ENCYCLE/TEXAS, INC.
Corpus Christi, Texas

BASELINE RISK ASSESSMENT

Volume II of II

April 14, 2004

ARCADIS

Infrastructure, buildings, environment, communications

APPENDIX A

ARCADIS

Appendix A

Groundwater Analytical Data
Summary Tables

RFI

Groundwater Analytical Data

Table 2. Analytical Results Summary - Groundwater (mg/L), Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Fill/Alluvium Upgradient Monitor Wells																					
MW-3	01/30/86	---	---	0.007	---	---	---	---	---	0.01	---	<0.001	---	---	---	---	---	---	---	---	0.06
	01/30/87	---	---	0.009	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.02
	02/01/88	---	---	0.014	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.01
	01/27/89	---	---	0.012	---	---	---	---	---	<0.01	---	0.003	---	---	---	---	---	---	---	---	0.06
	01/23/90	---	---	0.010	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	0.03
	01/09/91	---	---	0.006	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.03
	01/17/92	---	---	0.015	---	---	---	---	---	0.03	---	<0.001	---	---	---	---	---	---	---	---	<0.01
	02/14/94	---	---	0.014	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	0.01
	01/30/95	---	---	0.013	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	0.03
	02/20/98	11,200*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/20/98	14,800**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/23/99	---	---	0.016	0.037	---	<0.01	<0.01	---	---	---	0.007	1.8	<0.0005	---	0.007	<0.005	---	---	---	---
	10/20/99	---	---	0.016	0.037	---	<0.01	<0.01	---	---	---	<0.01	2.5	<0.0005	---	<0.01	<0.005	---	---	---	---
	01/27/00	---	---	0.011	0.043	---	0.008	<0.01	---	---	---	<0.02	1.3	<0.0005	---	0.012	<0.005	---	---	---	---
(dup-1)	01/27/00	---	---	0.008	0.051	---	0.005	<0.01	---	---	---	0.02	2.4	<0.0005	---	<0.01	<0.005	---	---	---	---
	04/25/00	14,870	---	0.016	0.043	---	<0.005	<0.01	---	---	---	0.009	1.8	<0.0005	---	<0.01	<0.005	---	---	---	---
	06/30/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	1.7	---	<0.05	<0.01	---	<0.002	<0.05	0.065	0.18
	07/28/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	1.8	---	<0.05	0.015	---	<0.002	<0.05	0.063	0.073
	08/17/00	---	<0.05	---	---	<0.05	---	<0.01	<0.05	<0.05	<0.004	---	3.1	---	<0.05	0.015	---	<0.002	<0.05	0.066	0.12
	12/11/00	---	---	0.016	<0.05	---	<0.01	<0.01	---	---	---	<0.02	2.3	<0.0005	---	<0.01	<0.01	---	---	---	---
	06/14/01	---	---	0.016	<0.05	---	<0.01	0.028	---	---	---	<0.02	1.4	<0.0005	---	0.012	<0.005	---	---	---	---
	12/12/01	---	---	0.015	0.036	---	<0.01	<0.01	---	---	---	<0.01	1.6	<0.0005	---	<0.01	<0.005	---	---	---	---
MW-10	04/29/99	9,238	---	0.026	0.55	---	0.018	0.08	---	---	---	0.11	1.9	0.00058	---	0.25	<0.005	---	---	---	---
	07/23/99	---	---	0.016	0.15	---	<0.01	0.028	---	---	---	0.03	1.2	<0.0005	---	0.16	<0.005	---	---	---	---
	10/20/99	---	---	0.025	0.074	---	<0.01	<0.01	---	---	---	0.013	6.6	0.00057	---	0.049	<0.005	---	---	---	---
	01/27/00	---	---	0.007	0.14	---	<0.01	0.021	---	---	---	0.032	3.6	<0.0005	---	0.12	<0.005	---	---	---	---
	06/30/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	1.9	---	<0.05	0.14	---	<0.002	<0.05	<0.05	0.62
	07/28/00	---	0.087	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	1.0	---	<0.05	0.22	---	<0.002	<0.05	<0.05	0.11
	08/17/00	---	<0.05	---	---	<0.05	---	0.02	<0.05	<0.05	<0.004	---	0.9	---	<0.05	0.21	---	<0.002	<0.05	0.056	0.36
	12/11/00	---	---	0.013	0.078	---	<0.01	<0.01	---	---	---	<0.02	0.34	<0.0005	---	0.17	<0.01	---	---	---	---
	06/14/01	---	---	0.03	0.054	---	0.01	<0.01	---	---	---	<0.02	1.1	<0.0005	---	0.28	<0.005	---	---	---	---
	12/12/01	---	---	0.02	0.028	---	<0.01	<0.01	---	---	---	<0.01	2.3	<0.0005	---	0.045	<0.005	---	---	---	---
Background Mean (x)[a]:			0.035	0.0157	0.125	0.05	0.0065	0.0177	0.05	0.05	0.004	0.0262	2.57	0.00032	0.05	0.068	0.0025	0.002	0.05	0.05	0.240
Background Standard Deviation (S):			0.025	0.0066	0.165	0	0.0045	0.0249	0	0	0	0.0329	1.68	0.00014	0	0.069	0	0	0	0.02	0.210
Background Upper Tolerance Interval (x = KS)[b]:			0.127[d]	0.036[c]	0.62[c]	0.05[d]	0.02[c]	0.093[c]	0.05[d]	0.05[d]	0.004[d]	0.126[c]	7.6[c]	0.0007[c]	0.05[d]	0.34[c]	0.0025[c]	0.002[d]	0.05[d]	0.12[d]	1.02[d]

