15491.	6887.5	93.870
SDev	.0333	.565	.405	.095	16.	14.9	.228
%RSD	.40771	.94584	1.0911	.21340	.10254	.21592	.24262
#1	8.1954	60.223	37.616	44.493	15494.	6887.8	93.608
#2	8.1377	59.104	36.889	44.579	15474.	6902.3	94.006
#3	8.1380	59.795	36.941	44.683	15505.	6872.6	93.998
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm 96%	ppm	ppm	ppm 91%	ppm	ppm	ppm
Avge	7170.3	341.76	90.633	4740.1	55.729	1547.9	159.25
SDev	5.4	.47	2.248	71.1	.248	12.5	2.24
%RSD	.07471	.13754	2.4805	1.5005	.44412	.80915	1.4086
#1	7165.1	341.89	90.533	4796.3	55.961	1561.7	158.47
#2	7169.9	341.23	88.436	4660.1	55.757	1537.3	161.78
#3	7175.8	342.14	92.929	4763.8	55.469	1544.7	157.51
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	28.680	188.09	1169.2	166.23	138.46	617.71	204.80
SDev	2.564	3.83	1.8	3.11	.15	.41	16.43
%RSD	8.9402	2.0375	.14982	1.8705	.10753	.06654	8.0248
#1	30.974	184.36	1171.0	164.84	138.31	617.24	222.75
#2	25.912	187.89	1167.5	169.80	138.61	618.03	190.49
#3	29.153	192.01	1168.9	164.07	138.44	617.84	201.15
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm 98%
Avge	77.390	151.84
SDev	.272	.28
%RSD	.35158	.18503
#1	77.596	151.86
#2	77.082	151.54
#3	77.493	152.10
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3808	--	--	--	--	--	--
SDev	19.29763	--	--	--	--	--	--
%RSD	.5068080	--	--	--	--	--	--
#1	3794	--	--	--	--	--	--
#2	3830	--	--	--	--	--	--
#3	3799	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT4 Operator: WGL
Run Time: 01/25/99 10:29:41
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13387	8596.9	37.233	5.0860	112.65	.47891	3019.1
SDev	.11781	11.2	6.757	.3470	.20	.01928	8.6
%RSD	88.005	.13079	18.148	6.8230	.18140	4.0248	.28598
#1	.26472	8585.6	41.499	4.9984	112.86	.50117	3009.2
#2	.10066	8597.2	29.442	5.4684	112.63	.46775	3025.0
#3	.03622	8608.0	40.757	4.7912	112.46	.46781	3023.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.8973	14.738	16.051	12.749	14949.	2018.9	6.5367
SDev	.3316	.698	.030	.183	26.	21.4	.0923
%RSD	11.445	4.7393	.18539	1.4335	.17582	1.0605	1.4128
#1	2.7624	15.516	16.085	12.897	14918.	2018.9	6.5132
#2	3.2750	14.534	16.031	12.807	14961.	2040.3	6.6385
#3	2.6543	14.164	16.037	12.545	14966.	1997.4	6.4583
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2291.6	266.40	1.0045	173.91	8.5062	659.30	107.86
SDev	.9	.61	.5685	69.89	.6736	9.88	.80
%RSD	.04071	.22811	56.596	40.188	7.9191	1.4989	.73732
#1	2291.0	265.70	1.3514	198.98	8.9993	667.11	108.77
#2	2292.7	266.76	1.3137	227.81	7.7387	648.19	107.30
#3	2291.2	266.74	.34841	94.944	8.7807	662.60	107.52
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53488	-.64403	692.51	.75009	42.175	406.11	5.7461
SDev	.61893	2.64984	2.33	8.0769	.032	.14	3.0079
%RSD	115.71	411.45	.33619	1076.8	.07547	.03531	52.347
#1	1.0029	-1.0702	689.92	-3.0595	42.211	406.01	8.7621
#2	.76867	-3.0550	694.44	10.027	42.150	406.28	2.7462
#3	-.16689	2.1931	693.17	-4.7175	42.165	406.05	5.7301
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	27.042	124.75
SDev	.079	.45
%RSD	.29107	.36229
#1	27.047	124.31
#2	27.119	124.72
#3	26.962	125.21
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3817	--	--	--	--	--	--
SDev	12.21847	--	--	--	--	--	--
%RSD	.3200827	--	--	--	--	--	--
#1	3831	--	--	--	--	--	--
#2	3808	--	--	--	--	--	--
#3	3813	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT6 Operator: WGL
Run Time: 01/25/99 10:33:20
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.78400	11640.	L-17.843	9.2914	199.31	.78645	4537.1
SDev	.05733	23.	7.926	.3100	.37	.02756	19.8
%RSD	7.3123	.19809	44.420	3.3369	.18701	3.5050	.43701
#1	.84977	11614.	L-16.652	9.6033	199.68	.81404	4514.4
#2	.74467	11649.	L-26.297	8.9832	198.94	.78639	4551.2
#3	.75755	11658.	L-10.580	9.2877	199.32	.75891	4545.8
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.7405	30.955	20.278	27.723	17932.	3288.5	8.5304
SDev	.1115	.350	.096	.144	54.	12.1	.0941
%RSD	2.3518	1.1298	.47110	.52023	.30037	.36817	1.1037
#1	4.6125	31.322	20.381	27.857	17870.	3289.5	8.4357
#2	4.7927	30.626	20.263	27.570	17970.	3275.9	8.5315
#3	4.8164	30.916	20.192	27.742	17955.	3300.1	8.6240
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2957.0	358.41	.78643	253.54	11.354	1043.2	207.24
SDev	7.1	1.09	.53700	60.01	.319	9.4	2.41
%RSD	.23952	.30535	68.282	23.668	2.8109	.90287	1.1633
#1	2949.1	357.16	.68354	299.44	11.172	1032.9	207.28
#2	2959.5	359.22	1.3674	275.54	11.166	1051.4	204.81
#3	2962.6	358.84	.30833	185.64	11.722	1045.2	209.63
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.26635	.99767	2313.1	11.645	58.149	575.05	16.193
SDev	3.66905	5.7569	12.2	1.759	.093	.76	6.907
%RSD	1377.5	577.04	.52802	15.107	.16055	.13273	42.656
#1	1.6465	-4.3840	2306.7	13.657	58.212	574.66	23.774
#2	-4.4966	7.0680	2327.2	10.399	58.042	574.55	14.548
#3	2.0510	.30899	2305.4	10.878	58.194	575.92	10.256
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	32.230	272.66
SDev	.236	1.53
%RSD	.73303	.55972
#1	32.154	271.18
#2	32.041	274.23
#3	32.495	272.59

Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3710	--	--	--	--	--	--
SDev	22.56870	--	--	--	--	--	--
%RSD	.6082900	--	--	--	--	--	--
#1	3726	--	--	--	--	--	--
#2	3684	--	--	--	--	--	--
#3	3720	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT7 Operator: WGL
Run Time: 01/25/99 10:36:57
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.34963	9661.8	46.886	4.6901	119.72	.55822	2806.4
SDev	.12324	9.1	4.677	.5632	.15	.01738	8.9
%RSD	35.250	.09402	9.9745	12.008	.12891	3.1142	.31714
#1	.47296	9656.1	44.751	5.2079	119.80	.55774	2796.1
#2	.34944	9672.3	52.250	4.7720	119.82	.57584	2811.5
#3	.22648	9657.1	43.658	4.0905	119.54	.54108	2811.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0989	14.237	18.914	11.981	16141.	2339.3	7.1841
SDev	.0297	.046	.071	.118	33.	16.0	.0484
%RSD	.95927	.32566	.37288	.98259	.20643	.68235	.67316
#1	3.1328	14.204	18.974	12.111	16103.	2357.0	7.2396
#2	3.0864	14.290	18.934	11.950	16165.	2326.2	7.1512
#3	3.0775	14.217	18.836	11.882	16156.	2334.5	7.1615
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2419.6	290.20	1.7038	119.41	9.5176	640.36	75.538
SDev	7.3	.67	.0762	86.67	.2125	3.64	2.526
%RSD	.30217	.23043	4.4714	72.580	2.2328	.56800	3.3445
#1	2413.5	289.48	1.7881	196.07	9.6367	636.91	77.816
#2	2427.7	290.80	1.6399	25.367	9.2722	640.02	75.978
#3	2417.6	290.32	1.6834	136.80	9.6438	644.16	72.821
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.28767	-2.8071	1088.3	4.0068	41.603	480.07	10.988
SDev	1.66375	2.0072	9.3	4.7199	.024	.79	7.764
%RSD	578.35	71.503	.85349	117.80	.05794	.16545	70.660
#1	1.6315	-4.9957	1084.1	4.9264	41.585	479.50	17.784
#2	-1.1728	-1.0522	1098.9	-1.1052	41.631	480.98	2.5265
#3	-1.3218	-2.3735	1081.8	8.1992	41.594	479.72	12.652
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	30.489	105.83
SDev	.085	.31
%RSD	.27747	.29292
#1	30.583	105.56
#2	30.468	105.76
#3	30.418	106.17
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3804	--	--	--	--	--	--
SDev	2.794960	--	--	--	--	--	--
%RSD	.0734736	--	--	--	--	--	--
#1	3805	--	--	--	--	--	--
#2	3806	--	--	--	--	--	--
#3	3801	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CCV2 Operator: WGL
Run Time: 01/25/99 10:41:14
Comment: 9014214
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50981	4.8701	1.0406	.50983	.48653	.50787	20.835
SDev	.00091	.0274	.0117	.00366	.00044	.00060	.048
%RSD	.17857	.56174	1.1222	.71751	.09015	.11861	.22970
#1	.51000	4.8933	1.0274	.50898	.48672	.50856	20.890
#2	.50883	4.8400	1.0495	.51384	.48603	.50762	20.813
#3	.51062	4.8770	1.0449	.50667	.48685	.50743	20.802
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	1.1000	.55200	.55200	.55200	22.000
Low	.44800	4.4800	.90000	.44800	.44800	.44800	18.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52402	.52213	.51043	.49080	5.0359	97.349	4.7312
SDev	.00212	.00482	.00132	.00111	.0113	.318	.0043
%RSD	.40511	.92265	.25899	.22504	.22479	.32715	.09056
#1	.52253	.52676	.50902	.49182	5.0478	97.457	4.7320
#2	.52308	.51714	.51163	.48963	5.0348	97.599	4.7350
#3	.52645	.52249	.51065	.49094	5.0252	96.990	4.7265
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	.55200	.55200	.55200	5.5200	110.50	5.5200
Low	.44800	.44800	.44800	.44800	4.4800	89.511	4.4800

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.669	.50827	.50410	198.31	.52525	5.1094	.52564
SDev	.036	.00056	.00684	1.09	.00981	.0823	.01499
%RSD	.18475	.10983	1.3573	.54776	1.8683	1.6100	2.8521
#1	19.709	.50889	.50925	199.54	.51394	5.1886	.53902
#2	19.637	.50812	.49634	197.50	.53157	5.0244	.52847
#3	19.661	.50780	.50671	197.88	.53022	5.1153	.50944
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	22.000	.55200	.55200	220.00	.55200	5.5200	.55200
Low	17.920	.44800	.44800	180.00	.44800	4.4800	.44800

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51217	5.0499	108.44	5.1888	.49323	.49097	5.1484
SDev	.00516	.0433	.25	.0892	.00024	.00021	.1064
%RSD	1.0078	.85655	.22706	1.7189	.04930	.04339	2.0664
#1	.51064	5.0227	108.71	5.1963	.49336	.49114	5.0645
#2	.51793	5.0273	108.22	5.2740	.49295	.49073	5.1126
#3	.50796	5.0998	108.41	5.0961	.49337	.49104	5.2680
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	117.70	5.5200	.55200	.55200	5.5200

Low	.44800	4.4800	96.300	4.4800	.44800	.44800	4.4800

Elem	V	Zn
Units	ppm	ppm
Avge	.49929	.51560
SDev	.00204	.00293
%RSD	.40810	.56727
#1	.49986	.51559
#2	.49703	.51269
#3	.50099	.51854
Errors	LC Pass	LC Pass
High	.55200	.55200
Low	.44800	.44800

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3645	--	--	--	--	--	--
SDev	27.06761	--	--	--	--	--	--
%RSD	.7425550	--	--	--	--	--	--
#1	3614	--	--	--	--	--	--
#2	3656	--	--	--	--	--	--
#3	3665	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CCB2 Operator: WGL
Run Time: 01/25/99 10:45:36
Comment: 9014214
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00145	.01581	.01372	.00318	.00000	-.00072	-.00232
SDev	.00059	.01088	.02047	.00415	.00019	.00001	.00207
%RSD	40.915	68.814	149.21	130.40	1490800.	1.0115	89.302
#1	-.00158	.00566	-.00983	-.00115	.00019	-.00073	-.00471
#2	-.00080	.01447	.02374	.00357	.00000	-.00072	-.00130
#3	-.00196	.02730	.02723	.00712	-.00019	-.00071	-.00096
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.10000	.10000	.10000	.01000	.00200	.20000
Low	-.01000	-.10000	-.10000	-.10000	-.01000	-.00200	-.20000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00045	.00136	-.00114	.00026	.00424	.17200	-.00089
SDev	.00074	.00195	.00000	.00049	.00183	.13140	.00154
%RSD	163.07	143.11	.09827	192.27	43.253	76.399	173.19
#1	-.00122	-.00001	-.00114	.00083	.00318	.14607	.00089
#2	-.00040	.00359	-.00114	-.00003	.00318	.05549	-.00178
#3	.00026	.00050	-.00114	-.00003	.00636	.31443	-.00178
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.01000	.01000	.02000	.10000	5.0000	.05000
Low	-.00500	-.01000	-.01000	-.02000	-.10000	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00030	-.00017	.00255	-.11902	.00310	-.01273	.01476
SDev	.00692	.00024	.00225	.11910	.00483	.04098	.00195
%RSD	2273.9	138.22	88.181	100.06	155.79	321.96	13.201
#1	-.00617	-.00017	.00125	-.25654	.00095	.02961	.01318
#2	-.00052	-.00041	.00126	-.04897	.00864	-.01559	.01417
#3	.00760	.00007	.00515	-.05157	-.00028	-.05221	.01694
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.01000	.02000	5.0000	.04000	.30000	.05000
Low	-.20000	-.01000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01846	.00719	-.00211	.03834	-.00017	.00069	.06011
SDev	.01584	.02595	.01282	.05278	.00000	.00030	.02199
%RSD	85.833	361.23	607.42	137.68	.05741	43.392	36.584
#1	.01651	-.01109	.01106	.00789	-.00017	.00035	.03545
#2	.00368	-.00425	-.01456	.00784	-.00017	.00087	.06720
#3	.03518	.03689	-.00283	.09929	-.00017	.00087	.07768
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.01500	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	.00035	-.00728
SDev	.00149	.00152
%RSD	428.96	20.859
#1	.00166	-.00903
#2	.00066	-.00641
#3	-.00128	-.00639

Errors	LC Pass	LC Pass
High	.01000	.02000
Low	-.01000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3643	--	--	--	--	--	--
SDev	1.084370	--	--	--	--	--	--
%RSD	.0297659	--	--	--	--	--	--
#1	3643	--	--	--	--	--	--
#2	3642	--	--	--	--	--	--
#3	3644	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT8 Operator: WGL
Run Time: 01/25/99 10:49:15
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.75308	9432.5	204.64	8.3867	113.46	.51650	5371.9
SDev	.13672	11.5	6.52	.4470	.01	.00412	18.9
%RSD	18.155	.12144	3.1866	5.3304	.00785	.79761	.35221
#1	.88048	9439.0	197.12	8.0925	113.45	.52062	5382.6
#2	.77013	9439.3	208.16	8.1666	113.47	.51651	5382.9
#3	.60863	9419.3	208.65	8.9012	113.47	.51238	5350.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.4262	15.217	24.556	28.012	15024.	1732.6	6.7200
SDev	.0896	.413	.494	.072	41.	20.7	.0785
%RSD	1.3945	2.7164	2.0098	.25871	.27159	1.1928	1.1685
#1	6.3229	15.655	24.917	28.093	15053.	1729.7	6.7892
#2	6.4732	14.834	24.757	27.989	15041.	1754.6	6.6346
#3	6.4825	15.163	23.994	27.953	14977.	1713.6	6.7360
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2708.9	303.69	3.6440	270.20	10.300	1134.2	222.78
SDev	5.0	.94	.1649	56.93	.456	10.5	4.27
%RSD	.18614	.30967	4.5243	21.071	4.4286	.92581	1.9181
#1	2714.5	304.34	3.4730	317.76	9.7803	1141.3	226.43
#2	2707.2	304.12	3.8020	285.72	10.633	1122.2	223.84
#3	2704.8	302.61	3.6570	207.11	10.487	1139.2	218.08
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7188	-3.4721	995.61	1.0030	55.559	344.45	16.872
SDev	.3988	13.0349	5.02	1.9311	.040	.45	1.398
%RSD	23.199	375.42	.50458	192.54	.07163	.13008	8.2838
#1	1.8153	1.6287	1000.6	.82940	55.514	344.74	15.435
#2	1.2807	-18.286	995.60	-.83546	55.590	344.69	18.227
#3	2.0605	6.2412	990.59	3.0149	55.574	343.94	16.955
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	29.788	152.25
SDev	.115	.74
%RSD	.38696	.48872
#1	29.900	153.02
#2	29.796	152.21
#3	29.670	151.54
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3761	--	--	--	--	--	--
SDev	38.75592	--	--	--	--	--	--
%RSD	1.030343	--	--	--	--	--	--
#1	3723	--	--	--	--	--	--
#2	3761	--	--	--	--	--	--
#3	3800	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWT9 Operator: WGL
Run Time: 01/25/99 10:52:56
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.80564	9381.1	36.296	7.5054	184.12	.58579	4260.6
SDev	.11446	12.4	5.870	.1331	.17	.00052	15.7
%RSD	14.207	.13201	16.172	1.7730	.09051	.08908	.36796
#1	.93606	9367.4	31.897	7.4170	184.30	.58528	4243.6
#2	.75896	9391.4	34.030	7.4409	183.97	.58632	4274.5
#3	.72191	9384.6	42.961	7.6585	184.08	.58578	4263.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0235	16.489	18.683	40.125	15926.	2402.7	7.2449
SDev	.1935	.137	.292	.170	32.	2.5	.0512
%RSD	3.8520	.83163	1.5647	.42338	.19832	.10499	.70641
#1	5.0420	16.484	18.857	40.043	15892.	2402.5	7.2641
#2	5.2071	16.629	18.847	40.320	15954.	2405.3	7.2838
#3	4.8214	16.355	18.346	40.011	15934.	2400.3	7.1869
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2380.2	370.75	.88419	184.38	10.140	982.32	273.90
SDev	3.8	.96	.90198	56.42	.507	15.43	4.10
%RSD	.15910	.25821	102.01	30.599	5.0033	1.5713	1.4986
#1	2375.8	369.68	1.6166	149.05	10.643	998.56	271.65
#2	2382.0	371.52	1.1592	249.45	9.6285	980.57	278.64
#3	2382.7	371.05	-.12329	154.65	10.149	967.84	271.42
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.60946	-5.4835	944.14	9.5226	68.540	383.25	3.6154
SDev	3.42056	1.3692	4.84	4.7707	.049	.42	5.1419
%RSD	561.24	24.969	.51220	50.099	.07187	.11012	142.22
#1	1.6347	-5.0360	939.04	12.264	68.592	382.86	9.0647
#2	1.0832	-4.3941	948.66	12.290	68.535	383.70	2.9322
#3	-4.5463	-7.0205	944.72	4.0139	68.494	383.21	-1.1508
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	29.404	446.95
SDev	.041	1.84
%RSD	.14100	.41259
#1	29.381	444.89
#2	29.452	447.50
#3	29.379	448.45
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3787	--	--	--	--	--	--
SDev	5.153307	--	--	--	--	--	--
%RSD	.1360787	--	--	--	--	--	--
#1	3792	--	--	--	--	--	--
#2	3782	--	--	--	--	--	--
#3	3787	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTD Operator: WGL
Run Time: 01/25/99 10:56:35
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.60769	8554.5	320.06	5.7485	123.14	.45430	3252.2
SDev	.09392	6.4	7.04	.5618	.30	.00914	9.7
%RSD	15.455	.07490	2.1983	9.7736	.24322	2.0114	.29755
#1	.70799	8557.6	318.06	5.4719	123.48	.46483	3241.6
#2	.59326	8547.1	314.24	5.3785	122.91	.44953	3254.7
#3	.52182	8558.8	327.88	6.3950	123.02	.44853	3260.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.3783	11.774	37.954	17.912	14604.	2271.5	6.7023
SDev	.3071	.121	.383	.205	29.	12.9	.0695
%RSD	5.7094	1.0285	1.0092	1.1468	.19619	.56970	1.0373
#1	5.0239	11.901	37.777	18.131	14571.	2272.9	6.7671
#2	5.5646	11.764	38.393	17.724	14620.	2283.7	6.6289
#3	5.5465	11.659	37.691	17.880	14622.	2257.9	6.7109
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2211.8	285.43	.40296	155.73	9.8911	695.52	182.77
SDev	7.2	.57	.77526	12.67	.1614	10.51	1.23
%RSD	.32357	.19797	192.39	8.1366	1.6314	1.5114	.67518
#1	2206.5	284.78	-.18890	168.20	9.7127	702.23	183.30
#2	2208.9	285.71	.11725	142.86	9.9340	700.92	183.66
#3	2219.9	285.81	1.2805	156.15	10.027	683.40	181.36
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.2542	2.1771	847.48	2.3655	47.780	430.55	7.7908
SDev	2.4123	2.2644	.60	3.8123	.122	.16	5.1699
%RSD	74.128	104.01	.07124	161.16	.25536	.03823	66.358
#1	5.5447	3.4809	846.81	4.0026	47.920	430.37	3.4262
#2	3.4816	3.4880	847.63	-1.9919	47.712	430.70	6.4460
#3	.73627	-.43753	847.99	5.0857	47.707	430.56	13.500
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00
Elem	V	Zn					
Units	ppm	ppm					
Avge	27.042	129.47					
SDev	.105	.82					
%RSD	.38708	.63222					
#1	27.076	128.59					
#2	26.924	130.22					
#3	27.125	129.59					
Errors	LC Pass	LC Pass					
High	10000.	10000.					
Low	-1.0000	-2.0000					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3820	--	--	--	--	--	--
SDev	9.874319	--	--	--	--	--	--
%RSD	.2585203	--	--	--	--	--	--
#1	3831	--	--	--	--	--	--
#2	3813	--	--	--	--	--	--
#3	3815	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTE Operator: WGL
Run Time: 01/25/99 11:00:17
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.18311	9815.1	2.9826	7.1237	158.07	.58512	5148.5
SDev	.12374	10.3	3.0387	.2454	.08	.01310	16.5
%RSD	67.577	.10502	101.88	3.4452	.04869	2.2396	.32080
#1	.32295	9824.9	-.05589	7.3826	157.99	.60012	5165.0
#2	.13861	9816.0	6.0214	6.8945	158.15	.57935	5148.5
#3	.08777	9804.3	2.9823	7.0940	158.07	.57589	5131.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5807	19.223	20.306	24.446	15555.	2968.6	7.0839
SDev	.1748	.110	.106	.191	28.	7.0	.1490
%RSD	6.7729	.57438	.52222	.77964	.17727	.23582	2.1036
#1	2.4489	19.178	20.342	24.611	15579.	2962.6	7.2002
#2	2.7790	19.142	20.187	24.237	15562.	2967.0	7.1356
#3	2.5144	19.348	20.390	24.489	15525.	2976.3	6.9159
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2474.2	297.18	.76410	131.95	10.505	1838.1	113.68
SDev	5.1	.52	.31826	21.89	.355	4.4	.85
%RSD	.20678	.17338	41.651	16.589	3.3753	.23681	.75031
#1	2479.7	297.56	.48914	157.19	10.914	1843.0	113.86
#2	2469.6	297.38	1.1127	120.47	10.293	1836.6	114.42
#3	2473.3	296.59	.69042	118.19	10.307	1834.7	112.75
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.4902	-6.5887	849.27	1.1885	60.398	452.22	4.5129
SDev	2.0068	6.0816	1.94	6.2112	.032	.52	7.3634
%RSD	134.67	92.303	.22886	522.61	.05260	.11588	163.16
#1	3.2811	-3.7884	847.37	-2.1381	60.411	452.75	2.5540
#2	-.67880	-2.4118	849.19	8.3544	60.421	452.21	12.658
#3	1.8682	-13.566	851.26	-2.6509	60.362	451.71	-1.6729
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00
Elem	V	Zn					
Units	ppm	ppm					
Avge	31.125	209.02					
SDev	.280	.54					
%RSD	.89831	.25907					
#1	31.447	209.52					
#2	30.979	209.08					
#3	30.949	208.45					
Errors	LC Pass	LC Pass					
High	10000.	10000.					
Low	-1.0000	-2.0000					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3767	--	--	--	--	--	--
SDev	29.99974	--	--	--	--	--	--
%RSD	.7964359	--	--	--	--	--	--
#1	3736	--	--	--	--	--	--
#2	3769	--	--	--	--	--	--
#3	3795	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTG Operator: WGL
Run Time: 01/25/99 11:03:51
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.79700	9556.9	66.747	7.8467	188.68	.62707	4266.6
SDev	.22777	2.1	6.309	.3475	.37	.01161	4.3
%RSD	28.578	.02221	9.4515	4.4290	.19433	1.8513	.10020
#1	1.0581	9556.5	70.946	7.7039	189.07	.64033	4264.1
#2	.69406	9559.2	59.493	7.5933	188.63	.62220	4271.6
#3	.63888	9555.1	69.803	8.2429	188.34	.61870	4264.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.6636	23.894	19.068	38.798	16193.	2402.5	7.0222
SDev	.0686	.351	.163	.129	18.	21.1	.1519
%RSD	1.0289	1.4671	.85523	.33299	.10893	.87789	2.1635
#1	6.6251	23.904	19.115	38.942	16193.	2425.8	7.1811
#2	6.6228	24.240	18.887	38.763	16211.	2397.2	7.0069
#3	6.7427	23.539	19.203	38.691	16176.	2384.6	6.8784
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2353.3	373.26	.92561	140.19	10.902	954.22	282.40
SDev	2.4	.61	.32099	104.46	.694	10.34	2.06
%RSD	.10195	.16361	34.679	74.518	6.3618	1.0833	.73081
#1	2353.5	373.07	.55817	260.81	11.127	964.22	280.09
#2	2355.6	373.95	1.0672	80.516	10.124	954.86	283.08
#3	2350.8	372.77	1.1515	79.232	11.456	943.58	284.04
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6449	-4.1772	783.63	2.5104	62.272	409.96	4.8504
SDev	1.4485	2.9806	1.05	4.7316	.093	.35	2.2835
%RSD	54.765	71.354	.13401	188.47	.14983	.08598	47.078
#1	1.0802	-4.4056	784.83	-2.6092	62.378	410.32	3.5615
#2	2.9156	-7.0372	782.95	6.7223	62.236	409.93	3.5028
#3	3.9389	-1.0890	783.09	3.4182	62.202	409.62	7.4870
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00
Elem	V	Zn					
Units	ppm	ppm					
Avge	28.973	412.93					
SDev	.006	1.49					
%RSD	.02025	.36105					
#1	28.972	412.91					
#2	28.968	414.43					
#3	28.980	411.44					
Errors	LC Pass	LC Pass					
High	10000.	10000.					
Low	-1.0000	-2.0000					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3800	--	--	--	--	--	--
SDev	14.23642	--	--	--	--	--	--
%RSD	.3746789	--	--	--	--	--	--
#1	3791	--	--	--	--	--	--
#2	3792	--	--	--	--	--	--
#3	3816	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTH Operator: WGL
Run Time: 01/25/99 11:07:29
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46693	8900.1	28.333	7.6049	193.96	.57664	3723.7
SDev	.09872	6.3	9.980	.3975	.44	.01241	11.2
%RSD	21.143	.07075	35.225	5.2271	.22618	2.1523	.30200
#1	.56192	8892.9	24.053	7.4020	193.64	.59084	3726.6
#2	.36486	8902.5	39.740	7.3498	194.46	.56784	3711.3
#3	.47400	8904.8	21.207	8.0629	193.77	.57124	3733.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0226	15.868	22.539	25.126	15103.	2383.0	6.8040
SDev	.1502	.142	.231	.054	21.	14.6	.0377
%RSD	2.9908	.89607	1.0254	.21613	.13785	.61347	.55428
#1	5.1675	15.909	22.803	25.189	15110.	2386.6	6.7611
#2	4.8676	15.710	22.443	25.092	15080.	2366.9	6.8321
#3	5.0328	15.986	22.372	25.098	15120.	2395.5	6.8187
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2291.9	296.29	.50516	109.46	9.2535	792.87	227.24
SDev	4.3	.55	.41485	53.90	.2703	5.06	1.86
%RSD	.18616	.18632	82.122	49.238	2.9212	.63864	.81648
#1	2289.5	296.28	.95185	166.49	9.2724	787.48	226.12
#2	2289.3	295.74	.13196	102.54	8.9742	797.53	226.21
#3	2296.8	296.84	.43168	59.362	9.5138	793.60	229.38
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.9550	2.8436	705.45	3.2312	50.191	420.17	12.134
SDev	1.5221	1.7103	1.75	1.2446	.111	.19	8.603
%RSD	51.509	60.147	.24826	38.518	.22119	.04422	70.900
#1	1.9506	3.4906	705.25	3.9702	50.115	420.28	20.973
#2	4.7063	.90413	703.81	3.9291	50.318	420.28	11.640
#3	2.2082	4.1359	707.29	1.7943	50.140	419.96	3.7887
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	26.508	261.62
SDev	.225	.95
%RSD	.84793	.36489
#1	26.649	261.25
#2	26.249	260.90
#3	26.626	262.70
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3858	--	--	--	--	--	--
SDev	28.42602	--	--	--	--	--	--
%RSD	.7368634	--	--	--	--	--	--
#1	3834	--	--	--	--	--	--
#2	3889	--	--	--	--	--	--
#3	3849	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTJ Operator: WGL
Run Time: 01/25/99 11:11:08
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10295	8672.2	27.104	5.3281	116.62	.49953	3256.1
SDev	.07882	3.6	3.021	.1643	.33	.00924	10.7
%RSD	76.557	.04208	11.147	3.0830	.28543	1.8506	.32786
#1	.14039	8676.4	29.190	5.5100	116.82	.49305	3247.3
#2	.01239	8669.5	28.483	5.2838	116.80	.51011	3253.1
#3	.15607	8670.8	23.639	5.1906	116.24	.49542	3268.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0483	15.557	16.489	14.008	15135.	2024.5	6.6698
SDev	.1822	.103	.228	.103	21.	13.8	.0676
%RSD	5.9779	.66450	1.3837	.73370	.13717	.67935	1.0136
#1	2.9474	15.621	16.656	14.101	15121.	2016.6	6.7471
#2	3.2587	15.612	16.229	13.898	15124.	2040.4	6.6406
#3	2.9389	15.438	16.582	14.025	15159.	2016.5	6.6218
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2486.4	274.45	1.1206	104.83	9.2572	709.19	120.39
SDev	3.6	.50	.2502	44.43	.5459	7.71	.92
%RSD	.14529	.18394	22.330	42.383	5.8968	1.0874	.76316
#1	2483.9	273.99	.88006	78.455	9.4911	706.00	120.13
#2	2484.8	274.37	1.3795	156.12	8.6333	703.59	119.63
#3	2490.6	274.99	1.1022	79.903	9.6472	717.98	121.41
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.05851	-2.3233	721.16	1.9383	44.840	421.33	12.303
SDev	1.92205	4.6912	4.36	1.7474	.089	.14	2.117
%RSD	3284.9	201.92	.60428	90.151	.19766	.03367	17.204
#1	1.7338	-6.2105	718.56	1.2170	44.909	421.28	9.9558
#2	.17887	2.8875	718.72	.66704	44.870	421.49	12.886
#3	-2.0882	-3.6468	726.19	3.9309	44.740	421.23	14.067
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	28.447	89.447
SDev	.143	.179
%RSD	.50269	.20016
#1	28.475	89.410
#2	28.292	89.290
#3	28.574	89.642
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3838	--	--	--	--	--	--
SDev	19.33686	--	--	--	--	--	--
%RSD	.5038050	--	--	--	--	--	--
#1	3842	--	--	--	--	--	--
#2	3855	--	--	--	--	--	--
#3	3817	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTK Operator: WGL
Run Time: 01/25/99 11:14:45
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.21138	6531.9	45.314	7.1651	139.82	.33425	4794.8
SDev	.22412	6.5	2.630	.5173	.27	.01070	11.5
%RSD	106.03	.09901	5.8035	7.2197	.19300	3.2005	.23940
#1	.46967	6534.6	44.425	7.7325	140.09	.32791	4782.0
#2	.09620	6536.6	43.244	6.7198	139.82	.32823	4804.2
#3	.06827	6524.5	48.273	7.0429	139.55	.34660	4798.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.2988	14.797	18.021	26.312	12672.	1865.7	5.0354
SDev	.2494	.347	.058	.242	20.	56.7	.2122
%RSD	4.7066	2.3475	.32138	.91982	.15917	3.0405	4.2132
#1	5.2259	14.977	18.027	26.414	12655.	1931.0	5.2645
#2	5.5765	15.018	18.076	26.485	12694.	1836.6	4.8457
#3	5.0940	14.397	17.961	26.035	12667.	1829.4	4.9960
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1967.9	232.93	1.9512	210.09	9.3498	968.38	175.33
SDev	2.1	.34	.3231	51.25	.1876	15.34	5.47
%RSD	.10537	.14568	16.560	24.394	2.0060	1.5838	3.1174
#1	1966.9	232.55	1.6453	239.27	9.1359	966.51	169.95
#2	1970.2	233.21	1.9192	240.09	9.4860	984.57	180.88
#3	1966.5	233.02	2.2891	150.92	9.4276	954.07	175.17
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4725	-3.4337	951.19	-1.7096	49.171	311.04	5.9672
SDev	2.9182	3.3445	2.55	5.2912	.096	.10	5.9777
%RSD	118.03	97.402	.26843	309.51	.19540	.03364	100.18
#1	-.34418	-6.5405	948.42	-6.7092	49.268	311.07	1.5539
#2	2.2790	.10633	953.44	3.8315	49.169	311.13	3.5777
#3	5.4826	-3.8671	951.73	-2.2509	49.076	310.93	12.770
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	23.722	185.64
SDev	.156	.63
%RSD	.65609	.34062
#1	23.775	184.98
#2	23.844	186.24
#3	23.546	185.71
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3754	--	--	--	--	--	--
SDev	8.572266	--	--	--	--	--	--
%RSD	.2283550	--	--	--	--	--	--
#1	3755	--	--	--	--	--	--
#2	3745	--	--	--	--	--	--
#3	3762	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CPWTL Operator: WGL
Run Time: 01/25/99 11:18:23
Comment: 9014214
Mode: CONC Corr. Factor: 100

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.32733	8661.9	385.60	5.0827	127.79	.46095	2977.4
SDev	.20980	17.4	2.06	.2179	.28	.01385	13.0
%RSD	92.288	.20075	.53421	4.2865	.21918	3.0052	.43634
#1	.32675	8665.6	385.07	4.9037	128.10	.46928	2986.0
#2	.36894	8677.2	387.88	5.0191	127.55	.46860	2983.6
#3	-.01370	8643.0	383.86	5.3253	127.74	.44496	2962.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	100000.	10000.	10000.	10000.	5000.0	100000.
Low	-1.0000	-10.000	-10.000	-10.000	-1.0000	-.20000	-20.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.3983	14.788	19.471	18.964	14925.	1974.1	6.3835
SDev	.1326	.262	.186	.134	37.	30.1	.1636
%RSD	2.4563	1.7725	.95717	.70797	.25016	1.5254	2.5633
#1	5.2457	15.074	19.555	19.050	14947.	1961.2	6.4809
#2	5.4850	14.560	19.600	19.033	14947.	2008.5	6.4751
#3	5.4643	14.731	19.257	18.809	14882.	1952.5	6.1946
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	10000.	10000.	50000.	50000.	5000.0
Low	-.50000	-1.0000	-1.0000	-2.0000	-10.000	-500.00	-5.0000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2216.3	198.16	1.0544	182.82	9.6310	941.90	352.67
SDev	4.4	.72	.6173	39.21	.5150	7.76	2.50
%RSD	.19633	.36531	58.543	21.448	5.3475	.82353	.71007
#1	2216.3	198.57	1.5361	212.02	10.183	946.17	350.96
#2	2220.7	198.58	1.2684	198.18	9.1627	946.58	355.54
#3	2212.0	197.32	.35858	138.25	9.5477	932.94	351.50
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100000.	10000.	10000.	200000.	10000.	20000.	10000.
Low	-20.000	-1.0000	-2.0000	-500.00	-4.0000	-30.000	-5.0000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.1612	.19549	864.45	4.4526	42.761	403.25	8.3164
SDev	1.0689	4.1466	4.93	5.7498	.061	.48	6.2754
%RSD	14.927	2121.1	.56991	129.14	.14379	.11891	75.457
#1	8.2996	4.8350	867.21	-1.9763	42.829	403.51	14.199
#2	7.0050	-3.1494	867.37	9.1032	42.708	403.55	9.0399
#3	6.1789	-1.0991	858.76	6.2308	42.747	402.70	1.7107
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	21400.	10000.	5000.0	10000.	10000.