Table 2. Analytical Results Summary - Groundwater (mg/L), Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Fill/Alluvium Downgradient Wells																					
MW-2	01/30/86	---	---	0.011	---	---	---	---	---	0.01	---	0.006	---	---	---	---	---	---	---	---	0.06
	01/30/87	---	---	0.002	---	---	---	---	---	<0.01	---	0.005	---	---	---	---	---	---	---	---	0.03
	02/01/88	---	---	0.001	---	---	---	---	---	<0.01	---	0.002	---	---	---	---	---	---	---	---	0.02
	01/27/89	---	---	0.002	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	<0.01
	01/23/90	---	---	0.003	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	<0.01
	01/09/91	---	---	0.004	---	---	---	---	---	<0.01	---	0.006	---	---	---	---	---	---	---	---	0.02
	01/17/92	---	---	0.005	---	---	---	---	---	**0.10**	---	0.006	---	---	---	---	---	---	---	---	0.05
	02/14/94	---	---	0.004	---	---	---	---	---	<0.01	---	0.002	---	---	---	---	---	---	---	---	0.01
	01/30/95	---	---	0.004	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.01
	02/20/98	66,400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	06/30/00	---	<0.05	<0.005	0.081	<0.05	<0.005	<0.01	<0.05	<0.05	<0.004	<0.02	2.9	<0.0005	<0.05	0.027	<0.01	<0.002	<0.05	<0.05	0.079
	07/28/00	---	<0.05	<0.009	0.069	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	2.6	<0.0005	<0.05	0.027	**0.02**	<0.002	<0.05	<0.05	<0.05
(dup)	07/28/00	---	<0.05	<0.009	0.072	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	2.6	<0.0005	<0.05	0.017	<0.005	**0.005**	<0.05	<0.05	<0.05
	08/17/00	---	<0.05	<0.008	0.072	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	3.1	<0.0005	<0.05	0.024	<0.005	<0.002	<0.05	<0.05	<0.05
MW-4	01/30/86	---	---	0.009	---	---	---	---	---	0.01	---	<0.001	---	---	---	---	---	---	---	---	0.08
	01/30/87	---	---	0.003	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	<0.01
	02/01/88	---	---	0.003	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.01
	01/27/89	---	---	0.001	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	<0.01
	01/23/90	---	---	0.002	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	<0.01
	01/09/91	---	---	0.001	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.02
	01/17/92	---	---	0.009	---	---	---	---	---	**0.09**	---	0.002	---	---	---	---	---	---	---	---	0.11
	02/14/94	---	---	0.002	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	<0.01
	01/30/95	---	---	0.001	---	---	---	---	---	0.01	---	0.001	---	---	---	---	---	---	---	---	0.01
	02/20/98	57,700*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/20/98	62,200**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	06/30/00	---	<0.05	<0.005	<0.05	<0.05	<0.005	<0.01	<0.05	<0.05	<0.004	<0.02	1.4	<0.0005	<0.05	0.016	<0.005	<0.002	<0.05	<0.05	0.063
(dup)	06/30/00	---	<0.05	<0.005	<0.05	<0.05	<0.005	<0.01	<0.05	<0.05	<0.004	0.02	1.4	<0.0005	<0.05	0.016	<0.005	<0.002	**0.10**	<0.05	0.061
	07/28/00	---	<0.05	<0.009	<0.05	<0.05	0.02	<0.01	<0.05	<0.05	<0.004	<0.02	1.1	<0.0005	<0.05	0.03	<0.005	**0.011**	<0.05	<0.05	<0.05
	08/17/00	---	<0.05	<0.008	0.054	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	1.2	<0.0005	<0.05	0.022	<0.005	**0.007**	<0.05	<0.05	<0.05
MW-5	01/30/87	---	---	0.006	---	---	---	---	---	0.02	---	0.004	---	---	---	---	---	---	---	---	0.24
	02/01/88	---	---	0.011	---	---	---	---	---	<0.01	---	0.001	---	---	---	---	---	---	---	---	**1.6**
	01/27/89	---	---	0.003	---	---	---	---	---	<0.01	---	0.002	---	---	---	---	---	---	---	---	<0.01
	01/23/90	---	---	0.021	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	**9.5**
	02/16/90	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2.3**
	01/09/91	---	---	0.009	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	0.03