Low	-6.0000	-20.000	-50.000	-10.000	-5.0000	-1.5000	-200.00

Elem	V	Zn
Units	ppm	ppm
Avge	28.103	148.80
SDev	.113	.30
%RSD	.40228	.20432
#1	28.132	148.87
#2	28.199	149.06
#3	27.978	148.46
Errors	LC Pass	LC Pass
High	10000.	10000.
Low	-1.0000	-2.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3774	--	--	--	--	--	--
SDev	38.71991	--	--	--	--	--	--
%RSD	1.025935	--	--	--	--	--	--
#1	3750	--	--	--	--	--	--
#2	3753	--	--	--	--	--	--
#3	3819	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CCV3 Operator: WGL
Run Time: 01/25/99 11:22:42
Comment: 9014214
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50772	4.8522	.99316	.50979	.48697	.50853	20.826
SDev	.00342	.0072	.03685	.00201	.00110	.00029	.059
%RSD	.67422	.14871	3.7102	.39391	.22522	.05668	.28399
#1	.50380	4.8456	.97757	.50764	.48824	.50881	20.762
#2	.51010	4.8599	1.0352	.51009	.48636	.50855	20.839
#3	.50927	4.8512	.96667	.51163	.48632	.50824	20.878
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	1.1000	.55200	.55200	.55200	22.000
Low	.44800	4.4800	.90000	.44800	.44800	.44800	18.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52443	.52248	.50973	.49044	5.0214	97.520	4.7339
SDev	.00305	.00096	.00327	.00074	.0060	.127	.0257
%RSD	.58092	.18435	.64053	.15144	.11895	.13034	.54350
#1	.52100	.52354	.50763	.49043	5.0145	97.395	4.7608
#2	.52682	.52167	.50806	.48970	5.0252	97.516	4.7314
#3	.52547	.52221	.51349	.49118	5.0246	97.649	4.7096
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	.55200	.55200	.55200	5.5200	110.50	5.5200
Low	.44800	.44800	.44800	.44800	4.4800	89.511	4.4800

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.599	.50711	.50592	197.95	.52264	5.1135	.51202
SDev	.009	.00052	.00555	.67	.01257	.0572	.01016
%RSD	.04702	.10160	1.0965	.33639	2.4050	1.1177	1.9835
#1	19.590	.50741	.49955	197.30	.52926	5.0708	.50085
#2	19.599	.50651	.50975	197.91	.53052	5.1784	.52069
#3	19.609	.50740	.50845	198.63	.50814	5.0912	.51452
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	22.000	.55200	.55200	220.00	.55200	5.5200	.55200
Low	17.920	.44800	.44800	180.00	.44800	4.4800	.44800

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50282	5.0934	108.17	5.2518	.49419	.49006	5.2391
SDev	.01875	.0860	.22	.0558	.00193	.00071	.0181
%RSD	3.7287	1.6878	.20630	1.0623	.39045	.14434	.34597
#1	.52007	4.9970	107.94	5.2778	.49640	.48990	5.2592
#2	.48287	5.1210	108.19	5.2898	.49329	.49083	5.2339
#3	.50552	5.1622	108.38	5.1878	.49287	.48944	5.2241
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	117.70	5.5200	.55200	.55200	5.5200

Low	.44800	4.4800	96.300	4.4800	.44800	.44800	4.4800

Elem	V	Zn
Units	ppm	ppm
Avge	.50091	.51349
SDev	.00250	.00644
%RSD	.49889	1.2549
#1	.49809	.50620
#2	.50179	.51587
#3	.50285	.51841
Errors	LC Pass	LC Pass
High	.55200	.55200
Low	.44800	.44800

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3688	--	--	--	--	--	--
SDev	13.15619	--	--	--	--	--	--
%RSD	.3567276	--	--	--	--	--	--
#1	3701	--	--	--	--	--	--
#2	3675	--	--	--	--	--	--
#3	3689	--	--	--	--	--	--

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Method: ICP3Y Sample Name: CCB3 Operator: WGL
Run Time: 01/25/99 11:26:59
Comment: 9014214
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00021	.01095	.02315	.00317	.00019	-.00050	.00002
SDev	.00059	.00097	.02137	.00178	.00000	.00001	.00091
%RSD	288.26	8.8635	92.336	56.246	.30603	2.3512	5244.1
#1	-.00044	.01194	.00450	.00473	.00018	-.00049	-.00101
#2	.00033	.01000	.04647	.00356	.00018	-.00050	.00074
#3	.00073	.01090	.01847	.00123	.00019	-.00052	.00032
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.10000	.10000	.10000	.01000	.00200	.20000
Low	-.01000	-.10000	-.10000	-.10000	-.01000	-.00200	-.20000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00064	-.00171	-.00020	.00052	.00315	.12857	.00029
SDev	.00127	.00029	.00033	.00049	.00001	.05985	.00102
%RSD	197.77	17.015	165.51	95.116	.36365	46.549	345.31
#1	-.00165	-.00205	-.00021	-.00005	.00314	.14030	.00088
#2	.00078	-.00154	-.00053	.00080	.00314	.06372	-.00088
#3	-.00105	-.00155	.00014	.00081	.00316	.18168	.00088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.01000	.01000	.02000	.10000	5.0000	.05000
Low	-.00500	-.01000	-.01000	-.02000	-.10000	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00210	.00005	-.00228	.47568	.00646	.03565	.01866
SDev	.00801	.00001	.00456	.53566	.00335	.04483	.01248
%RSD	380.38	9.0801	200.04	112.61	51.821	125.76	66.874
#1	-.01007	.00005	-.00199	.51087	.00942	.06002	.02818
#2	-.00218	.00005	-.00698	.99288	.00715	.06301	.00453
#3	.00594	.00006	.00213	-.07670	.00282	-.01609	.02327
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.01000	.02000	5.0000	.04000	.30000	.05000
Low	-.20000	-.01000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03110	-.01309	-.01031	.04381	-.00007	.00051	.03847
SDev	.00836	.04410	.00572	.03452	.00010	.00030	.04945
%RSD	26.887	336.96	55.493	78.799	145.18	58.477	128.54
#1	.03882	.02989	-.00403	.08146	-.00001	.00034	.07679
#2	.03225	-.05824	-.01169	.03631	-.00018	.00034	.05597
#3	.02222	-.01091	-.01522	.01365	-.00001	.00086	-.01735
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.01500	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	-.00109	-.00784
SDev	.00115	.00110
%RSD	104.96	14.062
#1	-.00242	-.00657
#2	-.00053	-.00851
#3	-.00034	-.00844
Errors	LC Pass	LC Pass
High	.01000	.02000
Low	-.01000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3679	--	--	--	--	--	--
SDev	11.23938	--	--	--	--	--	--
%RSD	.3055291	--	--	--	--	--	--
#1	3686	--	--	--	--	--	--
#2	3684	--	--	--	--	--	--
#3	3666	--	--	--	--	--	--

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Method: ICP3Y Sample Name: ICSA Operator: WGL
Run Time: 01/25/99 14:17:11
Comment: 9025168
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00295	467.85	.03836	.01564	.00236	-.00012	471.55
SDev	.00074	.70	.03621	.00672	.00020	.00017	1.23
%RSD	24.978	.15003	94.396	42.935	8.3386	146.63	.26053
#1	-.00252	467.85	.03526	.02307	.00237	.00006	471.50
#2	-.00253	468.54	.07601	.01386	.00256	-.00012	472.80
#3	-.00380	467.14	.00380	.01000	.00216	-.00028	470.34
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	600.00	.10000	.10000	.02000	.00400	600.00
Low	-.02000	400.00	-.10000	-.10000	-.02000	-.00400	400.00

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00523	.00009	.00210	-.00003	175.07	.00274	.00058
SDev	.00120	.00106	.00277	.00084	.32	.11835	.00180
%RSD	22.872	1165.6	132.00	2632.2	.18292	4314.6	309.99
#1	-.00542	.00129	.00445	.00045	174.98	.07053	.00260
#2	-.00632	-.00071	-.00096	.00046	175.43	.07161	.00000
#3	-.00395	-.00030	.00281	-.00101	174.81	-.13391	-.00086
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.02000	.02000	.02000	240.00	5.0000	.05000
Low	-.01000	-.02000	-.02000	-.02000	160.00	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	503.43	.00376	-.00812	-1.5394	.00138	.00830	.00475
SDev	.59	.00036	.01525	.4293	.00932	.16178	.03920
%RSD	.11713	9.6260	187.77	27.887	674.08	1949.8	825.56
#1	503.07	.00355	.00936	-1.8694	-.00250	.19387	.04866
#2	504.11	.00356	-.01867	-1.0541	-.00537	-.10307	-.00769
#3	503.12	.00418	-.01506	-1.6949	.01202	-.06591	-.02673
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	.02000	.02000	5.0000	.04000	.30000	.05000
Low	400.00	-.02000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02414	.16319	-.01909	.01265	.01889	.00230	.40199
SDev	.00404	.05978	.00894	.09249	.00006	.00027	.11834
%RSD	16.750	36.632	46.821	731.28	.32136	11.730	29.437
#1	.02761	.09416	-.01523	.01237	.01883	.00260	.49388
#2	.02510	.19816	-.01273	-.07971	.01888	.00208	.44363
#3	.01970	.19724	-.02930	H.10528	.01895	.00221	.26847
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.15000	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	.00360	-.00957
SDev	.00077	.00047
%RSD	21.376	4.9263
#1	.00430	-.00986
#2	.00278	-.00982
#3	.00371	-.00902
Errors	LC Pass	LC Pass
High	.02000	.02000
Low	-.02000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3747	--	--	--	--	--	--
SDev	26.16868	--	--	--	--	--	--
%RSD	.6983932	--	--	--	--	--	--
#1	3737	--	--	--	--	--	--
#2	3727	--	--	--	--	--	--
#3	3777	--	--	--	--	--	--

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Method: ICP3Y Sample Name: ICSAB Operator: WGL
Run Time: 01/25/99 14:20:54
Comment: 9025168
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93933	461.55	1.8551	2.0190	.46471	.48381	463.38
SDev	.00617	.47	.1003	.0077	.00048	.00036	1.51
%RSD	.65727	.10192	5.4078	.38333	.10377	.07545	.32576
#1	.94620	461.60	1.7541	2.0203	.46453	.48421	465.10
#2	.93754	461.99	1.9548	2.0107	.46525	.48373	462.74
#3	.93425	461.05	1.8563	2.0260	.46434	.48350	462.29
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.2000	600.00	2.4000	2.4000	.60000	.60000	600.00
Low	.80000	400.00	1.5900	1.5900	.40000	.40000	400.00

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.95666	.45394	.46023	.46844	172.16	48.672	.95234
SDev	.00473	.00087	.00350	.00161	.39	.456	.00554
%RSD	.49439	.19213	.76115	.34400	.22843	.93791	.58136
#1	.96192	.45473	.46406	.46957	172.59	48.786	.94649
#2	.95276	.45301	.45720	.46914	172.06	49.060	.95749
#3	.95531	.45409	.45942	.46659	171.83	48.169	.95306
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.2000	.60000	.60000	.60000	240.00	60.000	1.2000
Low	.80000	.40000	.40000	.40000	160.00	40.000	.80000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	496.01	.45612	.90153	46.340	.91430	1.8672	.93341
SDev	.60	.00111	.00179	.899	.01224	.0812	.03627
%RSD	.12110	.24421	.19885	1.9394	1.3384	4.3474	3.8854
#1	496.44	.45723	.90333	47.299	.91942	1.9585	.93485
#2	496.26	.45612	.89975	45.516	.92315	1.8400	.96893
#3	495.32	.45500	.90150	46.205	.90034	1.8032	.89644
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	600.00	.60000	1.2000	60.000	1.2000		1.2000
Low	400.00	.40000	.80000	40.000	.80000		.80000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.90293	4.8022	20.399	9.0214	.93660	.92702	9.6837
SDev	.04681	.1419	.073	.0788	.00114	.00068	.1859
%RSD	5.1839	2.9556	.35645	.87343	.12184	.07312	1.9194
#1	.88346	4.7839	20.482	9.0384	.93571	.92686	9.7786
#2	.95632	4.9524	20.348	9.0903	.93789	.92777	9.8029
#3	.86899	4.6703	20.366	8.9355	.93621	.92644	9.4695
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.2000	6.0000	25.680	12.000	1.2000	1.2000	12.000

Low	.80000	4.0000	17.120	8.0000	.80000	.80000	8.0000

Elem	V	Zn
Units	ppm	ppm
Avge	.45480	.91678
SDev	.00062	.00458
%RSD	.13638	.49957
#1	.45552	.91571
#2	.45438	.91283
#3	.45452	.92180

Errors	LC Pass	LC Pass
High	.60000	1.2000
Low	.40000	.80000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3780	--	--	--	--	--	--
SDev	36.16110	--	--	--	--	--	--
%RSD	.9565753	--	--	--	--	--	--
#1	3739	--	--	--	--	--	--
#2	3797	--	--	--	--	--	--
#3	3805	--	--	--	--	--	--

Analysis Report Mon 01-25-99 02:28:22 PM page 1

Method: ICP3Y Sample Name: CCV6 Operator: WGL
Run Time: 01/25/99 14:25:10
Comment: 9025168
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49923	4.8355	.96234	.49566	.48687	.50560	20.182
SDev	.00024	.0044	.04328	.00809	.00088	.00081	.046
%RSD	.04906	.09097	4.4971	1.6317	.17977	.15941	.22748
#1	.49940	4.8348	.91466	.49541	.48772	.50618	20.163
#2	.49894	4.8402	.99914	.50386	.48691	.50594	20.235
#3	.49933	4.8314	.97323	.48770	.48597	.50468	20.149
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	1.1000	.55200	.55200	.55200	22.000
Low	.44800	4.4800	.90000	.44800	.44800	.44800	18.000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51163	.51355	.50319	.48922	4.9420	98.580	4.7590
SDev	.00216	.00567	.00151	.00254	.0098	.399	.0158
%RSD	.42194	1.1049	.30005	.51968	.19932	.40459	.33101
#1	.50922	.50705	.50199	.48957	4.9377	98.426	4.7571
#2	.51339	.51755	.50489	.49158	4.9533	98.281	4.7442
#3	.51228	.51603	.50269	.48653	4.9351	99.033	4.7756
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	.55200	.55200	.55200	5.5200	110.50	5.5200
Low	.44800	.44800	.44800	.44800	4.4800	89.511	4.4800

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.570	.50062	.50525	195.86	.51743	5.0421	.50055
SDev	.033	.00065	.00200	.38	.00357	.0222	.01885
%RSD	.16931	.12966	.39631	.19214	.68951	.44092	3.7655
#1	19.575	.49990	.50605	195.69	.52079	5.0603	.48881
#2	19.600	.50116	.50297	196.29	.51783	5.0487	.52229
#3	19.535	.50080	.50672	195.59	.51368	5.0174	.49054
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	22.000	.55200	.55200	220.00	.55200	5.5200	.55200
Low	17.920	.44800	.44800	180.00	.44800	4.4800	.44800

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50053	5.0659	104.77	4.9980	.48957	.49188	5.1253
SDev	.01217	.0531	.13	.0502	.00007	.00095	.1159
%RSD	2.4307	1.0483	.12718	1.0040	.01405	.19326	2.2618
#1	.48926	5.1159	104.74	4.9717	.48949	.49109	5.2566
#2	.51343	5.0716	104.92	4.9664	.48963	.49293	5.0821
#3	.49890	5.0102	104.66	5.0558	.48958	.49161	5.0371
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55200	5.5200	117.70	5.5200	.55200	.55200	5.5200

Low	.44800	4.4800	96.300	4.4800	.44800	.44800	4.4800

Elem	V	Zn
Units	ppm	ppm
Avge	.49269	.49648
SDev	.00042	.00524
%RSD	.08552	1.0548
#1	.49296	.49051
#2	.49221	.49864
#3	.49292	.50029

Errors	LC Pass	LC Pass
High	.55200	.55200
Low	.44800	.44800

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3695	--	--	--	--	--	--
SDev	14.02474	--	--	--	--	--	--
%RSD	.3795689	--	--	--	--	--	--
#1	3688	--	--	--	--	--	--
#2	3686	--	--	--	--	--	--
#3	3711	--	--	--	--	--	--

Analysis Report Mon 01-25-99 02:32:46 PM page 1

Method: ICP3Y Sample Name: CCB6 Operator: WGL
Run Time: 01/25/99 14:29:35
Comment: 9025168
Mode: CONC Corr. Factor: 1

Elem	Ag	Al	As	B	Ba	Be	Ca
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00171	.03206	-.00154	.00083	.00012	-.00033	-.03897
SDev	.00118	.01230	.03889	.00272	.00021	.00001	.00322
%RSD	69.016	38.347	2519.9	329.21	173.21	3.2654	8.2659
#1	-.00042	.02443	-.01863	.00239	.00037	-.00034	-.03834
#2	-.00197	.04625	.04296	-.00232	.00000	-.00034	-.03611
#3	-.00274	.02551	-.02896	.00241	.00000	-.00032	-.04246
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.10000	.10000	.10000	.01000	.00200	.20000
Low	-.01000	-.10000	-.10000	-.10000	-.01000	-.00200	-.20000

Elem	Cd	Co	Cr	Cu	Fe	K	Li
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00116	-.00000	-.00159	.00110	.00422	.22542	-.00029
SDev	.00070	.00355	.00050	.00050	.00183	.08338	.00051
%RSD	60.308	81999.	31.590	45.193	43.487	36.987	173.21
#1	-.00185	.00205	-.00148	.00167	.00317	.27348	.00000
#2	-.00119	.00205	-.00115	.00082	.00634	.27363	.00000
#3	-.00045	-.00410	-.00214	.00080	.00315	.12914	-.00088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.01000	.01000	.02000	.10000	5.0000	.05000
Low	-.00500	-.01000	-.01000	-.02000	-.10000	-5.0000	-.05000

Elem	Mg	Mn	Mo	Na	Ni	P	Pb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00408	.00014	.00320	-.00300	.00303	.02828	-.00626
SDev	.00114	.00028	.00635	1.00599	.00447	.06970	.01778
%RSD	28.007	197.98	198.20	33534.	147.56	246.47	283.96
#1	.00282	.00030	.00901	1.0327	.00034	.09092	-.02384
#2	.00506	-.00018	-.00357	-.06526	.00056	.04072	.01172
#3	.00436	.00030	.00417	-.97642	.00819	-.04680	-.00667
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.01000	.02000	5.0000	.04000	.30000	.05000
Low	-.20000	-.01000	-.02000	-5.0000	-.04000	-.30000	-.05000

Elem	Sb	Se	SiO2	Sn	Sr	Ti	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02809	.01639	-.01838	.06282	.00016	-.00000	.01774
SDev	.01124	.04259	.00628	.04537	.00000	.00030	.03985
%RSD	39.996	259.85	34.171	72.212	1.1870	46892.	224.60
#1	.02428	.00267	-.01700	.05916	.00016	-.00017	.03528
#2	.04074	.06416	-.01290	.01940	.00016	.00034	.04581
#3	.01926	-.01765	-.02523	.10991	.00016	-.00017	-.02787
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.06000	.20000	.50000	.10000	.05000	.01500	2.0000

Low	-.06000	-.20000	-.50000	-.10000	-.05000	-.01500	-2.0000

Elem	V	Zn
Units	ppm	ppm
Avge	-.00032	-.00712
SDev	.00106	.00070
%RSD	331.75	9.7864
#1	.00080	-.00644
#2	-.00045	-.00709
#3	-.00131	-.00783
Errors	LC Pass	LC Pass
High	.01000	.02000
Low	-.01000	-.02000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	3662	--	--	--	--	--	--
SDev	10.31037	--	--	--	--	--	--
%RSD	.2815753	--	--	--	--	--	--
#1	3656	--	--	--	--	--	--
#2	3655	--	--	--	--	--	--
#3	3674	--	--	--	--	--	--

ICPMS Standard and Spike True Values

Element	Calibration Standard	Initial Calibration Verification	Continuing Calibration Verification	Interference Check Sample A	Interference Check Sample AB	Duplicate Control Sample	Matrix Spike	Matrix Spike Duplicate	Post Digestion Spike
Antimony	100	200	100	100000 Aluminum	Solution A with required elements spiked at 100 ug/L	100	100	100	100
Arsenic	100	200	100	100000 Calcium		100	100	100	100
Barium	100	200	100	100000 Iron		100	100	100	100
Berylium	100	200	100	100000 Magnesium		100	100	100	100
Cadmium	100	200	100	100000 Sodium		100	100	100	100
Chromium	100	200	100	100000 Phosphorous		100	100	100	100
Cobalt	100	200	100	100000 Potassium		100	100	100	100
Copper	100	200	100	100000 Sulfur		100	100	100	100
Lead	100	200	100	200000 Carbon		100	100	100	100
Manganese	100	200	100	1000000 Chloride		100	100	100	100
Iron	5000	5000	5000	2000 Molybdenum		5000	5000	5000	5000
Molybdenum	100	400	100	2000 Titanium		100	100	100	100
Nickel	100	200	100			100	100	100	100
Selenium	100	200	100			100	100	100	100
Silver	100	200	100			100	100	100	100
Tin	100	200	100			100	100	100	100
Thallium	100	200	100			100	100	100	100
Uranium	100	200	100			100	100	100	100
Vanadium	100	200	100			100	100	100	100
Zinc	100	200	100			100	100	100	100

All units are in ug/L

Elan 6000 ICPMS IDL

Forth Quarter 1998

Analyte	11/17/98 SD	11/25/98 SD	12/11/98 SD	IDL	RL
Be	0.003173	0.005926	0.004861	**0.0140**	1
Al	0.037362	0.048848	0.076229	**0.1624**	50
V	0.010648	0.007003	0.011311	**0.0290**	5
Cr	0.019041	0.019143	0.021804	**0.0600**	1
Mn	0.005322	0.003507	0.003494	**0.0123**	1
Fe	1.357894	0.428796	1.21785	**3.0045**	50
Co	0.000872	0.000962	0.000621	**0.0025**	1
Ni	0.016641	0.009053	0.041204	**0.0669**	1
Cu	0.048306	0.020626	0.083967	**0.1529**	1
Zn	0.051766	0.051956	0.102599	**0.2063**	10
As	0.023543	0.03635	0.021912	**0.0818**	5
Se	0.063753	0.123541	0.072927	**0.2602**	5
Mo	0.005083	0.009488	0.002699	**0.0173**	1
Ag	0.005401	0.003904	0.00197	**0.0113**	1
Cd	0.003195	0.003322	0.001799	**0.0083**	1
Sn	0.061825	0.036971	0.020043	**0.1188**	10
Sb	0.080931	0.057883	0.031712	**0.1705**	1
Ba	0.0041	0.004183	0.004369	**0.0127**	1
Tl	0.001465	0.001523	0.000983	**0.0040**	1
Pb	0.004466	0.024925	0.006233	**0.0356**	1
U	0.00076	0.00045	0.000712	**0.0019**	1

Units are ug/L

ICPMS Standards and Spiking Solutions

Method 6020

Calibration Standards

Inorganic Ventures Cal - 1 Verification # 11691
Expires 8/99 250uL to 50mL

Inorganic Ventures Cal - 2 Verification # 11513
Expires 8/99 250uL to 50mL

Initial Calibration Verification

Spex Instrument Check Standard 1 Verification # 11505
Expires 3/99 200uL to 10mL

Spex Instrument Check Standard 4 Verification # 11506
Expires 3/99 200uL to 10mL

Spex Instrument Check Standard 5 Verification # 11507
Expires 3/99 200uL to 10mL

Quality Control Standards

QC Std. 1 = Initial Calibration Verification (ICV)

QC Std. 2 = Initial Calibration Blank (ICB)

QC Std. 3 = Continuing Calibration Verification (CCV)

QC Std. 4 = Continuing Calibration Blank (CCB)

QC Std 5 = Continuing Calibration Blank (Final)

RQC057

Quanterra Incorporated
METALS PREP LOG/BATCH SUMMARY

Run Date: 1/19/99
Time: 7:06:13

BATCH NUMBER: 9014235

PREP DATE: 1/19/99
DUE DATE 2/01/99

INITIALS: LI

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
D9A130133	CPWT0	01	X 0.51 g → 50.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWT4	01	X 0.50 g → 50.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
	CPWT4S		0.51 g → 50.0	g	g	g
	CPWT4X		0.47 g → 50.0	g	g	g
D9A130133	CPWT6	01	X 0.48 g → 50.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWT7	01	X 1.00 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWT8	01	X 0.99 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWT9	01	X 1.02 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTD	01	X 1.00 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTE	01	X 1.02 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTG	01	X 0.98 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTH	01	X 0.99 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTJ	01	X 0.99 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTK	01	X 1.03 g → 100.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A130133	CPWTL	01	X 0.51 g → 50.0	g	g	g
SOLID	TO DUE DATE:		2/01/99			
D9A140000	CQ0AKB	01	X 1.00 g → 100.0	g	g	g
SOLID	DUE DATE:		0/00/00			
	CQ0AKC		1.00 g → 100.0	g	g	g

RQC057

Quanterra Incorporated
METALS PREP LOG/BATCH SUMMARY

Run Date: 1/19/99
Time: 7:06:13

BATCH NUMBER: 9014235

PREP DATE: 1/19/99
DUE DATE 2/01/99

INITIALS: LZ

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
	CQ0AKL		1.00 g	100.0 g	g	g

LEVEL 2

BLANK AND CHECK STANDARD ON BATCH ✓
MS/MSD AND PDS ON BATCH ✓
CURVE PREPPED FOR HG
CORRECT SPIKES ADDED ✓
SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG ✓

COMMENTS:

B-BLANK/C-LCS/D-MSD/I-REANALYSIS/L-LCSD/P-SERIAL DLTN/S-MS/X-SAMP DUP/Y-SAMP CONF/Z-PDS

SPIKING WITNESSED BY

ICP ELEMENTS WITHIN THE BATCH:

AG AS BA CO CR MN NI PB SB SE TL VX

MS/MSD 1:	ICP - 1	ICP - 2	GFAA	HG	ODD
MS/MSD 2:	ICP - 1	ICP - 2	GFAA	HG	ODD
MS/MSD 3:	ICP - 1	ICP - 2	GFAA	HG	ODD
CHECK :	ICP - 1	ICP - 2	GFAA	HG	ODD
CHECK DUP:	ICP - 1	ICP - 2	GFAA	HG	ODD
STANDARD NUMBERS					

Batch - 9014235

Sop - CORP-IP-0002

Spiking Information

Verification Number	Spike amount (ul)	Expiration Date
11513	1000 for DCS 500 for MS	11/99
11691	1000 for DCS 500 for MS	11/99

Acid Lot Information

HNO3 6623KXRZ

HCl S

H2O2 5240KXHA

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-----------------------------------------------------------------------------
:       Instrument Upload                                   Run Log - Page  1 :
:       Started Wed Jan 27 14:58:27 1999 by ROBERTSD                          :
:       Data File: UPL$DEN_DATA_ROOT:<REP>012798.REP;1                        :
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#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	BLANK		27-JAN-1999	08:34			004
2	STANDARD 1		27-JAN-1999	08:38:58			004
3	QC STD 1		27-JAN-1999	08:43:39			004
4	QC STD 2		27-JAN-1999	08:48:21			004
5	ICSA		27-JAN-1999	08:53:10			004
6	ICSA		27-JAN-1999	08:59:20			004
7	BLANK		27-JAN-1999	09:03:48			004
8	QC STD 3		27-JAN-1999	09:08:32			004
9	QC STD 5		27-JAN-1999	09:13:17			004
10	CQ0AKB		27-JAN-1999	09:17:54	9014235	D9A140000	004
11	CQ0AKC		27-JAN-1999	09:22:19	9014235	D9A140000	004
12	CQ0AKL		27-JAN-1999	09:26:44	9014235	D9A140000	004
13	CPWT0		27-JAN-1999	09:31:09	9014235	D9A130133	004
14	CPWT4		27-JAN-1999	09:35:35	9014235	D9A130133	004
15	CPWT4 L		27-JAN-1999	09:40:02			004
16	CPWT4 PDS		27-JAN-1999	09:44:29			004
17	CPWT4S		27-JAN-1999	09:48:56	9014235	D9A130133	004
18	CPWT4X		27-JAN-1999	09:53:27	9014235	D9A130133	004
19	QC STD 3		27-JAN-1999	09:58:12			004
20	QC STD 4		27-JAN-1999	10:02:56			004
21	CPWT6		27-JAN-1999	10:07:25	9014235	D9A130133	004
22	CPWT7		27-JAN-1999	10:11:53	9014235	D9A130133	004
23	CPWT8		27-JAN-1999	10:16:24	9014235	D9A130133	004
24	CPWT9		27-JAN-1999	10:20:57	9014235	D9A130133	004
25	CPWTD		27-JAN-1999	10:25:30	9014235	D9A130133	004
26	CPWTE		27-JAN-1999	10:30:01	9014235	D9A130133	004
27	CPWTG		27-JAN-1999	10:34:33	9014235	D9A130133	004
28	QC STD 3		27-JAN-1999	10:39:20			004
29	QC STD 4		27-JAN-1999	10:44:04			004
30	CPWTH		27-JAN-1999	10:51:37	9014235	D9A130133	004
31	CPWTJ		27-JAN-1999	10:56:02	9014235	D9A130133	004
32	CPWTK		27-JAN-1999	11:00:28	9014235	D9A130133	004
33	CPWTL		27-JAN-1999	11:04:53	9014235	D9A130133	004
34	QC STD 3		27-JAN-1999	11:09:37			004
35	QC STD 5		27-JAN-1999	11:14:23			004
36	BLANK		27-JAN-1999	11:22:10			004
37	STANDARD 1		27-JAN-1999	11:26:37			004
38	QC STD 3		27-JAN-1999	11:31:58			004
39	QC STD 4		27-JAN-1999	11:36:43			004
40	CPWT0	5	27-JAN-1999	11:41:13	9014235	D9A130133	004
41	CPWT4	5	27-JAN-1999	11:45:37	9014235	D9A130133	004
42	CPWT4 L		27-JAN-1999	11:50:04			004
43	CPWT4 PDS		27-JAN-1999	11:54:30			004
44	CPWT4S	5	27-JAN-1999	11:58:58	9014235	D9A130133	004

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Started Wed Jan 27 14:58:28 1999 by ROBERTSD

Data File: UPL$DEN_DATA_ROOT:<REP>012798.REP;1

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	CPWT4X	5	27-JAN-1999	12:03:30	9014235	D9A130133	004
46	CPWT6	5	27-JAN-1999	12:07:58	9014235	D9A130133	004
47	CPWT7	5	27-JAN-1999	12:12:29	9014235	D9A130133	004
48	QC STD 3		27-JAN-1999	12:17:13			004
49	QC STD 4		27-JAN-1999	12:21:58			004
50	CPWT8	5	27-JAN-1999	12:26:26	9014235	D9A130133	004
51	CPWT9	10	27-JAN-1999	12:30:59	9014235	D9A130133	004
52	CPWTD	5	27-JAN-1999	12:35:32	9014235	D9A130133	004
53	CPWTE	5	27-JAN-1999	12:40:03	9014235	D9A130133	004
54	CPWTG	10	27-JAN-1999	12:44:33	9014235	D9A130133	004
55	CPWTH	10	27-JAN-1999	12:49:09	9014235	D9A130133	004
56	CPWTJ	5	27-JAN-1999	12:53:42	9014235	D9A130133	004
57	CPWTK	5	27-JAN-1999	12:58:17	9014235	D9A130133	004
58	CPWTL	10	27-JAN-1999	13:02:46	9014235	D9A130133	004
59	QC STD 3		27-JAN-1999	13:07:31			004
60	QC STD 5		27-JAN-1999	13:12:17			004

End of Report

Run continued in file 012798.REP

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:       Instrument Upload                                   Run Log - Page  1 :
:       Started Thu Jan 28 10:07:59 1999 by ROBERTSD                          :
:       Data File: UPL$DEN_DATA_ROOT:<REP>012799.REP;1                        :
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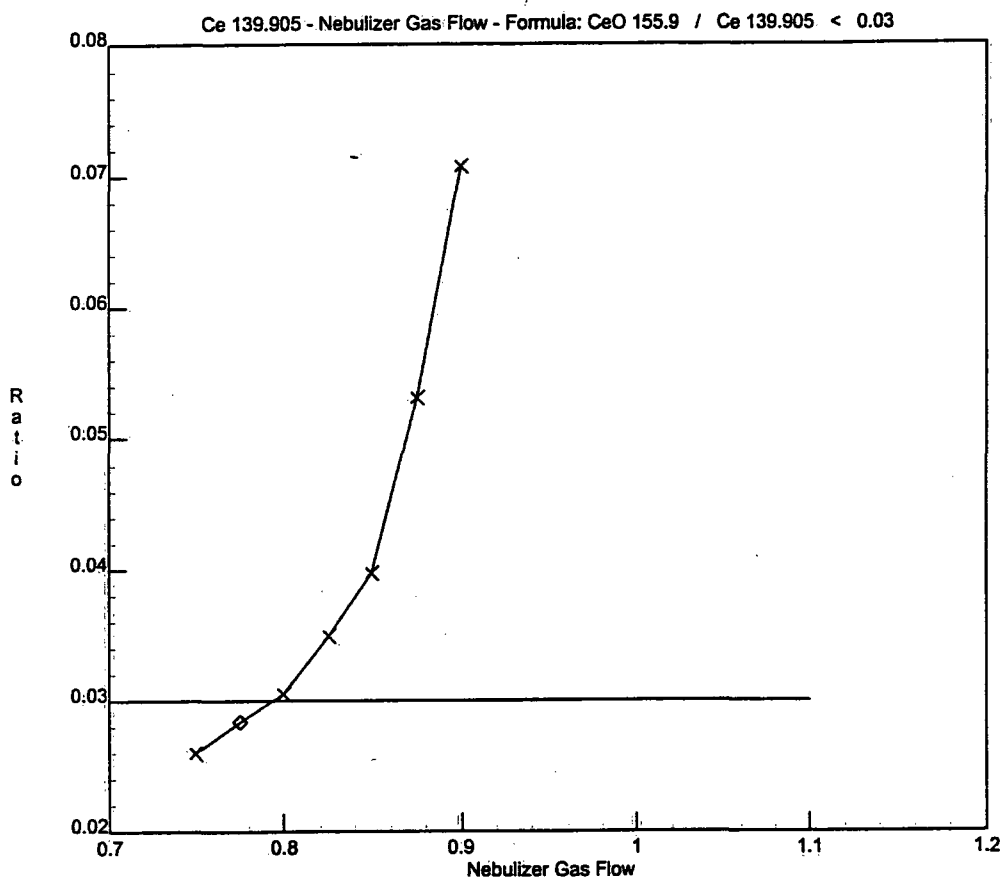
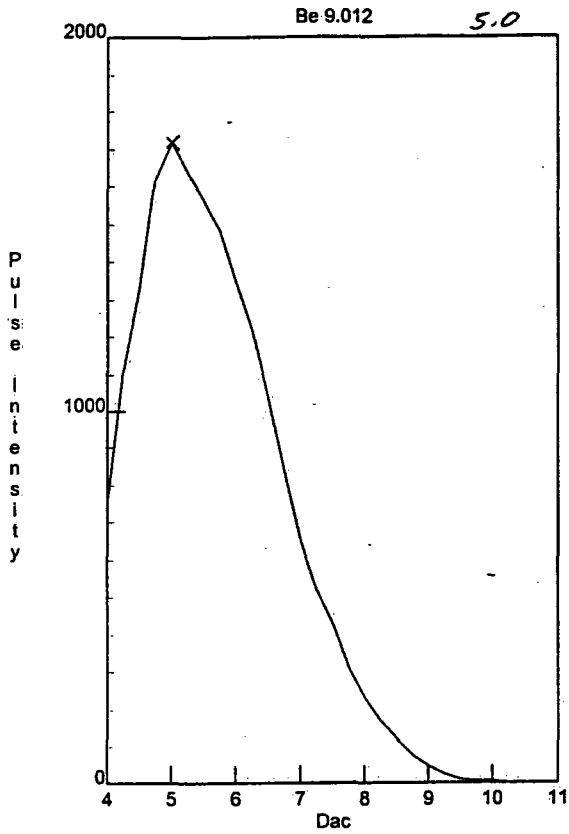
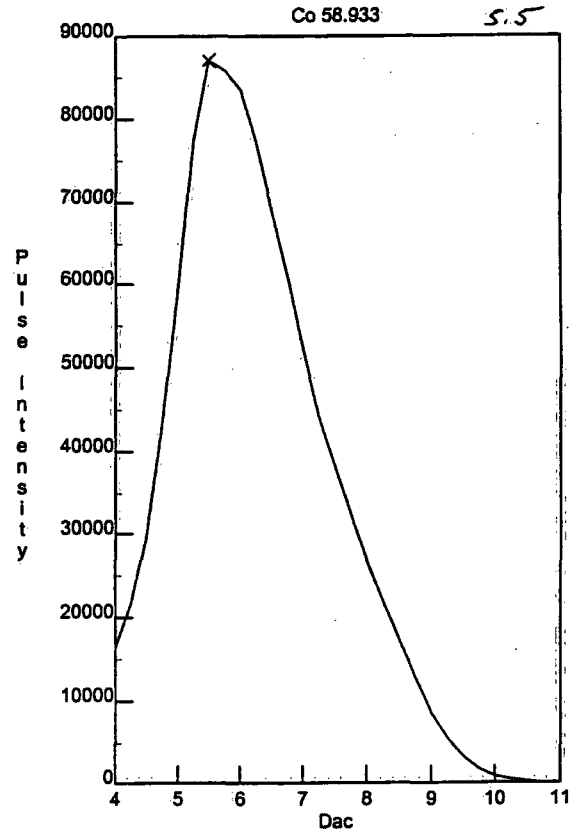
#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	BLANK		27-JAN-1999	13:17			004
2	STANDARD 1		27-JAN-1999	13:22:37			004
3	QC STD 3		27-JAN-1999	13:27:41			004
4	QC STD 4		27-JAN-1999	13:32:45			004
5	CQ46KB		27-JAN-1999	13:39:05	9021158	D9A210000	004
6	CQ46KC		27-JAN-1999	13:43:30	9021158	D9A210000	004
7	CQ46KL		27-JAN-1999	13:47:55	9021158	D9A210000	004
8	CNRGQ		27-JAN-1999	13:52:21	9021158	W14884	004
9	CNRKR		27-JAN-1999	13:56:47	9021158	W14884	004
10	CNRKX		27-JAN-1999	14:01:13	9021158	W14884	004
11	CNRL5		27-JAN-1999	14:05:39	9021158	W14884	004
12	CNRLA		27-JAN-1999	14:10:06	9021158	W14884	004
13	CNRLD		27-JAN-1999	14:14:34	9021158	W14884	004
14	QC STD 3		27-JAN-1999	14:19:18			004
15	QC STD 4		27-JAN-1999	14:24:22			004
16	CNRLF		27-JAN-1999	14:29:08	9021158	W14884	004
17	CNRLJ		27-JAN-1999	14:33:37	9021158	W14884	004
18	CNRLM		27-JAN-1999	14:38:12	9021158	W14884	004
19	CNRLP		27-JAN-1999	14:42:43	9021158	W14884	004
20	CNRLR		27-JAN-1999	14:47:18	9021158	W14884	004
21	CNRLT		27-JAN-1999	14:51:57	9021158	W14884	004
22	CNRLV		27-JAN-1999	14:56:35	9021158	W14884	004
23	CNRLX		27-JAN-1999	15:01:11	9021158	W14884	004
24	QC STD 3		27-JAN-1999	15:05:56			004
25	QC STD 4		27-JAN-1999	15:11:05			004
26	CPWRT		27-JAN-1999	15:15:59	9021158	H9A130132	004
27	CPWRW		27-JAN-1999	15:20:26	9021158	H9A130132	004
28	CPWRX		27-JAN-1999	15:24:53	9021158	H9A130132	004
29	CPWRX	L	27-JAN-1999	15:29:25			004
30	CPWRX	PDS	27-JAN-1999	15:33:53			004
31	CPWRXS		27-JAN-1999	15:38:21	9021158	H9A130132	004
32	CPWRXD		27-JAN-1999	15:42:48	9021158	H9A130132	004
33	CPWT2		27-JAN-1999	15:47:15	9021158	H9A130132	004
34	QC STD 3		27-JAN-1999	15:51:59			004
35	QC STD 5		27-JAN-1999	15:57:02			004

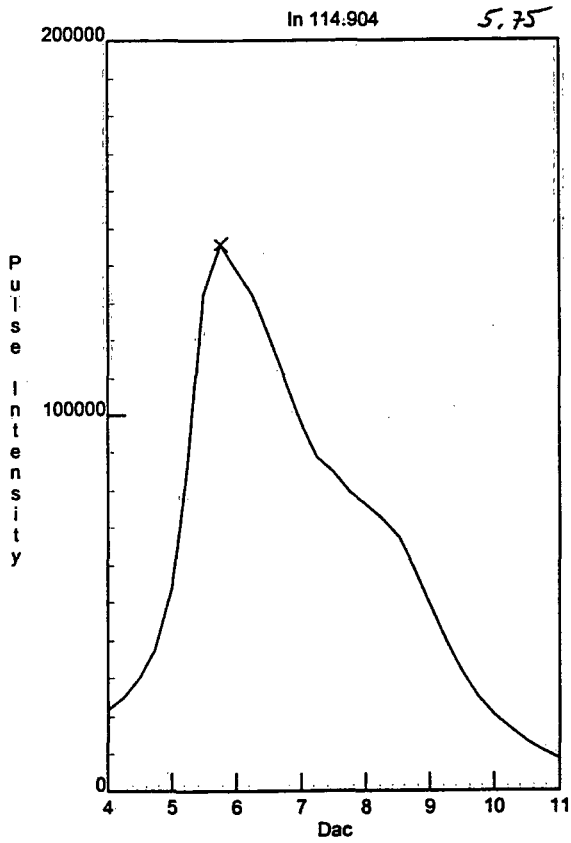
---------- End of Report ----------

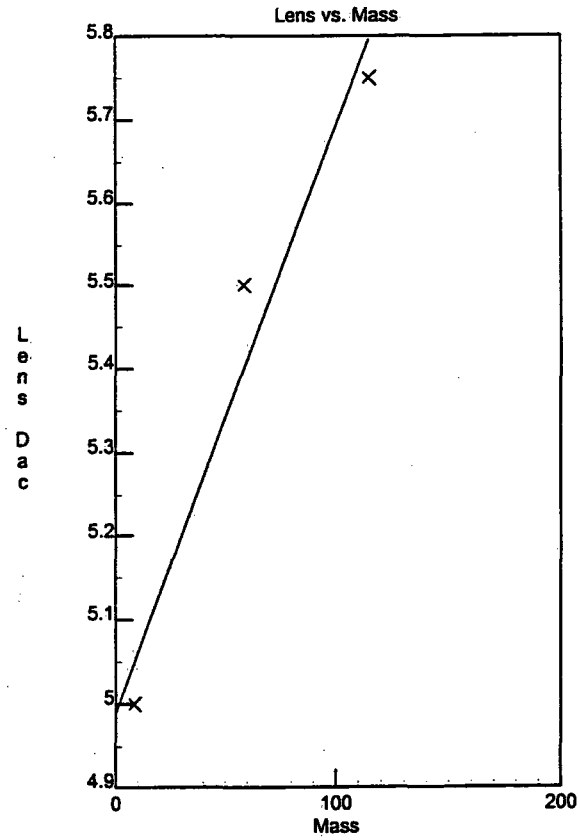

Ce 139.905 - Nebulizer Gas Flow - Formula: CeO 155.9 / Ce 139.905 < 0.03
0.08
0.07
0.06
0.05
0.04
0.03
0.02
Ratio
0.7
0.8
0.9
1
1.1
1.2
Nebulizer Gas Flow

Neb = 0.775


Be 9.012
5.0
2000
1000
0
Pulse Intensity
4
5
6
7
8
9
10
11
Dac


Co 58.933
5.5
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Pulse Intensity
4
5
6
7
8
9
10
11
Dac

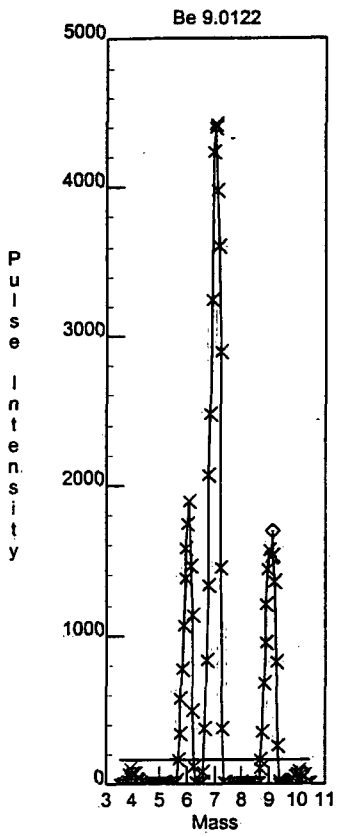

In 114.904
5.75
200000
100000
0
Pulse Intensity
4
5
6
7
8
9
10
11
Dac

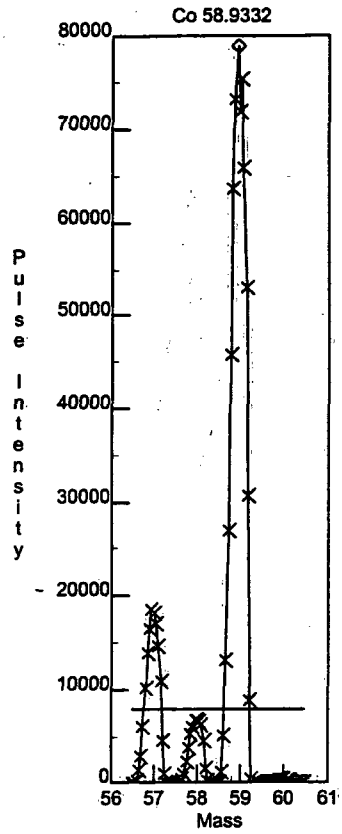

Lens vs. Mass
5.8
5.7
5.6
5.5
5.4
5.3
5.2
5.1
5
4.9
Lens Dac
0
100
200
Mass

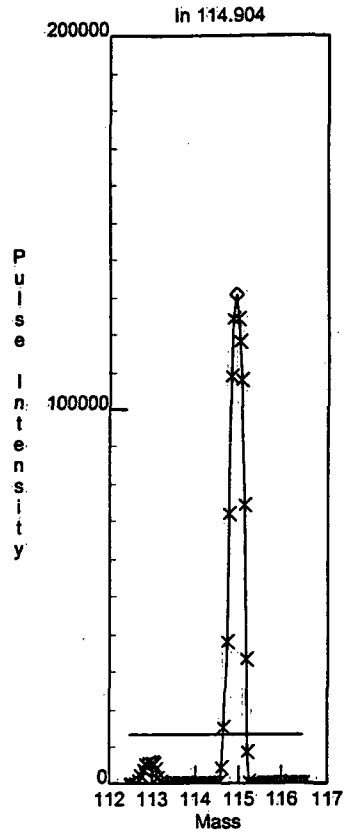
Instrument Tuning Report

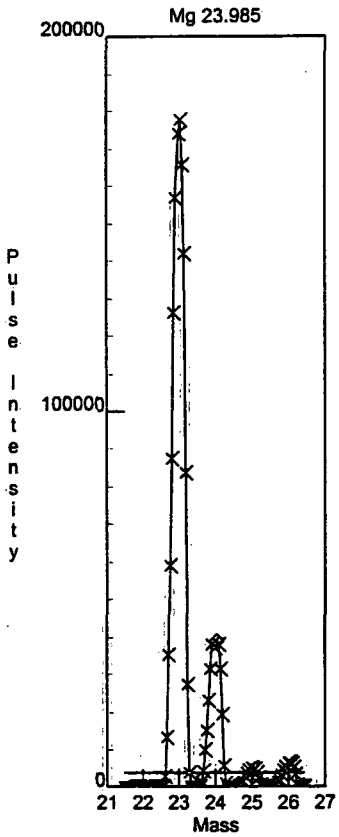
File Name: q_tune.tun
File Path: c:\elandata\Tuning

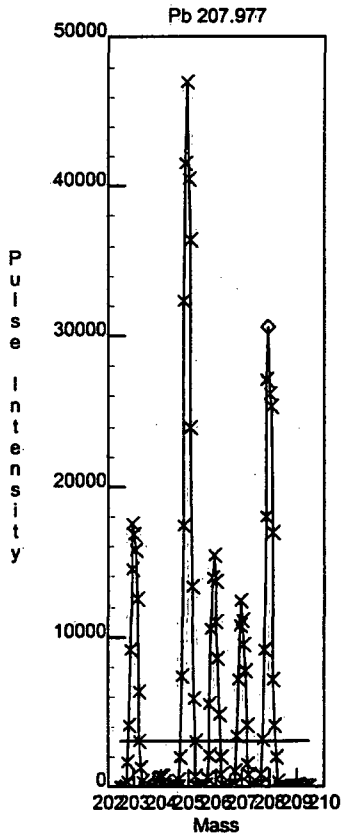
Analyte	Exact Mass	Meas. Mass	Mass DAC	Meas. Pk. Width	Res. DAC	Custom Res.
Li	7.016	7.049	1535	0.628	2164	
Be	9.012	9.099	2025	0.617	2170	
Mg	23.985	24.051	5667	0.581	2285	
Co	58.933	58.904	14161	0.584	2495	
Rh	102.905	102.900	24876	0.538	2785	
In	114.904	114.904	27814	0.547	2860	
Tl	204.975	204.954	49755	0.493	3496	
Pb	207.977	207.952	50483	0.479	3523	
U	238.050	238.054	57781	0.498	3784	

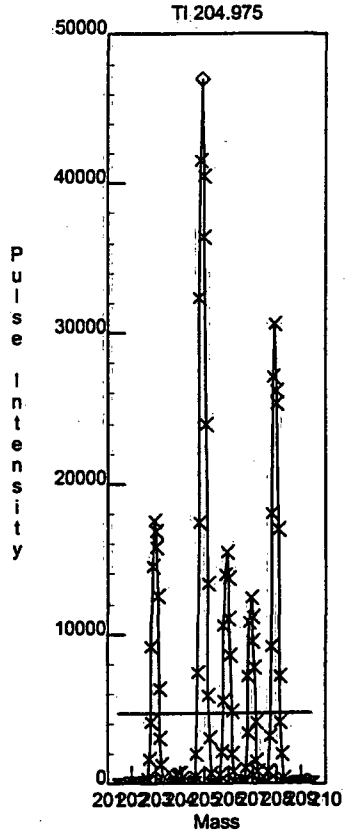

Be 9.0122
Pulse Intensity
Mass


Co 58.9332
Pulse Intensity
Mass


In 114.904
Pulse Intensity
Mass


Mg 23.985
Pulse Intensity
Mass


Pb 207.977
Pulse Intensity
Mass


Tl 204.975
Pulse Intensity
Mass

Daily Performance Report

Sample ID: CLP Tuning Solution
Sample Date/Time: Wednesday, January 27, 1999 08:21:16
Sample Description:
Sample File: C:\elandata\Sample\Daily.sam
Method File: C:\elandata\Method\Q-Daily.mth
Dataset File: C:\elandata\Dataset\012799\CLP Tuning Solution.001
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Number of Replicates: 6
Dual Detector Mode: Dual

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9	1636.427	17.777	1.086
	Mg	24	40281.268	237.715	0.590
	Rh	103	130195.659	661.091	0.508
	Pb	208	35774.796	281.282	0.786
⌈>	Ba	138	85300.755	563.084	0.660
⌊	Ba++	69	0.020	0.000	1.413
⌈>	Ce	140	93012.546	587.569	0.632
⌊	CeO	156	0.031	0.000	1.046
	Bkgd	220	4.056	1.389	34.252

Dual Detector Gains

Mass	Gain
9	10067
23	10471
27	9291
37	8907
39	8588
51	8267
52	8057
54	7701
55	7796
58	7213
59	7426
63	6924
66	6886
75	7189
82	6951
98	7390
107	6665
114	6583
115	6405
121	6685
135	6496
205	6031

208	6030
232	5991
238	5988

Method 6020 - Summary Report

Sample ID: Blank
Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 08:34:34
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\Blank.002
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	319676.163					ug/L
	Be	9	6.000					ug/L
	Al	27	7862.013					ug/L
>	Sc	45	596339.474					ug/L
	V	51	1761.886					ug/L
	Cr	52	13762.097					ug/L
	Mn	55	2117.180					ug/L
	Fe	57	17512.285					ug/L
	Co	59	289.340					ug/L
	Ni	60	442.068					ug/L
	Cu	65	947.073					ug/L
>	Ge	72	875813.048					ug/L
	Zn	68	1470.759					ug/L
	As	75	48.677					ug/L
	Se	82	12.281					ug/L
	Y	89	641013.796					ug/L
	Mo	97	170.336					ug/L
	Ag	107	122.002					ug/L
>	In	115	801836.023					ug/L
	Cd	111	25.660					ug/L
	Sn	117	161.336					ug/L
	Sb	121	734.360					ug/L
	Ba	135	40.667					ug/L
	Tb	159	529437.889					ug/L
>	Ho	165	489914.407					ug/L
	Tl	205	298.673					ug/L
	Pb	208	787.683					ug/L
	U	238	70.001					ug/L
	Bi	209	285341.754					ug/L
>	Sc	45	596339.474					ug/L
	Cr	50	499.717					ug/L
	Cr	53	4125.971					ug/L
	Ni	61	2350.884					ug/L
	Cu	63	2093.851					ug/L
	Br	79	636.354					ug/L

⌊>	Ge	74	1217758.254	ug/L
⌈	Ag	109	98.335	ug/L
⌊>	In	115	801836.023	ug/L
⌈	Pb	206	208.670	ug/L
|	Pb	207	166.669	ug/L
⌊>	Bi	209	285341.754	ug/L
	Hg	200	13.667	ug/L
	Pd	106	394.137	ug/L
	Kr	83	159.336	ug/L
	Ti	48	-1896.454	ug/L
	Ca	44	48194.008	ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72					
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115					
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165					
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45					
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74					
⌈	Ag	109					
⌊>	In	115					
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209					
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: Standard 1

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 08:38:58
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\Standard 1.003
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 2
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	312077.339	-7598.8236				ug/L
	Be	9	15565.965	0.0263				ug/L
	Al	27	359095.551	0.5932				ug/L
>	Sc	45	592187.603	592187.6033				ug/L
	V	51	662292.000	1.1154				ug/L
	Cr	52	603088.129	0.9953				ug/L
	Mn	55	1003339.258	1.6907				ug/L
	Fe	57	1036178.511	1.7204				ug/L
	Co	59	768125.474	1.2966				ug/L
	Ni	60	163721.741	0.2757				ug/L
	Cu	65	166482.602	0.2795				ug/L
>	Ge	72	889556.136	889556.1361				ug/L
	Zn	68	62301.182	0.0684				ug/L
	As	75	112114.090	0.1260				ug/L
	Se	82	11637.874	0.0131				ug/L
	Y	89	648604.937	7591.1405				ug/L
	Mo	97	131400.268	0.1627				ug/L
	Ag	107	489902.549	0.6072				ug/L
>	In	115	806611.971	806611.9714				ug/L
	Cd	111	123695.918	0.1533				ug/L
	Sn	117	111316.132	0.1378				ug/L
	Sb	121	409136.882	0.5063				ug/L
	Ba	135	79717.942	0.0988				ug/L
	Tb	159	537552.048	8114.1593				ug/L
>	Ho	165	497083.092	497083.0918				ug/L
	Tl	205	526254.430	1.0581				ug/L
	Pb	208	686795.039	1.3800				ug/L
	U	238	479233.859	0.9640				ug/L
	Bi	209	291368.932	6027.1784				ug/L
>	Sc	45	592187.603	592187.6033				ug/L
	Cr	50	26791.870	0.0444				ug/L
	Cr	53	75645.171	0.1208				ug/L
	Ni	61	9667.034	0.0060				ug/L
	Cu	63	368324.159	0.2989				ug/L
	Br	79	580.018	-0.0000				ug/L

↳	Ge	74	1225183.031	1225183.0306	ug/L
⌈	Ag	109	464724.531	0.5760	ug/L
↳	In	115	806611.971	806611.9714	ug/L
⌈	Pb	206	178819.147	0.6130	ug/L
|	Pb	207	149524.058	0.5127	ug/L
↳	Bi	209	291368.932	291368.9322	ug/L
	Hg	200	12.000	-1.6667	ug/L
	Pd	106	-142.853	-536.9896	ug/L
	Kr	83	167.003	7.6668	ug/L
	Ti	48	-1776.413	120.0417	ug/L
	Ca	44	46479.297	-1714.7105	ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72					
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115					
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165					
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45					
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74					
⌈	Ag	109					
⌊>	In	115					
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209					
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 1

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 08:43:39
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 1.004
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 9
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	312940.917	-6735.2459				ug/L
	Be	9	30967.845	0.0522	198.6246	2.4905	1.25	ug/L
	Al	27	721825.393	1.2034	202.8709	0.8618	0.42	ug/L
>	Sc	45	593336.136	593336.1358				ug/L
	V	51	1284834.092	2.1633	193.9477	4.9550	2.55	ug/L
	Cr	52	1182704.007	1.9708	198.0083	3.8310	1.93	ug/L
	Mn	55	1944065.399	3.2744	193.6692	5.7373	2.96	ug/L
	Fe	57	1003683.442	1.6630	4833.2968	156.6738	3.24	ug/L
	Co	59	1506210.541	2.5385	195.7785	2.4750	1.26	ug/L
	Ni	60	327597.138	0.5516	200.0501	5.0327	2.52	ug/L
	Cu	65	333528.218	0.5608	200.6152	7.1318	3.55	ug/L
>	Ge	72	879681.086	879681.0858				ug/L
	Zn	68	122736.914	0.1379	201.6686	3.1192	1.55	ug/L
	As	75	217961.664	0.2477	196.6251	0.5079	0.26	ug/L
	Se	82	22810.498	0.0259	198.3244	3.4417	1.74	ug/L
	Y	89	710422.100	69408.3037				ug/L
	Mo	97	533993.773	0.6696	411.5636	1.2173	0.30	ug/L
	Ag	107	921226.377	1.1554	190.2826	1.4441	0.76	ug/L
>	In	115	797224.248	797224.2484				ug/L
	Cd	111	244172.279	0.3063	199.7474	2.0547	1.03	ug/L
	Sn	117	220571.101	0.2765	200.6377	2.9936	1.49	ug/L
	Sb	121	831413.932	1.0420	205.8114	1.5347	0.75	ug/L
	Ba	135	158187.919	0.1984	200.8295	1.5284	0.76	ug/L
	Tb	159	535323.353	5885.4639				ug/L
>	Ho	165	498581.902	498581.9020				ug/L
	Tl	205	1054778.179	2.1150	199.8794	1.7916	0.90	ug/L
	Pb	208	1360294.114	2.7268	197.5895	2.3600	1.19	ug/L
	U	238	974024.226	1.9535	202.6396	2.0143	0.99	ug/L
	Bi	209	289041.214	3699.4605				ug/L
>	Sc	45	593336.136	593336.1358				ug/L
	Cr	50	62973.890	0.1053	237.2162	5.6897	2.40	ug/L
	Cr	53	146660.493	0.2403	198.8974	2.5435	1.28	ug/L
	Ni	61	16962.904	0.0119	200.3153	5.8457	2.92	ug/L
	Cu	63	731180.855	0.5960	199.3936	2.9824	1.50	ug/L
	Br	79	653.688	0.0000				ug/L

⌊>	Ge	74	1223262.983	1223262.9829				ug/L
⌈	Ag	109	872220.853	1.0940	189.9175	1.2359	0.65	ug/L
⌊>	In	115	797224.248	797224.2484				ug/L
⌈	Pb	206	358450.556	1.2395	202.2059	2.1014	1.04	ug/L
|	Pb	207	291733.378	1.0088	196.7707	0.9191	0.47	ug/L
⌊>	Bi	209	289041.214	289041.2143				ug/L
	Hg	200	14.667	1.0000				ug/L
	Pd	106	-696.709	-1090.8465				ug/L
	Kr	83	178.003	18.6671				ug/L
	Ti	48	1058445.978	1060342.4328				ug/L
	Ca	44	55635.380	7441.3728				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9	99.312				
	Al	27	101.435				
>	Sc	45		99.496			
	V	51	96.974				
	Cr	52	99.004				
	Mn	55	96.835				
	Fe	57	96.666				
	Co	59	97.889				
	Ni	60	100.025				
	Cu	65	100.308				
>	Ge	72		100.442			
	Zn	68	100.834				
	As	75	98.313				
	Se	82	99.162				
	Y	89					
	Mo	97	102.891				
	Ag	107	95.141				
>	In	115		99.425			
	Cd	111	99.874				
	Sn	117	100.319				
	Sb	121	102.906				
	Ba	135	100.415				
	Tb	159					
>	Ho	165		101.769			
	Tl	205	99.940				
	Pb	208	98.795				
	U	238	101.320				
	Bi	209					
>	Sc	45		99.496			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.452			
	Ag	109					
>	In	115		99.425			
	Pb	206					
	Pb	207					
>	Bi	209		101.297			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 2

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 08:48:21
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 2.005
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	308372.514	-11303.6483				ug/L
⌈	Be	9	10.333	0.0000	0.0290	0.0190	65.56	ug/L
|	Al	27	7737.506	0.0001	0.0090	0.0161	178.25	ug/L
|>	Sc	45	584507.714	584507.7145				ug/L
|	V	51	2242.287	0.0009	0.0790	0.0206	26.12	ug/L
|	Cr	52	13396.747	-0.0002	-0.0160	0.0283	176.95	ug/L
|	Mn	55	2044.834	-0.0001	-0.0031	0.0062	200.15	ug/L
|	Fe	57	16663.868	-0.0009	-2.4883	0.6118	24.59	ug/L
|	Co	59	298.673	0.0000	0.0020	0.0069	353.56	ug/L
|	Ni	60	480.898	0.0001	0.0294	0.0215	73.16	ug/L
⌊	Cu	65	928.124	-0.0000	-0.0001	0.0161	11575.99	ug/L
⌈>	Ge	72	871395.678	871395.6781				ug/L
|	Zn	68	1326.075	-0.0002	-0.2296	0.1290	56.20	ug/L
|	As	75	91.597	0.0001	0.0398	0.0884	222.02	ug/L
⌊	Se	82	29.041	0.0000	0.1499	0.2456	163.90	ug/L
	Y	89	633062.703	-7951.0939				ug/L
⌈	Mo	97	530.349	0.0005	0.2792	0.1079	38.66	ug/L
|	Ag	107	462.679	0.0004	0.0707	0.0188	26.55	ug/L
|>	In	115	795987.329	795987.3295				ug/L
|	Cd	111	34.273	0.0000	0.0072	0.0056	77.82	ug/L
|	Sn	117	281.339	0.0002	0.1105	0.0132	11.99	ug/L
|	Sb	121	4598.492	0.0049	0.9609	0.3279	34.13	ug/L
⌊	Ba	135	51.334	0.0000	0.0139	0.0062	44.86	ug/L
	Tb	159	539795.513	10357.6239				ug/L
⌈>	Ho	165	499451.949	499451.9487				ug/L
|	Tl	205	293.339	-0.0000	-0.0020	0.0085	417.33	ug/L
|	Pb	208	896.020	0.0002	0.0136	0.0080	58.73	ug/L
⌊	U	238	328.341	0.0005	0.0536	0.0272	50.76	ug/L
	Bi	209	289050.934	3709.1803				ug/L
⌈>	Sc	45	584507.714	584507.7145				ug/L
|	Cr	50	465.742	-0.0000	-0.0922	0.1254	136.00	ug/L
⌊	Cr	53	3392.437	-0.0011	-0.9230	0.1462	15.83	ug/L
⌈	Ni	61	2371.887	0.0000	0.6176	1.2452	201.62	ug/L
|	Cu	63	2043.167	-0.0000	-0.0084	0.0140	166.82	ug/L
|	Br	79	577.351	-0.0000				ug/L

L>	Ge	74	1206039.479	1206039.4794				ug/L
Γ	Ag	109	449.679	0.0004	0.0768	0.0235	30.61	ug/L
L>	In	115	795987.329	795987.3295				ug/L
Γ	Pb	206	228.004	0.0001	0.0094	0.0063	67.04	ug/L
|	Pb	207	197.003	0.0001	0.0191	0.0064	33.61	ug/L
L>	Bi	209	289050.934	289050.9341				ug/L
	Hg	200	14.333	0.6667				ug/L
	Pd	106	439.561	45.4237				ug/L
	Kr	83	148.669	-10.6669				ug/L
	Ti	48	-1846.079	50.3759				ug/L
	Ca	44	46122.128	-2071.8793				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		98.016			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		99.496			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		99.271			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		101.947			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		98.016			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		99.038			
⌈	Ag	109					
⌊>	In	115		99.271			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		101.300			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: ICSA

Sample Description: ICSA
Sample Date/Time: Wednesday, January 27, 1999 08:53:10
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\ICSA.006
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 6
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	281425.270	-38250.8928				ug/L
⌈	Be	9	6.667	0.0000	0.0033	0.0066	199.23	ug/L
|	Al	27	347595990.608	571.2078	96291.3706	2760.8557	2.87	ug/L
|>	Sc	45	608694.192	608694.1923				ug/L
|	V	51	-3277.957	-0.0083	-0.7479	0.0834	11.15	ug/L
|	Cr	52	63741.584	0.0816	8.2018	0.1299	1.58	ug/L
|	Mn	55	36692.769	0.0567	3.3555	0.0187	0.56	ug/L
|	Fe	57	21327634.926	35.0056	101737.9792	3095.0227	3.04	ug/L
|	Co	59	4464.409	0.0069	0.5283	0.0166	3.14	ug/L
|	Ni	60	1978.356	0.0025	0.9103	0.0534	5.86	ug/L
L	Cu	65	2057.520	0.0018	0.6406	0.0738	11.52	ug/L
⌈>	Ge	72	895610.821	895610.8214				ug/L
|	Zn	68	2395.225	0.0010	1.4565	0.0513	3.52	ug/L
|	As	75	-248.069	-0.0003	-0.2634	0.1826	69.33	ug/L
L	Se	82	-72.025	-0.0001	-0.7236	0.0985	13.61	ug/L
	Y	89	641201.844	188.0473				ug/L
⌈	Mo	97	2637851.758	3.5100	2157.3639	27.0665	1.25	ug/L
|	Ag	107	664.022	0.0007	0.1205	0.0167	13.85	ug/L
|>	In	115	751463.597	751463.5970				ug/L
|	Cd	111	197.399	0.0002	0.1507	0.0979	64.99	ug/L
|	Sn	117	306.673	0.0002	0.1502	0.0159	10.60	ug/L
|	Sb	121	6824.699	0.0082	1.6131	0.0474	2.94	ug/L
L	Ba	135	674.023	0.0008	0.8570	0.0581	6.78	ug/L
	Tb	159	517253.828	-12184.0609				ug/L
⌈>	Ho	165	480881.783	480881.7831				ug/L
|	Tl	205	201.337	-0.0002	-0.0180	0.0013	7.01	ug/L
|	Pb	208	7822.572	0.0147	1.0624	0.0235	2.21	ug/L
L	U	238	80.668	0.0000	0.0026	0.0015	58.10	ug/L
	Bi	209	259718.844	-25622.9095				ug/L
⌈>	Sc	45	608694.192	608694.1923				ug/L
|	Cr	50	-7080.555	-0.0127	-28.5057	58.8209	206.35	ug/L
L	Cr	53	31484.767	0.0448	37.0665	2.7295	7.36	ug/L
⌈	Ni	61	6221.083	0.0032	53.3920	1.7095	3.20	ug/L
|	Cu	63	10686.436	0.0071	2.3626	0.0446	1.89	ug/L
|	Br	79	8648.037	0.0066				ug/L

L>	Ge	74	1217234.104	1217234.1043				ug/L
⌈	Ag	109	646.688	0.0007	0.1281	0.0092	7.18	ug/L
L>	In	115	751463.597	751463.5970				ug/L
⌈	Pb	206	2097.842	0.0073	1.1983	0.0328	2.74	ug/L
|	Pb	207	1670.448	0.0058	1.1410	0.0406	3.56	ug/L
L>	Bi	209	259718.844	259718.8443				ug/L
	Hg	200	25.334	11.6668				ug/L
	Pd	106	-91.803	-485.9405				ug/L
	Kr	83	309.340	150.0040				ug/L
	Ti	48	11624537.828	11626434.2828				ug/L
	Ca	44	21148901.807	21100707.7998				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		102.072			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.261			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		93.718			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		98.156			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		102.072			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.957			
	Ag	109					
>	In	115		93.718			
	Pb	206					
	Pb	207					
>	Bi	209		91.020			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: ICSA B

Sample Description: ICSAB
Sample Date/Time: Wednesday, January 27, 1999 08:59:20
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\ICSA.007
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 7
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	271142.402	-48533.7604				ug/L
⌈	Be	9	14563.232	0.0238	90.7361	1.2829	1.41	ug/L
|	Al	27	331611186.849	543.1194	91556.3638	1970.6879	2.15	ug/L
|>	Sc	45	610635.261	610635.2615				ug/L
|	V	51	686286.319	1.1210	100.5049	1.4942	1.49	ug/L
|	Cr	52	658341.323	1.0550	106.0011	0.4517	0.43	ug/L
|	Mn	55	1053866.780	1.7224	101.8707	0.4832	0.47	ug/L
|	Fe	57	21247756.266	34.7660	101041.4897	369.1142	0.37	ug/L
|	Co	59	771965.038	1.2639	97.4738	1.8582	1.91	ug/L
|	Ni	60	159877.305	0.2611	94.6967	1.6639	1.76	ug/L
⌊	Cu	65	158031.835	0.2572	92.0188	1.4314	1.56	ug/L
⌈>	Ge	72	910252.049	910252.0492				ug/L
|	Zn	68	62567.350	0.0671	98.0988	1.0375	1.06	ug/L
|	As	75	115663.049	0.1270	100.8148	0.3883	0.39	ug/L
⌊	Se	82	12029.625	0.0132	101.0129	0.6060	0.60	ug/L
	Y	89	657266.134	16252.3373				ug/L
⌈	Mo	97	2705797.116	3.6880	2266.7261	4.9496	0.22	ug/L
|	Ag	107	424325.943	0.5782	95.2267	0.5953	0.63	ug/L
|>	In	115	733639.178	733639.1784				ug/L
|	Cd	111	111019.778	0.1513	98.6800	0.2866	0.29	ug/L
|	Sn	117	103548.290	0.1409	102.2796	0.4007	0.39	ug/L
|	Sb	121	386485.524	0.5259	103.8737	0.7207	0.69	ug/L
⌊	Ba	135	72829.919	0.0992	100.4501	1.3349	1.33	ug/L
	Tb	159	510826.960	-18610.9291				ug/L
⌈>	Ho	165	475087.095	475087.0954				ug/L
|	Tl	205	458709.881	0.9650	91.1943	0.8124	0.89	ug/L
|	Pb	208	606850.639	1.2758	92.4498	1.2380	1.34	ug/L
⌊	U	238	439098.580	0.9242	95.8707	1.8309	1.91	ug/L
	Bi	209	252484.546	-32857.2083				ug/L
⌈>	Sc	45	610635.261	610635.2615				ug/L
|	Cr	50	34442.362	0.0555	125.0557	13.3382	10.67	ug/L
⌊	Cr	53	105850.507	0.1664	137.7399	1.2028	0.87	ug/L
⌈	Ni	61	13301.325	0.0088	148.0542	6.3649	4.30	ug/L
|	Cu	63	356859.532	0.2867	95.9243	1.9516	2.03	ug/L
|	Br	79	7105.505	0.0052				ug/L

⌊>	Ge	74	1237291.117	1237291.1167			ug/L
⌈	Ag	109	401080.109	0.5466	94.8873	0.1369	0.14	ug/L
⌊>	In	115	733639.178	733639.1784			ug/L
⌈	Pb	206	158282.333	0.6262	102.1632	1.5011	1.47	ug/L
|	Pb	207	132221.450	0.5231	102.0419	0.6473	0.63	ug/L
⌊>	Bi	209	252484.546	252484.5456				ug/L
	Hg	200	21.000	7.3334				ug/L
	Pd	106	-452.276	-846.4128				ug/L
	Kr	83	326.007	166.6712				ug/L
	Ti	48	11395250.997	11397147.4519				ug/L
	Ca	44	20827315.888	20779121.8800				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9			90.733		
|	Al	27					
|>	Sc	45		102.397			
|	V	51			101.253		
|	Cr	52			97.799		
|	Mn	55			98.515		
|	Fe	57					
|	Co	59			96.945		
|	Ni	60			93.786		
⌊	Cu	65			91.378		
⌈>	Ge	72		103.932			
|	Zn	68			96.642		
|	As	75			101.078		
⌊	Se	82			101.736		
	Y	89					
⌈	Mo	97					
|	Ag	107			95.106		
|>	In	115		91.495			
|	Cd	111			98.529		
|	Sn	117			102.129		
|	Sb	121			102.261		
⌊	Ba	135			99.593		
	Tb	159					
⌈>	Ho	165		96.973			
|	Tl	205			91.212		
|	Pb	208			91.387		
⌊	U	238			95.868		
	Bi	209					
⌈>	Sc	45		102.397			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		101.604			
⌈	Ag	109					
⌊>	In	115		91.495			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		88.485			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: BLANK

Sample Description: Blank Following ICSAB
Sample Date/Time: Wednesday, January 27, 1999 09:03:48
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\BLANK.008
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	298267.533	-21408.6298				ug/L
	Be	9	10.333	0.0000	0.0255	0.0161	63.07	ug/L
	Al	27	33195.323	0.0408	6.8748	3.3066	48.10	ug/L
>	Sc	45	617325.261	617325.2605				ug/L
	V	51	1074.144	-0.0012	-0.1089	0.0820	75.31	ug/L
	Cr	52	14736.078	0.0008	0.0804	0.0669	83.23	ug/L
	Mn	55	5791.648	0.0059	0.3469	0.1886	54.37	ug/L
	Fe	57	21121.734	0.0049	14.1581	6.4082	45.26	ug/L
	Co	59	254.338	-0.0001	-0.0056	0.0030	53.51	ug/L
	Ni	60	513.832	0.0001	0.0331	0.0086	26.03	ug/L
	Cu	65	1060.006	0.0001	0.0464	0.0245	52.90	ug/L
>	Ge	72	911852.398	911852.3980				ug/L
	Zn	68	1536.431	0.0000	0.0087	0.0754	870.89	ug/L
	As	75	67.724	0.0000	0.0152	0.0604	397.92	ug/L
	Se	82	25.279	0.0000	0.1045	0.1840	176.07	ug/L
	Y	89	659176.961	18163.1645				ug/L
	Mo	97	1960.168	0.0023	1.4302	0.6337	44.31	ug/L
	Ag	107	267.005	0.0002	0.0318	0.0102	32.03	ug/L
>	In	115	773404.294	773404.2944				ug/L
	Cd	111	33.413	0.0000	0.0073	0.0084	115.51	ug/L
	Sn	117	193.003	0.0000	0.0351	0.0053	15.23	ug/L
	Sb	121	3661.203	0.0038	0.7555	0.3016	39.92	ug/L
	Ba	135	45.667	0.0000	0.0084	0.0083	99.40	ug/L
	Tb	159	523152.569	-6285.3200				ug/L
>	Ho	165	485235.462	485235.4618				ug/L
	Tl	205	390.676	0.0002	0.0185	0.0043	23.30	ug/L
	Pb	208	886.019	0.0002	0.0158	0.0124	78.51	ug/L
	U	238	200.004	0.0003	0.0280	0.0154	55.01	ug/L
	Bi	209	269952.039	-15389.7148				ug/L
>	Sc	45	617325.261	617325.2605				ug/L
	Cr	50	576.899	0.0001	0.2196	0.2515	114.52	ug/L
	Cr	53	6865.064	0.0042	3.4891	1.1279	32.33	ug/L
	Ni	61	2373.888	-0.0001	-0.8886	1.6552	186.27	ug/L
	Cu	63	2232.197	0.0000	0.0154	0.0304	197.40	ug/L
	Br	79	935.374	0.0002				ug/L

L>	Ge	74	1265299.061	1265299.0608				ug/L
⌈	Ag	109	247.671	0.0002	0.0344	0.0113	32.97	ug/L
L>	In	115	773404.294	773404.2944				ug/L
⌈	Pb	206	230.338	0.0001	0.0201	0.0212	105.77	ug/L
|	Pb	207	199.003	0.0002	0.0300	0.0126	41.93	ug/L
L>	Bi	209	269952.039	269952.0390				ug/L
	Hg	200	12.333	-1.3333				ug/L
	Pd	106	364.363	-29.7745				ug/L
	Kr	83	159.669	0.3333				ug/L
	Ti	48	811.807	2708.2612				ug/L
	Ca	44	47957.908	-236.0995				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		103.519			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		104.115			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		96.454			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		99.045			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		103.519			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		103.904			
⌈	Ag	109					
⌊>	In	115		96.454			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		94.607			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 09:08:32
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.009
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	298794.429	-20881.7334				ug/L
	Be	9	15221.593	0.0251	95.4071	3.2014	3.36	ug/L
	Al	27	359735.360	0.5794	97.6760	1.6347	1.67	ug/L
>	Sc	45	607113.132	607113.1322				ug/L
	V	51	690250.287	1.1340	101.6694	0.7215	0.71	ug/L
	Cr	52	620323.042	0.9988	100.3465	1.1465	1.14	ug/L
	Mn	55	1043628.642	1.7155	101.4676	0.7013	0.69	ug/L
	Fe	57	1052268.078	1.7040	4952.2457	32.6785	0.66	ug/L
	Co	59	782162.598	1.2878	99.3233	0.8998	0.91	ug/L
	Ni	60	165910.234	0.2726	98.8533	1.5235	1.54	ug/L
	Cu	65	166927.893	0.2734	97.7942	0.9399	0.96	ug/L
>	Ge	72	916053.588	916053.5881				ug/L
	Zn	68	63316.642	0.0674	98.6557	0.3713	0.38	ug/L
	As	75	114997.850	0.1255	99.6003	0.1803	0.18	ug/L
	Se	82	11910.973	0.0130	99.3886	1.3051	1.31	ug/L
	Y	89	674485.597	33471.8010				ug/L
	Mo	97	133245.857	0.1687	103.6789	0.8716	0.84	ug/L
	Ag	107	481546.576	0.6102	100.4979	0.8304	0.83	ug/L
>	In	115	788946.864	788946.8641				ug/L
	Cd	111	121249.687	0.1537	100.2190	0.3789	0.38	ug/L
	Sn	117	108643.640	0.1375	99.7902	1.0224	1.02	ug/L
	Sb	121	401304.962	0.5077	100.2894	0.1947	0.19	ug/L
	Ba	135	76862.668	0.0974	98.5777	0.6445	0.65	ug/L
	Tb	159	526982.842	-2455.0474				ug/L
>	Ho	165	489365.642	489365.6419				ug/L
	Tl	205	500357.351	1.0219	96.5716	0.7677	0.79	ug/L
	Pb	208	656408.976	1.3397	97.0806	0.4977	0.51	ug/L
	U	238	460619.286	0.9411	97.6221	0.6759	0.69	ug/L
	Bi	209	277215.436	-8126.3181				ug/L
>	Sc	45	607113.132	607113.1322				ug/L
	Cr	50	28016.146	0.0453	102.0418	1.0481	1.03	ug/L
	Cr	53	78614.552	0.1226	101.4668	2.9039	2.86	ug/L
	Ni	61	9746.088	0.0057	96.4533	2.5328	2.63	ug/L
	Cu	63	365562.954	0.2863	95.7736	0.7450	0.78	ug/L
	Br	79	654.022	-0.0000				ug/L

⌊>	Ge	74	1269297.193	1269297.1927				ug/L
⌈	Ag	109	454273.385	0.5757	99.9401	0.2554	0.26	ug/L
⌊>	In	115	788946.864	788946.8641				ug/L
⌈	Pb	206	170293.702	0.6136	100.1038	1.4245	1.42	ug/L
|	Pb	207	143281.442	0.5163	100.7061	0.6327	0.63	ug/L
⌊>	Bi	209	277215.436	277215.4358				ug/L
	Hg	200	15.000	1.3333				ug/L
	Pd	106	68.653	-325.4841				ug/L
	Kr	83	183.670	24.3339				ug/L
	Ti	48	-1200.057	696.3977				ug/L
	Ca	44	43739.304	-4454.7037				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9	95.407				
|	Al	27	97.676				
|>	Sc	45		101.807			
|	V	51	101.669				
|	Cr	52	100.346				
|	Mn	55	101.468				
|	Fe	57	99.045				
|	Co	59	99.323				
|	Ni	60	98.853				
⌊	Cu	65	97.794				
⌈>	Ge	72		104.595			
|	Zn	68	98.656				
|	As	75	99.600				
⌊	Se	82	99.389				
	Y	89					
⌈	Mo	97	103.679				
|	Ag	107	100.498				
|>	In	115		98.393			
|	Cd	111	100.219				
|	Sn	117	99.790				
|	Sb	121	100.289				
⌊	Ba	135	98.578				
	Tb	159					
⌈>	Ho	165		99.888			
|	Tl	205	96.572				
|	Pb	208	97.081				
⌊	U	238	97.622				
	Bi	209					
⌈>	Sc	45		101.807			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		104.232			
⌈	Ag	109					
⌊>	In	115		98.393			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		97.152			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 5

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 09:13:17
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 5.010
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	299524.972	-20151.1906				ug/L
⌈	Be	9	9.333	0.0000	0.0203	0.0215	106.26	ug/L
|	Al	27	15469.534	0.0124	2.0826	0.1172	5.63	ug/L
|>	Sc	45	605646.639	605646.6392				ug/L
|	V	51	2022.353	0.0004	0.0345	0.0181	52.51	ug/L
|	Cr	52	13903.235	-0.0001	-0.0119	0.0444	372.05	ug/L
|	Mn	55	2256.534	0.0002	0.0104	0.0074	70.71	ug/L
|	Fe	57	19022.259	0.0020	5.9513	2.4157	40.59	ug/L
|	Co	59	269.005	-0.0000	-0.0031	0.0035	110.13	ug/L
|	Ni	60	490.689	0.0001	0.0251	0.0139	55.40	ug/L
⌊	Cu	65	954.348	-0.0000	-0.0044	0.0258	586.66	ug/L
⌈>	Ge	72	907241.868	907241.8681				ug/L
|	Zn	68	1354.745	-0.0002	-0.2726	0.1325	48.59	ug/L
|	As	75	-16.216	-0.0001	-0.0579	0.0522	90.07	ug/L
⌊	Se	82	-7.490	-0.0000	-0.1706	0.1256	73.60	ug/L
	Y	89	664703.895	23690.0987				ug/L
⌈	Mo	97	456.679	0.0004	0.2240	0.0422	18.86	ug/L
|	Ag	107	322.674	0.0003	0.0420	0.0178	42.41	ug/L
|>	In	115	791786.563	791786.5635				ug/L
|	Cd	111	26.420	0.0000	0.0009	0.0039	445.70	ug/L
|	Sn	117	343.674	0.0002	0.1690	0.0336	19.86	ug/L
|	Sb	121	4396.413	0.0046	0.9158	0.2619	28.60	ug/L
⌊	Ba	135	44.667	0.0000	0.0057	0.0116	201.86	ug/L
	Tb	159	534190.533	4752.6439				ug/L
⌈>	Ho	165	494081.024	494081.0243				ug/L
|	Tl	205	259.338	-0.0001	-0.0080	0.0069	85.70	ug/L
|	Pb	208	864.019	0.0001	0.0102	0.0041	39.80	ug/L
⌊	U	238	199.003	0.0003	0.0270	0.0101	37.53	ug/L
	Bi	209	279384.004	-5957.7500				ug/L
⌈>	Sc	45	605646.639	605646.6392				ug/L
|	Cr	50	497.733	-0.0000	-0.0360	0.1269	352.10	ug/L
⌊	Cr	53	4188.324	-0.0000	-0.0007	0.3556	49191.76	ug/L
⌈	Ni	61	2414.562	-0.0000	-0.1447	0.4951	342.24	ug/L
|	Cu	63	2080.839	-0.0001	-0.0213	0.0164	77.08	ug/L
|	Br	79	591.685	-0.0001				ug/L