Table 2. Analytical Results Summary - Groundwater (mg/L), Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
MW-5	01/17/92	---	---	0.004	---	---	---	---	---	**0.08**	---	<0.001	---	---	---	---	---	---	---	---	0.27
(cont.)	02/14/94	---	---	0.016	---	---	---	---	---	<0.01	---	<0.001	---	---	---	---	---	---	---	---	**6.4**
	01/30/95	---	---	0.017	---	---	---	---	---	<0.01	---	0.032	---	---	---	---	---	---	---	---	**10**
	06/30/00	---	<0.05	0.023	<0.05	<0.05	0.006	<0.01	<0.05	<0.05	<0.004	<0.02	**19**	<0.0005	<0.05	<0.01	**0.019**	<0.002	<0.05	<0.05	**6.6**
	07/28/00	---	<0.05	<0.009	<0.05	<0.05	**0.1**	<0.01	<0.05	<0.05	<0.004	<0.02	**20**	<0.0005	**0.08**	0.039	<0.005	**0.003**	<0.05	<0.05	**7.1**
	08/17/00	---	<0.05	<0.008	0.051	<0.05	**0.023**	<0.01	<0.05	<0.05	<0.004	<0.02	**12**	<0.0005	<0.05	0.03	<0.005	**0.004**	<0.05	<0.05	<0.05
MW-6	06/07/93	32,954	---	<0.02	---	---	0.005	---	---	<0.008	---	<0.02	0.48	---	<0.02	---	---	---	---	---	0.064
(dup)	06/07/93	---	---	<0.02	---	---	0.006	---	---	<0.008	---	<0.02	0.45	---	<0.02	---	---	---	---	---	0.075
	06/17/93	10,654	---	<0.02	---	---	**0.027**	---	---	0.035	---	0.028	0.5	---	<0.02	---	---	---	---	---	0.11
	06/24/93	9,717	---	<0.02	---	---	<0.008	---	---	<0.02	---	<0.02	0.8	---	<0.02	---	---	---	---	---	0.043
	02/20/98	22,000*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/20/98	32,000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/29/99	---	---	<0.005	0.065	---	<0.01	<0.01	---	---	---	<0.02	0.52	<0.0005	---	<0.01	<0.005	---	---	---	---
	07/23/99	---	---	<0.005	0.024	---	<0.01	<0.01	---	---	---	<0.005	0.43	<0.0005	---	0.006	<0.005	---	---	---	---
	10/20/99	---	---	0.008	0.041	---	<0.01	<0.01	---	---	---	<0.01	0.50	<0.0005	---	<0.01	<0.005	---	---	---	---
	01/27/00	---	---	<0.005	0.11	---	<0.01	<0.01	---	---	---	0.036	0.61	<0.0005	---	<0.01	<0.005	---	---	---	---
	06/30/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	0.46	---	<0.05	0.014	---	<0.002	<0.05	<0.05	0.065
	07/28/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	0.46	---	<0.05	0.017	---	<0.002	<0.05	<0.05	<0.05
	08/17/00	---	<0.05	---	---	<0.05	---	<0.01	<0.05	<0.05	<0.004	---	0.43	---	<0.05	0.034	---	<0.002	<0.05	<0.05	<0.05
(dup)	08/17/00	---	<0.05	---	---	<0.05	---	<0.01	<0.05	<0.05	<0.004	---	0.44	---	<0.05	0.026	---	<0.002	<0.05	<0.05	<0.05
	12/11/00	---	---	0.012	<0.05	---	<0.01	<0.01	---	---	---	<0.02	0.27	<0.0005	---	0.023	<0.01	---	---	---	---
	06/14/01	---	---	0.008	<0.05	---	<0.01	0.013	---	---	---	<0.02	0.34	<0.0005	---	0.014	<0.005	---	---	---	---
	12/12/01	---	---	0.01	0.045	---	<0.01	<0.01	---	---	---	<0.01	0.28	<0.0005	---	<0.01	<0.005	---	---	---	---
MW-8	04/29/99	---	---	0.006	0.16	---	<0.01	<0.01	---	---	---	<0.02	0.45	<0.0005	---	0.011	<0.005	---	---	---	---
	07/23/99	---	---	0.012	0.12	---	<0.01	<0.01	---	---	---	0.006	0.27	**0.00082**	---	0.17	<0.005	---	---	---	---
	10/20/99	---	---	0.007	0.076	---	<0.01	<0.01	---	---	---	<0.01	0.48	<0.0005	---	0.13	<0.005	---	---	---	---
	01/27/00	---	---	<0.005	0.049	---	<0.01	<0.01	---	---	---	<0.02	0.62	<0.0005	---	0.02	<0.005	---	---	---	---
	06/30/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	0.77	---	<0.05	<0.01	---	<0.002	**0.84**	<0.05	0.17
	07/28/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	0.48	---	<0.05	0.031	---	<0.002	<0.05	<0.05	0.059
	08/17/00	---	<0.05	---	---	<0.05	---	<0.01	<0.05	<0.05	<0.004	---	0.62	---	<0.05	0.025	---	<0.002	<0.05	<0.05	0.097
	12/11/00	---	---	<0.005	0.10	---	<0.01	<0.01	---	---	---	0.032	0.61	**0.00082**	---	<0.01	<0.01	---	---	---	---
	06/14/01	---	---	0.011	0.075	---	<0.01	<0.01	---	---	---	<0.02	0.63	<0.0005	---	0.024	<0.005	---	---	---	---
(dup)	06/14/01	---	---	0.013	0.051	---	<0.01	<0.01	---	---	---	<0.02	0.62	<0.0005	---	0.021	<0.005	---	---	---	---
	12/12/01	---	---	0.015	0.037	---	<0.01	<0.01	---	---	---	<0.01	0.14	<0.0005	---	0.28	<0.005	---	---	---	---