⌊>	Ge	74	1256377.801	1256377.8007				ug/L
⌈	Ag	109	289.673	0.0002	0.0422	0.0131	30.97	ug/L
⌊>	In	115	791786.563	791786.5635				ug/L
⌈	Pb	206	227.671	0.0001	0.0137	0.0086	62.64	ug/L
⌊	Pb	207	198.337	0.0001	0.0245	0.0058	23.57	ug/L
⌊>	Bi	209	279384.004	279384.0038				ug/L
	Hg	200	14.000	0.3333				ug/L
	Pd	106	408.341	14.2037				ug/L
	Kr	83	171.336	12.0003				ug/L
	Ti	48	-1389.141	507.3131				ug/L
	Ca	44	44145.216	-4048.7912				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		101.561			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.589			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		98.747			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		100.850			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		101.561			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		103.171			
	Ag	109					
>	In	115		98.747			
	Pb	206					
	Pb	207					
>	Bi	209		97.912			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: CQ0AKB Blank

Sample Description: 9014235 Soils
Sample Date/Time: Wednesday, January 27, 1999 09:17:54
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CQ0AKB.011
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 24
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	313248.223	-6427.9391				~~ug/L~~ µg/L
	Be	9	7.000	0.0000	0.5020	0.5570	110.95	ug/L
	Al	27	11018.692	0.0048	80.1335	2.4353	3.04	ug/L
>	Sc	45	614316.683	614316.6828				ug/L
	V	51	2692.551	0.0014	12.8412	4.0289	31.37	ug/L
	Cr	52	16689.245	0.0041	41.1613	7.0766	17.19	ug/L
	Mn	55	3983.262	0.0029	17.3537	0.1731	1.00	ug/L
	Fe	57	19760.899	0.0028	817.2238	260.3341	31.86	ug/L
	Co	59	196.337	-0.0002	-1.2779	0.0818	6.40	ug/L
	Ni	60	650.525	0.0003	11.5224	0.2048	1.78	ug/L
	Cu	65	1267.829	0.0005	17.0510	3.3262	19.51	ug/L
>	Ge	72	906738.592	906738.5921				ug/L
	Zn	68	1050.383	-0.0005	-75.9770	24.7145	32.53	ug/L
	As	75	34.046	-0.0000	-1.4298	6.3283	442.59	ug/L
	Se	82	-14.855	-0.0000	-23.0496	33.5840	145.70	ug/L
	Y	89	666364.083	25350.2866				ug/L
	Mo	97	219.337	0.0001	4.2759	0.8843	20.68	ug/L
	Ag	107	108.001	-0.0000	-0.2181	0.3648	167.26	ug/L
>	In	115	777856.852	777856.8519				ug/L
	Cd	111	12.895	-0.0000	-1.0064	0.5392	53.57	ug/L
	Sn	117	2189.857	0.0026	189.6890 - NR	7.0277	3.70	ug/L
	Sb	121	1163.726	0.0006	11.4754	4.2471	37.01	ug/L
	Ba	135	359.675	0.0004	41.6821	2.9440	7.06	ug/L
	Tb	159	531582.327	2144.4377				ug/L
>	Ho	165	494451.731	494451.7311				ug/L
	Tl	205	130.669	-0.0003	-3.2629	0.1645	5.04	ug/L
	Pb	208	766.349	-0.0001	-0.4227	0.4071	96.32	ug/L
	U	238	61.001	-0.0000	-0.2024	0.2001	98.86	ug/L
	Bi	209	279104.262	-6237.4914				ug/L
>	Sc	45	614316.683	614316.6828				ug/L
	Cr	50	655.225	0.0002	51.6305	11.3241	21.93	ug/L
	Cr	53	3996.266	-0.0004	-33.9539	23.2515	68.48	ug/L
	Ni	61	2417.229	-0.0000	-37.7665	66.4282	175.89	ug/L
	Cu	63	2737.290	0.0004	14.7683	2.2161	15.01	ug/L
	Br	79	1093.386	0.0003				ug/L

⌊>	Ge	74	1267145.798	1267145.7978				ug/L
⌈	Ag	109	86.001	-0.0000	-0.2093	0.1261	60.27	ug/L
⌊>	In	115	777856.852	777856.8519				ug/L
⌈	Pb	206	188.003	-0.0001	-0.9432	0.4716	50.00	ug/L
|	Pb	207	176.670	0.0000	0.9510	0.9157	96.30	ug/L
⌊>	Bi	209	279104.262	279104.2624				ug/L
	Hg	200	11.000	-2.6667				ug/L
	Pd	106	404.041	9.9040				ug/L
	Kr	83	175.003	15.6670				ug/L
	Ti	48	-946.810	949.6449				ug/L
	Ca	44	63743.872	15549.8648				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		103.015			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.531			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		97.009			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		100.926			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		103.015			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		104.056			
	Ag	109					
>	In	115		97.009			
	Pb	206					
	Pb	207					
>	Bi	209		97.814			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: CQ0AKC DCS

Sample Description: 9014235 Soils
Sample Date/Time: Wednesday, January 27, 1999 09:22:19
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CQ0AKC.012
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 25
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	312801.222	-6874.9408				~~ug/L~~ µg/L
	Be	9	31599.561	0.0515	19582.8279	497.4167	2.54	ug/L
	Al	27	749420.865	1.2072	20349.7189	226.2853	1.11	ug/L
>	Sc	45	614193.088	614193.0881				ug/L
	V	51	1405273.707	2.2851	20486.5741	163.6105	0.80	ug/L
	Cr	52	1267580.724	2.0406	20501.9632	224.8090	1.10	ug/L
	Mn	55	2188155.422	3.5588	21049.1592	230.9411	1.10	ug/L
	Fe	57	20618.693	0.0042	1225.4050	278.1081	22.70	ug/L
	Co	59	1576738.565	2.5671	19798.6686	420.3944	2.12	ug/L
	Ni	60	335454.088	0.5455	19782.7273	142.8142	0.72	ug/L
	Cu	65	337133.774	0.5475	19585.3849	517.5559	2.64	ug/L
>	Ge	72	902420.609	902420.6091				ug/L
	Zn	68	119611.190	0.1309	19144.1058	12.5078	0.07	ug/L
	As	75	230993.546	0.2559	20313.9346	113.5251	0.56	ug/L
	Se	82	23290.043	0.0258	19738.0558	191.2460	0.97	ug/L
	Y	89	662873.451	21859.6542				ug/L
	Mo	97	272163.947	0.3499	21504.1601	213.7880	0.99	ug/L
	Ag	107	986377.440	1.2686	20892.5961	86.8819	0.42	ug/L
>	In	115	777446.368	777446.3677				ug/L
	Cd	111	238616.754	0.3069	20016.5416	64.8521	0.32	ug/L
	Sn	117	2929.663	0.0036	258.9172	10.7416	4.15	ug/L
	Sb	121	815520.462	1.0481	20701.5343	95.9768	0.46	ug/L
	Ba	135	159215.927	0.2048	20728.8841	279.5924	1.35	ug/L
	Tb	159	535106.608	5668.7185				ug/L
>	Ho	165	496610.697	496610.6968				ug/L
	Tl	205	1018899.819	2.0511	19384.3221	152.8332	0.79	ug/L
	Pb	208	1356944.688	2.7308	19787.9100	50.2589	0.25	ug/L
	U	238	952903.494	1.9187	19903.1359	191.1724	0.96	ug/L
	Bi	209	280675.004	-4666.7498				ug/L
>	Sc	45	614193.088	614193.0881				ug/L
	Cr	50	57058.505	0.0921	20735.9821	313.6682	1.51	ug/L
	Cr	53	157792.943	0.2500	20691.2406	343.5114	1.66	ug/L
	Ni	61	17205.862	0.0117	19641.9086	498.2604	2.54	ug/L
	Cu	63	744614.245	0.5884	19683.3348	226.4879	1.15	ug/L
	Br	79	1153.725	0.0004				ug/L

TV = 20,000 µg/Kg

L>	Ge	74	1261956.340	1261956.3404				ug/L
Γ	Ag	109	929345.748	1.1953	20750.0822	16.6604	0.08	ug/L
L>	In	115	777446.368	777446.3677				ug/L
Γ	Pb	206	353593.537	1.2592	20541.2589	296.7564	1.44	ug/L
|	Pb	207	295235.980	1.0513	20507.3532	191.9784	0.94	ug/L
L>	Bi	209	280675.004	280675.0040				ug/L
	Hg	200	15.667	2.0000				ug/L
	Pd	106	-476.647	-870.7837				ug/L
	Kr	83	164.336	5.0001				ug/L
	Ti	48	-143.873	1752.5810				ug/L
	Ca	44	87787.450	39593.4426				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		102.994			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		103.038			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		96.958			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		101.367			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		102.994			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		103.629			
⌈	Ag	109					
⌊>	In	115		96.958			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		98.365			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: CQ0AKL DCS

Sample Description: 9014235 Soils
Sample Date/Time: Wednesday, January 27, 1999 09:26:44
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CQ0AKL.013
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 26
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	311114.933	-8561.2296				~~ug/L~~ µg/kg
	Be	9	32042.554	0.0523	19900.1570	115.1588	0.58	ug/L
	Al	27	759510.669	1.2265	20674.9272	360.1480	1.74	ug/L
>	Sc	45	612713.176	612713.1764				ug/L
	V	51	1428767.840	2.3297	20886.4603	568.5341	2.72	ug/L
	Cr	52	1288793.283	2.0811	20909.3255	755.3533	3.61	ug/L
	Mn	55	2220565.539	3.6214	21418.9845	373.9424	1.75	ug/L
	Fe	57	19967.797	0.0032	941.5031	405.8917	43.11	ug/L
	Co	59	1585175.355	2.5873	19954.5372	443.6810	2.22	ug/L
	Ni	60	333611.531	0.5439	19727.0469	574.6901	2.91	ug/L
	Cu	65	338748.877	0.5514	19723.3221	237.7745	1.21	ug/L
>	Ge	72	894517.579	894517.5791				ug/L
	Zn	68	119914.709	0.1324	19366.3592	184.8545	0.95	ug/L
	As	75	229740.369	0.2568	20382.8468	145.9132	0.72	ug/L
	Se	82	23179.096	0.0259	19817.1129	73.9655	0.37	ug/L
	Y	89	659512.447	18498.6510				ug/L
	Mo	97	270447.091	0.3537	21738.4334	107.3176	0.49	ug/L
	Ag	107	1000780.493	1.3094	21563.6887	142.9555	0.66	ug/L
>	In	115	764211.317	764211.3172				ug/L
	Cd	111	237066.517	0.3102	20232.4116	264.9786	1.31	ug/L
	Sn	117	3384.102	0.0042	306.8321	13.6045	4.43	ug/L
	Sb	121	810235.627	1.0593	20923.9447	134.9717	0.65	ug/L
	Ba	135	158867.741	0.2078	21041.1161	147.0143	0.70	ug/L
	Tb	159	530673.668	1235.7784				ug/L
>	Ho	165	498311.308	498311.3078				ug/L
	Tl	205	1030646.669	2.0677	19540.5950	17.1307	0.09	ug/L
	Pb	208	1364580.713	2.7368	19831.6137	43.7452	0.22	ug/L
	U	238	964305.605	1.9350	20072.4005	172.7021	0.86	ug/L
	Bi	209	276335.830	-9005.9236				ug/L
>	Sc	45	612713.176	612713.1764				ug/L
	Cr	50	58337.797	0.0944	21257.1748	331.1700	1.56	ug/L
	Cr	53	158649.683	0.2521	20864.7726	527.9061	2.53	ug/L
	Ni	61	17286.626	0.0120	20104.4032	274.9053	1.37	ug/L
	Cu	63	745584.137	0.5983	20015.3403	160.0486	0.80	ug/L
	Br	79	1260.735	0.0005				ug/L

TV = 20,000 µg/kg

⌊>	Ge	74	1242631.124	1242631.1237				ug/L
⌈	Ag	109	938106.576	1.2275	21309.3213	164.0607	0.77	ug/L
⌊>	In	115	764211.317	764211.3172				ug/L
⌈	Pb	206	355310.848	1.2851	20964.3854	141.3484	0.67	ug/L
|	Pb	207	298004.104	1.0778	21024.6597	79.1317	0.38	ug/L
⌊>	Bi	209	276335.830	276335.8302				ug/L
	Hg	200	19.000	5.3334				ug/L
	Pd	106	-392.029	-786.1662				ug/L
	Kr	83	178.336	19.0004				ug/L
	Ti	48	79.780	1976.2340				ug/L
	Ca	44	78968.112	30774.1042				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		102.746			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.136			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		95.308			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		101.714			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		102.746			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		102.043			
	Ag	109					
>	In	115		95.308			
	Pb	206					
	Pb	207					
>	Bi	209		96.844			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

U 238 Upper	U	238	U above linear range - NR

Method 6020 - Summary Report

Sample ID: CPWT0

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 09:31:09
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT0.014
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 27
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	313742.112	-5934.0508				ug/L
⌈	Be	9	765.695	0.0009	346.5018	17.4305	5.03	ug/L
|	Al	27	285065739.715	342.4874	5773481.2625	67767.5639	1.17	ug/L
|>	Sc	45	832421.740	832421.7398				ug/L
|	V	51	1204262.081	1.4438	12943.9211	19.2980	0.15	ug/L
|	Cr	52	776938.322	0.9105	9147.4207	160.4335	1.75	ug/L
|	Mn	55	29785925.800	35.7900	211684.3616	4600.2100	2.17	ug/L
|	Fe	57	22684285.898	27.2272	7913113.8641	110022.8178	1.39	ug/L
|	Co	59	897264.013	1.0777	8311.6113	155.4018	1.87	ug/L
|	Ni	60	133439.294	0.1596	5787.8970	85.8913	1.48	ug/L
⌊	Cu	65	370023.219	0.4430	15845.7534	98.5499	0.62	ug/L
⌈>	Ge	72	898678.956	898678.9559				ug/L
|	Zn	68	579501.599	0.6432	94088.4577	716.7090	0.76	ug/L
|	As	75	319850.309	0.3559	28247.6980	206.6636	0.73	ug/L
⌊	Se	82	536.297	0.0006	445.9610	18.5114	4.15	ug/L
	Y	89	3140575.501	2499561.7045				ug/L
⌈	Mo	97	21603.539	0.0284	1744.5122	22.9798	1.32	ug/L
|	Ag	107	11980.475	0.0157	258.6986	7.4704	2.89	ug/L
|>	In	115	755587.418	755587.4185				ug/L
|	Cd	111	40113.562	0.0531	3460.6326	23.5824	0.68	ug/L
|	Sn	117	4793.852	0.0061	445.8207	4.9851	1.12	ug/L
|	Sb	121	4518.426	0.0051	100.0498	2.8820	2.88	ug/L
⌊	Ba	135	877889.524	1.1618	117620.0959	254.6532	0.22	ug/L
	Tb	159	584580.916	55143.0265				ug/L
⌈>	Ho	165	528055.422	528055.4220				ug/L
|	Tl	205	16339.504	0.0303	286.6861	4.6466	1.62	ug/L
|	Pb	208	7093767.401	13.4336	97343.0734	1090.1930	1.12	ug/L
⌊	U	238	126109.157	0.2387	2476.0116	23.4458	0.95	ug/L
	Bi	209	281500.067	-3841.6866				ug/L
⌈>	Sc	45	832421.740	832421.7398				ug/L
|	Cr	50	178236.114	0.2134	48054.7872	3089.3861	6.43	ug/L
⌊	Cr	53	95551.105	0.1079	8931.1064	206.1052	2.31	ug/L
⌈	Ni	61	10342.514	0.0065	10985.5445	393.2281	3.58	ug/L
|	Cu	63	822858.253	0.6726	22502.1444	304.3355	1.35	ug/L
|	Br	79	20667.193	0.0164				ug/L

↳	Ge	74	1220259.356	1220259.3565			ug/L
⌈	Ag	109	11640.524	0.0153	265.3941	6.8799	2.59	ug/L
↳	In	115	755587.418	755587.4185			ug/L
⌈	Pb	206	1837988.015	6.5287	106506.8232	535.2828	0.50	ug/L
|	Pb	207	1527707.311	5.4265	105850.3143	474.3162	0.45	ug/L
↳	Bi	209	281500.067	281500.0672			ug/L
	Hg	200	13347.701	13334.0343			ug/L
	Pd	106	5428.270	5034.1327			ug/L
	Kr	83	468.012	308.6765			ug/L
	Ti	48	15585094.412	15586990.8663			ug/L
	Ca	44	6915979.158	6867785.1508			ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		139.589			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.611			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		94.232			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		107.785			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		139.589			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.205			
	Ag	109					
>	In	115		94.232			
	Pb	206					
	Pb	207					
>	Bi	209		98.654			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWT4

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 09:35:35
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4.015
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 28
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	306430.219	-13245.9440				~~ug/L~~ mg/kg
	Be	9	712.358	0.0008	320.1283	4.8319	1.51	ug/L
	Al	27	265924128.661	317.7465	5356411.7504	49100.1583	0.92	ug/L
>	Sc	45	836832.212	836832.2123				ug/L
	V	51	1102409.409	1.3144	11783.6042	84.4304	0.72	ug/L
	Cr	52	697004.269	0.8098	8136.2634	29.7594	0.37	ug/L
	Mn	55	27259893.867	32.5723	192652.8606	1379.2591	0.72	ug/L
	Fe	57	22069880.787	26.3442	7656503.4967	23938.9611	0.31	ug/L
	Co	59	1144644.336	1.3674	10546.2620	141.8524	1.35	ug/L
	Ni	60	118918.975	0.1414	5127.1941	47.7824	0.93	ug/L
	Cu	65	209538.021	0.2488	8900.1998	46.1220	0.52	ug/L
>	Ge	72	912386.120	912386.1198				ug/L
	Zn	68	709795.024	0.7763	113564.8622	1172.8126	1.03	ug/L
	As	75	503992.897	0.5523	43842.5788	164.1588	0.37	ug/L
	Se	82	503.769	0.0005	411.7547	1.3788	0.33	ug/L
	Y	89	3147006.421	2505992.6243				ug/L
	Mo	97	25820.906	0.0332	2042.3189	15.7299	0.77	ug/L
	Ag	107	9918.875	0.0127	209.0628	3.0354	1.45	ug/L
>	In	115	772181.423	772181.4233				ug/L
	Cd	111	35557.372	0.0460	3001.5715	35.6205	1.19	ug/L
	Sn	117	5237.346	0.0066	477.6351	8.0226	1.68	ug/L
	Sb	121	4605.122	0.0050	99.7194	2.2538	2.26	ug/L
	Ba	135	868470.219	1.1247	113861.4868	852.0124	0.75	ug/L
	Tb	159	586054.924	56617.0348				ug/L
>	Ho	165	531235.611	531235.6109				ug/L
	Tl	205	13877.209	0.0255	241.1211	2.4341	1.01	ug/L
	Pb	208	6543343.208	12.3157	89242.2508	220.6305	0.25	ug/L
	U	238	101213.300	0.1904	1974.9074	9.7470	0.49	ug/L
	Bi	209	279202.114	-6139.6394				ug/L
>	Sc	45	836832.212	836832.2123				ug/L
	Cr	50	206615.665	0.2461	55416.6518	1699.5535	3.07	ug/L
	Cr	53	84878.258	0.0945	7822.4590	30.7145	0.39	ug/L
	Ni	61	9689.048	0.0059	9850.2759	16.9941	0.17	ug/L
	Cu	63	473173.510	0.3792	12687.2629	40.0569	0.32	ug/L
	Br	79	24150.712	0.0189				ug/L

⌊>	Ge	74	1242057.534	1242057.5338				ug/L
⌈	Ag	109	10099.336	0.0130	224.9431	2.9906	1.33	ug/L
⌊>	In	115	772181.423	772181.4233				ug/L
⌈	Pb	206	1696088.437	6.0741	99090.8292	1016.9724	1.03	ug/L
|	Pb	207	1403684.652	5.0270	98058.0780	969.4861	0.99	ug/L
⌊>	Bi	209	279202.114	279202.1144				ug/L
	Hg	200	16807.051	16793.3845				ug/L
	Pd	106	5116.903	4722.7663				ug/L
	Kr	83	451.678	292.3425				ug/L
	Ti	48	17897910.371	17899806.8255				ug/L
	Ca	44	6812383.080	6764189.0726				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		140.328			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		104.176			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		96.302			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		108.434			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		140.328			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.995			
	Ag	109					
>	In	115		96.302			
	Pb	206					
	Pb	207					
>	Bi	209		97.848			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWT4 L

Sample Description: Serial Dilution 5x
Sample Date/Time: Wednesday, January 27, 1999 09:40:02
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4 L.016
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 29
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	295740.117	-23936.0452				~~ug/L~~ µg/L
	Be	9	137.669	0.0002	381.3452	24.6173	6.46	ug/L
	Al	27	49272199.227	75.2912	6346109.8537	27407.5238	0.43	ug/L
>	Sc	45	654329.450	654329.4500				ug/L
	V	51	210103.740	0.3182	14262.5401	153.5360	1.08	ug/L
	Cr	52	144799.591	0.1982	9958.7656	160.1430	1.61	ug/L
	Mn	55	5172169.483	7.9027	233707.4561	6453.7273	2.76	ug/L
	Fe	57	4238020.724	6.4492	9371816.9703	328570.5380	3.51	ug/L
	Co	59	220961.948	0.3372	13004.9815	203.2842	1.56	ug/L
	Ni	60	23529.982	0.0352	6387.4508	113.2322	1.77	ug/L
	Cu	65	42647.895	0.0636	11375.6534	330.4222	2.90	ug/L
>	Ge	72	906503.480	906503.4804				ug/L
	Zn	68	147716.003	0.1613	117960.9909	1578.9055	1.34	ug/L
	As	75	100439.561	0.1107	43951.7312	41.0865	0.09	ug/L
	Se	82	124.702	0.0001	472.6976	16.2719	3.44	ug/L
	Y	89	1140542.462	499528.6657				ug/L
	Mo	97	5260.021	0.0061	1874.8122	20.8680	1.11	ug/L
	Ag	107	2204.525	0.0025	205.3723	4.2244	2.06	ug/L
>	In	115	833172.045	833172.0452				ug/L
	Cd	111	7675.625	0.0092	2994.0967	90.0631	3.01	ug/L
	Sn	117	1198.396	0.0012	448.9083	24.9658	5.56	ug/L
	Sb	121	1148.724	0.0005	45.7176	1.7948	3.93	ug/L
	Ba	135	184974.011	0.2220	112358.9090	49% 1174.1367	1.04	ug/L
	Tb	159	570652.543	41214.6535				ug/L
>	Ho	165	522619.167	522619.1671				ug/L
	Tl	205	2864.316	0.0049	230.1962	4.3838	1.90	ug/L
	Pb	208	1356124.766	2.5934	93962.4013	1057.9860	1.13	ug/L
	U	238	20228.516	0.0386	2000.3386	44.7959	2.24	ug/L
	Bi	209	289195.165	3853.4114				ug/L
>	Sc	45	654329.450	654329.4500				ug/L
	Cr	50	34493.422	0.0519	58408.2965	1088.3890	1.86	ug/L
	Cr	53	18699.087	0.0217	8965.6355	360.9459	4.03	ug/L
	Ni	61	3718.855	0.0010	8499.6224	450.4494	5.30	ug/L
	Cu	63	95401.822	0.0738	12344.9287	79.3560	0.64	ug/L
	Br	79	7732.504	0.0056				ug/L

Sample read < 100 x RL except for Ba

L>	Ge	74	1263272.084	1263272.0839				ug/L
Γ	Ag	109	2223.529	0.0025	221.0032	3.1525	1.43	ug/L
L>	In	115	833172.045	833172.0452				ug/L
Γ	Pb	206	353852.403	1.2229	99746.8039	661.0130	0.66	ug/L
|	Pb	207	294225.411	1.0168	99174.6852	1127.3255	1.14	ug/L
L>	Bi	209	289195.165	289195.1652				ug/L
	Hg	200	3186.054	3172.3870				ug/L
	Pd	106	1311.571	917.4343				ug/L
	Kr	83	226.337	67.0016				ug/L
	Ti	48	3402487.077	3404383.5313				ug/L
	Ca	44	1284523.206	1236329.1985				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		109.724			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.504			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		103.908			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		106.676			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		109.724			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		103.738			
	Ag	109					
>	In	115		103.908			
	Pb	206					
	Pb	207					
>	Bi	209		101.350			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Pb 208 Upper	Pb	208	Pb above linear range - Dilute

Method 6020 - Summary Report

Sample ID: CPWT4 PDS

Sample Description: Post Digestion Spike
Sample Date/Time: Wednesday, January 27, 1999 09:44:29
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4 PDS.017
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 30
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	300344.562	-19331.6004				~~ug/L~~ µg/kg
	Be	9	30653.826	0.0370	14093.6382	328.9358	2.33	ug/L
	Al	27	259747278.362	313.8289	5290371.1061	114991.0532	2.17	ug/L
>	Sc	45	827827.567	827827.5666				ug/L
	V	51	2514231.248	3.0340	27201.0336	564.0813	2.07	ug/L
	Cr	52	1831894.224	2.1900	22003.1148	330.7025	1.50	ug/L
	Mn	55	28499624.733	34.4287	203632.3956	2161.5458	1.06	ug/L
	Fe	57	21583545.519	26.0438	7569181.3014	13632.8539	0.18	ug/L
	Co	59	2694079.278	3.2540	25095.9429	141.9540	0.57	ug/L
	Ni	60	428348.590	0.5168	18743.3089	305.6257	1.63	ug/L
	Cu	65	507573.599	0.6117	21882.2026	399.9926	1.83	ug/L
>	Ge	72	902487.281	902487.2807				ug/L
	Zn	68	796468.025	0.8809	128864.7892	1394.2196	1.08	ug/L
	As	75	707222.320	0.7836	62196.5241	255.7225	0.41	ug/L
	Se	82	21771.287	0.0241	18447.0577	194.5449	1.05	ug/L
	Y	89	3108535.006	2467521.2099				ug/L
	Mo	97	285566.515	0.3687	22662.7229	101.6271	0.45	ug/L
	Ag	107	893280.354	1.1539	19003.7691	117.0053	0.62	ug/L
>	In	115	774047.106	774047.1065				ug/L
	Cd	111	257577.149	0.3327	21701.6419	84.7258	0.39	ug/L
	Sn	117	5286.364	0.0066	481.0374	6.3672	1.32	ug/L
	Sb	121	762668.892	0.9844	19443.4989	65.6366	0.34	ug/L
	Ba	135	997668.142	1.2889	130483.4974	1009.0453	0.77	ug/L
	Tb	159	585772.545	56334.6554				ug/L
>	Ho	165	528974.170	528974.1701				ug/L
	Tl	205	970837.145	1.8348	17339.9189	151.5146	0.87	ug/L
	Pb	208	7647347.979	14.4559	104750.9155	667.2003	0.64	ug/L
	U	238	1010705.797	1.9106	19818.7966	126.2609	0.64	ug/L
	Bi	209	278599.933	-6741.8206				ug/L
>	Sc	45	827827.567	827827.5666				ug/L
	Cr	50	241583.622	0.2909	65514.1512	5398.1084	8.24	ug/L
	Cr	53	228087.471	0.2686	22229.0519	227.0532	1.02	ug/L
	Ni	61	23459.148	0.0172	28930.1916	529.8411	1.83	ug/L
	Cu	63	1126307.755	0.9187	30733.6129	219.4717	0.71	ug/L
	Br	79	23561.066	0.0187				ug/L

Spike level = 20,000 µg/kg

↳	Ge	74	1223759.047	1223759.0470			ug/L
⌈	Ag	109	843314.011	1.0894	18911.7154	81.8385	0.43	ug/L
↳	In	115	774047.106	774047.1065			ug/L
⌈	Pb	206	1954588.373	7.0154	114446.0142	1174.3506	1.03	ug/L
|	Pb	207	1629099.355	5.8472	114056.6957	1125.0590	0.99	ug/L
↳	Bi	209	278599.933	278599.9332				ug/L
	Hg	200	16213.692	16200.0250				ug/L
	Pd	106	4342.769	3948.6322				ug/L
	Kr	83	490.347	331.0108				ug/L
	Ti	48	17397343.852	17399240.3069				ug/L
	Ca	44	6649017.957	6600823.9498				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		138.818			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.046			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		96.534			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		107.973			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		138.818			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.493			
	Ag	109					
>	In	115		96.534			
	Pb	206					
	Pb	207					
>	Bi	209		97.637			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range — NR
Sc 45 Int Std for sampl	Sc	45	QC Int Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC Int Std out of limits (30-120%)

dilute

Method 6020 - Summary Report

Sample ID: CPWT4S

Sample Description: Matrix Spike
Sample Date/Time: Wednesday, January 27, 1999 09:48:56
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4S.018
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 31
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	298199.702	-21476.4608				~~ug/L~~ µg/kg
	Be	9	29831.747	0.0367	13954.6295	99.7157	0.71	ug/L
	Al	27	242276706.867	297.8493	5020995.9074	53025.1854	1.06	ug/L
>	Sc	45	813419.516	813419.5164				ug/L
	V	51	2451489.381	3.0109	26993.4179	395.8399	1.47	ug/L
	Cr	52	1815434.209	2.2086	22190.3966	236.9122	1.07	ug/L
	Mn	55	26428321.372	32.4848	192135.1582	2238.5462	1.17	ug/L
	Fe	57	19880443.136	24.4078	7093725.8784	176351.4019	2.49	ug/L
	Co	59	2604150.936	3.2008	24686.1066	205.3194	0.83	ug/L
	Ni	60	420365.121	0.5160	18715.5388	170.5818	0.91	ug/L
	Cu	65	483069.458	0.5923	21188.1241	178.6235	0.84	ug/L
>	Ge	72	902677.289	902677.2887				ug/L
	Zn	68	726068.285	0.8027	117420.2901	1314.9194	1.12	ug/L
	As	75	646476.019	0.7161	56842.9710	415.9625	0.73	ug/L
	Se	82	20184.744	0.0223	17099.3830	341.9197	2.00	ug/L
	Y	89	2884329.135	2243315.3390				ug/L
	Mo	97	262941.423	0.3411	20967.8852	151.4747	0.72	ug/L
	Ag	107	855534.872	1.1105	18288.9860	16.8280	0.09	ug/L
>	In	115	770287.516	770287.5164				ug/L
	Cd	111	249433.081	0.3238	21118.3455	64.0834	0.30	ug/L
	Sn	117	5317.709	0.0067	486.3650	3.9555	0.81	ug/L
	Sb	121	174485.901	0.2256	4456.1862	48.7197	1.09	ug/L
	Ba	135	930661.516	1.2082	122310.2599	973.8626	0.80	ug/L
	Tb	159	582418.502	52980.6126				ug/L
>	Ho	165	525758.962	525758.9622				ug/L
	Tl	205	944448.094	1.7958	16971.0657	105.9401	0.62	ug/L
	Pb	208	7127126.440	13.5544	98218.3348	786.3965	0.80	ug/L
	U	238	989896.378	1.8827	19529.0546	6.5991	0.03	ug/L
	Bi	209	278318.244	-7023.5101				ug/L
>	Sc	45	813419.516	813419.5164				ug/L
	Cr	50	251605.278	0.3086	69500.8827	8090.7647	11.64	ug/L
	Cr	53	224754.577	0.2694	22296.7769	46.8503	0.21	ug/L
	Ni	61	22998.069	0.0169	28284.7577	852.4305	3.01	ug/L
	Cu	63	1072488.220	0.8744	29251.3535	296.5114	1.01	ug/L
	Br	79	21214.292	0.0168				ug/L

Spike level = 20,000 µg/kg

⊥>	Ge	74	1224165.757	1224165.7570				ug/L
⊤	Ag	109	804383.598	1.0441	18126.7087	29.1132	0.16	ug/L
⊥>	In	115	770287.516	770287.5164				ug/L
⊤	Pb	206	1816662.769	6.5272	106482.5671	1722.7129	1.62	ug/L
⊥	Pb	207	1520686.970	5.4637	106576.8312	1688.8116	1.58	ug/L
⊥>	Bi	209	278318.244	278318.2437				ug/L
	Hg	200	15101.130	15087.4628				ug/L
	Pd	106	3799.448	3405.3105				ug/L
	Kr	83	418.677	259.3412				ug/L
	Ti	48	16455356.576	16457253.0309				ug/L
	Ca	44	6148356.283	6100162.2750				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		136.402			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.067			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		96.065			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		107.316			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		136.402			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.526			
	Ag	109					
>	In	115		96.065			
	Pb	206					
	Pb	207					
>	Bi	209		97.539			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

dilute

Method 6020 - Summary Report

Sample ID: CPWT4X

Sample Description: Sample Duplicate
Sample Date/Time: Wednesday, January 27, 1999 09:53:27
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4X.019
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 32
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	300753.586	-18922.5766				~~ug/L~~ µg/L
	Be	9	755.694	0.0009	335.7634	18.0243	5.37	ug/L
	Al	27	280497947.129	331.1077	5581649.3037	86414.8570	1.55	ug/L
>	Sc	45	847166.548	847166.5481				ug/L
	V	51	1143962.084	1.3475	12080.4207	134.3194	1.11	ug/L
	Cr	52	722226.238	0.8295	8334.0459	100.1580	1.20	ug/L
	Mn	55	28241079.825	33.3344	197160.2236	2046.3921	1.04	ug/L
	Fe	57	23043247.324	27.1759	7898220.6120	197998.8354	2.51	ug/L
	Co	59	1175594.175	1.3874	10700.5015	280.6125	2.62	ug/L
	Ni	60	122958.191	0.1444	5238.4638	199.6594	3.81	ug/L
	Cu	65	211689.487	0.2483	8882.9808	158.0873	1.78	ug/L
>	Ge	72	906982.170	906982.1698				ug/L
	Zn	68	720061.802	0.7922	115894.5306	605.9478	0.52	ug/L
	As	75	521739.647	0.5752	45659.0889	345.0472	0.76	ug/L
	Se	82	512.524	0.0006	421.3575	34.0247	8.08	ug/L
	Y	89	3190448.219	2549434.4230				ug/L
	Mo	97	26580.639	0.0345	2122.0719	15.0829	0.71	ug/L
	Ag	107	10325.834	0.0133	219.7506	2.5010	1.14	ug/L
>	In	115	765167.958	765167.9581				ug/L
	Cd	111	36226.878	0.0473	3085.9690	21.0114	0.68	ug/L
	Sn	117	5739.877	0.0073	529.7826	4.9823	0.94	ug/L
	Sb	121	4843.870	0.0054	106.9510	2.1281	1.99	ug/L
	Ba	135	903467.062	1.1807	119530.5462	715.3218	0.60	ug/L
	Tb	159	591789.367	62351.4778				ug/L
>	Ho	165	532353.751	532353.7512				ug/L
	Tl	205	14288.287	0.0262	247.9237	7.7972	3.15	ug/L
	Pb	208	6860730.302	12.8865	93378.9429	997.9845	1.07	ug/L
	U	238	106226.881	0.1994	2068.4147	4.0578	0.20	ug/L
	Bi	209	280812.882	-4528.8715				ug/L
>	Sc	45	847166.548	847166.5481				ug/L
	Cr	50	243500.395	0.2870	64631.6184	15754.3452	24.38	ug/L
	Cr	53	87287.394	0.0961	7955.9585	92.5548	1.16	ug/L
	Ni	61	9968.911	0.0062	10332.2695	371.3837	3.59	ug/L
	Cu	63	479218.051	0.3870	12947.7539	56.7086	0.44	ug/L
	Br	79	24233.506	0.0191				ug/L

L>	Ge	74	1232698.603	1232698.6026				ug/L
⌈	Ag	109	10590.030	0.0137	238.1640	4.8297	2.03	ug/L
L>	In	115	765167.958	765167.9581				ug/L
⌈	Pb	206	1743686.673	6.2087	101286.5219	529.5845	0.52	ug/L
⌈	Pb	207	1444956.080	5.1451	100361.2461	512.2733	0.51	ug/L
L>	Bi	209	280812.882	280812.8823				ug/L
	Hg	200	17373.739	17360.0719				ug/L
	Pd	106	5347.892	4953.7546				ug/L
	Kr	83	480.013	320.6771				ug/L
	Ti	48	19336760.675	19338657.1296				ug/L
	Ca	44	6976673.719	6928479.7113				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		142.061			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.559			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		95.427			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		108.663			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		142.061			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.227			
	Ag	109					
>	In	115		95.427			
	Pb	206					
	Pb	207					
>	Bi	209		98.413			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range — NR	
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)	Dilute
Pb 208 Upper	Pb	208	Pb above linear range	
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)	

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 09:58:12
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.020
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	289698.399	-29977.7634				ug/L
⌈	Be	9	14839.521	0.0253	96.1777	2.5278	2.63	ug/L
|	Al	27	353303.343	0.5887	99.2372	1.0942	1.10	ug/L
|>	Sc	45	587038.015	587038.0154				ug/L
|	V	51	668065.856	1.1351	101.7657	0.6186	0.61	ug/L
|	Cr	52	603179.363	1.0045	100.9192	1.1145	1.10	ug/L
|	Mn	55	971800.001	1.6519	97.7030	2.1554	2.21	ug/L
|	Fe	57	1000915.693	1.6756	4869.8857	73.5541	1.51	ug/L
|	Co	59	746055.133	1.2704	97.9792	2.4249	2.47	ug/L
|	Ni	60	159385.201	0.2708	98.1971	1.9737	2.01	ug/L
⌊	Cu	65	161324.428	0.2732	97.7336	1.0011	1.02	ug/L
⌈>	Ge	72	878783.900	878783.8997				ug/L
|	Zn	68	60897.143	0.0676	98.9308	1.8127	1.83	ug/L
|	As	75	112395.121	0.1279	101.4931	1.7594	1.73	ug/L
⌊	Se	82	11297.877	0.0128	98.2639	0.4678	0.48	ug/L
	Y	89	647505.705	6491.9086				ug/L
⌈	Mo	97	134938.996	0.1622	99.7010	0.6681	0.67	ug/L
|	Ag	107	498400.326	0.5998	98.7762	0.6448	0.65	ug/L
|>	In	115	830779.859	830779.8592				ug/L
|	Cd	111	125225.524	0.1507	98.2910	0.4321	0.44	ug/L
|	Sn	117	113575.489	0.1365	99.0614	0.2883	0.29	ug/L
|	Sb	121	421901.388	0.5069	100.1254	0.3434	0.34	ug/L
⌊	Ba	135	83506.187	0.1005	101.7074	0.4149	0.41	ug/L
	Tb	159	568391.200	38953.3114				ug/L
⌈>	Ho	165	521838.535	521838.5353				ug/L
|	Tl	205	526650.544	1.0087	95.3282	1.3021	1.37	ug/L
|	Pb	208	694660.355	1.3296	96.3480	0.7203	0.75	ug/L
⌊	U	238	487121.622	0.9333	96.8137	0.3714	0.38	ug/L
	Bi	209	295403.236	10061.4821				ug/L
⌈>	Sc	45	587038.015	587038.0154				ug/L
|	Cr	50	27056.936	0.0453	101.9119	1.3471	1.32	ug/L
⌊	Cr	53	73038.332	0.1175	97.2583	2.1264	2.19	ug/L
⌈	Ni	61	9447.887	0.0058	96.9280	5.9243	6.11	ug/L
|	Cu	63	354254.393	0.2872	96.0876	2.1627	2.25	ug/L
|	Br	79	2997.347	0.0019				ug/L

L>	Ge	74	1226161.644	1226161.6442				ug/L
Γ	Ag	109	476681.425	0.5737	99.5896	0.6033	0.61	ug/L
L>	In	115	830779.859	830779.8592				ug/L
Γ	Pb	206	180672.780	0.6110	99.6699	1.4873	1.49	ug/L
I	Pb	207	151884.673	0.5136	100.1866	0.7784	0.78	ug/L
L>	Bi	209	295403.236	295403.2359				ug/L
	Hg	200	32.667	19.0002				ug/L
	Pd	106	-148.129	-542.2663				ug/L
	Kr	83	173.336	14.0003				ug/L
	Ti	48	-1013.053	883.4017				ug/L
	Ca	44	42709.528	-5484.4796				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9	96.178				
	Al	27	99.237				
>	Sc	45		98.440			
	V	51	101.766				
	Cr	52	100.919				
	Mn	55	97.703				
	Fe	57	97.398				
	Co	59	97.979				
	Ni	60	98.197				
	Cu	65	97.734				
>	Ge	72		100.339			
	Zn	68	98.931				
	As	75	101.493				
	Se	82	98.264				
	Y	89					
	Mo	97	99.701				
	Ag	107	98.776				
>	In	115		103.610			
	Cd	111	98.291				
	Sn	117	99.061				
	Sb	121	100.125				
	Ba	135	101.707				
	Tb	159					
>	Ho	165		106.516			
	Tl	205	95.328				
	Pb	208	96.348				
	U	238	96.814				
	Bi	209					
>	Sc	45		98.440			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.690			
	Ag	109					
>	In	115		103.610			
	Pb	206					
	Pb	207					
>	Bi	209		103.526			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 10:02:56
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 4.021
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	288587.210	-31088.9521				ug/L
	Be	9	13.667	0.0000	0.0508	0.0244	48.00	ug/L
	Al	27	15104.802	0.0126	2.1268	0.1715	8.07	ug/L
>	Sc	45	585691.767	585691.7667				ug/L
	V	51	2332.809	0.0010	0.0927	0.0412	44.49	ug/L
	Cr	52	13501.180	-0.0000	-0.0017	0.0785	4619.37	ug/L
	Mn	55	2410.561	0.0006	0.0336	0.0121	36.19	ug/L
	Fe	57	19504.489	0.0039	11.4714	2.8855	25.15	ug/L
	Co	59	294.673	0.0000	0.0014	0.0005	35.07	ug/L
	Ni	60	464.348	0.0001	0.0187	0.0185	98.96	ug/L
	Cu	65	845.901	-0.0001	-0.0514	0.0188	36.58	ug/L
>	Ge	72	874016.304	874016.3038				ug/L
	Zn	68	1192.728	-0.0003	-0.4595	0.0728	15.84	ug/L
	As	75	170.123	0.0001	0.1109	0.0557	50.19	ug/L
	Se	82	23.989	0.0000	0.1044	0.1941	185.86	ug/L
	Y	89	645185.935	4172.1381				ug/L
	Mo	97	336.674	0.0002	0.1222	0.0222	18.19	ug/L
	Ag	107	374.009	0.0003	0.0503	0.0145	28.82	ug/L
>	In	115	819034.865	819034.8647				ug/L
	Cd	111	35.660	0.0000	0.0076	0.0085	112.39	ug/L
	Sn	117	348.674	0.0002	0.1632	0.0546	33.43	ug/L
	Sb	121	4816.232	0.0050	0.9827	0.3234	32.91	ug/L
	Ba	135	67.668	0.0000	0.0323	0.0224	69.42	ug/L
	Tb	159	562095.361	32657.4721				ug/L
>	Ho	165	518012.086	518012.0861				ug/L
	Tl	205	206.670	-0.0002	-0.0199	0.0042	21.27	ug/L
	Pb	208	929.688	0.0002	0.0136	0.0032	23.57	ug/L
	U	238	216.337	0.0003	0.0285	0.0118	41.21	ug/L
	Bi	209	292872.571	7530.8175				ug/L
>	Sc	45	585691.767	585691.7667				ug/L
	Cr	50	445.946	-0.0001	-0.1734	0.1075	61.98	ug/L
	Cr	53	2534.250	-0.0026	-2.1428	0.2332	10.88	ug/L
	Ni	61	2223.862	-0.0001	-1.6374	0.5503	33.61	ug/L
	Cu	63	2005.828	-0.0001	-0.0221	0.0215	97.49	ug/L
	Br	79	1658.113	0.0008				ug/L

⌊>	Ge	74	1213459.896	1213459.8958				ug/L
⌈	Ag	109	351.341	0.0003	0.0533	0.0143	26.81	ug/L
⌊>	In	115	819034.865	819034.8647				ug/L
⌈	Pb	206	246.005	0.0001	0.0177	0.0075	42.22	ug/L
|	Pb	207	207.004	0.0001	0.0239	0.0163	68.28	ug/L
⌊>	Bi	209	292872.571	292872.5714				ug/L
	Hg	200	20.334	6.6667				ug/L
	Pd	106	402.462	8.3246				ug/L
	Kr	83	154.669	-4.6668				ug/L
	Ti	48	-1960.039	-63.5844				ug/L
	Ca	44	44161.597	-4032.4105				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		98.214			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		99.795			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		102.145			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		105.735			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		98.214			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.647			
	Ag	109					
>	In	115		102.145			
	Pb	206					
	Pb	207					
>	Bi	209		102.639			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: CPWT6

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:07:25
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT6.022
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 33
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	292855.511	-26820.6516				~~ug/L~~ ug/kg
	Be	9	853.034	0.0010	388.8502	28.5714	7.35	ug/L
	Al	27	301755699.262	365.0299	6153493.0018	54438.8669	0.88	ug/L
>	Sc	45	826658.474	826658.4743				ug/L
	V	51	1156661.554	1.3963	12517.9391	62.3449	0.50	ug/L
	Cr	52	808631.362	0.9551	9596.2133	45.3262	0.47	ug/L
	Mn	55	31134855.757	37.6616	222754.0285	4406.5688	1.98	ug/L
	Fe	57	23517293.032	28.4226	8260557.2976	258146.4732	3.13	ug/L
	Co	59	2120519.310	2.5650	19782.6166	1083.1001	5.48	ug/L
	Ni	60	135928.729	0.1637	5936.7879	41.9997	0.71	ug/L
	Cu	65	379302.765	0.4573	16357.3088	135.9318	0.83	ug/L
>	Ge	72	882760.434	882760.4338				ug/L
	Zn	68	1302776.738	1.4742	215658.7485	2282.1421	1.06	ug/L
	As	75	140812.657	0.1595	12658.1884	220.3703	1.74	ug/L
	Se	82	618.418	0.0007	525.2745	16.2074	3.09	ug/L
	Y	89	3472441.085	2831427.2884				ug/L
	Mo	97	17322.670	0.0222	1365.1501	12.0205	0.88	ug/L
	Ag	107	37382.557	0.0482	794.4968	16.6589	2.10	ug/L
>	In	115	772572.872	772572.8719				ug/L
	Cd	111	49305.239	0.0638	4160.8098	56.7655	1.36	ug/L
	Sn	117	12539.293	0.0160	1163.2212	2.0473	0.18	ug/L
	Sb	121	8443.914	0.0100	197.8404	8.3013	4.20	ug/L
	Ba	135	1321261.535	1.7102	173135.2433	1238.7119	0.72	ug/L
	Tb	159	602189.396	72751.5071				ug/L
>	Ho	165	543094.508	543094.5075				ug/L
	Tl	205	15598.334	0.0281	265.6909	2.9274	1.10	ug/L
	Pb	208	11970171.449	22.0388	159698.4715	380.4415	0.24	ug/L
	U	238	136437.807	0.2511	2604.7523	37.0916	1.42	ug/L
	Bi	209	312243.930	26902.1758				ug/L
>	Sc	45	826658.474	826658.4743				ug/L
	Cr	50	195040.827	0.2352	52957.4806	2771.1510	5.23	ug/L
	Cr	53	98877.327	0.1127	9327.6938	96.5349	1.03	ug/L
	Ni	61	11051.384	0.0073	12193.4460	382.1927	3.13	ug/L
	Cu	63	838242.660	0.6958	23276.9783	192.5952	0.83	ug/L
	Br	79	20837.099	0.0168				ug/L

L>	Ge	74	1201822.931	1201822.9309				ug/L
Γ	Ag	109	35673.175	0.0461	799.5412	9.2403	1.16	ug/L
L>	In	115	772572.872	772572.8719				ug/L
Γ	Pb	206	3157416.429	10.1115	164954.0544	2155.0023	1.31	ug/L
|	Pb	207	2572742.927	8.2392	160715.2971	2637.2200	1.64	ug/L
L>	Bi	209	312243.930	312243.9296				ug/L
	Hg	200	34148.788	34135.1216				ug/L
	Pd	106	7331.618	6937.4809				ug/L
	Kr	83	493.347	334.0110				ug/L
	Ti	48	17443935.183	17445831.6375				ug/L
	Ca	44	8631627.238	8583433.2300				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		138.622			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		100.793			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		96.350			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		110.855			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		138.622			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		98.691			
	Ag	109					
>	In	115		96.350			
	Pb	206					
	Pb	207					
>	Bi	209		109.428			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Zn 68 Upper	Zn	68	Zn above linear range - NR
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWT7

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:11:53
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT7.023
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 34
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	291980.335	-27695.8276				~~ug/L~~ pg/L
	Be	9	759.694	0.0010	361.6027	6.1906	1.71	ug/L
	Al	27	277274666.550	350.4511	5907730.6771	96391.2037	1.63	ug/L
>	Sc	45	791229.730	791229.7296				ug/L
	V	51	1165131.310	1.4695	13174.9278	213.2002	1.62	ug/L
	Cr	52	792337.863	0.9783	9828.7702	160.7028	1.64	ug/L
	Mn	55	28222612.331	35.6646	210942.7832	1987.1982	0.94	ug/L
	Fe	57	22622904.416	28.5618	8300993.8977	55989.3039	0.67	ug/L
	Co	59	1009462.521	1.2753	9835.6983	102.3871	1.04	ug/L
	Ni	60	117848.320	0.1482	5374.7769	52.4351	0.98	ug/L
	Cu	65	177449.803	0.2227	7966.1571	63.8508	0.80	ug/L
>	Ge	72	888134.766	888134.7664				ug/L
	Zn	68	559911.993	0.6288	91978.8706	314.2228	0.34	ug/L
	As	75	493157.297	0.5552	44073.2979	590.4848	1.34	ug/L
	Se	82	450.827	0.0005	377.8741	44.7083	11.83	ug/L
	Y	89	3153072.207	2512058.4102				ug/L
	Mo	97	20546.305	0.0257	1581.5009	28.2079	1.78	ug/L
	Ag	107	22853.494	0.0287	472.7029	2.1127	0.45	ug/L
>	In	115	792026.199	792026.1988				ug/L
	Cd	111	38465.118	0.0485	3165.5732	15.5747	0.49	ug/L
	Sn	117	5525.790	0.0068	491.6966	4.1342	0.84	ug/L
	Sb	121	3823.883	0.0039	77.2811	2.1691	2.81	ug/L
	Ba	135	910987.293	1.1502	116441.4806	871.1183	0.75	ug/L
	Tb	159	601761.991	72324.1019				ug/L
>	Ho	165	541071.730	541071.7297				ug/L
	Tl	205	15369.417	0.0278	262.6836	1.7816	0.68	ug/L
	Pb	208	4507921.426	8.3302	60362.4112	490.2839	0.81	ug/L
	U	238	97368.679	0.1798	1865.3278	24.8739	1.33	ug/L
	Bi	209	298804.928	13463.1738				ug/L
>	Sc	45	791229.730	791229.7296				ug/L
	Cr	50	134628.885	0.1693	38126.3304	1829.3161	4.80	ug/L
	Cr	53	96216.986	0.1147	9491.7165	144.3485	1.52	ug/L
	Ni	61	9508.592	0.0059	9979.4099	200.8075	2.01	ug/L
	Cu	63	400000.665	0.3297	11028.5960	93.7395	0.85	ug/L
	Br	79	18960.447	0.0152				ug/L

L>	Ge	74	1207021.073	1207021.0728				ug/L
⌈	Ag	109	21213.284	0.0267	462.8714	4.8843	1.06	ug/L
L>	In	115	792026.199	792026.1988				ug/L
⌈	Pb	206	1149763.427	3.8471	62760.4661	91.7302	0.15	ug/L
|	Pb	207	950828.759	3.1815	62059.5697	79.1867	0.13	ug/L
L>	Bi	209	298804.928	298804.9276				ug/L
	Hg	200	9329.140	9315.4732				ug/L
	Pd	106	6310.620	5916.4831				ug/L
	Kr	83	483.013	323.6772				ug/L
	Ti	48	11132231.315	11134127.7699				ug/L
	Ca	44	5787200.702	5739006.6947				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		132.681			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.407			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		98.777			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		110.442			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		132.681			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.118			
	Ag	109					
>	In	115		98.777			
	Pb	206					
	Pb	207					
>	Bi	209		104.718			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWT8

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:16:24
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT8.024
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 35
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	289852.232	-29823.9307				~~ug/L~~ µg/L
	Be	9	662.355	0.0008	320.9165	16.4047	5.11	ug/L
	Al	27	261464579.734	336.8140	5677843.1855	66272.1896	1.17	ug/L
>	Sc	45	776242.149	776242.1489				ug/L
	V	51	1223197.223	1.5728	14100.7553	211.9332	1.50	ug/L
	Cr	52	1149473.069	1.4577	14645.5976	273.8379	1.87	ug/L
	Mn	55	27935161.781	35.9843	212833.5453	762.6280	0.36	ug/L
	Fe	57	21380407.817	27.5138	7996407.4762	61717.2107	0.77	ug/L
	Co	59	1022038.168	1.3162	10150.8092	81.5393	0.80	ug/L
	Ni	60	137506.949	0.1764	6397.8564	85.8293	1.34	ug/L
	Cu	65	415393.913	0.5335	19086.2226	83.9340	0.44	ug/L
>	Ge	72	893063.000	893062.9999				ug/L
	Zn	68	771136.024	0.8618	126073.3277	1025.5933	0.81	ug/L
	As	75	2325653.422	2.6043	206715.7009	1967.1998	0.95	ug/L
	Se	82	975.451	0.0011	825.3270	39.7330	4.81	ug/L
	Y	89	2714980.060	2073966.2636				ug/L
	Mo	97	47363.206	0.0596	3661.4252	41.8219	1.14	ug/L
	Ag	107	35208.352	0.0443	729.4424	5.1285	0.70	ug/L
>	In	115	792210.189	792210.1890				ug/L
	Cd	111	66318.961	0.0837	5458.0075	40.3055	0.74	ug/L
	Sn	117	4214.664	0.0051	371.5059	10.0957	2.72	ug/L
	Sb	121	30769.075	0.0379	749.0939	8.8685	1.18	ug/L
	Ba	135	797167.375	1.0062	101867.0766	683.1815	0.67	ug/L
	Tb	159	589537.349	60099.4601				ug/L
>	Ho	165	533978.914	533978.9139				ug/L
	Tl	205	21337.471	0.0393	371.8776	3.9333	1.06	ug/L
	Pb	208	13489858.661	25.2617	183052.0907	1041.2533	0.57	ug/L
	U	238	166508.145	0.3117	3233.1527	34.4621	1.07	ug/L
	Bi	209	302783.180	17441.4257				ug/L
>	Sc	45	776242.149	776242.1489				ug/L
	Cr	50	136492.124	0.1750	39408.5644	2796.9855	7.10	ug/L
	Cr	53	139105.397	0.1723	14259.5489	100.2470	0.70	ug/L
	Ni	61	11369.971	0.0075	12531.0673	328.9820	2.63	ug/L
	Cu	63	917044.524	0.7563	25300.1205	247.4721	0.98	ug/L
	Br	79	40937.728	0.0333				ug/L

L>	Ge	74	1209865.393	1209865.3933				ug/L
⌈	Ag	109	33764.525	0.0425	737.7916	4.1756	0.57	ug/L
L>	In	115	792210.189	792210.1890				ug/L
⌈	Pb	206	3559391.405	11.7552	191768.4266	1083.4257	0.56	ug/L
|	Pb	207	2922188.505	9.6507	188248.6120	924.1928	0.49	ug/L
L>	Bi	209	302783.180	302783.1795				ug/L
	Hg	200	11703.243	11689.5762				ug/L
	Pd	106	3792.771	3398.6339				ug/L
	Kr	83	416.344	257.0077				ug/L
	Ti	48	9818218.878	9820115.3322				ug/L
	Ca	44	10843910.998	10795716.9900				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		130.168			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.970			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		98.800			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		108.994			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		130.168			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.352			
	Ag	109					
>	In	115		98.800			
	Pb	206					
	Pb	207					
>	Bi	209		106.112			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR	
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)	
As 75 Upper	As	75	As above linear range	dilute
Pb 208 Upper	Pb	208	Pb above linear range	
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)	

Method 6020 - Summary Report

Sample ID: CPWT9

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:20:57
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT9.025
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 36
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	291132.949	-28543.2133				~~ug/L~~ ug/L
	Be	9	805.364	0.0010	388.9462	21.1414	5.44	ug/L
	Al	27	272727983.723	349.3796	5889666.5486	34626.4414	0.59	ug/L
>	Sc	45	780602.225	780602.2249				ug/L
	V	51	1286026.476	1.6447	14745.1042	259.5916	1.76	ug/L
	Cr	52	867497.526	1.0883	10934.3514	132.2386	1.21	ug/L
	Mn	55	36412276.571	46.6503	275918.7598	8540.8824	3.10	ug/L
	Fe	57	24311509.102	31.1165	9043496.7343	170561.9102	1.89	ug/L
	Co	59	1157680.753	1.4826	11434.7253	96.4565	0.84	ug/L
	Ni	60	145932.302	0.1862	6753.6653	100.5982	1.49	ug/L
	Cu	65	615544.797	0.7870	28151.9156	143.5831	0.51	ug/L
>	Ge	72	857641.279	857641.2786				ug/L
	Zn	68	2530777.449	2.9493	431440.0021	3506.9585	0.81	ug/L
	As	75	474953.483	0.5537	43953.8721	375.9845	0.86	ug/L
	Se	82	697.595	0.0008	611.5853	25.8576	4.23	ug/L
	Y	89	2970911.497	2329897.7011				ug/L
	Mo	97	19231.796	0.0247	1518.8535	6.4796	0.43	ug/L
	Ag	107	37023.952	0.0478	787.7629	10.6886	1.36	ug/L
>	In	115	771630.249	771630.2488				ug/L
	Cd	111	58079.776	0.0752	4907.1394	37.0371	0.75	ug/L
	Sn	117	11355.959	0.0145	1053.4368	12.0396	1.14	ug/L
	Sb	121	7850.235	0.0093	182.8853	4.5794	2.50	ug/L
	Ba	135	1380167.131	1.7887	181077.0947	1217.1044	0.67	ug/L
	Tb	159	589527.303	60089.4141				ug/L
>	Ho	165	536238.232	536238.2322				ug/L
	Tl	205	16106.569	0.0294	278.0965	1.3643	0.49	ug/L
	Pb	208	17960462.391	33.4920	242691.1161	1449.7313	0.60	ug/L
	U	238	121808.314	0.2270	2354.8386	9.7290	0.41	ug/L
	Bi	209	305275.990	19934.2361				ug/L
>	Sc	45	780602.225	780602.2249				ug/L
	Cr	50	115952.539	0.1477	33272.5885	2177.7456	6.55	ug/L
	Cr	53	104499.210	0.1270	10508.5764	200.8966	1.91	ug/L
	Ni	61	11486.399	0.0078	13137.6796	321.8564	2.45	ug/L
	Cu	63	1349479.813	1.1450	38303.3392	121.3159	0.32	ug/L
	Br	79	32862.785	0.0274				ug/L

⌊>	Ge	74	1176875.475	1176875.4751				ug/L
⌈	Ag	109	34706.123	0.0449	778.7100	6.3135	0.81	ug/L
⌊>	In	115	771630.249	771630.2488				ug/L
⌈	Pb	206	4731340.449	15.4978	252824.2598	1796.8548	0.71	ug/L
|	Pb	207	3889540.452	12.7406	248520.8911	1854.5168	0.75	ug/L
⌊>	Bi	209	305275.990	305275.9900				ug/L
	Hg	200	9309.793	9296.1258				ug/L
	Pd	106	7439.220	7045.0832				ug/L
	Kr	83	473.679	314.3434				ug/L
	Ti	48	9084852.866	9086749.3204				ug/L
	Ca	44	9054148.377	9005954.3698				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		130.899			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		97.925			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		96.233			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		109.455			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		130.899			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		96.643			
	Ag	109					
>	In	115		96.233			
	Pb	206					
	Pb	207					
>	Bi	209		106.986			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Zn 68 Upper	Zn	68	Zn above linear range - NR
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWTD

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:25:30
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTD.026
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 37
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	283649.037	-36027.1254				~~ug/L~~ mg/L
	Be	9	681.356	0.0009	333.8336	16.4784	4.94	ug/L
	Al	27	258347970.810	336.4753	5672132.9133	95864.0707	1.69	ug/L
>	Sc	45	767869.122	767869.1224				ug/L
	V	51	1046235.556	1.3597	12190.3580	629.6350	5.17	ug/L
	Cr	52	2104530.058	2.7179	27306.6021	1313.1901	4.81	ug/L
	Mn	55	28596779.807	37.2419	220271.6105	2921.5694	1.33	ug/L
	Fe	57	21003381.547	27.3238	7941210.3562	47686.6170	0.60	ug/L
	Co	59	867576.855	1.1294	8710.5924	69.7988	0.80	ug/L
	Ni	60	126327.454	0.1638	5940.0922	47.0814	0.79	ug/L
	Cu	65	280861.178	0.3642	13028.8527	187.4642	1.44	ug/L
>	Ge	72	853461.001	853461.0015				ug/L
	Zn	68	705663.231	0.8253	120724.8388	1687.3657	1.40	ug/L
	As	75	3580739.857	4.1955	333022.7806	1592.6646	0.48	ug/L
	Se	82	658.866	0.0008	579.3478	65.1965	11.25	ug/L
	Y	89	2833694.200	2192680.4036				ug/L
	Mo	97	14825.505	0.0192	1181.5751	17.4460	1.48	ug/L
	Ag	107	28364.084	0.0370	609.8699	4.0019	0.66	ug/L
>	In	115	762785.342	762785.3418				ug/L
	Cd	111	55733.865	0.0730	4763.6017	26.1693	0.55	ug/L
	Sn	117	4355.041	0.0055	399.6988	8.7498	2.19	ug/L
	Sb	121	17024.976	0.0214	422.7943	5.6761	1.34	ug/L
	Ba	135	969179.386	1.2706	128625.6446	381.4355	0.30	ug/L
	Tb	159	582030.844	52592.9548				ug/L
>	Ho	165	530715.210	530715.2100				ug/L
	Tl	205	16299.790	0.0301	284.4954	1.7239	0.61	ug/L
	Pb	208	12456793.350	23.4707	170074.2683	2297.5395	1.35	ug/L
	U	238	110377.231	0.2078	2155.9407	25.1132	1.16	ug/L
	Bi	209	288943.795	3602.0411				ug/L
>	Sc	45	767869.122	767869.1224				ug/L
	Cr	50	184686.426	0.2396	53968.7767	1548.7738	2.87	ug/L
	Cr	53	249177.960	0.3176	26290.2624	566.9741	2.16	ug/L
	Ni	61	9985.590	0.0066	11095.6044	438.5164	3.95	ug/L
	Cu	63	621506.859	0.5299	17726.2321	142.2634	0.80	ug/L
	Br	79	26612.408	0.0222				ug/L

⌊>	Ge	74	1169122.908	1169122.9078				ug/L
⌈	Ag	109	26505.833	0.0346	601.1469	7.5447	1.26	ug/L
⌊>	In	115	762785.342	762785.3418				ug/L
⌈	Pb	206	3250667.660	11.2496	183520.1912	1663.7949	0.91	ug/L
|	Pb	207	2701886.093	9.3511	182404.7488	1605.3042	0.88	ug/L
⌊>	Bi	209	288943.795	288943.7950				ug/L
	Hg	200	10573.017	10559.3504				ug/L
	Pd	106	6850.439	6456.3021				ug/L
	Kr	83	442.011	282.6754				ug/L
	Ti	48	10453437.760	10455334.2145				ug/L
	Ca	44	6967538.106	6919344.0982				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		128.764			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		97.448			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		95.130			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		108.328			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		128.764			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		96.006			
	Ag	109					
>	In	115		95.130			
	Pb	206					
	Pb	207					
>	Bi	209		101.262			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
As 75 Upper	As	75	As above linear range
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWTE

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:30:01
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTE.027
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 38
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	282067.610	-37608.5526				~~ug/L~~ mg/L
	Be	9	841.033	0.0011	402.3636	6.8228	1.70	ug/L
	Al	27	296323529.406	376.0599	6339431.0494	69248.2866	1.09	ug/L
>	Sc	45	787961.237	787961.2368				ug/L
	V	51	1321906.687	1.6747	15013.8020	111.7341	0.74	ug/L
	Cr	52	905735.667	1.1266	11318.5988	219.8329	1.94	ug/L
	Mn	55	30030553.177	38.1155	225438.4536	6233.2583	2.76	ug/L
	Fe	57	23209652.196	29.4317	8553824.4324	212531.0142	2.48	ug/L
	Co	59	1452735.453	1.8435	14217.5274	258.2508	1.82	ug/L
	Ni	60	141686.846	0.1791	6496.0862	179.4443	2.76	ug/L
	Cu	65	384389.876	0.4863	17396.0369	380.8023	2.19	ug/L
>	Ge	72	848730.072	848730.0725				ug/L
	Zn	68	1140608.311	1.3423	196365.9522	1725.6020	0.88	ug/L
	As	75	92765.640	0.1092	8671.5225	33.9605	0.39	ug/L
	Se	82	651.784	0.0008	576.9174	16.7037	2.90	ug/L
	Y	89	3327555.977	2686542.1803				ug/L
	Mo	97	16254.405	0.0215	1321.3022	17.8497	1.35	ug/L
	Ag	107	15760.514	0.0209	344.1575	2.9977	0.87	ug/L
>	In	115	748723.187	748723.1868				ug/L
	Cd	111	34398.613	0.0459	2994.5348	35.3783	1.18	ug/L
	Sn	117	4718.493	0.0061	442.7303	6.4019	1.45	ug/L
	Sb	121	4597.452	0.0052	103.1929	1.0707	1.04	ug/L
	Ba	135	1244523.349	1.6621	168269.2149	748.3962	0.44	ug/L
	Tb	159	594490.382	65052.4924				ug/L
>	Ho	165	538957.800	538957.7999				ug/L
	Tl	205	13291.313	0.0241	227.2963	1.6250	0.71	ug/L
	Pb	208	7411493.974	13.7498	99634.3249	409.8527	0.41	ug/L
	U	238	171215.752	0.3175	3293.7853	37.4562	1.14	ug/L
	Bi	209	283172.617	-2169.1364				ug/L
>	Sc	45	787961.237	787961.2368				ug/L
	Cr	50	98879.227	0.1247	28080.9311	1118.4167	3.98	ug/L
	Cr	53	108275.957	0.1305	10802.7815	310.1651	2.87	ug/L
	Ni	61	11830.018	0.0083	13915.9858	648.1790	4.66	ug/L
	Cu	63	858875.335	0.7405	24771.2461	346.6978	1.40	ug/L
	Br	79	21030.690	0.0176				ug/L

L>	Ge	74	1157343.775	1157343.7752				ug/L
Γ	Ag	109	14732.408	0.0196	339.4717	5.8003	1.71	ug/L
L>	In	115	748723.187	748723.1868				ug/L
Γ	Pb	206	1860475.449	6.5697	107174.3144	1384.3712	1.29	ug/L
|	Pb	207	1545240.490	5.4567	106439.1828	1280.4231	1.20	ug/L
L>	Bi	209	283172.617	283172.6175				ug/L
	Hg	200	9210.060	9196.3934				ug/L
	Pd	106	7885.802	7491.6646				ug/L
	Kr	83	451.345	292.0092				ug/L
	Ti	48	9977613.973	9979510.4272				ug/L
	Ca	44	11490453.258	11442259.2499				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		132.133			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		96.908			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		93.376			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		110.011			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		132.133			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		95.039			
	Ag	109					
>	In	115		93.376			
	Pb	206					
	Pb	207					
>	Bi	209		99.240			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWTG

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:34:33
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTG.028
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 39
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	284805.479	-34870.6833				ug/L µg/L
	Be	9	794.697	0.0010	388.6538	22.2511	5.73	ug/L
	Al	27	266225055.016	345.2996	5820888.5439	31668.4497	0.54	ug/L
>	Sc	45	770937.713	770937.7129				ug/L
	V	51	1164659.662	1.5079	13519.0592	207.3758	1.53	ug/L
	Cr	52	815475.717	1.0347	10396.0229	67.5096	0.65	ug/L
	Mn	55	34199389.093	44.3636	262393.7311	4709.8436	1.79	ug/L
	Fe	57	22443814.291	29.0871	8453665.2296	145899.3897	1.73	ug/L
	Co	59	1598784.851	2.0735	15991.5469	212.7285	1.33	ug/L
	Ni	60	129672.452	0.1675	6074.0110	89.0292	1.47	ug/L
	Cu	65	547746.795	0.7090	25361.0835	307.7452	1.21	ug/L
>	Ge	72	833596.892	833596.8919				ug/L
	Zn	68	1984183.008	2.3789	348001.8834	6121.4997	1.76	ug/L
	As	75	745041.577	0.8939	70950.3450	1701.2666	2.40	ug/L
	Se	82	658.376	0.0008	593.4336	26.3857	4.45	ug/L
	Y	89	2957903.604	2316889.8080				ug/L
	Mo	97	19273.187	0.0255	1568.6874	7.6207	0.49	ug/L
	Ag	107	38604.811	0.0514	846.5466	12.8215	1.51	ug/L
>	In	115	748923.601	748923.6011				ug/L
	Cd	111	71099.189	0.0949	6190.2150	35.7463	0.58	ug/L
	Sn	117	12657.732	0.0167	1211.9048	5.4354	0.45	ug/L
	Sb	121	8755.770	0.0108	212.8586	3.4175	1.61	ug/L
	Ba	135	1321878.050	1.7652	178699.6898	1827.1838	1.02	ug/L
	Tb	159	578727.271	49289.3818				ug/L
>	Ho	165	527944.281	527944.2813				ug/L
	Tl	205	15853.952	0.0294	278.0296	1.1388	0.41	ug/L
	Pb	208	17687654.257	33.5025	242767.1032	1691.0139	0.70	ug/L
	U	238	119137.575	0.2255	2339.4349	15.3012	0.65	ug/L
	Bi	209	312090.949	26749.1955				ug/L
>	Sc	45	770937.713	770937.7129				ug/L
	Cr	50	118039.079	0.1523	34303.8072	4939.3915	14.40	ug/L
	Cr	53	97643.897	0.1198	9912.4254	243.4509	2.46	ug/L
	Ni	61	10504.967	0.0073	12286.6450	356.7354	2.90	ug/L
	Cu	63	1204593.107	1.0592	35434.0069	88.4295	0.25	ug/L
	Br	79	23462.171	0.0201				ug/L

⌊>	Ge	74	1135444.213	1135444.2130				ug/L
⌈	Ag	109	36395.004	0.0485	841.5523	5.4805	0.65	ug/L
⌊>	In	115	748923.601	748923.6011				ug/L
⌈	Pb	206	4642846.382	14.8758	242677.6941	574.6906	0.24	ug/L
|	Pb	207	3806003.939	12.1946	237871.7227	1372.5270	0.58	ug/L
⌊>	Bi	209	312090.949	312090.9494				ug/L
	Hg	200	16204.681	16191.0147				ug/L
	Pd	106	6764.356	6370.2188				ug/L
	Kr	83	460.012	300.6762				ug/L
	Ti	48	9576683.457	9578579.9113				ug/L
	Ca	44	8529793.496	8481599.4883				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		129.278			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		95.180			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		93.401			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		107.763			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		129.278			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		93.241			
	Ag	109					
>	In	115		93.401			
	Pb	206					
	Pb	207					
>	Bi	209		109.374			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Zn 68 Upper	Zn	68	Zn above linear range - NR
Pb 208 Upper -	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 10:39:20
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.029
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	281517.226	-38158.9369				ug/L
	Be	9	14576.245	0.0261	99.4666	1.7134	1.72	ug/L
	Al	27	353992.694	0.6217	104.8112	1.9257	1.84	ug/L
>	Sc	45	557554.546	557554.5462				ug/L
	V	51	647529.071	1.1585	103.8645	1.8324	1.76	ug/L
	Cr	52	579070.580	1.0156	102.0342	1.0645	1.04	ug/L
	Mn	55	936032.549	1.6754	99.0947	2.0514	2.07	ug/L
	Fe	57	961374.669	1.6950	4926.3260	84.6858	1.72	ug/L
	Co	59	718255.170	1.2878	99.3194	2.4692	2.49	ug/L
	Ni	60	152446.729	0.2727	98.9004	1.9223	1.94	ug/L
	Cu	65	152206.648	0.2714	97.0928	1.9626	2.02	ug/L
>	Ge	72	824305.460	824305.4601				ug/L
	Zn	68	56730.993	0.0672	98.2452	1.6315	1.66	ug/L
	As	75	105650.784	0.1281	101.7056	1.1660	1.15	ug/L
	Se	82	10495.382	0.0127	97.3414	1.7188	1.77	ug/L
	Y	89	591368.639	-49645.1575				ug/L
	Mo	97	127318.439	0.1655	101.7496	0.4658	0.46	ug/L
	Ag	107	468213.095	0.6094	100.3655	0.9629	0.96	ug/L
>	In	115	768097.688	768097.6883				ug/L
	Cd	111	116438.557	0.1516	98.8529	1.0536	1.07	ug/L
	Sn	117	105753.390	0.1375	99.7664	0.6975	0.70	ug/L
	Sb	121	397270.977	0.5163	101.9783	0.9608	0.94	ug/L
	Ba	135	79828.239	0.1039	105.1640	1.4658	1.39	ug/L
	Tb	159	545745.509	16307.6200				ug/L
>	Ho	165	504580.766	504580.7655				ug/L
	Tl	205	515153.574	1.0203	96.4274	0.3630	0.38	ug/L
	Pb	208	677771.707	1.3416	97.2169	0.4223	0.43	ug/L
	U	238	480250.248	0.9516	98.7136	0.7344	0.74	ug/L
	Bi	209	287921.878	2580.1239				ug/L
>	Sc	45	557554.546	557554.5462				ug/L
	Cr	50	26066.851	0.0459	103.4088	2.7856	2.69	ug/L
	Cr	53	70683.149	0.1199	99.2059	1.4313	1.44	ug/L
	Ni	61	9051.291	0.0060	100.1159	4.7538	4.75	ug/L
	Cu	63	335635.096	0.2911	97.3680	2.1667	2.23	ug/L
	Br	79	2818.308	0.0019				ug/L

L>	Ge	74	1146744.304	1146744.3035				ug/L
⌈	Ag	109	443196.988	0.5769	100.1492	0.6358	0.63	ug/L
L>	In	115	768097.688	768097.6883				ug/L
⌈	Pb	206	175774.860	0.6099	99.4907	1.5233	1.53	ug/L
|	Pb	207	148107.949	0.5139	100.2407	1.2456	1.24	ug/L
L>	Bi	209	287921.878	287921.8777				ug/L
	Hg	200	30.000	16.3335				ug/L
	Pd	106	-316.051	-710.1882				ug/L
	Kr	83	156.336	-3.0001				ug/L
	Ti	48	-1266.857	629.5975				ug/L
	Ca	44	38734.844	-9459.1634				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9	99.467				
	Al	27	104.811				
>	Sc	45		93.496			
	V	51	103.865				
	Cr	52	102.034				
	Mn	55	99.095				
	Fe	57	98.527				
	Co	59	99.319				
	Ni	60	98.900				
	Cu	65	97.093				
>	Ge	72		94.119			
	Zn	68	98.245				
	As	75	101.706				
	Se	82	97.341				
	Y	89					
	Mo	97	101.750				
	Ag	107	100.366				
>	In	115		95.792			
	Cd	111	98.853				
	Sn	117	99.766				
	Sb	121	101.978				
	Ba	135	105.164				
	Tb	159					
>	Ho	165		102.994			
	Tl	205	96.427				
	Pb	208	97.217				
	U	238	98.714				
	Bi	209					
>	Sc	45		93.496			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		94.168			
	Ag	109					
>	In	115		95.792			
	Pb	206					
	Pb	207					
>	Bi	209		100.904			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 10:44:04
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 4.030
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	280404.674	-39271.4890				ug/L
⌈	Be	9	7.000	0.0000	0.0093	0.0116	125.57	ug/L
|	Al	27	15974.763	0.0153	2.5871	0.2024	7.82	ug/L
|>	Sc	45	559935.053	559935.0528				ug/L
|	V	51	2450.469	0.0014	0.1276	0.0371	29.10	ug/L
|	Cr	52	13232.269	0.0006	0.0557	0.1238	222.12	ug/L
|	Mn	55	2655.607	0.0012	0.0705	0.0109	15.40	ug/L
|	Fe	57	20659.058	0.0075	21.8905	2.3764	10.86	ug/L
|	Co	59	298.339	0.0000	0.0037	0.0039	105.70	ug/L
|	Ni	60	430.764	0.0000	0.0102	0.0156	152.96	ug/L
⌊	Cu	65	845.323	-0.0001	-0.0280	0.0079	28.35	ug/L
⌈>	Ge	72	817567.552	817567.5523				ug/L
|	Zn	68	1042.049	-0.0004	-0.5909	0.1782	30.16	ug/L
|	As	75	119.744	0.0001	0.0728	0.0546	75.07	ug/L
⌊	Se	82	4.383	-0.0000	-0.0664	0.1122	168.86	ug/L
	Y	89	589434.126	-51579.6706				ug/L
⌈	Mo	97	307.340	0.0002	0.1165	0.0352	30.19	ug/L
|	Ag	107	272.005	0.0002	0.0335	0.0068	20.38	ug/L
|>	In	115	764482.802	764482.8018				ug/L
|	Cd	111	34.386	0.0000	0.0085	0.0045	53.35	ug/L
|	Sn	117	337.007	0.0002	0.1739	0.0465	26.77	ug/L
|	Sb	121	4601.814	0.0051	1.0081	0.2799	27.76	ug/L
⌊	Ba	135	75.001	0.0000	0.0480	0.0113	23.53	ug/L
	Tb	159	547493.632	18055.7426				ug/L
⌈>	Ho	165	508091.400	508091.4002				ug/L
|	Tl	205	198.337	-0.0002	-0.0207	0.0052	25.15	ug/L
|	Pb	208	1098.694	0.0006	0.0402	0.0107	26.56	ug/L
⌊	U	238	275.339	0.0004	0.0414	0.0157	37.85	ug/L
	Bi	209	287458.311	2116.5569				ug/L
⌈>	Sc	45	559935.053	559935.0528				ug/L
|	Cr	50	383.889	-0.0002	-0.3431	0.1297	37.82	ug/L
⌊	Cr	53	2113.844	-0.0031	-2.6017	0.0553	2.13	ug/L
⌈	Ni	61	2286.539	0.0001	1.1775	2.2146	188.07	ug/L
|	Cu	63	1943.152	-0.0000	-0.0066	0.0204	309.18	ug/L
|	Br	79	1855.139	0.0011				ug/L

⌊>	Ge	74	1143639.075	1143639.0753				ug/L
⌈	Ag	109	269.339	0.0002	0.0399	0.0101	25.31	ug/L
⌊>	In	115	764482.802	764482.8018				ug/L
⌈	Pb	206	289.673	0.0003	0.0452	0.0123	27.25	ug/L
|	Pb	207	239.338	0.0002	0.0486	0.0136	27.97	ug/L
⌊>	Bi	209	287458.311	287458.3108				ug/L
	Hg	200	22.667	9.0001				ug/L
	Pd	106	385.925	-8.2125				ug/L
	Kr	83	147.669	-11.6669				ug/L
	Ti	48	-1865.472	30.9824				ug/L
	Ca	44	40618.740	-7575.2680				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		93.895			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		93.350			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		95.342			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		103.710			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		93.895			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		93.913			
	Ag	109					
>	In	115		95.342			
	Pb	206					
	Pb	207					
>	Bi	209		100.742			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Std 4	Sb	121	CCB is out of limits (+/- RL)	- ok Sb RL = 6 ppb 1-27-99 DBR

Method 6020 - Summary Report

Sample ID: CPWTH

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:51:37
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTH.031
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 40
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	282715.426	-36960.7363				~~ug/L~~ mg/L
	Be	9	808.031	0.0011	401.5191	12.6840	3.16	ug/L
	Al	27	264976659.785	349.2790	5887972.1943	87409.7289	1.48	ug/L
>	Sc	45	758580.828	758580.8276				ug/L
	V	51	1006657.059	1.3241	11870.9371	48.1321	0.41	ug/L
	Cr	52	1081691.161	1.4029	14095.4506	249.3171	1.77	ug/L
	Mn	55	29638721.142	39.0694	231080.3655	2551.2246	1.10	ug/L
	Fe	57	21734247.627	28.6233	8318866.1671	106825.8709	1.28	ug/L
	Co	59	1161725.630	1.5311	11808.1018	197.1987	1.67	ug/L
	Ni	60	126958.421	0.1666	6043.1439	50.8081	0.84	ug/L
	Cu	65	404391.660	0.5315	19014.4449	391.2436	2.06	ug/L
>	Ge	72	850230.153	850230.1533				ug/L
	Zn	68	1415464.504	1.6631	243291.8859	2855.8566	1.17	ug/L
	As	75	377926.977	0.4445	35279.3631	561.7990	1.59	ug/L
	Se	82	575.173	0.0007	506.9106	40.8244	8.05	ug/L
	Y	89	3150602.989	2509589.1926				ug/L
	Mo	97	15443.499	0.0204	1256.7986	20.4553	1.63	ug/L
	Ag	107	26325.498	0.0351	577.5026	5.9670	1.03	ug/L
>	In	115	747506.147	747506.1466				ug/L
	Cd	111	59874.723	0.0801	5222.2419	38.8625	0.74	ug/L
	Sn	117	8705.739	0.0114	830.5424	1.8906	0.23	ug/L
	Sb	121	5562.805	0.0065	128.8937	2.1834	1.69	ug/L
	Ba	135	1523311.938	2.0378	206301.1617	569.9178	0.28	ug/L
	Tb	159	590359.901	60922.0117				ug/L
>	Ho	165	533587.010	533587.0100				ug/L
	Tl	205	15964.742	0.0293	276.9970	0.5631	0.20	ug/L
	Pb	208	15686946.954	29.3977	213022.8201	793.1471	0.37	ug/L
	U	238	129829.589	0.2432	2522.5044	21.2922	0.84	ug/L
	Bi	209	293749.987	8408.2327				ug/L
>	Sc	45	758580.828	758580.8276				ug/L
	Cr	50	135603.086	0.1779	40066.6982	926.9964	2.31	ug/L
	Cr	53	131289.364	0.1661	13751.5700	256.5421	1.87	ug/L
	Ni	61	10335.508	0.0070	11740.1909	368.5777	3.14	ug/L
	Cu	63	902506.571	0.7777	26018.0091	499.8513	1.92	ug/L
	Br	79	21731.103	0.0182				ug/L