Table 2. Analytical Results Summary - Groundwater (mg/L), Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
MW-9	04/29/99	---	---	0.02	0.5	---	<0.01	0.063	---	---	---	0.053	1.8	0.00044	---	<0.01	<0.005	---	---	---	---
	07/23/99	---	---	0.015	0.039	---	<0.01	<0.01	---	---	---	<0.005	0.62	<0.0005	---	<0.005	<0.005	---	---	---	---
	10/20/99	---	---	0.017	0.029	---	<0.01	<0.01	---	---	---	<0.01	1.1	<0.0005	---	<0.01	<0.005	---	---	---	---
	01/27/00	---	---	<0.005	0.045	---	<0.01	<0.01	---	---	---	<0.02	0.56	<0.0005	---	<0.01	<0.005	---	---	---	---
	06/30/00	---	<0.05	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	0.57	---	<0.05	<0.01	---	<0.002	**0.27**	0.058	0.3
	07/28/00	---	**0.18**	---	---	<0.05	---	---	<0.05	<0.05	<0.004	---	0.33	---	<0.05	0.02	---	<0.002	<0.05	<0.05	<0.05
	08/17/00	---	0.052	---	---	<0.05	---	0.017	<0.05	<0.05	<0.004	---	0.49	---	<0.05	0.029	---	<0.002	<0.05	0.057	0.26
	12/11/00	---	---	0.012	<0.05	---	<0.01	<0.01	---	---	---	<0.02	0.21	<0.0005	---	0.011	<0.01	---	---	---	---
(dup)	12/11/00	---	---	0.014	<0.05	---	<0.01	<0.01	---	---	---	<0.02	0.2	<0.0005	---	0.011	<0.01	---	---	---	---
	06/14/01	---	---	0.017	0.057	---	0.01	<0.01	---	---	---	<0.02	0.43	<0.0005	---	0.016	<0.005	---	---	---	---
	12/12/01	---	---	0.025	0.043	---	<0.01	<0.01	---	---	---	<0.01	0.77	<0.0005	---	<0.01	<0.005	---	---	---	---
(dup)	12/12/01	---	---	0.025	0.05	---	<0.01	<0.01	---	---	---	<0.01	0.81	<0.0005	---	<0.01	<0.005	---	---	---	---
Beaumont Formation Monitor Wells																					
MW-7	06/07/93	6,646	---	0.033	---	---	<0.003	---	---	0.008	---	<0.02	0.44	---	<0.02	---	---	---	---	---	0.026
	06/17/93	7,026	---	0.022	---	---	**0.056**	---	---	0.01	---	<0.02	0.3	---	<0.02	---	---	---	---	---	0.26
	06/24/93	7,068	---	0.02	---	---	<0.008	---	---	<0.02	---	<0.02	0.35	---	<0.02	---	---	---	---	---	0.013
(dup)	06/24/93	7,101	---	0.024	---	---	<0.008	---	---	<0.02	---	<0.02	0.38	---	<0.02	---	---	---	---	---	0.014
	02/20/98	7,680*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/20/98	8,540**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/11/01	---	<0.05	**0.044**	0.085	<0.05	<0.01	<0.1	<0.05	<0.05	<0.004	<0.02	0.16	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	01/16/02	---	<0.05	**0.051**	0.062	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.17	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	02/12/02	---	<0.05	**0.063**	0.07	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.019	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
MW-11	12/11/01	---	<0.05	<0.005	0.12	**0.059**	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	**7.7**	<0.0005	<0.05	0.015	<0.005	<0.002	<0.05	<0.05	0.18
	01/16/02	---	<0.05	0.006	0.066	<0.05	<0.01	<0.01	<0.05	<0.05	**0.039**	<0.02	6.2	<0.0005	**0.053**	<0.01	<0.005	<0.002	<0.05	<0.05	0.06
	02/12/02	---	<0.05	<0.005	0.066	<0.05	<0.01	<0.01	<0.05	**0.061**	<0.004	<0.02	7.3	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
MW-12	12/27/01	---	<0.05	0.023	0.11	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.13	<0.0005	<0.05	0.27	<0.005	<0.002	<0.05	<0.05	0.092
	01/16/02	---	<0.05	0.032	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.071	<0.0005	<0.05	**0.40**	<0.005	<0.002	<0.05	<0.05	0.062
(dup)	01/16/02	---	<0.05	0.029	0.16	<0.05	<0.01	0.01	<0.05	<0.05	<0.004	<0.02	0.21	<0.0005	<0.05	0.31	<0.005	<0.002	<0.05	0.054	0.19
	02/12/02	---	<0.05	0.035	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.064	<0.0005	<0.05	**0.38**	<0.005	<0.002	<0.05	<0.05	<0.05
MW-13	12/11/01	---	<0.05	0.006	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	**0.14**	<0.02	0.2	<0.0005	<0.05	0.28	<0.005	<0.002	<0.05	<0.05	<0.05
	01/16/02	---	<0.05	0.012	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.065	<0.0005	<0.05	**0.49**	<0.005	<0.002	<0.05	<0.05	<0.05
	02/12/02	---	<0.05	0.016	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.037	<0.0005	<0.05	**0.42**	<0.005	<0.002	<0.05	<0.05	<0.05
(dup)	02/12/02	---	<0.05	0.017	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.043	<0.0005	<0.05	**0.44**	<0.005	<0.002	<0.05	<0.05	<0.05