⌊>	Ge	74	1157902.583	1157902.5834				ug/L
⌈	Ag	109	24547.319	0.0327	567.9917	8.9760	1.58	ug/L
⌊>	In	115	747506.147	747506.1466				ug/L
⌈	Pb	206	4161507.850	14.1663	231102.6716	1365.5880	0.59	ug/L
|	Pb	207	3378282.076	11.5000	224321.9956	249.4380	0.11	ug/L
⌊>	Bi	209	293749.987	293749.9865				ug/L
	Hg	200	11297.913	11284.2466				ug/L
	Pd	106	6362.533	5968.3954				ug/L
	Kr	83	482.680	323.3438				ug/L
	Tl	48	10411762.058	10413658.5125				ug/L
	Ca	44	8040712.339	7992518.3311				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		127.206			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		97.079			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		93.224			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		108.914			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		127.206			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		95.085			
	Ag	109					
>	In	115		93.224			
	Pb	206					
	Pb	207					
>	Bi	209		102.947			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Zn 68 Upper	Zn	68	Zn above linear range – NR
Ba 135 Upper	Ba	135	Ba above linear range
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWTJ

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 10:56:02
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTJ.032
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 41
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	280618.885	-39057.2772				~~ug/L~~ µg/L
	Be	9	680.356	0.0009	339.6978	23.8944	7.03	ug/L
	Al	27	245778681.183	325.9077	5493990.2613	80193.2779	1.46	ug/L
>	Sc	45	754054.098	754054.0975				ug/L
	V	51	1010346.752	1.3371	11987.5825	244.1772	2.04	ug/L
	Cr	52	661097.896	0.8537	8577.1896	106.7695	1.24	ug/L
	Mn	55	24996689.161	33.1459	196045.6069	2243.6610	1.14	ug/L
	Fe	57	20056660.488	26.5717	7722621.6003	161258.8697	2.09	ug/L
	Co	59	1065009.493	1.4119	10889.1964	45.7889	0.42	ug/L
	Ni	60	111725.595	0.1474	5346.4773	42.8962	0.80	ug/L
	Cu	65	199245.540	0.2627	9395.6524	77.1744	0.82	ug/L
>	Ge	72	842549.430	842549.4297				ug/L
	Zn	68	437902.046	0.5181	75791.2993	734.0134	0.97	ug/L
	As	75	364638.801	0.4328	34350.0554	402.4061	1.17	ug/L
	Se	82	436.158	0.0005	385.3433	21.3821	5.55	ug/L
	Y	89	2938487.612	2297473.8160				ug/L
	Mo	97	20289.268	0.0272	1672.4797	20.7257	1.24	ug/L
	Ag	107	8893.190	0.0119	195.4458	1.2314	0.63	ug/L
>	In	115	739875.404	739875.4037				ug/L
	Cd	111	33472.356	0.0452	2948.5659	14.0350	0.48	ug/L
	Sn	117	2943.666	0.0038	274.1354	8.3577	3.05	ug/L
	Sb	121	3026.017	0.0032	62.6974	0.9592	1.53	ug/L
	Ba	135	830728.993	1.1228	113664.2720	478.4015	0.42	ug/L
	Tb	159	582728.343	53290.4542				ug/L
>	Ho	165	529461.054	529461.0536				ug/L
	Tl	205	13904.570	0.0257	242.4555	4.8330	1.99	ug/L
	Pb	208	7308147.946	13.8017	100010.4911	374.4062	0.37	ug/L
	U	238	98917.604	0.1867	1936.6461	23.2835	1.20	ug/L
	Bi	209	279652.782	-5688.9718				ug/L
>	Sc	45	754054.098	754054.0975				ug/L
	Cr	50	120828.195	0.1595	35915.4014	3901.7617	10.86	ug/L
	Cr	53	78435.865	0.0971	8036.9712	67.2123	0.84	ug/L
	Ni	61	9380.507	0.0062	10481.7242	112.5486	1.07	ug/L
	Cu	63	451164.751	0.3916	13099.5981	96.5434	0.74	ug/L
	Br	79	21278.070	0.0180				ug/L

L>	Ge	74	1147202.469	1147202.4694				ug/L
⌈	Ag	109	8632.360	0.0115	200.4292	2.3937	1.19	ug/L
L>	In	115	739875.404	739875.4037				ug/L
⌈	Pb	206	1808329.124	6.4656	105476.8639	338.3310	0.32	ug/L
|	Pb	207	1517661.878	5.4264	105848.9605	441.0762	0.42	ug/L
L>	Bi	209	279652.782	279652.7820				ug/L
	Hg	200	7991.315	7977.6477				ug/L
	Pd	106	5522.723	5128.5859				ug/L
	Kr	83	444.678	285.3422				ug/L
	Ti	48	10670648.189	10672544.6433				ug/L
	Ca	44	6373850.516	6325656.5080				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		126.447			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		96.202			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		92.273			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		108.072			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		126.447			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		94.206			
⌈	Ag	109					
⌊>	In	115		92.273			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		98.006			
	Hg	200					
	Pd	106					
	Kr	83					
	Tl	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper -	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWTK

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 11:00:28
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTK.033
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 42
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	282906.953	-36769.2095				~~ug/L~~ ug/L
	Be	9	504.014	0.0007	257.1251	19.6366	7.64	ug/L
	Al	27	211550329.425	287.7823	4851290.1034	16691.8369	0.34	ug/L
>	Sc	45	735086.327	735086.3274				ug/L
	V	51	1032886.397	1.4023	12572.0274	242.4808	1.93	ug/L
	Cr	52	906298.864	1.2099	12155.5785	338.6616	2.79	ug/L
	Mn	55	23436587.431	31.8761	188534.9141	3928.4989	2.08	ug/L
	Fe	57	18892009.228	25.6715	7460988.0152	108499.4390	1.45	ug/L
	Co	59	1084973.923	1.4756	11380.2000	137.3576	1.21	ug/L
	Ni	60	123481.798	0.1673	6066.0977	132.7963	2.19	ug/L
	Cu	65	382051.882	0.5182	18537.4371	383.2454	2.07	ug/L
>	Ge	72	840605.253	840605.2533				ug/L
	Zn	68	1020747.896	1.2127	177399.1019	1139.6491	0.64	ug/L
	As	75	533389.769	0.6345	50362.7230	161.8443	0.32	ug/L
	Se	82	591.735	0.0007	528.0724	26.3923	5.00	ug/L
	Y	89	2342297.077	1701283.2804				ug/L
	Mo	97	29443.610	0.0399	2451.6471	28.1137	1.15	ug/L
	Ag	107	10201.743	0.0137	226.3242	1.1539	0.51	ug/L
>	In	115	734237.597	734237.5973				ug/L
	Cd	111	62433.799	0.0850	5544.0380	46.8937	0.85	ug/L
	Sn	117	3972.259	0.0052	378.0151	4.9029	1.30	ug/L
	Sb	121	22488.579	0.0297	586.8833	1.3108	0.22	ug/L
	Ba	135	1099019.126	1.4968	151528.4926	307.3370	0.20	ug/L
	Tb	159	562758.584	33320.6954				ug/L
>	Ho	165	511958.149	511958.1491				ug/L
	Tl	205	14827.173	0.0284	267.9712	5.3668	2.00	ug/L
	Pb	208	12229928.440	23.8881	173099.1061	1570.5936	0.91	ug/L
	U	238	97972.112	0.1912	1983.7139	20.0773	1.01	ug/L
	Bi	209	284336.804	-1004.9497				ug/L
>	Sc	45	735086.327	735086.3274				ug/L
	Cr	50	115548.739	0.1564	35224.0696	3367.3386	9.56	ug/L
	Cr	53	107117.585	0.1388	11488.5207	206.1193	1.79	ug/L
	Ni	61	10704.783	0.0074	12342.3628	201.8413	1.64	ug/L
	Cu	63	848539.355	0.7343	24565.9207	11.9326	0.05	ug/L
	Br	79	28105.928	0.0239				ug/L

L>	Ge	74	1152838.538	1152838.5376				ug/L
[	Ag	109	10334.507	0.0140	242.2437	4.3553	1.80	ug/L
L>	In	115	734237.597	734237.5973				ug/L
[	Pb	206	3203874.462	11.2683	183825.5811	2569.1972	1.40	ug/L
	Pb	207	2647515.999	9.3112	181626.5129	1677.7385	0.92	ug/L
L>	Bi	209	284336.804	284336.8041				ug/L
	Hg	200	11582.477	11568.8099				ug/L
	Pd	106	3628.293	3234.1560				ug/L
	Kr	83	379.342	220.0063				ug/L
	Ti	48	10025234.612	10027131.0668				ug/L
	Ca	44	10818509.443	10770315.4352				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		123.266			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		95.980			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		91.570			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		104.500			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		123.266			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		94.669			
⌈	Ag	109					
⌊>	In	115		91.570			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		99.648			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: CPWTL

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 11:04:53
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTL.034
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 43
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	279168.682	-40507.4801				~~ug/L~~ ug/L
	Be	9	662.355	0.0008	314.4100	20.0197	6.37	ug/L
	Al	27	283303748.533	357.8620	6032659.6732	71486.2185	1.18	ug/L
>	Sc	45	791731.416	791731.4159				ug/L
	V	51	1207424.742	1.5221	13646.3995	124.0480	0.91	ug/L
	Cr	52	928442.376	1.1497	11551.5513	156.2491	1.35	ug/L
	Mn	55	20276149.424	25.6104	151475.6979	2299.2264	1.52	ug/L
	Fe	57	22880487.262	28.8722	8391206.6388	75788.5975	0.90	ug/L
	Co	59	1132189.806	1.4299	11027.9369	238.9783	2.17	ug/L
	Ni	60	127710.827	0.1606	5824.2885	85.1203	1.46	ug/L
	Cu	65	293516.567	0.3692	13206.4634	154.3672	1.17	ug/L
>	Ge	72	831599.328	831599.3277				ug/L
	Zn	68	813036.511	0.9761	142788.0900	1144.6492	0.80	ug/L
	As	75	4686769.487	5.6362	447378.6830	4009.7253	0.90	ug/L
	Se	82	831.092	0.0010	753.7753	41.2628	5.47	ug/L
	Y	89	2762789.772	2121775.9759				ug/L
	Mo	97	19910.064	0.0271	1664.4712	3.6992	0.22	ug/L
	Ag	107	11956.455	0.0162	267.4279	4.2456	1.59	ug/L
>	In	115	729490.369	729490.3689				ug/L
	Cd	111	57258.765	0.0785	5117.4073	21.2055	0.41	ug/L
	Sn	117	7591.092	0.0102	740.5456	4.8717	0.66	ug/L
	Sb	121	63323.344	0.0859	1696.4288	10.8312	0.64	ug/L
	Ba	135	1011622.559	1.3867	140384.9016	244.8412	0.17	ug/L
	Tb	159	561153.232	31715.3433				ug/L
>	Ho	165	509246.427	509246.4267				ug/L
	Tl	205	21083.090	0.0408	385.5262	5.6344	1.46	ug/L
	Pb	208	25320042.542	49.7202	360284.3981	2118.4157	0.59	ug/L
	U	238	123060.362	0.2415	2505.1951	11.9516	0.48	ug/L
	Bi	209	293732.679	8390.9253				ug/L
>	Sc	45	791731.416	791731.4159				ug/L
	Cr	50	208769.054	0.2627	59160.8116	4184.1295	7.07	ug/L
	Cr	53	113250.678	0.1361	11268.4835	254.8899	2.26	ug/L
	Ni	61	10065.646	0.0070	11694.6369	123.6072	1.06	ug/L
	Cu	63	666346.193	0.5875	19654.5313	122.6385	0.62	ug/L
	Br	79	26056.720	0.0225				ug/L

L>	Ge	74	1130923.941	1130923.9415				ug/L
Γ	Ag	109	12304.420	0.0167	290.6957	1.8481	0.64	ug/L
L>	In	115	729490.369	729490.3689				ug/L
Γ	Pb	206	6554902.072	22.3152	364040.1549	1740.6351	0.48	ug/L
|	Pb	207	5492341.866	18.6981	364729.8826	1054.7334	0.29	ug/L
L>	Bi	209	293732.679	293732.6791				ug/L
	Hg	200	15278.653	15264.9861				ug/L
	Pd	106	5453.498	5059.3607				ug/L
	Kr	83	379.009	219.6730				ug/L
	Ti	48	19985208.771	19987105.2257				ug/L
	Ca	44	6800501.770	6752307.7624				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		132.765			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		94.952			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		90.978			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		103.946			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		132.765			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		92.869			
	Ag	109					
>	In	115		90.978			
	Pb	206					
	Pb	207					
>	Bi	209		102.941			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range - NR
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)
As 75 Upper	As	75	As above linear range
Pb 208 Upper	Pb	208	Pb above linear range
Sc 45 Int Std for sampl	Sc	45	QC I(nt Std out of limits (30-120%)

Dilute

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 11:09:37
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.035
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277427.475	-42248.6874				ug/L
	Be	9	14210.540	0.0258	98.2815	1.7207	1.75	ug/L
	Al	27	350249.558	0.6235	105.0989	1.5808	1.50	ug/L
>	Sc	45	550223.127	550223.1267				ug/L
	V	51	619310.176	1.1227	100.6546	0.7019	0.70	ug/L
	Cr	52	565296.173	1.0046	100.9289	1.5877	1.57	ug/L
	Mn	55	924062.849	1.6766	99.1641	2.6781	2.70	ug/L
	Fe	57	945917.733	1.6906	4913.3027	143.4192	2.92	ug/L
	Co	59	696532.674	1.2660	97.6354	2.5755	2.64	ug/L
	Ni	60	145475.326	0.2638	95.6601	2.6225	2.74	ug/L
	Cu	65	149420.040	0.2700	96.5985	1.4733	1.53	ug/L
>	Ge	72	811933.100	811933.1004				ug/L
	Zn	68	56132.303	0.0675	98.6769	0.4781	0.48	ug/L
	As	75	103851.735	0.1279	101.4856	0.4403	0.43	ug/L
	Se	82	10202.788	0.0126	96.0538	1.6122	1.68	ug/L
	Y	89	592218.304	-48795.4923				ug/L
	Mo	97	125126.848	0.1649	101.3285	1.3180	1.30	ug/L
	Ag	107	463529.645	0.6113	100.6757	0.7950	0.79	ug/L
>	In	115	758070.549	758070.5495				ug/L
	Cd	111	114427.397	0.1509	98.4316	1.2814	1.30	ug/L
	Sn	117	104187.923	0.1372	99.5938	0.6435	0.65	ug/L
	Sb	121	388752.074	0.5119	101.1044	0.8228	0.81	ug/L
	Ba	135	77887.529	0.1027	103.9668	0.5560	0.53	ug/L
	Tb	159	538533.253	9095.3642				ug/L
>	Ho	165	496289.676	496289.6759				ug/L
	Tl	205	508007.767	1.0230	96.6793	0.1463	0.15	ug/L
	Pb	208	670021.344	1.3485	97.7120	0.2523	0.26	ug/L
	U	238	472359.293	0.9516	98.7153	0.1247	0.13	ug/L
	Bi	209	283192.867	-2148.8873				ug/L
>	Sc	45	550223.127	550223.1267				ug/L
	Cr	50	25500.910	0.0455	102.5102	1.5867	1.55	ug/L
	Cr	53	69113.856	0.1188	98.2957	4.0460	4.12	ug/L
	Ni	61	8641.700	0.0056	94.1408	2.1777	2.31	ug/L
	Cu	63	324920.779	0.2818	94.2725	0.7570	0.80	ug/L
	Br	79	3274.745	0.0023				ug/L

⌊>	Ge	74	1146066.573	1146066.5728				ug/L
⌈	Ag	109	437655.109	0.5772	100.2060	0.3253	0.32	ug/L
⌊>	In	115	758070.549	758070.5495				ug/L
⌈	Pb	206	174308.766	0.6148	100.2938	1.0719	1.07	ug/L
|	Pb	207	145719.261	0.5140	100.2590	1.2707	1.27	ug/L
⌊>	Bi	209	283192.867	283192.8665				ug/L
	Hg	200	45.334	31.6670				ug/L
	Pd	106	-237.313	-631.4502				ug/L
	Kr	83	161.669	2.3334				ug/L
	Ti	48	-496.815	1399.6397				ug/L
	Ca	44	39007.580	-9186.4274				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9	98.281				
	Al	27	105.099				
>	Sc	45		92.267			
	V	51	100.655				
	Cr	52	100.929				
	Mn	55	99.164				
	Fe	57	98.266				
	Co	59	97.635				
	Ni	60	95.660				
	Cu	65	96.598				
>	Ge	72		92.706			
	Zn	68	98.677				
	As	75	101.486				
	Se	82	96.054				
	Y	89					
	Mo	97	101.329				
	Ag	107	100.676				
>	In	115		94.542			
	Cd	111	98.432				
	Sn	117	99.594				
	Sb	121	101.104				
	Ba	135	103.967				
	Tb	159					
>	Ho	165		101.301			
	Tl	205	96.679				
	Pb	208	97.712				
	U	238	98.715				
	Bi	209					
>	Sc	45		92.267			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		94.113			
	Ag	109					
>	In	115		94.542			
	Pb	206					
	Pb	207					
>	Bi	209		99.247			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 5

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 11:14:23
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 5.036
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277857.212	-41818.9503				ug/L
⌈	Be	9	7.667	0.0000	0.0152	0.0184	120.54	ug/L
|	Al	27	7779.205	0.0011	0.1782	0.2490	139.70	ug/L
|>	Sc	45	546928.483	546928.4835				ug/L
|	V	51	2449.801	0.0015	0.1370	0.0384	28.04	ug/L
|	Cr	52	13585.927	0.0018	0.1779	0.0738	41.47	ug/L
|	Mn	55	2911.326	0.0018	0.1049	0.0104	9.94	ug/L
|	Fe	57	19646.359	0.0066	19.0796	2.3690	12.42	ug/L
|	Co	59	235.004	-0.0001	-0.0042	0.0062	146.52	ug/L
|	Ni	60	428.023	0.0000	0.0152	0.0225	148.34	ug/L
⌊	Cu	65	519.470	-0.0006	-0.2280	0.0306	13.43	ug/L
⌈>	Ge	72	809649.612	809649.6124				ug/L
|	Zn	68	798.364	-0.0007	-1.0139	0.0560	5.53	ug/L
|	As	75	221.884	0.0002	0.1737	0.1009	58.09	ug/L
⌊	Se	82	13.429	0.0000	0.0202	0.2910	1441.41	ug/L
	Y	89	579770.870	-61242.9266				ug/L
⌈	Mo	97	176.670	0.0000	0.0145	0.0307	212.22	ug/L
|	Ag	107	174.669	0.0001	0.0134	0.0041	30.88	ug/L
|>	In	115	748522.746	748522.7458				ug/L
|	Cd	111	21.980	-0.0000	-0.0017	0.0032	182.03	ug/L
|	Sn	117	291.339	0.0002	0.1364	0.0278	20.35	ug/L
|	Sb	121	3388.129	0.0036	0.7125	0.2781	39.03	ug/L
⌊	Ba	135	53.667	0.0000	0.0212	0.0164	77.49	ug/L
	Tb	159	536312.737	6874.8484				ug/L
⌈>	Ho	165	495131.357	495131.3571				ug/L
|	Tl	205	126.335	-0.0004	-0.0335	0.0072	21.58	ug/L
|	Pb	208	730.348	-0.0001	-0.0096	0.0086	89.26	ug/L
⌊	U	238	199.337	0.0003	0.0270	0.0139	51.35	ug/L
	Bi	209	281514.732	-3827.0221				ug/L
⌈>	Sc	45	546928.483	546928.4835				ug/L
|	Cr	50	386.045	-0.0001	-0.2975	0.2193	73.73	ug/L
⌊	Cr	53	2037.166	-0.0032	-2.6431	0.0483	1.83	ug/L
⌈	Ni	61	2121.512	-0.0000	-0.7804	1.4680	188.11	ug/L
|	Cu	63	1234.399	-0.0006	-0.2085	0.0143	6.87	ug/L
|	Br	79	1918.815	0.0012				ug/L

⌊>	Ge	74	1126791.507	1126791.5074				ug/L
⌈	Ag	109	166.669	0.0001	0.0174	0.0112	64.45	ug/L
⌊>	In	115	748522.746	748522.7458				ug/L
⌈	Pb	206	204.670	-0.0000	-0.0007	0.0033	498.97	ug/L
|	Pb	207	149.669	-0.0001	-0.0101	0.0097	95.37	ug/L
⌊>	Bi	209	281514.732	281514.7317				ug/L
	Hg	200	27.000	13.3335				ug/L
	Pd	106	383.161	-10.9757				ug/L
	Kr	83	142.335	-17.0003				ug/L
	Ti	48	-2072.804	-176.3495				ug/L
	Ca	44	38305.342	-9888.6656				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		91.714			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		92.445			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		93.351			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		101.065			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		91.714			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		92.530			
⌈	Ag	109					
⌊>	In	115		93.351			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		98.659			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Reslope before continuing analytical run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: D Roberts

Date: 1-27-99

Method 6020 - Summary Report

Sample ID: Blank

Sample Description: Reslope before continuing run
Sample Date/Time: Wednesday, January 27, 1999 11:22:10
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\Blank.037
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	278432.727					ug/L
⌈	Be	9	4.667					ug/L
|	Al	27	5639.836					ug/L
|>	Sc	45	553669.616					ug/L
|	V	51	2358.000					ug/L
|	Cr	52	13729.066					ug/L
|	Mn	55	2613.932					ug/L
|	Fe	57	19840.979					ug/L
|	Co	59	182.003					ug/L
|	Ni	60	435.445					ug/L
⌊	Cu	65	466.914					ug/L
⌈>	Ge	72	809612.407					ug/L
|	Zn	68	739.693					ug/L
|	As	75	145.303					ug/L
⌊	Se	82	7.345					ug/L
	Y	89	584014.329					ug/L
⌈	Mo	97	91.335					ug/L
|	Ag	107	71.334					ug/L
|>	In	115	746539.737					ug/L
|	Cd	111	18.818					ug/L
|	Sn	117	117.668					ug/L
|	Sb	121	901.037					ug/L
⌊	Ba	135	31.667					ug/L
	Tb	159	541815.950					ug/L
⌈>	Ho	165	501622.922					ug/L
|	Tl	205	85.668					ug/L
|	Pb	208	570.677					ug/L
⌊	U	238	47.667					ug/L
	Bi	209	288176.182					ug/L
⌈>	Sc	45	553669.616					ug/L
|	Cr	50	406.401					ug/L
⌊	Cr	53	1997.493					ug/L
⌈	Ni	61	2155.518					ug/L
|	Cu	63	1153.391					ug/L
|	Br	79	1340.410					ug/L

⌊>	Ge	74	1133431.340	ug/L
⌈	Ag	109	69.001	ug/L
⌊>	In	115	746539.737	ug/L
⌈	Pb	206	144.669	ug/L
|	Pb	207	133.002	ug/L
⌊>	Bi	209	288176.182	ug/L
	Hg	200	13.667	ug/L
	Pd	106	353.153	ug/L
	Kr	83	152.002	ug/L
	Ti	48	-2335.359	ug/L
	Ca	44	38084.411	ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72					
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115					
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165					
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45					
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74					
⌈	Ag	109					
⌊>	In	115					
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209					
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: Standard 1

Sample Description: Reslope before continuing run
Sample Date/Time: Wednesday, January 27, 1999 11:26:37
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\Standard 1.038
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 2
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	276103.800	-2328.9265				ug/L
	Be	9	14169.833	0.0258	98.3189	2.0871	2.12	ug/L
	Al	27	337982.495	0.6061	102.1803	1.2565	1.23	ug/L
>	Sc	45	548392.784	548392.7842				ug/L
	V	51	619609.962	1.1257	100.9210	1.0644	1.05	ug/L
	Cr	52	561880.233	0.9999	100.4563	0.9434	0.94	ug/L
	Mn	55	896703.603	1.6305	96.4369	1.0947	1.14	ug/L
	Fe	57	916725.054	1.6359	4754.4110	31.7302	0.67	ug/L
	Co	59	680250.853	1.2402	95.6490	1.1309	1.18	ug/L
	Ni	60	144674.375	0.2631	95.4065	2.3256	2.44	ug/L
	Cu	65	146859.930	0.2670	95.5125	3.1068	3.25	ug/L
>	Ge	72	820662.312	820662.3121				ug/L
	Zn	68	54906.197	0.0660	96.5434	0.8818	0.91	ug/L
	As	75	102662.094	0.1249	99.1504	0.7749	0.78	ug/L
	Se	82	9945.644	0.0121	92.6652	0.7967	0.86	ug/L
	Y	89	581609.253	-2405.0768				ug/L
	Mo	97	121935.824	0.1618	99.4706	1.5112	1.52	ug/L
	Ag	107	459390.383	0.6101	100.4789	0.9601	0.96	ug/L
>	In	115	752874.895	752874.8950				ug/L
	Cd	111	112645.550	0.1496	97.5757	1.2293	1.26	ug/L
	Sn	117	105041.512	0.1394	101.1322	0.8824	0.87	ug/L
	Sb	121	385830.310	0.5112	100.9808	1.8333	1.82	ug/L
	Ba	135	78776.391	0.1046	105.8865	0.4143	0.39	ug/L
	Tb	159	552279.435	10463.4850				ug/L
>	Ho	165	513070.555	513070.5546				ug/L
	Tl	205	522869.554	1.0189	96.2963	0.2636	0.27	ug/L
	Pb	208	682017.029	1.3283	96.2504	1.1964	1.24	ug/L
	U	238	480407.747	0.9363	97.1231	0.5944	0.61	ug/L
	Bi	209	292336.740	4160.5581				ug/L
>	Sc	45	548392.784	548392.7842				ug/L
	Cr	50	24968.546	0.0448	100.8884	0.8899	0.88	ug/L
	Cr	53	67594.551	0.1197	99.0412	1.4340	1.45	ug/L
	Ni	61	8736.425	0.0058	97.0837	4.1559	4.28	ug/L
	Cu	63	320296.045	0.2808	93.9497	3.7062	3.94	ug/L
	Br	79	1225.065	-0.0001				ug/L

L>	Ge	74	1136807.057	1136807.0572				ug/L
Γ	Ag	109	431916.745	0.5736	99.5819	0.8086	0.81	ug/L
L>	In	115	752874.895	752874.8950				ug/L
Γ	Pb	206	177804.491	0.6077	99.1421	1.1803	1.19	ug/L
|	Pb	207	148062.842	0.5060	98.7072	1.0463	1.06	ug/L
L>	Bi	209	292336.740	292336.7399				ug/L
	Hg	200	14.333	0.6667				ug/L
	Pd	106	-144.078	-497.2309				ug/L
	Kr	83	156.336	4.3334				ug/L
	Ti	48	-2173.097	162.2621				ug/L
	Ca	44	38944.400	859.9889				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72					
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115					
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165					
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45					
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74					
⌈	Ag	109					
⌊>	In	115					
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209					
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description: Reslope before continuing run
Sample Date/Time: Wednesday, January 27, 1999 11:31:58
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.039
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	279754.820	1322.0936				ug/L
⌈	Be	9	14226.891	0.0254	98.1386	0.1359	0.14	ug/L
|	Al	27	339606.136	0.5952	98.1996	1.1473	1.17	ug/L
|>	Sc	45	560979.260	560979.2601				ug/L
|	V	51	620331.116	1.1017	97.8660	0.9767	1.00	ug/L
|	Cr	52	558481.849	0.9709	97.1040	1.5999	1.65	ug/L
|	Mn	55	902031.539	1.6033	98.3353	1.0204	1.04	ug/L
|	Fe	57	919410.623	1.6034	4900.6547	95.1045	1.94	ug/L
|	Co	59	679264.366	1.2108	97.6300	2.2077	2.26	ug/L
|	Ni	60	143962.774	0.2559	97.2795	2.7379	2.81	ug/L
⌊	Cu	65	146351.457	0.2601	97.4036	0.9738	1.00	ug/L
⌈>	Ge	72	811625.979	811625.9793				ug/L
|	Zn	68	54716.807	0.0665	100.7680	0.6702	0.67	ug/L
|	As	75	102353.078	0.1259	100.8185	1.5202	1.51	ug/L
⌊	Se	82	10230.572	0.0126	104.0118	2.7146	2.61	ug/L
	Y	89	584150.277	135.9474				ug/L
⌈	Mo	97	123393.530	0.1625	100.4283	1.3376	1.33	ug/L
|	Ag	107	457896.216	0.6035	98.9219	1.9041	1.92	ug/L
|>	In	115	758759.042	758759.0415				ug/L
|	Cd	111	114877.730	0.1514	101.2008	1.2086	1.19	ug/L
|	Sn	117	105848.090	0.1394	100.0036	1.3505	1.35	ug/L
|	Sb	121	394567.950	0.5189	101.4925	1.0559	1.04	ug/L
⌊	Ba	135	78408.075	0.1033	98.7637	0.7854	0.80	ug/L
	Tb	159	551217.137	9401.1868				ug/L
⌈>	Ho	165	515217.517	515217.5165				ug/L
|	Tl	205	521982.734	1.0130	99.4173	0.7234	0.73	ug/L
|	Pb	208	683088.809	1.3248	99.7359	0.9449	0.95	ug/L
⌊	U	238	482671.956	0.9368	100.0499	0.4589	0.46	ug/L
	Bi	209	292879.039	4702.8570				ug/L
⌈>	Sc	45	560979.260	560979.2601				ug/L
|	Cr	50	25491.933	0.0447	99.8108	1.2963	1.30	ug/L
⌊	Cr	53	68484.784	0.1185	99.0265	1.9351	1.95	ug/L
⌈	Ni	61	8555.647	0.0057	97.6770	2.3836	2.44	ug/L
|	Cu	63	321466.537	0.2828	100.6878	1.2408	1.23	ug/L
|	Br	79	1064.384	-0.0002				ug/L

⌊>	Ge	74	1132921.297	1132921.2968				ug/L
⌈	Ag	109	435145.323	0.5736	99.9958	2.5283	2.53	ug/L
⌊>	In	115	758759.042	758759.0415				ug/L
⌈	Pb	206	177507.788	0.6056	99.6472	0.6770	0.68	ug/L
|	Pb	207	148535.691	0.5067	100.1333	0.5861	0.59	ug/L
⌊>	Bi	209	292879.039	292879.0389				ug/L
	Hg	200	23.334	9.6668				ug/L
	Pd	106	-409.051	-762.2038				ug/L
	Kr	83	149.669	-2.3334				ug/L
	Ti	48	-2132.243	203.1160				ug/L
	Ca	44	38414.296	329.8848				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9	98.139				
	Al	27	98.200				
>	Sc	45		101.320			
	V	51	97.866				
	Cr	52	97.104				
	Mn	55	98.335				
	Fe	57	98.013				
	Co	59	97.630				
	Ni	60	97.280				
	Cu	65	97.404				
>	Ge	72		100.249			
	Zn	68	100.768				
	As	75	100.818				
	Se	82	104.012				
	Y	89					
	Mo	97	100.428				
	Ag	107	98.922				
>	In	115		101.637			
	Cd	111	101.201				
	Sn	117	100.004				
	Sb	121	101.493				
	Ba	135	98.764				
	Tb	159					
>	Ho	165		102.710			
	Tl	205	99.417				
	Pb	208	99.736				
	U	238	100.050				
	Bi	209					
>	Sc	45		101.320			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.955			
	Ag	109					
>	In	115		101.637			
	Pb	206					
	Pb	207					
>	Bi	209		101.632			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Description: Reslope before continuing run
Sample Date/Time: Wednesday, January 27, 1999 11:36:43
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 4.040
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL):
Diluted To Volume (mL):

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	278831.318	398.5915				ug/L
	Be	9	10.667	0.0000	0.0425	0.0186	43.68	ug/L
	Al	27	4836.200	-0.0014	-0.2315	0.0104	4.48	ug/L
>	Sc	45	550592.219	550592.2185				ug/L
	V	51	2519.783	0.0003	0.0281	0.0134	47.73	ug/L
	Cr	52	13669.007	0.0000	0.0034	0.0535	1569.67	ug/L
	Mn	55	2534.584	-0.0001	-0.0071	0.0110	154.14	ug/L
	Fe	57	19544.063	-0.0003	-1.0071	3.6421	361.65	ug/L
	Co	59	218.337	0.0001	0.0055	0.0011	19.47	ug/L
	Ni	60	471.506	0.0001	0.0266	0.0162	60.65	ug/L
	Cu	65	500.936	0.0001	0.0249	0.0173	69.26	ug/L
>	Ge	72	822660.218	822660.2179				ug/L
	Zn	68	749.027	-0.0000	-0.0036	0.1207	3353.31	ug/L
	As	75	11.273	-0.0002	-0.1337	0.1108	82.88	ug/L
	Se	82	-13.351	-0.0000	-0.2105	0.1261	59.92	ug/L
	Y	89	573459.447	-10554.8823				ug/L
	Mo	97	195.003	0.0001	0.0843	0.0278	33.02	ug/L
	Ag	107	191.003	0.0002	0.0259	0.0071	27.53	ug/L
>	In	115	752711.141	752711.1409				ug/L
	Cd	111	19.944	0.0000	0.0009	0.0032	370.39	ug/L
	Sn	117	338.341	0.0003	0.2091	0.0669	31.97	ug/L
	Sb	121	4059.307	0.0042	0.8176	0.2518	30.80	ug/L
	Ba	135	40.334	0.0000	0.0107	0.0071	66.40	ug/L
	Tb	159	556897.025	15081.0758				ug/L
>	Ho	165	515971.443	515971.4431				ug/L
	Tl	205	149.669	0.0001	0.0117	0.0039	32.93	ug/L
	Pb	208	551.343	-0.0001	-0.0052	0.0012	22.41	ug/L
	U	238	211.004	0.0003	0.0336	0.0127	37.98	ug/L
	Bi	209	294384.517	6208.3349				ug/L
>	Sc	45	550592.219	550592.2185				ug/L
	Cr	50	407.569	0.0000	0.0121	0.2077	1715.24	ug/L
	Cr	53	1990.159	0.0000	0.0067	0.1207	1790.63	ug/L
	Ni	61	2196.524	0.0001	1.0166	1.7982	176.88	ug/L
	Cu	63	1138.723	-0.0000	-0.0005	0.0133	2760.86	ug/L
	Br	79	969.376	-0.0003				ug/L

⌊>	Ge	74	1121103.936	1121103.9364				ug/L
⌈	Ag	109	171.003	0.0001	0.0234	0.0092	39.43	ug/L
⌊>	In	115	752711.141	752711.1409				ug/L
⌈	Pb	206	147.336	-0.0000	-0.0003	0.0101	3665.91	ug/L
|	Pb	207	124.335	-0.0000	-0.0077	0.0089	114.68	ug/L
⌊>	Bi	209	294384.517	294384.5168				ug/L
	Hg	200	14.667	1.0000				ug/L
	Pd	106	391.024	37.8711				ug/L
	Kr	83	155.336	3.3334				ug/L
	Tl	48	-2447.060	-111.7010				ug/L
	Ca	44	38768.927	684.5158				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		99.444			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.612			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		100.827			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		102.860			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		99.444			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		98.912			
	Ag	109					
>	In	115		100.827			
	Pb	206					
	Pb	207					
>	Bi	209		102.154			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: CPWT0

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 11:41:13
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT0.041
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 55
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2 5x
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	281097.633	2664.9066				~~ug/L~~ mg/L
	Be	9	142.669	0.0002	441.6622	14.8424	3.36	ug/L
	Al	27	53908261.673	89.4006	7374566.9291	51272.7080	0.70	ug/L
>	Sc	45	602919.733	602919.7328				ug/L
	V	51	220492.471	0.3615	16054.7675	186.2775	1.16	ug/L
	Cr	52	152852.410	0.2287	11437.9045	211.2874	1.85	ug/L
	Mn	55	5464069.629	9.0584	277781.3599	5238.2164	1.89	ug/L
	Fe	57	4145307.065	6.8406	10453953.1171	330807.2276	3.16	ug/L
	Co	59	161358.206	0.2673	10777.6618	229.1415	2.13	ug/L
	Ni	60	24352.474	0.0396	7528.5482	190.0572	2.52	ug/L
	Cu	65	69685.684	0.1147	21487.0008	162.4060	0.76	ug/L
>	Ge	72	830483.589	830483.5887				ug/L
	Zn	68	113338.000	0.1356	102702.3352	1292.7361	1.26	ug/L
	As	75	61230.714	0.0735	29440.2504	169.7557	0.58	ug/L
	Se	82	102.032	0.0001	469.7095	175.5405	37.37	ug/L
	Y	89	1032351.110	448336.7803				ug/L
	Mo	97	4264.013	0.0055	1688.4458	58.2064	3.45	ug/L
	Ag	107	2299.542	0.0029	239.0884	15.2504	6.38	ug/L
>	In	115	763074.418	763074.4180				ug/L
	Cd	111	8334.991	0.0109	3642.2526	27.7309	0.76	ug/L
	Sn	117	1172.727	0.0014	494.9031	23.4494	4.74	ug/L
	Sb	121	2064.170	0.0015	146.5596	17.8616	12.19	ug/L
	Ba	135	189040.128	0.2477	118411.2432	1358.0333	1.15	ug/L
	Tb	159	568195.695	26379.7450				ug/L
>	Ho	165	525008.867	525008.8666				ug/L
	Tl	205	3490.795	0.0065	317.9035	6.1611	1.94	ug/L
	Pb	208	1527239.329	2.9079	109461.5262	818.7665	0.75	ug/L
	U	238	26252.029	0.0499	2665.3552	37.9876	1.43	ug/L
	Bi	209	294881.283	6705.1017				ug/L
>	Sc	45	602919.733	602919.7328				ug/L
	Cr	50	30394.443	0.0496	55401.3861	8487.0852	15.32	ug/L
	Cr	53	18443.750	0.0270	11274.7041	43.2266	0.38	ug/L
	Ni	61	3755.532	0.0013	11652.8746	909.5354	7.81	ug/L
	Cu	63	155812.029	0.1339	23831.8966	108.2137	0.45	ug/L
	Br	79	4415.395	0.0026				ug/L

⌊>	Ge	74	1155264.378	1155264.3783				ug/L
⌈	Ag	109	2213.527	0.0028	244.7722	7.7659	3.17	ug/L
⌊>	In	115	763074.418	763074.4180				ug/L
⌈	Pb	206	400859.776	1.3589	111800.7412	1289.1144	1.15	ug/L
⌊	Pb	207	327629.633	1.1106	109737.2639	531.4084	0.48	ug/L
⌊>	Bi	209	294881.283	294881.2835				ug/L
	Hg	200	2529.916	2516.2494				ug/L
	Pd	106	1451.741	1098.5886				ug/L
	Kr	83	226.671	74.6684				ug/L
	Ti	48	2987185.036	2989520.3948				ug/L
	Ca	44	1230075.033	1191990.6216				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		108.895			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.578			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		102.215			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		104.662			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		108.895			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.926			
	Ag	109					
>	In	115		102.215			
	Pb	206					
	Pb	207					
>	Bi	209		102.327			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Pb 208 Upper	Pb	208	Pb above linear range

– OK
Table does not account for DF
1-27-99
DBR

Method 6020 - Summary Report

Sample ID: CPWT4

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 11:45:37
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4.042
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 56
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	278110.153	-322.5741				~~ug/L~~ mg/L
	Be	9	134.335	0.0002	403.3898	52.3927	12.99	ug/L
	Al	27	50642986.147	81.8055	6748052.4095	88659.7481	1.31	ug/L
>	Sc	45	619050.905	619050.9054				ug/L
	V	51	203385.994	0.3243	14403.9934	0.7910	0.01	ug/L
	Cr	52	137579.497	0.1974	9873.1846	61.6055	0.62	ug/L
	Mn	55	4978515.901	8.0367	246452.5365	4906.4481	1.99	ug/L
	Fe	57	4045139.033	6.4983	9930870.0937	174492.3127	1.76	ug/L
	Co	59	204315.821	0.3297	13292.6254	187.2759	1.41	ug/L
	Ni	60	21463.373	0.0339	6440.9647	162.4867	2.52	ug/L
	Cu	65	38589.525	0.0615	11516.9657	176.4718	1.53	ug/L
>	Ge	72	823716.576	823716.5756				ug/L
	Zn	68	134905.036	0.1629	123392.9403	1291.8467	1.05	ug/L
	As	75	93872.916	0.1138	45548.5232	626.7582	1.38	ug/L
	Se	82	105.446	0.0001	490.8395	115.5027	23.53	ug/L
	Y	89	1026015.886	442001.5564				ug/L
	Mo	97	4860.209	0.0063	1956.3132	4.4435	0.23	ug/L
	Ag	107	1933.150	0.0025	202.5539	2.3630	1.17	ug/L
>	In	115	753013.741	753013.7406				ug/L
	Cd	111	6968.053	0.0092	3085.1706	75.6359	2.45	ug/L
	Sn	117	1203.729	0.0014	516.8933	8.4529	1.64	ug/L
	Sb	121	1486.092	0.0008	75.0301	4.6890	6.25	ug/L
	Ba	135	178960.822	0.2377	113608.4554	1265.4964	1.11	ug/L
	Tb	159	561075.433	19259.4829				ug/L
>	Ho	165	518972.266	518972.2659				ug/L
	Tl	205	2904.658	0.0054	266.2657	4.1186	1.55	ug/L
	Pb	208	1367953.981	2.6348	99179.1786	67.4474	0.07	ug/L
	U	238	20618.409	0.0396	2116.5867	24.6565	1.16	ug/L
	Bi	209	290617.177	2440.9950				ug/L
>	Sc	45	619050.905	619050.9054				ug/L
	Cr	50	31478.561	0.0501	55937.2872	2890.2530	5.17	ug/L
	Cr	53	16495.350	0.0230	9627.1259	117.9031	1.22	ug/L
	Ni	61	3538.474	0.0012	10169.2549	392.8679	3.86	ug/L
	Cu	63	85790.692	0.0736	13107.6175	204.8788	1.56	ug/L
	Br	79	5072.619	0.0032				ug/L

⌊>	Ge	74	1149519.985	1149519.9852				ug/L
⌈	Ag	109	1990.825	0.0026	222.3457	3.5316	1.59	ug/L
⌊>	In	115	753013.741	753013.7406				ug/L
⌈	Pb	206	356139.844	1.2250	100782.5390	626.7476	0.62	ug/L
|	Pb	207	296598.287	1.0201	100798.2044	630.6257	0.63	ug/L
⌊>	Bi	209	290617.177	290617.1768				ug/L
	Hg	200	3281.076	3267.4095				ug/L
	Pd	106	1332.407	979.2548				ug/L
	Kr	83	217.337	65.3348				ug/L
	Ti	48	3405282.181	3407617.5396				ug/L
	Ca	44	1199229.894	1161145.4831				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		111.809			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.742			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		100.867			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		103.459			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		111.809			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.419			
	Ag	109					
>	In	115		100.867			
	Pb	206					
	Pb	207					
>	Bi	209		100.847			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Pb 208 Upper	Pb	208	Pb above linear range - ok

Method 6020 - Summary Report

Sample ID: CPWT4 L

Sample Description: Serial Dilution 5x
Sample Date/Time: Wednesday, January 27, 1999 11:50:04
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4 L.043
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 57
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 0.4
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	273978.858	-4453.8688				~~ug/L~~ mg/kg
	Be	9	31.334	0.0000	456.7590	15.1408	3.31	ug/L
	Al	27	10225580.011	18.1483	7485164.6416	143584.9478	1.92	ug/L
>	Sc	45	563345.421	563345.4214				ug/L
	V	51	42872.117	0.0719	15962.0370	311.9737	1.95	ug/L
	Cr	52	37231.506	0.0413	10337.6241	705.1636	6.82	ug/L
	Mn	55	942898.977	1.6706	256154.4461 104%	12077.1910	4.71	ug/L
	Fe	57	770776.705	1.3330	10185766.0788	287297.2010	2.82	ug/L
	Co	59	41868.371	0.0740	14926.2753	633.0728	4.24	ug/L
	Ni	60	4677.640	0.0075	7147.3043	240.6391	3.37	ug/L
	Cu	65	8203.654	0.0137	12855.2214	468.8986	3.65	ug/L
>	Ge	72	832553.171	832553.1709				ug/L
	Zn	68	28778.581	0.0337	127500.9373	2698.9421	2.12	ug/L
	As	75	19446.295	0.0232	46387.5233	366.3631	0.79	ug/L
	Se	82	27.606	0.0000	496.3398	503.3515	101.41	ug/L
	Y	89	678683.664	94669.3345				ug/L
	Mo	97	1046.049	0.0012	1926.8654	30.1090	1.56	ug/L
	Ag	107	407.343	0.0004	179.3920	1.7524	0.98	ug/L
>	In	115	763714.836	763714.8358				ug/L
	Cd	111	1434.328	0.0019	3095.8329	103.8048	3.35	ug/L
	Sn	117	327.007	0.0003	485.3054	67.4778	13.90	ug/L
	Sb	121	546.016	-0.0005	-240.6390	16.6298	6.91	ug/L
	Ba	135	37615.836	0.0492	117626.0982	652.7098	0.55	ug/L
	Tb	159	556433.724	14617.7748				ug/L
>	Ho	165	515842.089	515842.0886				ug/L
	Tl	205	640.354	0.0011	262.6581 105%	4.4472	1.69	ug/L
	Pb	208	286431.247	0.5542	104301.9669	1062.8965	1.02	ug/L
	U	238	4218.332	0.0081	2158.3824	31.7820	1.47	ug/L
	Bi	209	292585.289	4409.1072				ug/L
>	Sc	45	563345.421	563345.4214				ug/L
	Cr	50	7170.658	0.0120	66932.2083	3799.9122	5.68	ug/L
	Cr	53	4885.884	0.0051	10597.6812	753.5112	7.11	ug/L
	Ni	61	2494.576	0.0003	11507.1826	2933.9325	25.50	ug/L
	Cu	63	18483.802	0.0150	13393.9808	407.8520	3.05	ug/L
	Br	79	2181.855	0.0007				ug/L

Sample read < 100 x RL
except for Mn + Pb

L>	Ge	74	1151146.939	1151146.9391			ug/L
⌈	Ag	109	419.344	0.0005	199.0094	8.4866	4.26	ug/L
L>	In	115	763714.836	763714.8358			ug/L
⌈	Pb	206	74587.970	0.2544	104669.2846	637.6439	0.61	ug/L
|	Pb	207	61816.409	0.2109	104169.3271	1664.2659	1.60	ug/L
L>	Bi	209	292585.289	292585.2890			ug/L
	Hg	200	693.357	679.6904			ug/L
	Pd	106	561.749	208.5967			ug/L
	Kr	83	160.336	8.3335			ug/L
	Ti	48	635372.151	637707.5098			ug/L
	Ca	44	273025.561	234941.1492			ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		101.748			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.834			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		102.301			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		102.835			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		101.748			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.563			
	Ag	109					
>	In	115		102.301			
	Pb	206					
	Pb	207					
>	Bi	209		101.530			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Sb 121 Lower	Sb	121	
Pb 208 Upper	Pb	208	Pb above linear range ✓ ok

Method 6020 - Summary Report

Sample ID: CPWT4 PDS

Sample Description: Post Digestion Spike
Sample Date/Time: Wednesday, January 27, 1999 11:54:30
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4 PDS.044
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 58
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2 5x
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	279882.213	1449.4865				~~ug/L~~ µg/L
	Be	9	28018.732	0.0462	89412.0798	2223.9726	2.49	ug/L
	Al	27	49937605.787	82.3319	6791473.7861	141454.4376	2.08	ug/L
>	Sc	45	606565.835	606565.8348				ug/L
	V	51	1415239.764	2.3295	103471.7522	2662.9976	2.57	ug/L
	Cr	52	1207620.700	1.9665	98337.7806	1599.8297	1.63	ug/L
	Mn	55	6691677.020	11.0294	338223.6941	5456.6871	1.61	ug/L
	Fe	57	3981997.107	6.5297	9978822.4835	138869.3316	1.39	ug/L
	Co	59	1528113.276	2.5199	101591.3849	3092.7776	3.04	ug/L
	Ni	60	304996.250	0.5022	95446.5267	2039.8077	2.14	ug/L
	Cu	65	321091.137	0.5286	98993.3923	1768.3363	1.79	ug/L
>	Ge	72	841065.937	841065.9375				ug/L
	Zn	68	237492.957	0.2815	213276.3528	3979.7838	1.87	ug/L
	As	75	293227.933	0.3485	139495.4883	1412.6252	1.01	ug/L
	Se	82	19791.009	0.0235	97136.4374	2079.3676	2.14	ug/L
	Y	89	1013330.954	429316.6250				ug/L
	Mo	97	245208.172	0.3272	101081.2186	1537.4396	1.52	ug/L
	Ag	107	876158.138	1.1694	95835.1592	46.0558	0.05	ug/L
>	In	115	749171.518	749171.5179				ug/L
	Cd	111	224578.291	0.2998	100181.5812	410.5319	0.41	ug/L
	Sn	117	1199.396	0.0014	517.8734	19.3935	3.74	ug/L
	Sb	121	737006.176	0.9826	96097.0398	731.7121	0.76	ug/L
	Ba	135	323083.824	0.4312	206150.9239	2410.0087	1.17	ug/L
	Tb	159	558118.332	16302.3828				ug/L
>	Ho	165	514522.061	514522.0613				ug/L
	Tl	205	977843.931	1.9003	93249.3275	374.1886	0.40	ug/L
	Pb	208	2588450.514	5.0297	189330.1252	674.8795	0.36	ug/L
	U	238	938716.144	1.8244	97424.3244	769.0832	0.79	ug/L
	Bi	209	288763.832	587.6504				ug/L
>	Sc	45	606565.835	606565.8348				ug/L
	Cr	50	77910.430	0.1278	142659.9956	9944.9094	6.97	ug/L
	Cr	53	147884.591	0.2402	100386.0359	2944.1288	2.93	ug/L
	Ni	61	16164.969	0.0120	103915.0178	3033.4076	2.92	ug/L
	Cu	63	703430.652	0.6049	107699.3289	1822.4248	1.69	ug/L
	Br	79	5099.964	0.0032				ug/L

Spike level = 100,000 µg/Kg

⊢>	Ge	74	1161145.043	1161145.0435				ug/L
⊢	Ag	109	823053.287	1.0986	95758.5679	730.8270	0.76	ug/L
⊢>	In	115	749171.518	749171.5179				ug/L
⊢	Pb	206	675638.436	2.3394	192472.9053	1582.9444	0.82	ug/L
⊢	Pb	207	565564.447	1.9582	193492.0479	1445.4763	0.75	ug/L
⊢>	Bi	209	288763.832	288763.8322				ug/L
	Hg	200	3159.381	3145.7145				ug/L
	Pd	106	77.258	-275.8940				ug/L
	Kr	83	213.004	61.0014				ug/L
	Ti	48	3317478.346	3319813.7045				ug/L
	Ca	44	1183732.948	1145648.5371				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		109.554			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		103.885			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		100.353			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		102.571			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		109.554			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		102.445			
	Ag	109					
>	In	115		100.353			
	Pb	206					
	Pb	207					
>	Bi	209		100.204			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
V 51 Upper	V	51	V above linear range
Co 59 Upper	Co	59	Co above linear range
Ni 60 Upper	Ni	60	Ni above linear range
Zn 68 Upper	Zn	68	Zn above linear range
As 75 Upper	As	75	As above linear range
Cd 111 Upper	Cd	111	Cd above linear range
Ba 135 Upper	Ba	135	Ba above linear range
Pb 208 Upper	Pb	208	Pb above linear range
U 238 Upper	U	238	U above linear range

OK

Method 6020 - Summary Report

Sample ID: CPWT4S

Sample Description: Matrix Spike
Sample Date/Time: Wednesday, January 27, 1999 11:58:58
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4S.045
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 59
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2 5x
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277869.156	-563.5705				~~ug/L~~ µg/kg
	Be	9	5652.509	0.0093	18076.0954	448.3505	2.48	ug/L
	Al	27	45729128.253	75.6229	6238056.0908	47229.9206	0.76	ug/L
>	Sc	45	604654.587	604654.5866				ug/L
	V	51	425405.932	0.6994	31066.6557	478.9121	1.54	ug/L
	Cr	52	342238.423	0.5413	27069.9360	496.4196	1.83	ug/L
	Mn	55	4918743.282	8.1326	249392.7227	7237.5955	2.90	ug/L
	Fe	57	3672462.387	6.0403	9230891.4647	312225.4502	3.38	ug/L
	Co	59	451093.791	0.7460	30074.7198	936.7898	3.11	ug/L
	Ni	60	74766.211	0.1229	23366.2466	1139.4565	4.88	ug/L
	Cu	65	89521.443	0.1473	27578.9939	1034.5757	3.75	ug/L
>	Ge	72	824684.406	824684.4058				ug/L
	Zn	68	140360.649	0.1693	128251.9407	1044.2098	0.81	ug/L
	As	75	123107.716	0.1491	59681.9620	313.8264	0.53	ug/L
	Se	82	3786.767	0.0046	18920.6430	143.5033	0.76	ug/L
	Y	89	973251.434	389237.1041				ug/L
	Mo	97	49395.080	0.0658	20334.1685	247.7477	1.22	ug/L
	Ag	107	170586.882	0.2276	18653.5439	39.0018	0.21	ug/L
>	In	115	749134.178	749134.1781				ug/L
	Cd	111	49237.761	0.0657	21958.4258	265.7856	1.21	ug/L
	Sn	117	1102.054	0.0013	471.2939	11.1692	2.37	ug/L
	Sb	121	39392.749	0.0514	5026.1059	327.1979	6.51	ug/L
	Ba	135	188191.760	0.2512	120072.6810	1304.4226	1.09	ug/L
	Tb	159	555010.228	13194.2779				ug/L
>	Ho	165	511328.668	511328.6677				ug/L
	Tl	205	194088.516	0.3794	18617.6145	36.8484	0.20	ug/L
	Pb	208	1451988.243	2.8386	106850.6543	486.9905	0.46	ug/L
	U	238	200740.922	0.3925	20960.5006	204.1034	0.97	ug/L
	Bi	209	287214.799	-961.3825				ug/L
>	Sc	45	604654.587	604654.5866				ug/L
	Cr	50	39135.824	0.0639	71374.0444	10526.7191	14.75	ug/L
	Cr	53	41330.461	0.0648	27065.8247	1020.6734	3.77	ug/L
	Ni	61	5894.275	0.0032	27974.1868	1463.1173	5.23	ug/L
	Cu	63	199177.449	0.1726	30733.1995	624.1712	2.03	ug/L
	Br	79	4476.413	0.0027				ug/L

Spike level = 20,000 µg/kg

⌊>	Ge	74	1147170.678	1147170.6782				ug/L
⌈	Ag	109	160851.285	0.2146	18707.1672	204.0643	1.09	ug/L
⌊>	In	115	749134.178	749134.1781				ug/L
⌈	Pb	206	377541.624	1.3141	108115.2952	1594.5505	1.47	ug/L
|	Pb	207	314951.069	1.0962	108311.0071	1081.9396	1.00	ug/L
⌊>	Bi	209	287214.799	287214.7994				ug/L
	Hg	200	2863.649	2849.9822				ug/L
	Pd	106	867.845	514.6922				ug/L
	Kr	83	210.337	58.3347				ug/L
	Ti	48	3073404.718	3075740.0766				ug/L
	Ca	44	1080991.170	1042906.7583				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		109.209			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.862			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		100.348			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		101.935			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		109.209			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.212			
	Ag	109					
>	In	115		100.348			
	Pb	206					
	Pb	207					
>	Bi	209		99.666			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Pb 208 Upper	Pb	208	Pb above linear range -ok
U 238 Upper	U	238	U above linear range

Method 6020 - Summary Report

Sample ID: CPWT4X

Sample Description: Sample Duplicate
Sample Date/Time: Wednesday, January 27, 1999 12:03:30
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT4X.046
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 60
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277192.948	-1239.7785				~~ug/L~~ mg/L
	Be	9	137.669	0.0002	419.9631	4.5653	1.09	ug/L
	Al	27	52091924.090	85.2829	7034903.6334	83768.3959	1.19	ug/L
>	Sc	45	610740.936	610740.9360				ug/L
	V	51	207851.814	0.3361	14927.1701	152.7638	1.02	ug/L
	Cr	52	140502.994	0.2053	10264.2306	88.0957	0.86	ug/L
	Mn	55	5196328.611	8.5035	260766.5725	1095.9167	0.42	ug/L
	Fe	57	4251038.824	6.9245	10582197.9615	206297.4606	1.95	ug/L
	Co	59	210921.296	0.3450	13909.8116	305.2867	2.19	ug/L
	Ni	60	22096.889	0.0354	6727.1962	89.8486	1.34	ug/L
	Cu	65	40829.862	0.0660	12361.1218	148.0460	1.20	ug/L
>	Ge	72	830536.309	830536.3086				ug/L
	Zn	68	138205.143	0.1655	125376.5252	1593.6596	1.27	ug/L
	As	75	97619.558	0.1174	46977.8988	530.5030	1.13	ug/L
	Se	82	93.826	0.0001	428.4953	117.4714	27.41	ug/L
	Y	89	1007267.410	423253.0809				ug/L
	Mo	97	5011.596	0.0066	2040.8938	34.1891	1.68	ug/L
	Ag	107	2022.830	0.0026	214.7195	10.4808	4.88	ug/L
>	In	115	744866.348	744866.3477				ug/L
	Cd	111	7153.177	0.0096	3201.1876	20.5863	0.64	ug/L
	Sn	117	1176.394	0.0014	510.1186	29.4512	5.77	ug/L
	Sb	121	1905.480	0.0014	132.1467	11.0129	8.33	ug/L
	Ba	135	184674.191	0.2479	118501.0310	877.3248	0.74	ug/L
	Tb	159	558114.150	16298.2004				ug/L
>	Ho	165	513971.392	513971.3922				ug/L
	Tl	205	2954.668	0.0056	273.7298	5.0796	1.86	ug/L
	Pb	208	1389949.748	2.7031	101753.1208	628.4525	0.62	ug/L
	U	238	21100.449	0.0410	2187.3035	6.7407	0.31	ug/L
	Bi	209	286183.482	-1992.7003				ug/L
>	Sc	45	610740.936	610740.9360				ug/L
	Cr	50	39981.846	0.0647	72233.7115	14155.2760	19.60	ug/L
	Cr	53	17086.718	0.0244	10182.8743	221.5511	2.18	ug/L
	Ni	61	3616.161	0.0012	10501.1190	816.9108	7.78	ug/L
	Cu	63	92301.186	0.0785	13981.6681	113.1608	0.81	ug/L
	Br	79	5016.265	0.0031				ug/L

⊢>	Ge	74	1160304.474	1160304.4741				ug/L
⊢	Ag	109	2060.503	0.0027	233.0683	1.3417	0.58	ug/L
⊢>	In	115	744866.348	744866.3477				ug/L
⊢	Pb	206	362516.709	1.2662	104177.9925	887.5301	0.85	ug/L
⊢	Pb	207	301603.800	1.0534	104088.0886	799.1307	0.77	ug/L
⊢>	Bi	209	286183.482	286183.4815				ug/L
	Hg	200	3340.091	3326.4237				ug/L
	Pd	106	1288.962	935.8096				ug/L
	Kr	83	212.004	60.0014				ug/L
	Ti	48	3632011.049	3634346.4075				ug/L
	Ca	44	1209593.357	1171508.9457				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		110.308			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		102.584			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		99.776			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		102.462			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		110.308			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		102.371			
⌈	Ag	109					
⌊>	In	115		99.776			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		99.309			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Pb 208 Upper	Pb	208	Pb above linear range - OK

Method 6020 - Summary Report

Sample ID: CPWT6

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:07:58
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT6.047
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 61
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	275318.169	-3114.5574				~~ug/L~~ µg/L
	Be	9	174.670	0.0003	546.4212	106.4999	19.49	ug/L
	Al	27	58624496.289	97.4839	8041349.7688	50325.4112	0.63	ug/L
>	Sc	45	601341.786	601341.7859				ug/L
	V	51	214701.650	0.3528	15670.3012	204.7857	1.31	ug/L
	Cr	52	160422.471	0.2420	12102.5296	308.7191	2.55	ug/L
	Mn	55	5875502.466	9.7667	299504.3751	6244.9445	2.09	ug/L
	Fe	57	4478634.051	7.4136	11329674.9101	322365.2623	2.85	ug/L
	Co	59	378926.264	0.6299	25396.2101	598.3227	2.36	ug/L
	Ni	60	25404.503	0.0415	7881.3537	130.5153	1.66	ug/L
	Cu	65	71225.143	0.1176	22022.5707	42.8623	0.19	ug/L
>	Ge	72	832332.303	832332.3033				ug/L
	Zn	68	259275.326	0.3106	235314.1545	2037.5604	0.87	ug/L
	As	75	27441.962	0.0328	13125.5595	239.2327	1.82	ug/L
	Se	82	126.850	0.0001	591.6786	76.2083	12.88	ug/L
	Y	89	1063306.711	479292.3819				ug/L
	Mo	97	3256.737	0.0042	1302.7145	19.6625	1.51	ug/L
	Ag	107	7382.314	0.0097	798.1761	9.5632	1.20	ug/L
>	In	115	750605.715	750605.7154				ug/L
	Cd	111	9697.545	0.0129	4309.6788	66.7835	1.55	ug/L
	Sn	117	2541.585	0.0032	1158.3746	52.4910	4.53	ug/L
	Sb	121	2023.164	0.0015	145.6139	14.1419	9.71	ug/L
	Ba	135	272280.413	0.3627	173390.4052	1499.5747	0.86	ug/L
	Tb	159	558648.871	16832.9212				ug/L
>	Ho	165	516802.720	516802.7204				ug/L
	Tl	205	3122.039	0.0059	288.0808	9.9538	3.46	ug/L
	Pb	208	2406568.564	4.6555	175246.9564	740.8687	0.42	ug/L
	U	238	27569.858	0.0533	2843.7849	46.5721	1.64	ug/L
	Bi	209	293128.936	4952.7546				ug/L
>	Sc	45	601341.786	601341.7859				ug/L
	Cr	50	32345.655	0.0530	59208.0560	7373.6701	12.45	ug/L
	Cr	53	19337.274	0.0286	11932.4274	374.6231	3.14	ug/L
	Ni	61	3817.215	0.0014	11855.0786	878.3536	7.41	ug/L
	Cu	63	158358.510	0.1348	23992.5396	167.8524	0.70	ug/L
	Br	79	4876.882	0.0030				ug/L

L>	Ge	74	1166347.196	1166347.1965				ug/L
⌈	Ag	109	7193.883	0.0095	827.3888	11.7368	1.42	ug/L
L>	In	115	750605.715	750605.7154				ug/L
⌈	Pb	206	638645.336	2.1783	179218.5672	1381.5437	0.77	ug/L
|	Pb	207	519563.296	1.7721	175100.0040	1567.7231	0.90	ug/L
L>	Bi	209	293128.936	293128.9364				ug/L
	Hg	200	6625.936	6612.2697				ug/L
	Pd	106	1666.939	1313.7868				ug/L
	Kr	83	209.337	57.3346				ug/L
	Ti	48	3259358.930	3261694.2893				ug/L
	Ca	44	1527726.902	1489642.4910				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		108.610			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.806			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		100.545			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		103.026			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		108.610			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		102.904			
	Ag	109					
>	In	115		100.545			
	Pb	206					
	Pb	207					
>	Bi	209		101.719			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Zn 68 Upper	Zn	68	Zn above linear range
Pb 208 Upper	Pb	208	Pb above linear range - OK

Method 6020 - Summary Report

Sample ID: CPWT7

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:12:29
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT7.048
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 62
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2 5x
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277320.311	-1112.4159				~~ug/L~~ mg/kg
	Be	9	143.669	0.0002	445.4700	24.4334	5.48	ug/L
	Al	27	53506053.388	88.8559	7329630.3541	77919.2044	1.06	ug/L
>	Sc	45	602097.739	602097.7394				ug/L
	V	51	217231.527	0.3565	15836.8775	247.2650	1.56	ug/L
	Cr	52	155127.345	0.2328	11644.0076	150.2201	1.29	ug/L
	Mn	55	5310391.311	8.8148	270312.9151	4942.5536	1.83	ug/L
	Fe	57	4210054.233	6.9564	10630962.4540	155230.5757	1.46	ug/L
	Co	59	184942.101	0.3068	12370.0252	137.9243	1.11	ug/L
	Ni	60	21596.827	0.0351	6667.9158	105.7579	1.59	ug/L
	Cu	65	33245.687	0.0544	10182.2041	82.9793	0.81	ug/L
>	Ge	72	829604.714	829604.7137				ug/L
	Zn	68	107597.758	0.1288	97571.3928	491.2314	0.50	ug/L
	As	75	93412.145	0.1124	44998.1350	403.1439	0.90	ug/L
	Se	82	105.884	0.0001	489.5066	14.7764	3.02	ug/L
	Y	89	1016471.364	432457.0342				ug/L
	Mo	97	3896.237	0.0051	1570.2771	28.3174	1.80	ug/L
	Ag	107	4477.080	0.0059	482.2906	7.4746	1.55	ug/L
>	In	115	748591.255	748591.2549				ug/L
	Cd	111	7403.204	0.0099	3296.7805	15.2003	0.46	ug/L
	Sn	117	1057.716	0.0013	450.4364	18.1972	4.04	ug/L
	Sb	121	1002.379	0.0001	12.9189	0.6256	4.84	ug/L
	Ba	135	178943.602	0.2390	114249.2423	363.9590	0.32	ug/L
	Tb	159	558540.228	16724.2786				ug/L
>	Ho	165	513941.549	513941.5486				ug/L
	Tl	205	3146.378	0.0060	292.0667	7.6556	2.62	ug/L
	Pb	208	898587.804	1.7474	65775.2957	513.7694	0.78	ug/L
	U	238	18896.011	0.0367	1958.4830	22.3642	1.14	ug/L
	Bi	209	288309.120	132.9385				ug/L
>	Sc	45	602097.739	602097.7394				ug/L
	Cr	50	23529.402	0.0383	42796.2928	1749.1291	4.09	ug/L
	Cr	53	18966.776	0.0279	11654.7709	241.7228	2.07	ug/L
	Ni	61	3538.140	0.0012	10383.2858	838.6941	8.08	ug/L
	Cu	63	72925.733	0.0629	11206.2084	148.5344	1.33	ug/L
	Br	79	4237.672	0.0025				ug/L

L>	Ge	74	1140235.410	1140235.4100				ug/L
Γ	Ag	109	4103.297	0.0054	469.7669	8.5043	1.81	ug/L
L>	In	115	748591.255	748591.2549				ug/L
Γ	Pb	206	234965.587	0.8145	67012.4040	739.1752	1.10	ug/L
|	Pb	207	192656.977	0.6678	65981.8568	124.9744	0.19	ug/L
L>	Bi	209	288309.120	288309.1203				ug/L
	Hg	200	1775.461	1761.7947				ug/L
	Pd	106	1475.797	1122.6440				ug/L
	Kr	83	205.337	53.3345				ug/L
	Ti	48	1891260.628	1893595.9869				ug/L
	Ca	44	1040859.781	1002775.3695				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		108.747			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.469			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		100.275			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		102.456			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		108.747			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.600			
	Ag	109					
>	In	115		100.275			
	Pb	206					
	Pb	207					
>	Bi	209		100.046			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Pb 208 Upper	Pb	208	Pb above linear range - ok

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 12:17:13
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.049
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	273134.458	-5298.2688				ug/L
	Be	9	13996.662	0.0250	96.6919	2.5315	2.62	ug/L
	Al	27	340085.570	0.5969	98.4792	0.8617	0.87	ug/L
>	Sc	45	560196.367	560196.3668				ug/L
	V	51	630370.692	1.1210	99.5875	0.4424	0.44	ug/L
	Cr	52	573031.654	0.9982	99.8352	1.8858	1.89	ug/L
	Mn	55	905282.979	1.6115	98.8350	2.3431	2.37	ug/L
	Fe	57	936519.631	1.6361	5000.7877	97.7677	1.96	ug/L
	Co	59	685057.149	1.2227	98.5927	2.5434	2.58	ug/L
	Ni	60	144332.834	0.2569	97.6672	3.7814	3.87	ug/L
	Cu	65	145870.161	0.2596	97.2120	0.5961	0.61	ug/L
>	Ge	72	808382.087	808382.0871				ug/L
	Zn	68	54744.257	0.0668	101.2287	0.3084	0.30	ug/L
	As	75	103338.619	0.1277	102.2025	0.9520	0.93	ug/L
	Se	82	10226.918	0.0126	104.4131	2.3699	2.27	ug/L
	Y	89	581443.138	-2571.1919				ug/L
	Mo	97	122619.228	0.1655	102.2463	1.4771	1.44	ug/L
	Ag	107	450340.549	0.6080	99.6580	0.6323	0.63	ug/L
>	In	115	740541.984	740541.9841				ug/L
	Cd	111	111505.286	0.1505	100.6311	0.1028	0.10	ug/L
	Sn	117	102647.541	0.1385	99.3456	0.8591	0.86	ug/L
	Sb	121	380162.481	0.5121	100.1736	0.8041	0.80	ug/L
	Ba	135	76644.492	0.1035	98.9139	0.3217	0.33	ug/L
	Tb	159	541359.517	-456.4323				ug/L
>	Ho	165	503662.953	503662.9527				ug/L
	Tl	205	507764.379	1.0080	98.9231	0.7629	0.77	ug/L
	Pb	208	669300.552	1.3277	99.9600	0.6619	0.66	ug/L
	U	238	474618.720	0.9423	100.6367	0.4849	0.48	ug/L
	Bi	209	287543.253	-632.9288				ug/L
>	Sc	45	560196.367	560196.3668				ug/L
	Cr	50	26010.033	0.0457	101.9974	1.5963	1.56	ug/L
	Cr	53	68798.629	0.1192	99.6220	1.0994	1.10	ug/L
	Ni	61	8617.018	0.0057	97.9462	0.6909	0.71	ug/L
	Cu	63	318254.826	0.2785	99.1763	0.6582	0.66	ug/L
	Br	79	1059.717	-0.0003				ug/L

L>	Ge	74	1138559.014	1138559.0137				ug/L
Γ	Ag	109	426232.073	0.5755	100.3293	0.8284	0.83	ug/L
L>	In	115	740541.984	740541.9841				ug/L
Γ	Pb	206	173594.770	0.6032	99.2576	0.1036	0.10	ug/L
|	Pb	207	145501.673	0.5056	99.9087	0.5837	0.58	ug/L
L>	Bi	209	287543.253	287543.2530				ug/L
	Hg	200	25.000	11.3335				ug/L
	Pd	106	-340.759	-693.9112				ug/L
	Kr	83	147.669	-4.3334				ug/L
	Ti	48	-1800.227	535.1321				ug/L
	Ca	44	36521.662	-1562.7494				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9	96.692				
|	Al	27	98.479				
|>	Sc	45		101.179			
|	V	51	99.588				
|	Cr	52	99.835				
|	Mn	55	98.835				
|	Fe	57	100.016				
|	Co	59	98.593				
|	Ni	60	97.667				
⌊	Cu	65	97.212				
⌈>	Ge	72		99.848			
|	Zn	68	101.229				
|	As	75	102.203				
⌊	Se	82	104.413				
	Y	89					
⌈	Mo	97	102.246				
|	Ag	107	99.658				
|>	In	115		99.197			
|	Cd	111	100.631				
|	Sn	117	99.346				
|	Sb	121	100.174				
⌊	Ba	135	98.914				
	Tb	159					
⌈>	Ho	165		100.407			
|	Tl	205	98.923				
|	Pb	208	99.960				
⌊	U	238	100.637				
	Bi	209					
⌈>	Sc	45		101.179			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		100.452			
⌈	Ag	109					
⌊>	In	115		99.197			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		99.780			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 12:21:58
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 4.050
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	275214.772	-3217.9551				ug/L
	Be	9	7.000	0.0000	0.0169	0.0144	85.22	ug/L
	Al	27	5591.483	0.0000	0.0028	0.0216	765.59	ug/L
>	Sc	45	548000.152	548000.1521				ug/L
	V	51	2402.021	0.0001	0.0110	0.0144	130.65	ug/L
	Cr	52	13436.117	-0.0003	-0.0278	0.0294	105.85	ug/L
	Mn	55	2640.604	0.0001	0.0060	0.0052	86.53	ug/L
	Fe	57	20081.105	0.0008	2.4714	1.2208	49.40	ug/L
	Co	59	218.671	0.0001	0.0057	0.0017	29.73	ug/L
	Ni	60	449.820	0.0000	0.0131	0.0098	74.65	ug/L
	Cu	65	459.935	-0.0000	-0.0015	0.0041	270.85	ug/L
>	Ge	72	804949.315	804949.3152				ug/L
	Zn	68	664.022	-0.0001	-0.1342	0.0894	66.64	ug/L
	As	75	52.415	-0.0001	-0.0915	0.0342	37.38	ug/L
	Se	82	-7.342	-0.0000	-0.1500	0.1307	87.09	ug/L
	Y	89	575089.026	-8925.3038				ug/L
	Mo	97	173.670	0.0001	0.0698	0.0379	54.33	ug/L
	Ag	107	176.670	0.0001	0.0236	0.0078	33.06	ug/L
>	In	115	738944.500	738944.4998				ug/L
	Cd	111	22.986	0.0000	0.0040	0.0046	116.15	ug/L
	Sn	117	308.006	0.0003	0.1863	0.0574	30.81	ug/L
	Sb	121	4051.649	0.0043	0.8381	0.3316	39.57	ug/L
	Ba	135	42.334	0.0000	0.0142	0.0136	95.54	ug/L
	Tb	159	543826.587	2010.6374				ug/L
>	Ho	165	500446.806	500446.8062				ug/L
	Tl	205	134.335	0.0001	0.0096	0.0078	81.37	ug/L
	Pb	208	509.009	-0.0001	-0.0090	0.0041	45.19	ug/L
	U	238	195.337	0.0003	0.0317	0.0173	54.74	ug/L
	Bi	209	285234.102	-2942.0796				ug/L
>	Sc	45	548000.152	548000.1521				ug/L
	Cr	50	414.638	0.0000	0.0504	0.0323	64.08	ug/L
	Cr	53	1765.794	-0.0004	-0.3214	0.1785	55.53	ug/L
	Ni	61	2141.515	0.0000	0.0823	1.2313	1495.57	ug/L
	Cu	63	1089.386	-0.0000	-0.0171	0.0083	48.29	ug/L
	Br	79	807.031	-0.0005				ug/L

⌊>	Ge	74	1123857.512	1123857.5122			ug/L
⌈	Ag	109	155.669	0.0001	0.0207	0.0072	34.67	ug/L
⌊>	In	115	738944.500	738944.4998			ug/L
⌈	Pb	206	119.002	-0.0001	-0.0140	0.0021	15.20	ug/L
|	Pb	207	107.335	-0.0001	-0.0168	0.0058	34.48	ug/L
⌊>	Bi	209	285234.102	285234.1022			ug/L
	Hg	200	18.334	4.6667			ug/L
	Pd	106	363.396	10.2438			ug/L
	Kr	83	154.336	2.3334			ug/L
	Ti	48	-2230.666	104.6926			ug/L
	Ca	44	36314.128	-1770.2836			ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		98.976			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		99.424			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		98.983			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		99.766			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		98.976			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.155			
	Ag	109					
>	In	115		98.983			
	Pb	206					
	Pb	207					
>	Bi	209		98.979			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: CPWT8

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:26:26
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT8.051
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 63
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277566.286	-866.4407				~~ug/L~~ mg/L
	Be	9	138.669	0.0002	432.0398	50.4222	11.67	ug/L
	Al	27	49435912.148	82.5966	6813309.1186	66733.1087	0.98	ug/L
>	Sc	45	598471.725	598471.7251				ug/L
	V	51	229075.856	0.3785	16812.6406	59.6934	0.36	ug/L
	Cr	52	227619.330	0.3556	17780.5111	182.1688	1.02	ug/L
	Mn	55	5182670.361	8.6547	265401.5995	5703.8128	2.15	ug/L
	Fe	57	3934608.309	6.5392	9993415.8650	183662.0481	1.84	ug/L
	Co	59	183524.141	0.3064	12350.8945	150.5701	1.22	ug/L
	Ni	60	24787.774	0.0406	7723.3874	100.7680	1.30	ug/L
	Cu	65	82257.620	0.1366	25585.6624	706.3378	2.76	ug/L
>	Ge	72	832562.767	832562.7673				ug/L
	Zn	68	146983.444	0.1756	133071.5870	1452.8525	1.09	ug/L
	As	75	401072.463	0.4816	192779.1693	2974.3128	1.54	ug/L
	Se	82	166.402	0.0002	786.4082	155.8136	19.81	ug/L
	Y	89	947879.608	363865.2783				ug/L
	Mo	97	8930.547	0.0119	3669.5678	34.1617	0.93	ug/L
	Ag	107	6716.313	0.0089	731.8596	15.7626	2.15	ug/L
>	In	115	744177.856	744177.8556				ug/L
	Cd	111	12617.184	0.0169	5658.2606	37.9247	0.67	ug/L
	Sn	117	914.372	0.0011	384.3744	12.8121	3.33	ug/L
	Sb	121	6815.027	0.0080	777.8270	27.1001	3.48	ug/L
	Ba	135	156928.113	0.2109	100798.6666	1327.4752	1.32	ug/L
	Tb	159	553423.132	11607.1822				ug/L
>	Ho	165	513971.340	513971.3404				ug/L
	Tl	205	4394.720	0.0084	411.2057	6.4128	1.56	ug/L
	Pb	208	2619166.651	5.0950	191788.5177	1827.1871	0.95	ug/L
	U	238	32925.229	0.0640	3416.0220	42.1193	1.23	ug/L
	Bi	209	289438.362	1262.1797				ug/L
>	Sc	45	598471.725	598471.7251				ug/L
	Cr	50	24721.963	0.0406	45302.9209	2567.8964	5.67	ug/L
	Cr	53	26770.328	0.0411	17183.9147	186.0435	1.08	ug/L
	Ni	61	3859.894	0.0014	12409.0064	1184.5107	9.55	ug/L
	Cu	63	182016.378	0.1564	27838.2152	464.2211	1.67	ug/L
	Br	79	7737.173	0.0055				ug/L

↳	Ge	74	1156710.915	1156710.9155				ug/L
⌈	Ag	109	6453.522	0.0086	747.8506	6.0508	0.81	ug/L
↳	In	115	744177.856	744177.8556				ug/L
⌈	Pb	206	694975.693	2.4008	197519.4722	2676.8167	1.36	ug/L
|	Pb	207	569744.603	1.9680	194457.1877	1307.6176	0.67	ug/L
↳	Bi	209	289438.362	289438.3615				ug/L
	Hg	200	2268.203	2254.5360				ug/L
	Pd	106	989.641	636.4881				ug/L
	Kr	83	222.671	70.6683				ug/L
	Ti	48	1654926.790	1657262.1487				ug/L
	Ca	44	1876555.743	1838471.3313				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		108.092			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		102.835			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		99.684			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		102.462			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		108.092			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		102.054			
	Ag	109					
>	In	115		99.684			
	Pb	206					
	Pb	207					
>	Bi	209		100.438			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
As 75 Upper	As	75	As above linear range
Pb 208 Upper	Pb	208	Pb above linear range - ok