Table 2. Analytical Results Summary - Groundwater (mg/L), Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
MW-14	12/11/01	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.18	<0.0005	<0.05	0.067	<0.005	<0.002	<0.05	<0.05	0.06
	01/16/02	---	<0.05	0.009	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.077	<0.0005	<0.05	0.12	<0.005	<0.002	<0.05	<0.05	0.089
	02/12/02	---	<0.05	0.009	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.034	<0.0005	<0.05	0.11	<0.005	<0.002	<0.05	<0.05	0.053
MW-15	12/11/01	---	<0.05	0.012	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	**0.23**	<0.02	2.0	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	01/16/02	---	<0.05	0.027	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	2.7	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	02/12/02	---	<0.05	0.018	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	3.1	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
MW-16	12/11/01	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.05	0.00056	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	01/16/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	0.012	<0.005	<0.002	<0.05	<0.05	<0.05
	02/12/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
MW-17	12/11/01	---	<0.05	<0.005	0.11	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.17	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.081
(dup)	12/11/01	---	<0.05	0.013	0.13	<0.05	<0.01	0.01	<0.05	<0.05	<0.004	<0.02	0.83	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.084
	01/16/02	---	<0.05	0.026	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.50	<0.0005	<0.05	0.011	<0.005	<0.002	<0.05	<0.05	0.069
	02/12/02	---	<0.05	0.024	<0.05	<0.05	<0.01	0.01	<0.05	<0.05	<0.004	<0.02	0.46	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.160
MW-18	12/11/01	---	<0.05	<0.005	0.24	<0.05	<0.01	0.041	<0.05	**0.056**	<0.004	0.039	0.55	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	0.086	0.71
	01/16/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	0.064	<0.005	<0.002	<0.05	<0.05	0.36
	02/12/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.021	<0.0005	<0.05	0.043	<0.005	<0.002	<0.05	<0.05	0.36
	7/19/02***	---	<0.05	0.006	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	0.037	<0.005	<0.002	<0.05	<0.05	0.42
MW-19	12/11/01	---	<0.05	<0.005	0.2	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.83	<0.0005	<0.05	0.022	<0.005	<0.002	<0.05	0.086	0.11
	01/16/02	---	<0.05	0.005	0.064	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.55	<0.0005	<0.05	0.050	<0.005	<0.002	<0.05	0.069	<0.05
	02/12/02	---	<0.05	<0.005	0.068	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.44	<0.0005	<0.05	0.032	<0.005	<0.002	<0.05	0.071	<0.05
MW-20	12/11/01	---	<0.05	<0.005	0.069	<0.05	<0.01	0.029	<0.05	<0.05	<0.004	<0.02	0.36	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	01/16/02	---	<0.05	<0.005	0.056	<0.05	<0.01	0.012	<0.05	<0.05	<0.004	<0.02	0.13	<0.0005	<0.05	0.020	<0.005	<0.002	<0.05	<0.05	<0.05
	02/12/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	0.010	<0.05	<0.05	<0.004	<0.02	0.036	<0.0005	<0.05	0.014	<0.005	<0.002	<0.05	<0.05	<0.05
MW-21	12/11/01	---	<0.05	<0.005	0.07	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.51	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	0.062	<0.05
	01/16/02	---	<0.05	0.010	0.087	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.39	<0.0005	<0.05	0.011	<0.005	<0.002	<0.05	0.11	<0.05
	02/12/02	---	<0.05	0.011	0.084	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	0.24	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	0.11	<0.05

Table 2. Analytical Results Summary - Groundwater (mg/L), Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Field	04/29/99	---	---	<0.005	<0.05	---	<0.01	<0.01	---	---	---	<0.02	<0.015	<0.0005	---	<0.01	<0.005	---	---	---	---
Blank	06/30/00	---	<0.05	<0.005	<0.05	<0.05	<0.005	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.077
	07/28/00	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	08/17/00	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	**0.006**	<0.05	<0.05	<0.05
	12/11/00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/11/01	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.05	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	12/12/01	---	---	<0.005	<0.01	---	<0.01	<0.01	---	---	---	<0.01	<0.015	<0.0005	---	<0.01	<0.005	---	---	---	---
	12/27/01	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	01/16/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	02/12/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
	07/19/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
Trip	07/23/99	---	---	<0.005	<0.01	---	<0.01	<0.01	---	---	---	<0.005	<0.015	<0.0005	---	<0.005	<0.005	---	---	---	---
Blank	10/20/99	---	---	<0.005	<0.01	---	<0.01	<0.01	---	---	---	<0.01	<0.01	<0.0005	---	<0.01	<0.005	---	---	---	---
	01/27/00	---	---	<0.005	<0.05	---	<0.01	<0.01	---	---	---	<0.02	0.02	<0.0005	---	<0.01	<0.005	---	---	---	---
	04/25/00	---	---	<0.005	<0.01	---	<0.005	<0.01	---	---	---	<0.005	<0.015	<0.0005	---	<0.01	<0.005	---	---	---	---
	12/11/00	---	---	<0.005	<0.05	---	<0.01	<0.01	---	---	---	<0.02	<0.015	<0.0005	---	<0.01	<0.01	---	---	---	---
	06/14/01	---	---	<0.005	<0.05	---	<0.01	<0.01	---	---	---	<0.02	<0.015	<0.0005	---	<0.01	<0.005	---	---	---	---
	12/12/01	---	---	<0.005	<0.01	---	<0.01	<0.01	---	---	---	<0.01	<0.015	<0.0005	---	<0.01	<0.005	---	---	---	---
	02/12/02	---	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05
TNRCC RRS2 MSCs[e]																					
Adjusted GW (mg/L):			0.6	1	200		0.5	10	610	130	20	1.5	1400	0.2	200	5	51	0.2	6100	72	3100

* Sample collected with Teflon bailer from top of water column in well bore.

** Sample collected with bottom-filling Teflon bailer from base of well bore.

*** Sample collected on July 19, 2002 following a release of stormwater from a broken PVC pipe near the South Demin Tank. Stormwater flowed to the monitor well MW-18 area.