Method 6020 - Summary Report

Sample ID: CPWT9

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:30:59
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWT9.052
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 64
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 1
Diluted To Volume (mL): 1e+001 10x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	273273.904	-5158.8222				~~ug/L~~ mg/kg
	Be	9	79.334	0.0001	498.9753	25.7230	5.16	ug/L
	Al	27	25820828.708	44.7172	7377362.1552	146330.2700	1.98	ug/L
>	Sc	45	577399.545	577399.5449				ug/L
	V	51	124819.786	0.2119	18827.6353	338.2712	1.80	ug/L
	Cr	52	93327.807	0.1369	13687.9290	252.4672	1.84	ug/L
	Mn	55	3473983.929	6.0127	368767.4975	5083.9438	1.38	ug/L
	Fe	57	2385637.816	4.0963	12520142.1899	134217.6495	1.07	ug/L
	Co	59	110730.697	0.1915	15441.5003	504.0099	3.26	ug/L
	Ni	60	14185.736	0.0238	9043.0342	265.2457	2.93	ug/L
	Cu	65	60128.485	0.1033	38693.7390	731.8129	1.89	ug/L
>	Ge	72	823009.149	823009.1492				ug/L
	Zn	68	238574.058	0.2890	437871.4198	4553.7238	1.04	ug/L
	As	75	46033.884	0.0558	44634.1257	463.1471	1.04	ug/L
	Se	82	70.486	0.0001	632.7602	118.2913	18.69	ug/L
	Y	89	788638.671	204624.3412				ug/L
	Mo	97	1919.482	0.0025	1520.1258	13.8390	0.91	ug/L
	Ag	107	3775.537	0.0050	816.9861	7.1069	0.87	ug/L
>	In	115	743237.158	743237.1585				ug/L
	Cd	111	5838.748	0.0078	5233.4816	105.4319	2.01	ug/L
	Sn	117	1190.728	0.0014	1036.4181	47.7404	4.61	ug/L
	Sb	121	1273.736	0.0005	99.1434	14.7457	14.87	ug/L
	Ba	135	142256.262	0.1914	182956.5589	1171.1109	0.64	ug/L
	Tb	159	545076.487	3260.5378				ug/L
>	Ho	165	505628.819	505628.8189				ug/L
	Tl	205	1725.455	0.0032	318.1647	4.8866	1.54	ug/L
	Pb	208	1784212.192	3.5276	265577.1464	846.0964	0.32	ug/L
	U	238	11908.748	0.0235	2505.3904	36.7065	1.47	ug/L
	Bi	209	285918.409	-2257.7724				ug/L
>	Sc	45	577399.545	577399.5449				ug/L
	Cr	50	10053.461	0.0167	37184.5254	6253.8404	16.82	ug/L
	Cr	53	11447.366	0.0162	13556.8126	363.9711	2.68	ug/L
	Ni	61	3140.043	0.0008	14242.0180	904.8897	6.35	ug/L
	Cu	63	133262.679	0.1147	40831.8462	966.9722	2.37	ug/L
	Br	79	3840.555	0.0022				ug/L

⌊>	Ge	74	1152262.716	1152262.7160				ug/L
⌈	Ag	109	3502.465	0.0046	805.3468	17.1391	2.13	ug/L
⌊>	In	115	743237.158	743237.1585				ug/L
⌈	Pb	206	472727.400	1.6529	271986.8841	4778.5557	1.76	ug/L
|	Pb	207	385763.002	1.3488	266541.9309	2498.1579	0.94	ug/L
⌊>	Bi	209	285918.409	285918.4095				ug/L
	Hg	200	937.040	923.3733				ug/L
	Pd	106	1032.876	679.7232				ug/L
	Kr	83	174.336	22.3338				ug/L
	Ti	48	805718.978	808054.3366				ug/L
	Ca	44	834463.216	796378.8051				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		104.286			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.655			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		99.558			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		100.799			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		104.286			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.661			
	Ag	109					
>	In	115		99.558			
	Pb	206					
	Pb	207					
>	Bi	209		99.217			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Zn 68 Upper	Zn	68	Zn above linear range
Pb 208 Upper	Pb	208	Pb above linear range - OK

Method 6020 - Summary Report

Sample ID: CPWTD

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:35:32
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTD.053
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 65
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	274841.431	-3591.2959				~~ug/L~~ µg/L
	Be	9	128.335	0.0002	402.5908	22.2279	5.52	ug/L
	Al	27	50548216.802	85.2651	7033434.6796	43686.2935	0.62	ug/L
>	Sc	45	592741.615	592741.6146				ug/L
	V	51	202416.470	0.3372	14979.3604	278.7949	1.86	ug/L
	Cr	52	401808.673	0.6531	32657.7464	537.9479	1.65	ug/L
	Mn	55	5490516.284	9.2579	283901.4274	1250.5848	0.44	ug/L
	Fe	57	4132804.601	6.9365	10600520.2572	160894.7435	1.52	ug/L
	Co	59	163517.504	0.2755	11108.8528	69.0726	0.62	ug/L
	Ni	60	23672.463	0.0392	7441.7870	114.6068	1.54	ug/L
	Cu	65	54215.783	0.0906	16973.2303	435.4468	2.57	ug/L
>	Ge	72	821065.197	821065.1972				ug/L
	Zn	68	140386.933	0.1701	128852.1587	671.6395	0.52	ug/L
	As	75	659516.889	0.8031	321479.4946	3025.8232	0.94	ug/L
	Se	82	116.128	0.0001	546.2048	24.7514	4.53	ug/L
	Y	89	968943.893	384929.5631				ug/L
	Mo	97	2883.653	0.0038	1170.8544	32.7345	2.80	ug/L
	Ag	107	5679.519	0.0076	623.5350	13.4993	2.16	ug/L
>	In	115	737147.260	737147.2602				ug/L
	Cd	111	11103.996	0.0150	5025.8014	63.2672	1.26	ug/L
	Sn	117	929.040	0.0011	395.6878	19.1767	4.85	ug/L
	Sb	121	3665.507	0.0038	368.2785	4.2831	1.16	ug/L
	Ba	135	199379.686	0.2704	129278.4185	271.2203	0.21	ug/L
	Tb	159	549459.533	7643.5830				ug/L
>	Ho	165	507597.245	507597.2452				ug/L
	Tl	205	3310.750	0.0064	311.6645	4.7635	1.53	ug/L
	Pb	208	2465732.981	4.8567	182819.7982	1346.7906	0.74	ug/L
	U	238	22593.077	0.0444	2371.9454	17.2405	0.73	ug/L
	Bi	209	287040.559	-1135.6226				ug/L
>	Sc	45	592741.615	592741.6146				ug/L
	Cr	50	34427.433	0.0573	63993.8073	2926.4047	4.57	ug/L
	Cr	53	48498.003	0.0782	32682.3558	368.5084	1.13	ug/L
	Ni	61	3642.168	0.0013	11076.8585	626.8003	5.66	ug/L
	Cu	63	119951.399	0.1038	18489.3263	191.6708	1.04	ug/L
	Br	79	5513.787	0.0036				ug/L

⌊>	Ge	74	1143886.261	1143886.2610				ug/L
⌈	Ag	109	5320.711	0.0071	621.0909	4.6628	0.75	ug/L
⌊>	In	115	737147.260	737147.2602				ug/L
⌈	Pb	206	647359.927	2.2548	185509.3224	968.8223	0.52	ug/L
|	Pb	207	540123.620	1.8812	185883.3897	883.4246	0.48	ug/L
⌊>	Bi	209	287040.559	287040.5592				ug/L
	Hg	200	2109.510	2095.8434				ug/L
	Pd	106	1601.678	1248.5253				ug/L
	Kr	83	215.670	63.6681				ug/L
	Ti	48	1838123.236	1840458.5948				ug/L
	Ca	44	1278916.703	1240832.2915				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		107.057			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.415			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		98.742			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		101.191			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		107.057			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.922			
	Ag	109					
>	In	115		98.742			
	Pb	206					
	Pb	207					
>	Bi	209		99.606			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
As 75 Upper	As	75	As above linear range
Pb 208 Upper	Pb	208	Pb above linear range

> ok

Method 6020 - Summary Report

Sample ID: CPWTE

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:40:03
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTE.054
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 66
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	276253.760	-2178.9666				~~ug/L~~ mg/L
	Be	9	154.669	0.0002	482.7923	29.2402	6.06	ug/L
	Al	27	58220716.001	97.1773	8016054.7499	218952.1816	2.73	ug/L
>	Sc	45	599267.545	599267.5448				ug/L
	V	51	257099.352	0.4248	18870.2711	268.2608	1.42	ug/L
	Cr	52	183882.168	0.2821	14107.8192	260.5712	1.85	ug/L
	Mn	55	5734227.814	9.5658	293343.8087	7291.5792	2.49	ug/L
	Fe	57	4488505.443	7.4563	11394957.5302	254862.1064	2.24	ug/L
	Co	59	272171.297	0.4540	18305.4617	582.3848	3.18	ug/L
	Ni	60	26407.226	0.0433	8229.3536	225.0125	2.73	ug/L
	Cu	65	74127.198	0.1229	23013.9498	513.0091	2.23	ug/L
>	Ge	72	823436.623	823436.6229				ug/L
	Zn	68	229277.288	0.2775	210259.1713	1570.3322	0.75	ug/L
	As	75	17932.526	0.0216	8645.2616	112.1938	1.30	ug/L
	Se	82	129.609	0.0001	612.4837	108.5465	17.72	ug/L
	Y	89	1051433.588	467419.2589				ug/L
	Mo	97	3138.043	0.0042	1294.2342	25.4330	1.97	ug/L
	Ag	107	3165.050	0.0043	348.4703	20.8086	5.97	ug/L
>	In	115	727865.189	727865.1889				ug/L
	Cd	111	6762.061	0.0093	3096.5087	16.7042	0.54	ug/L
	Sn	117	995.045	0.0012	433.7038	28.9539	6.68	ug/L
	Sb	121	1110.721	0.0003	31.1941	3.0588	9.81	ug/L
	Ba	135	253255.441	0.3479	166322.7090	2282.9539	1.37	ug/L
	Tb	159	551529.683	9713.7338				ug/L
>	Ho	165	508206.381	508206.3810				ug/L
	Tl	205	2750.626	0.0052	257.2067	0.8480	0.33	ug/L
	Pb	208	1502912.830	2.9562	111279.6149	1152.1633	1.04	ug/L
	U	238	34627.264	0.0680	3633.6055	37.2277	1.02	ug/L
	Bi	209	286431.366	-1744.8161				ug/L
>	Sc	45	599267.545	599267.5448				ug/L
	Cr	50	19628.048	0.0321	35782.8000	3674.4418	10.27	ug/L
	Cr	53	21749.094	0.0327	13662.6244	354.6206	2.60	ug/L
	Ni	61	3962.256	0.0016	13472.3796	1067.8249	7.93	ug/L
	Cu	63	163131.438	0.1415	25184.3376	244.8518	0.97	ug/L
	Br	79	4465.743	0.0027				ug/L

L>	Ge	74	1145053.809	1145053.8090				ug/L
⌈	Ag	109	2944.666	0.0040	344.5423	6.8642	1.99	ug/L
L>	In	115	727865.189	727865.1889				ug/L
⌈	Pb	206	393295.576	1.3727	112934.2157	1011.1457	0.90	ug/L
|	Pb	207	324230.374	1.1315	111806.4580	1456.5246	1.30	ug/L
L>	Bi	209	286431.366	286431.3658				ug/L
	Hg	200	1691.117	1677.4502				ug/L
	Pd	106	1779.264	1426.1116				ug/L
	Kr	83	198.670	46.6677				ug/L
	Tl	48	1739823.306	1742158.6645				ug/L
	Ca	44	2253646.607	2215562.1961				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		108.236			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		101.708			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		97.499			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		101.312			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		108.236			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		101.025			
⌈	Ag	109					
⌊>	In	115		97.499			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		99.395			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Zn 68 Upper	Zn	68	Zn above linear range
Pb 208 Upper	Pb	208	Pb above linear range - ok

Method 6020 - Summary Report

Sample ID: CPWTG

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:44:33
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTG.055
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 67
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 1
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277352.839	-1079.8875				ug/L
	Be	9	87.334	0.0001	553.0449	29.3277	5.30	ug/L
	Al	27	25772096.605	44.6348	7363760.0243	143180.5121	1.94	ug/L
>	Sc	45	577309.287	577309.2870				ug/L
	V	51	114133.773	0.1934	17184.3610	113.9337	0.66	ug/L
	Cr	52	90539.593	0.1320	13205.8485	204.7753	1.55	ug/L
	Mn	55	3319481.767	5.7456	352384.5344	5380.0125	1.53	ug/L
	Fe	57	1957103.703	3.3543	10252293.3718	72215.5470	0.70	ug/L
	Co	59	152142.422	0.2632	21222.9837	111.2049	0.52	ug/L
	Ni	60	12564.519	0.0210	7974.3871	132.4414	1.66	ug/L
	Cu	65	54326.552	0.0933	34929.5022	283.8351	0.81	ug/L
>	Ge	72	824538.399	824538.3993				ug/L
	Zn	68	207916.571	0.2513	380723.4370	3251.0088	0.85	ug/L
	As	75	74764.407	0.0905	72446.5244	298.5672	0.41	ug/L
	Se	82	80.924	0.0001	734.3506	216.7455	29.52	ug/L
	Y	89	784696.652	200682.3221				ug/L
	Mo	97	1899.479	0.0025	1527.4720	52.0227	3.41	ug/L
	Ag	107	3919.244	0.0053	861.6735	15.5726	1.81	ug/L
>	In	115	732166.352	732166.3522				ug/L
	Cd	111	7180.414	0.0098	6537.4829	159.7015	2.44	ug/L
	Sn	117	1329.075	0.0017	1189.5805	30.3329	2.55	ug/L
	Sb	121	1069.051	0.0003	49.5024	5.1363	10.38	ug/L
	Ba	135	138012.533	0.1885	180181.3335	224.6798	0.12	ug/L
	Tb	159	546388.738	4572.7884				ug/L
>	Ho	165	504486.026	504486.0256				ug/L
	Tl	205	1675.115	0.0031	309.1097	0.2809	0.09	ug/L
	Pb	208	1742195.963	3.4524	259911.8046	1186.1607	0.46	ug/L
	U	238	11960.125	0.0236	2521.8900	10.3427	0.41	ug/L
	Bi	209	287097.384	-1078.7983				ug/L
>	Sc	45	577309.287	577309.2870				ug/L
	Cr	50	11274.136	0.0188	41950.0249	2493.9226	5.94	ug/L
	Cr	53	10747.482	0.0150	12543.2897	141.3885	1.13	ug/L
	Ni	61	2993.344	0.0007	12714.3153	928.3847	7.30	ug/L
	Cu	63	119486.243	0.1043	37132.3061	1087.7859	2.93	ug/L
	Br	79	3051.023	0.0015				ug/L

⌊>	Ge	74	1134985.735	1134985.7355				ug/L
⌈	Ag	109	3779.538	0.0051	883.9337	17.5205	1.98	ug/L
⌊>	In	115	732166.352	732166.3522				ug/L
⌈	Pb	206	461666.428	1.6076	264517.7630	710.8316	0.27	ug/L
|	Pb	207	376383.774	1.3105	258981.8488	1369.3101	0.53	ug/L
⌊>	Bi	209	287097.384	287097.3836				ug/L
	Hg	200	1541.432	1527.7651				ug/L
	Pd	106	908.525	555.3729				ug/L
	Kr	83	162.336	10.3336				ug/L
	Ti	48	841983.738	844319.0964				ug/L
	Ca	44	800213.260	762128.8483				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
⌈	Be	9					
|	Al	27					
|>	Sc	45		104.270			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
⌊	Cu	65					
⌈>	Ge	72		101.844			
|	Zn	68					
|	As	75					
⌊	Se	82					
	Y	89					
⌈	Mo	97					
|	Ag	107					
|>	In	115		98.075			
|	Cd	111					
|	Sn	117					
|	Sb	121					
⌊	Ba	135					
	Tb	159					
⌈>	Ho	165		100.571			
|	Tl	205					
|	Pb	208					
⌊	U	238					
	Bi	209					
⌈>	Sc	45		104.270			
|	Cr	50					
⌊	Cr	53					
⌈	Ni	61					
|	Cu	63					
|	Br	79					
⌊>	Ge	74		100.137			
⌈	Ag	109					
⌊>	In	115		98.075			
⌈	Pb	206					
|	Pb	207					
⌊>	Bi	209		99.626			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Zn 68 Upper	Zn	68	Zn above linear range
Pb 208 Upper	Pb	208	Pb above linear range - OK

Method 6020 - Summary Report

Sample ID: CPWTH

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:49:09
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTH.056
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 68
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 1
Diluted To Volume (mL): 1e+001

10 x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	- Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	280357.666	1924.9393				~~ug/L~~ ug/kg
	Be	9	90.001	0.0001	569.3337	82.5630	14.50	ug/L
	Al	27	26227753.004	45.3890	7488192.9696	72835.8559	0.97	ug/L
>	Sc	45	577756.841	577756.8409				ug/L
	V	51	101792.464	0.1719	15274.6939	144.6017	0.95	ug/L
	Cr	52	118662.828	0.1806	18060.3150	146.7384	0.81	ug/L
	Mn	55	2945255.743	5.0931	312370.3343	636.6057	0.20	ug/L
	Fe	57	1899205.261	3.2521	9940008.4757	184633.5146	1.86	ug/L
	Co	59	110522.385	0.1910	15402.7534	430.4894	2.79	ug/L
	Ni	60	12369.629	0.0206	7841.3315	209.1013	2.67	ug/L
	Cu	65	40016.767	0.0684	25634.1947	815.1133	3.18	ug/L
>	Ge	72	816191.166	816191.1661				ug/L
	Zn	68	145446.131	0.1773	268651.9097	1815.3860	0.68	ug/L
	As	75	37311.588	0.0455	36454.7902	228.5963	0.63	ug/L
	Se	82	67.089	0.0001	601.6811	250.3969	41.62	ug/L
	Y	89	810616.547	226602.2179				ug/L
	Mo	97	1583.437	0.0021	1269.8858	21.5129	1.69	ug/L
	Ag	107	2706.950	0.0036	594.4945	8.4969	1.43	ug/L
>	In	115	727145.132	727145.1317				ug/L
	Cd	111	6034.170	0.0083	5529.7582	126.7779	2.29	ug/L
	Sn	117	928.373	0.0011	802.8440	56.5260	7.04	ug/L
	Sb	121	678.690	-0.0003	-53.4977	5.1623	9.65	ug/L
	Ba	135	159136.699	0.2188	209203.0578	1207.6122	0.58	ug/L
	Tb	159	544305.253	2489.3032				ug/L
>	Ho	165	503007.008	503007.0076				ug/L
	Tl	205	1702.452	0.0032	315.4245	13.2068	4.19	ug/L
	Pb	208	1548755.248	3.0779	231717.5957	66.7192	0.03	ug/L
	U	238	13226.253	0.0262	2798.1761	27.1078	0.97	ug/L
	Bi	209	286976.312	-1199.8697				ug/L
>	Sc	45	577756.841	577756.8409				ug/L
	Cr	50	13072.135	0.0219	48856.3112	1053.5442	2.16	ug/L
	Cr	53	14169.833	0.0209	17482.5541	230.7107	1.32	ug/L
	Ni	61	2968.005	0.0007	12487.1825	744.0594	5.96	ug/L
	Cu	63	87950.452	0.0768	27329.5687	580.1872	2.12	ug/L
	Br	79	2958.003	0.0014				ug/L

⌊>	Ge	74	1131232.855	1131232.8552				ug/L
⌈	Ag	109	2525.582	0.0034	589.4289	12.0942	2.05	ug/L
⌊>	In	115	727145.132	727145.1317				ug/L
⌈	Pb	206	409245.118	1.4256	234572.8678	656.6298	0.28	ug/L
|	Pb	207	334155.246	1.1639	230016.9360	1153.3831	0.50	ug/L
⌊>	Bi	209	286976.312	286976.3121				ug/L
	Hg	200	1112.054	1098.3876				ug/L
	Pd	106	903.177	550.0250				ug/L
	Kr	83	181.670	29.6673				ug/L
	Ti	48	945033.238	947368.5968				ug/L
	Ca	44	773642.202	735557.7908				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		104.350			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		100.813			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		97.402			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		100.276			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		104.350			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.806			
	Ag	109					
>	In	115		97.402			
	Pb	206					
	Pb	207					
>	Bi	209		99.584			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Zn 68 Upper	Zn	68	Zn above linear range
Ba 135 Upper	Ba	135	Ba above linear range > ok
Pb 208 Upper	Pb	208	Pb above linear range

Method 6020 - Summary Report

Sample ID: CPWTJ

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:53:42
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTJ.057
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 69
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	277389.009	-1043.7175				~~ug/L~~ mg/L
	Be	9	135.669	0.0002	434.3751	20.7174	4.77	ug/L
	Al	27	46510189.345	79.8079	6583274.2540	128627.5211	1.95	ug/L
>	Sc	45	582717.641	582717.6414				ug/L
	V	51	192083.760	0.3254	14452.8431	127.8784	0.88	ug/L
	Cr	52	135107.935	0.2071	10354.8666	132.1368	1.28	ug/L
	Mn	55	4822420.416	8.2711	253638.1463	1908.8724	0.75	ug/L
	Fe	57	3928355.219	6.7057	10247780.1646	200487.3600	1.96	ug/L
	Co	59	204166.414	0.3500	14112.3325	157.9109	1.12	ug/L
	Ni	60	21644.261	0.0364	6910.0652	86.5391	1.25	ug/L
	Cu	65	39163.782	0.0664	12428.6806	225.2735	1.81	ug/L
>	Ge	72	819086.112	819086.1121				ug/L
	Zn	68	88559.538	0.1072	81232.9083	950.5267	1.17	ug/L
	As	75	71791.418	0.0875	35018.3399	800.7078	2.29	ug/L
	Se	82	112.586	0.0001	530.6313	63.1475	11.90	ug/L
	Y	89	976055.539	392041.2095				ug/L
	Mo	97	3966.257	0.0053	1646.4648	21.2175	1.29	ug/L
	Ag	107	1803.465	0.0024	195.3088	1.9186	0.98	ug/L
>	In	115	727575.350	727575.3497				ug/L
	Cd	111	6806.761	0.0093	3118.2043	34.8285	1.12	ug/L
	Sn	117	636.354	0.0007	257.2765	8.7277	3.39	ug/L
	Sb	121	719.692	-0.0002	-21.2944	2.1116	9.92	ug/L
	Ba	135	168925.974	0.2321	110968.9490	860.8262	0.78	ug/L
	Tb	159	549543.069	7727.1197				ug/L
>	Ho	165	508750.885	508750.8853				ug/L
	Tl	205	2809.638	0.0054	262.6544	7.2071	2.74	ug/L
	Pb	208	1471236.016	2.8907	108814.6616	57.7474	0.05	ug/L
	U	238	19872.012	0.0390	2080.9194	33.0862	1.59	ug/L
	Bi	209	285087.045	-3089.1364				ug/L
>	Sc	45	582717.641	582717.6414				ug/L
	Cr	50	23055.398	0.0388	43341.9380	620.9830	1.43	ug/L
	Cr	53	16231.044	0.0242	10131.3353	64.4854	0.64	ug/L
	Ni	61	3649.836	0.0013	10985.9629	209.4355	1.91	ug/L
	Cu	63	87344.072	0.0749	13341.7827	321.4092	2.41	ug/L
	Br	79	4546.770	0.0028				ug/L

⌊>	Ge	74	1150383.740	1150383.7397				ug/L
⌈	Ag	109	1689.783	0.0022	194.3900	1.9447	1.00	ug/L
⌊>	In	115	727575.350	727575.3497				ug/L
⌈	Pb	206	381621.566	1.3381	110091.1259	85.0948	0.08	ug/L
|	Pb	207	318989.366	1.1185	110513.5270	653.4254	0.59	ug/L
⌊>	Bi	209	285087.045	285087.0454				ug/L
	Hg	200	1544.766	1531.0989				ug/L
	Pd	106	1320.662	967.5098				ug/L
	Kr	83	201.337	49.3344				ug/L
	Ti	48	1845197.402	1847532.7607				ug/L
	Ca	44	1142614.980	1104530.5689				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		105.246			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		101.170			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		97.460			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		101.421			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		105.246			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		101.496			
	Ag	109					
>	In	115		97.460			
	Pb	206					
	Pb	207					
>	Bi	209		98.928			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
Pb 208 Upper	Pb	208	Pb above linear range - ok

Method 6020 - Summary Report

Sample ID: CPWTK

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 12:58:17
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTK.058
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 70
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 2
Diluted To Volume (mL): 1e+001 5x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	274781.941	-3650.7852				~~ug/L~~ mg/L
	Be	9	99.001	0.0002	313.0173	24.3799	7.79	ug/L
	Al	27	39777523.577	68.3655	5639405.0470	36081.9541	0.64	ug/L
>	Sc	45	581763.056	581763.0565				ug/L
	V	51	198024.058	0.3361	14929.8422	269.0068	1.80	ug/L
	Cr	52	181675.592	0.2875	14377.4196	149.8809	1.04	ug/L
	Mn	55	4457691.602	7.6588	234863.5774	2983.2086	1.27	ug/L
	Fe	57	3586136.634	6.1295	9367207.3604	131113.7228	1.40	ug/L
	Co	59	202210.509	0.3474	14005.2454	420.3767	3.00	ug/L
	Ni	60	23183.407	0.0391	7427.7566	234.7642	3.16	ug/L
	Cu	65	73291.430	0.1252	23439.2979	548.1749	2.34	ug/L
>	Ge	72	813405.375	813405.3747				ug/L
	Zn	68	205090.075	0.2512	190336.5027	1390.3873	0.73	ug/L
	As	75	101335.957	0.1244	49797.3139	663.8832	1.33	ug/L
	Se	82	119.287	0.0001	567.9447	113.7175	20.02	ug/L
	Y	89	872402.429	288388.0997				ug/L
	Mo	97	5691.190	0.0077	2379.1843	22.5649	0.95	ug/L
	Ag	107	2033.832	0.0027	221.2921	2.9966	1.35	ug/L
>	In	115	727451.779	727451.7786				ug/L
	Cd	111	12319.394	0.0169	5651.5438	26.1443	0.46	ug/L
	Sn	117	830.366	0.0010	353.0021	5.3441	1.51	ug/L
	Sb	121	4493.085	0.0050	486.0441	15.0196	3.09	ug/L
	Ba	135	224485.262	0.3086	147502.4120	999.7435	0.68	ug/L
	Tb	159	541672.776	-143.1740				ug/L
>	Ho	165	501591.174	501591.1736				ug/L
	Tl	205	3064.359	0.0059	291.4581	11.8162	4.05	ug/L
	Pb	208	2328485.038	4.6415	174716.7682	2935.1848	1.68	ug/L
	U	238	19402.361	0.0386	2060.6988	20.7991	1.01	ug/L
	Bi	209	283149.523	-5026.6587				ug/L
>	Sc	45	581763.056	581763.0565				ug/L
	Cr	50	23150.766	0.0391	43591.7083	1256.5692	2.88	ug/L
	Cr	53	20912.511	0.0323	13511.5960	97.5657	0.72	ug/L
	Ni	61	3687.513	0.0014	11667.1591	1102.7663	9.45	ug/L
	Cu	63	161976.502	0.1418	25246.7958	661.0815	2.62	ug/L
	Br	79	5968.642	0.0041				ug/L

L>	Ge	74	1134379.553	1134379.5528				ug/L
⌈	Ag	109	2125.846	0.0028	246.6653	13.4774	5.46	ug/L
L>	In	115	727451.779	727451.7786				ug/L
⌈	Pb	206	614128.244	2.1687	178430.1791	2568.4061	1.44	ug/L
|	Pb	207	508177.370	1.7945	177311.1646	2246.2166	1.27	ug/L
L>	Bi	209	283149.523	283149.5232				ug/L
	Hg	200	2195.857	2182.1906				ug/L
	Pd	106	998.351	645.1985				ug/L
	Kr	83	197.337	45.3343				ug/L
	Ti	48	1712990.127	1715325.4859				ug/L
	Ca	44	1864646.782	1826562.3711				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Dif
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		105.074			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		100.468			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		97.443			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		99.994			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		105.074			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.084			
	Ag	109					
>	In	115		97.443			
	Pb	206					
	Pb	207					
>	Bi	209		98.256			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Pb 208 Upper	Pb	208	Pb above linear range - ok

Method 6020 - Summary Report

Sample ID: CPWTL

Sample Description: 9014235 D9A130133 Soils
Sample Date/Time: Wednesday, January 27, 1999 13:02:46
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\CPWTL.059
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 71
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 1
Diluted To Volume (mL): 1e+001

10 x

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	272791.691	-5641.0353				~~ug/L~~ ug/L
	Be	9	73.334	0.0001	460.5559	44.5968	9.68	ug/L
	Al	27	27808963.800	48.3025	7968842.8974	208085.6790	2.61	ug/L
>	Sc	45	575669.727	575669.7268				ug/L
	V	51	120146.303	0.2044	18161.2223	226.1751	1.25	ug/L
	Cr	52	103261.640	0.1546	15459.5200	240.5968	1.56	ug/L
	Mn	55	1771117.614	3.0720	188412.1004	1897.7588	1.01	ug/L
	Fe	57	2078398.075	3.5735	10922363.7297	1008174.9554	9.23	ug/L
	Co	59	109691.982	0.1902	15338.1865	205.7228	1.34	ug/L
	Ni	60	12787.580	0.0214	8145.3616	82.8110	1.02	ug/L
	Cu	65	29937.681	0.0512	19161.8297	359.0103	1.87	ug/L
>	Ge	72	811285.531	811285.5313				ug/L
	Zn	68	85903.769	0.1050	159062.8086	518.0134	0.33	ug/L
	As	75	439617.321	0.5418	433749.1059	7632.9432	1.76	ug/L
	Se	82	107.203	0.0001	1017.2211	71.0085	6.98	ug/L
	Y	89	769339.954	185325.6241				ug/L
	Mo	97	1994.159	0.0026	1619.4184	87.7248	5.42	ug/L
	Ag	107	1245.400	0.0016	265.1325	3.8276	1.44	ug/L
>	In	115	726943.475	726943.4748				ug/L
	Cd	111	6029.679	0.0083	5527.6020	74.8265	1.35	ug/L
	Sn	117	881.036	0.0011	756.5523	5.1550	0.68	ug/L
	Sb	121	6819.029	0.0082	1598.6870	31.7389	1.99	ug/L
	Ba	135	109755.446	0.1509	144309.7798	660.5046	0.46	ug/L
	Tb	159	542557.717	741.7671				ug/L
>	Ho	165	503203.748	503203.7478				ug/L
	Tl	205	2297.208	0.0044	431.2382	9.4811	2.20	ug/L
	Pb	208	2541678.230	5.0499	380186.8637	1439.3818	0.38	ug/L
	U	238	12141.946	0.0240	2567.1003	26.1236	1.02	ug/L
	Bi	209	283960.009	-4216.1726				ug/L
>	Sc	45	575669.727	575669.7268				ug/L
	Cr	50	21183.000	0.0361	80507.3796	9749.6103	12.11	ug/L
	Cr	53	12318.099	0.0178	14866.5874	119.3509	0.80	ug/L
	Ni	61	2914.326	0.0007	11554.4247	314.8961	2.73	ug/L
	Cu	63	66825.342	0.0579	20622.1082	261.1118	1.27	ug/L
	Br	79	3318.085	0.0017				ug/L

⌊>	Ge	74	1133854.208	1133854.2079				ug/L
⌈	Ag	109	1300.739	0.0017	295.8185	2.9854	1.01	ug/L
⌊>	In	115	726943.475	726943.4748				ug/L
⌈	Pb	206	662663.650	2.3332	383914.3750	3167.5215	0.83	ug/L
|	Pb	207	556997.802	1.9611	387554.2583	3094.9395	0.80	ug/L
⌊>	Bi	209	283960.009	283960.0093				ug/L
	Hg	200	1574.436	1560.7690				ug/L
	Pd	106	834.195	481.0422				ug/L
	Kr	83	168.669	16.6670				ug/L
	Ti	48	1744658.981	1746994.3397				ug/L
	Ca	44	640424.722	602340.3107				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Dif
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		103.974			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		100.207			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		97.375			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		100.315			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		103.974			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.037			
	Ag	109					
>	In	115		97.375			
	Pb	206					
	Pb	207					
>	Bi	209		98.537			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Al 27 Upper	Al	27	Al above linear range
Fe 57 Upper	Fe	57	Fe over linear range
As 75 Upper	As	75	As above linear range
Pb 208 Upper	Pb	208	Pb above linear range

> ok

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 13:07:31
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 3.060
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 8
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 1
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	269945.054	-8487.6729				ug/L
	Be	9	13762.101	0.0256	98.9198	3.0592	3.09	ug/L
	Al	27	328320.563	0.5997	98.9321	1.1116	1.12	ug/L
>	Sc	45	538353.937	538353.9374				ug/L
	V	51	634429.186	1.1742	104.3103	0.6203	0.59	ug/L
	Cr	52	563712.975	1.0223	102.2472	0.9320	0.91	ug/L
	Mn	55	897477.550	1.6623	101.9541	1.5648	1.53	ug/L
	Fe	57	929384.855	1.6905	5166.9485	110.9537	2.15	ug/L
	Co	59	689252.544	1.2800	103.2059	1.0762	1.04	ug/L
	Ni	60	142909.067	0.2647	100.6093	0.8272	0.82	ug/L
	Cu	65	143662.981	0.2660	99.6254	2.5314	2.54	ug/L
>	Ge	72	811157.276	811157.2763				ug/L
	Zn	68	53537.020	0.0651	98.6241	0.3655	0.37	ug/L
	As	75	100941.776	0.1243	99.4838	0.6136	0.62	ug/L
	Se	82	9999.348	0.0123	101.7198	2.2866	2.25	ug/L
	Y	89	575207.564	-8806.7653				ug/L
	Mo	97	120086.825	0.1644	101.5925	0.7718	0.76	ug/L
	Ag	107	441943.658	0.6054	99.2341	0.8256	0.83	ug/L
>	In	115	729851.498	729851.4984				ug/L
	Cd	111	109373.532	0.1498	100.1552	1.2382	1.24	ug/L
	Sn	117	101485.890	0.1389	99.6626	0.5771	0.58	ug/L
	Sb	121	375619.633	0.5134	100.4286	0.4216	0.42	ug/L
	Ba	135	76150.850	0.1043	99.7155	0.4091	0.41	ug/L
	Tb	159	537990.036	-3825.9138				ug/L
>	Ho	165	496294.161	496294.1608				ug/L
	Tl	205	501448.285	1.0102	99.1456	0.5165	0.52	ug/L
	Pb	208	658106.411	1.3249	99.7489	0.6008	0.60	ug/L
	U	238	466177.464	0.9393	100.3191	1.1520	1.15	ug/L
	Bi	209	282824.360	-5351.8220				ug/L
>	Sc	45	538353.937	538353.9374				ug/L
	Cr	50	25209.963	0.0461	102.8918	1.3727	1.33	ug/L
	Cr	53	68281.496	0.1232	102.9784	1.3745	1.33	ug/L
	Ni	61	8427.237	0.0056	96.1279	2.4656	2.56	ug/L
	Cu	63	317226.170	0.2800	99.7133	4.0019	4.01	ug/L
	Br	79	915.705	-0.0004				ug/L

L>	Ge	74	1129119.935	1129119.9346				ug/L
Γ	Ag	109	416352.593	0.5704	99.4352	0.6842	0.69	ug/L
L>	In	115	729851.498	729851.4984				ug/L
Γ	Pb	206	171103.299	0.6045	99.4658	0.6234	0.63	ug/L
|	Pb	207	143864.537	0.5082	100.4317	0.3697	0.37	ug/L
L>	Bi	209	282824.360	282824.3599				ug/L
	Hg	200	21.000	7.3334				ug/L
	Pd	106	-161.442	-514.5941				ug/L
	Kr	83	156.669	4.6668				ug/L
	Ti	48	-1666.221	669.1376				ug/L
	Ca	44	34487.591	-3596.8200				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9	98.920				
	Al	27	98.932				
>	Sc	45		97.234			
	V	51	104.310				
	Cr	52	102.247				
	Mn	55	101.954				
	Fe	57	103.339				
	Co	59	103.206				
	Ni	60	100.609				
	Cu	65	99.625				
>	Ge	72		100.191			
	Zn	68	98.624				
	As	75	99.484				
	Se	82	101.720				
	Y	89					
	Mo	97	101.592				
	Ag	107	99.234				
>	In	115		97.765			
	Cd	111	100.155				
	Sn	117	99.663				
	Sb	121	100.429				
	Ba	135	99.715				
	Tb	159					
>	Ho	165		98.938			
	Tl	205	99.146				
	Pb	208	99.749				
	U	238	100.319				
	Bi	209					
>	Sc	45		97.234			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		99.620			
	Ag	109					
>	In	115		97.765			
	Pb	206					
	Pb	207					
>	Bi	209		98.143			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Method 6020 - Summary Report

Sample ID: QC Std 5

Sample Description:
Sample Date/Time: Wednesday, January 27, 1999 13:12:17
Number of Replicates: 3
Method File: c:\elandata\Method\6020_soil.mth
Dataset File: C:\elandata\Dataset\012799\QC Std 5.061
Tuning File: q_tune.tun
Optimization File: analog_9k.dac
Autosampler Position: 1
Initial Sample Quantity (mg): 1e+003
Sample Prep Volume (mL): 1e+002
Aliquot Volume (mL): 1
Diluted To Volume (mL): 1e+001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample
	Li	6	276005.633	-2427.0937				ug/L
	Be	9	5.667	0.0000	0.0069	0.0321	463.55	ug/L
	Al	27	5218.006	-0.0008	-0.1250	0.0544	43.50	ug/L
>	Sc	45	553463.163	553463.1627				ug/L
	V	51	2628.529	0.0005	0.0435	0.0272	62.52	ug/L
	Cr	52	13266.624	-0.0008	-0.0826	0.0403	48.76	ug/L
	Mn	55	2577.925	-0.0001	-0.0039	0.0119	307.96	ug/L
	Fe	57	19549.555	-0.0005	-1.5638	1.7025	108.87	ug/L
	Co	59	189.670	0.0000	0.0011	0.0047	415.12	ug/L
	Ni	60	439.686	0.0000	0.0030	0.0128	424.16	ug/L
	Cu	65	497.624	0.0001	0.0210	0.0278	132.70	ug/L
>	Ge	72	815725.953	815725.9529				ug/L
	Zn	68	604.352	-0.0002	-0.2617	0.0697	26.63	ug/L
	As	75	53.280	-0.0001	-0.0912	0.0647	70.98	ug/L
	Se	82	14.426	0.0000	0.0686	0.2702	393.77	ug/L
	Y	89	567309.356	-16704.9729				ug/L
	Mo	97	171.003	0.0001	0.0708	0.0358	50.56	ug/L
	Ag	107	177.670	0.0002	0.0247	0.0099	40.15	ug/L
>	In	115	722636.655	722636.6553				ug/L
	Cd	111	19.325	0.0000	0.0011	0.0062	584.57	ug/L
	Sn	117	290.006	0.0002	0.1753	0.0702	40.06	ug/L
	Sb	121	3945.298	0.0043	0.8343	0.3946	47.30	ug/L
	Ba	135	34.334	0.0000	0.0049	0.0036	74.05	ug/L
	Tb	159	533106.709	-8709.2406				ug/L
>	Ho	165	493563.904	493563.9038				ug/L
	Tl	205	122.335	0.0001	0.0076	0.0047	62.22	ug/L
	Pb	208	549.343	-0.0000	-0.0019	0.0075	395.62	ug/L
	U	238	192.003	0.0003	0.0315	0.0172	54.76	ug/L
	Bi	209	284237.357	-3938.8252				ug/L
>	Sc	45	553463.163	553463.1627				ug/L
	Cr	50	395.331	-0.0000	-0.0441	0.0464	105.25	ug/L
	Cr	53	1665.114	-0.0006	-0.5007	0.0644	12.85	ug/L
	Ni	61	2191.857	0.0000	0.4842	1.2828	264.95	ug/L
	Cu	63	1073.718	-0.0001	-0.0260	0.0186	71.81	ug/L
	Br	79	685.690	-0.0006				ug/L

└>	Ge	74	1136105.532	1136105.5323				ug/L
┌	Ag	109	140.669	0.0001	0.0179	0.0089	50.08	ug/L
└>	In	115	722636.655	722636.6553				ug/L
┌	Pb	206	147.002	0.0000	0.0025	0.0131	517.11	ug/L
│	Pb	207	118.668	-0.0000	-0.0087	0.0042	48.36	ug/L
└>	Bi	209	284237.357	284237.3566				ug/L
	Hg	200	12.667	-1.0000				ug/L
	Pd	106	345.420	-7.7321				ug/L
	Kr	83	142.669	-9.3335				ug/L
	Ti	48	-2087.408	247.9512				ug/L
	Ca	44	34147.105	-3937.3063				ug/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45		99.963			
	V	51					
	Cr	52					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	65					
>	Ge	72		100.755			
	Zn	68					
	As	75					
	Se	82					
	Y	89					
	Mo	97					
	Ag	107					
>	In	115		96.798			
	Cd	111					
	Sn	117					
	Sb	121					
	Ba	135					
	Tb	159					
>	Ho	165		98.393			
	Tl	205					
	Pb	208					
	U	238					
	Bi	209					
>	Sc	45		99.963			
	Cr	50					
	Cr	53					
	Ni	61					
	Cu	63					
	Br	79					
>	Ge	74		100.236			
	Ag	109					
>	In	115		96.798			
	Pb	206					
	Pb	207					
>	Bi	209		98.633			
	Hg	200					
	Pd	106					
	Kr	83					
	Ti	48					
	Ca	44					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message