--- Not analyzed

dup Duplicate

TDS Total dissolved solids

a Non-detects were assigned a value of one-half the detection limit, except when all observations were non-detectable the detection limit was used as the constituent concentration.

b K=Tolerance factor for one-sided normal tolerance interval with 0.95 probability level (U.S. EPA, Feb. 1989)

c Background data for arsenic, barium, cadmium, chromium, lead, maganese, mercury, selenium, and silver taken from monitor wells MW-3 and MW-10 during the first year of quarterly groundwater monitoring (April 1999 - April 2000) as part of the East and West Lagoons groundwater monitoring program.

d Background data for antimony, bismuth, cobalt, copper, cyanide, manganese, nickel, selenium, thallium, tin, vanadium, and zinc taken from monitor wells MW-3 and MW-10 during the RFI monthly groundwater sampling events conducted during June, July, and August 2000.

e Adjusted Risk Reduction Standard No. 2 (RRS2) medium specific concentration (MSC) for groundwater (adjusted for saline groundwater).

Note: Numbers in **bold** indicate concentrations above the background upper tolerance limit.

East and West Lagoons
Groundwater Analytical Data

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
Fill/Alluvium Upgradient Wells																							
MW-3	01/30/86	---	0.007	---	---	---	0.01	<0.001	---	---	---	---	0.06	---	---	---	---	---	---	6.87	**16,000**	---	---
	01/30/87	---	0.009	---	---	---	<0.01	<0.001	---	---	---	---	0.02	---	---	---	---	---	---	6.94	**20,900**	---	---
	02/01/88	---	0.014	---	---	---	<0.01	<0.001	---	---	---	---	0.01	---	---	---	---	---	---	7.11	**18,400**	---	---
	01/27/89	---	0.012	---	---	---	<0.01	0.003	---	---	---	---	0.06	---	---	---	---	---	---	7.04	**18,500**	---	---
	01/23/90	---	0.010	---	---	---	<0.01	0.001	---	---	---	---	0.03	---	---	---	---	---	---	7.00	**17,000**	---	---
	01/09/91	---	0.006	---	---	---	<0.01	<0.001	---	---	---	---	0.03	---	---	---	---	---	---	7.09	**15,700**	---	---
	01/17/92	---	0.015	---	---	---	0.03	<0.001	---	---	---	---	<0.01	---	---	---	---	---	---	6.92	**19,300**	---	---
	02/14/94	---	0.014	---	---	---	<0.01	0.001	---	---	---	---	0.01	---	---	---	---	---	---	6.87	**14,800**	---	---
	01/30/95	---	0.013	---	---	---	<0.01	0.001	---	---	---	---	0.03	---	---	---	---	---	---	7.06	13,900	---	---
	02/20/98	11,200*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/20/98	14,800**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/23/99	---	0.016	0.037	<0.01	<0.01	---	0.007	---	<0.0005	<0.005	0.007	---	2,240	0.77	1.8	<0.04	2,150	1,585	8.19	11,000	7.0	0.16
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.96	12,000	7.0	0.38
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.93	12,250	8.0	0.2
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.92	12,000	9.0	0.21
	10/20/99	---	0.016	0.037	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	<0.01	---	4,992	0.65	2.5	<0.04	3,100	1,579	6.3	13,000	4.0	0.10
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4	13,500	4.0	0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4	13,500	4.0	0.26
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4	13,500	3.0	0.27
	01/27/00	---	0.011	0.043	0.008	<0.01	---	<0.02	---	<0.0005	<0.005	0.012	---	2,564	1.5	1.3	<0.04	1,909	1,549	7.7	7,500	3.5	0.248
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.6	7,500	3.3	0.179
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.6	7,500	3.2	0.172
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.6	7,500	3.1	0.173
(dup-1)	01/27/00	---	0.008	0.051	0.005	<0.01	---	0.02	---	<0.0005	<0.005	<0.01	---	2,140	2.4	2.4	<0.04	2,475	1,529	---	---	3.4	0.175
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<3	0.186
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<3	0.167
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<3	0.140
	04/25/00	14,870	0.016	0.043	<0.005	<0.01	---	0.009	---	<0.0005	<0.005	<0.01	---	3,321	1.6	1.8	<0.04	2,790	1,857	7.0	7,500	2.3	0.21
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.0	9,500	3.5	0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.0	8,000	2.3	0.16
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.0	9,500	2.6	0.20
	12/11/00	---	0.016	<0.05	<0.01	<0.01	---	<0.02	---	<0.0005	<0.01	<0.01	---	1,415	0.78	2.3	<0.04	1,693	1,284	7.6	11,100	6.4	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.7	11,300	6.4	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.6	11,400	6.4	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.6	11,300	6.4	<0.75
	06/14/01	---	0.016	<0.05	<0.01	0.028	---	<0.02	---	<0.0005	<0.005	0.012	---	3,045	0.93	1.4	<0.04	1,645	1,561	7.36	6,770	5.1	0.109
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.37	6,780	4.3	0.119
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.36	6,820	4.3	0.083
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.35	6,790	4.1	0.135

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
MW-3	12/12/01	---	0.015	0.036	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	<0.01	---	1,560	0.19	1.6	<0.02	1,720	1,177	7.56	4,390	6.1	0.102
(cont.)	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.56	4,390	5.9	0.144
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.55	4,390	6.0	0.118
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.55	4,390	5.9	0.350
	06/11/02	---	0.015	<0.05	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	<0.01	---	2,042	0.28	1.7	<0.04	1,887	1,190	7.59	11,290	5.4	0.077
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	10,730	5.1	0.087
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	11,090	5.2	0.083
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	11,120	6.2	<0.035
	12/05/02	---	0.010	0.022	<0.005	<0.01	---	<0.005	---	<0.0005	<0.008	<0.005	---	1,580	0.088	0.17	<0.04	1,147	818	7.90	4,920	5.2	<0.2
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.78	4,890	5.7	0.140
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.76	4,850	5.8	0.150
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.76	4,860	5.4	0.087
	06/05/03	---	0.022	0.066	<0.005	<0.01	---	0.013	---	<0.0005	<0.005	<0.005	---	3,014	0.85	2.6	<0.04	2,508	1,288	7.16	15,520	6.4	0.120
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.18	15,750	6.7	0.120
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.18	15,680	6.5	0.120
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.16	15,650	6.3	0.120
	12/05/03	---	0.016	0.048	0.002	<0.02	---	<0.005	---	<0.0006	<0.005	<0.005	---	3,175	0.38	1.6	<0.04	2,347	1,552	7.22	10,000	**15**	0.085
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	10,000	**16**	0.069
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	10,000	5.9	0.028
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	10,000	6.0	<0.04
MW-10	04/29/99	9,238	0.026	0.55	0.018	0.08	---	0.11	---	0.00058	<0.005	0.25	---	2,224	61	1.9	<0.04	2,550	2,396	8.7	11,000	6.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.4	9,500	6.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.2	9,500	8.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.2	9,500	9.0	<1
	07/23/99	---	0.016	0.15	<0.01	0.028	---	0.03	---	<0.0005	<0.005	0.16	---	2,193	19	1.2	<0.04	2,200	2,850	8.37	10,000	**16.0**	0.09
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.02	10,500	5.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.24	10,500	5.0	0.06
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.25	10,500	4.0	0.08
	10/20/99	---	0.025	0.074	<0.01	<0.01	---	0.013	---	0.00057	<0.005	0.049	---	2,242	7.8	6.6	<0.04	1,900	2,629	7.3	8,000	2.0	0.21
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	8,500	2.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	8,750	2.0	0.06
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	8,750	3.0	<0.05
	01/27/00	---	0.007	0.14	<0.01	0.021	---	0.032	---	<0.0005	<0.005	0.12	---	2,700	13	3.6	<0.04	2,248	2,749	8.1	9,000	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.0	9,000	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.0	9,000	<3	0.131
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.0	9,000	<3	0.12

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
MW-10	12/11/00	—	0.013	0.078	<0.01	<0.01	—	<0.02	—	<0.0005	<0.01	0.17	—	2,814	4.9	0.34	<0.04	2,882	2,937	6.9	9,600	3.0	<0.75
(cont.)	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.8	9,800	2.9	<0.75
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	9,600	2.8	<0.75
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.8	9,600	2.8	<0.75
	06/14/01	—	0.03	0.054	0.01	<0.01	—	<0.02	—	<0.0005	<0.005	0.28	—	2,043	1.9	1.1	<0.04	1,581	3,095	7.45	7,330	1.8	0.143
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.08	7,360	2.9	0.106
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.06	7,360	3.6	0.175
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.05	7,350	3.1	0.185
	12/12/01	—	0.02	0.028	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	0.045	—	1,434	0.078	2.3	<0.02	1,818	2,400	7.55	9,260	5.9	0.0754
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.56	9,260	5.6	0.156
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.55	9,260	5.3	0.124
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.55	9,260	5.9	0.0935
	06/11/02	—	0.018	<0.05	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	0.23	—	1,615	0.084	0.34	<0.04	1,873	2,596	7.08	8,890	3.6	0.048
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.06	8,880	3.7	0.037
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.59	8,940	4.1	0.067
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.59	8,930	3.9	0.044
	12/05/02	—	0.028	0.033	0.006	<0.01	—	<0.005	—	<0.0005	<0.008	0.16	—	1,530	0.74	3.7	<0.04	1,922	2,276	7.21	10,780	3.0	<0.1
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.19	10,660	3.3	<0.1
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.17	10,800	3.0	<0.1
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.20	10,770	3.0	<0.1
	06/05/03	—	**0.044**	0.048	0.017	<0.01	—	0.032	—	<0.0005	**0.007**	0.032	—	1,668	1.8	**14**	<0.04	1,809	3,084	7.03	9,080	5.6	0.060
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.00	9,300	3.8	0.061
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.02	9,240	3.8	0.066
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.06	9,190	6.1	0.069
	12/05/03	—	**0.047**	0.043	0.009	<0.02	—	0.008	—	<0.0006	<0.005	0.007	—	749	0.67	**16**	<0.04	1,241	1,714	7.40	3,000	5.8	<0.04
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.36	3,000	4.3	<0.04
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.34	3,000	4.4	<0.04
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.34	3,000	4.6	<0.04
Background Mean (x)[a]:			0.0157	0.125	0.0065	0.0177	—	0.0262	—	0.00032	0.0025	0.068	—	2,735	12	2.57	0.02	2,369	2,080	7.60	9,883	4.21	0.188
Background Standard Deviation (S):			0.0066	0.165	0.0045	0.0249	—	0.0329	—	0.00014	0	0.089	—	926	19.5	1.68	0	400	567	0.67	1,892	3.03	0.135
Background Upper Tolerance Interval (x + KS) [b]:			0.036	0.62	0.02	0.093	—	0.126	—	0.0007	0.0025	0.34	—	5,542	71	7.6	0.02	3,581	3,799	9.1/6.1	14,042	10.7	0.480

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
Fill/Alluvium Downgradient Wells																							
MW-6	06/07/93	32,954	<0.02	---	0.005	---	<0.008	<0.02	<0.02	---	---	---	0.064	**17,252**	---	0.48	---	**9,043**	2,614	7.5	**38,000**	---	---
	(dup)	---	<0.02	---	0.006	---	<0.008	<0.02	<0.02	---	---	---	0.075	---	---	0.45	---	---	---	7.4	**37,000**	---	---
	06/17/93	10,654	<0.02	---	**0.027**	---	0.035	0.028	<0.02	---	---	---	0.11	3,764	---	0.5	---	3,071	2,579	7.5	13,500	---	---
	06/24/93	9,717	<0.02	---	<0.008	---	<0.02	<0.02	<0.02	---	---	---	0.043	3,016	---	0.8	---	2,732	2,506	7.3	13,000	---	---
	02/20/98	22,000*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/20/98	32,000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/29/99	---	<0.005	0.065	<0.01	<0.01	---	<0.02	---	<0.0005	<0.005	<0.01	---	**11,779**	4.5	0.52	<0.04	**10,000**	2,145	8	**26,500**	8.0	**1.52**
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.1	**30,000**	**12.0**	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.1	**30,000**	8.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.1	**30,000**	**11.0**	**1.27**
	07/23/99	---	<0.005	0.024	<0.01	<0.01	---	<0.005	---	<0.0005	<0.005	0.006	---	1,799	0.19	0.43	<0.04	1,650	2,265	8.72	**20,500**	6.0	0.06
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.6	**19,500**	6.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.54	**19,000**	**12.0**	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.56	**19,000**	9.0	0.07
	10/20/99	---	0.008	0.041	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	<0.01	---	1,008	3.0	0.50	<0.04	1,000	1,495	7.2	6,750	3.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	12,500	4.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	13,000	7.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	13,000	3.0	<0.07
	01/27/00	---	<0.005	0.11	<0.01	<0.01	---	0.036	---	<0.0005	<0.005	<0.01	---	**9,894**	16	0.61	<0.04	**7,015**	2,581	7.6	**28,000**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	**28,000**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	**28,000**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	**28,000**	<3	<0.12
	12/11/00	---	0.012	<0.05	<0.01	<0.01	---	<0.02	---	<0.0005	<0.01	0.023	---	**8,224**	1.4	0.27	<0.04	**6,911**	2,291	7.4	**18,000**	2.7	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	**18,000**	2.8	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	**17,500**	2.8	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.3	**18,000**	2.8	<0.75
	06/14/01	---	0.008	<0.05	<0.01	0.013	---	<0.02	---	<0.0005	<0.005	0.014	---	**11,316**	1.0	0.34	<0.04	**6,191**	3,031	7.36	**20,000**	2.6	**0.714**
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.36	**20,000**	5.2	0.091
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.36	**20,000**	4.8	0.067
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.35	**20,000**	6.6	0.118
	12/12/01	---	0.01	0.045	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	<0.01	---	864	0.14	0.28	<0.02	1,253	3,089	7.55	4,540	5.0	0.154
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.65	4,540	<5	0.155
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.69	4,540	5.0	0.147
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.71	4,540	5.2	0.145
	06/11/02	---	<0.005	0.054	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	0.015	---	**10,266**	0.47	0.39	<0.04	**6,952**	2,586	7.59	**>20,000**	5.8	0.140
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	**>20,000**	7.5	<0.035
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	**>20,000**	5.3	<0.035
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	**>20,000**	5.0	0.098
(dup)	06/11/02	---	0.009	<0.05	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	0.032	---	**9,950**	0.35	0.39	<0.04	**6,700**	2,500	7.59	**>20,000**	6.8	0.110

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
MW-6	12/05/02	---	0.012	0.041	<0.005	<0.01	---	<0.005	---	<0.0005	<0.008	<0.005	---	1,109	0.19	0.33	<0.04	1,032	1,237	7.81	11,390	3.7	0.020
(cont.)	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.80	11,420	3.6	<0.02
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.81	11,310	3.9	<0.02
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.79	11,290	3.9	<0.02
	06/05/03	---	0.012	0.038	<0.005	<0.01	---	<0.003	---	<0.0005	<0.005	<0.005	---	171	0.066	0.56	<0.04	304	789	7.01	10,320	2.5	<0.02
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.06	10,470	2.3	<0.02
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.06	10,500	2.4	<0.02
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.06	10,520	2.5	<0.02
	12/05/03	---	0.015	0.055	<0.002	<0.02	---	<0.005	---	<0.0006	<0.005	0.005	---	161	0.31	0.57	<0.04	230	833	7.21	6,000	4.5	<0.02
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	5,000	5.2	0.048
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	6,000	5.2	0.048
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	6,000	5.4	0.069
MW-8	04/29/99	---	0.006	0.16	<0.01	<0.01	---	<0.02	---	<0.0005	<0.005	0.011	---	**11,255**	2.3	0.45	<0.04	**9,000**	2,831	8.3	**28,000**	5.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.1	**33,000**	6.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.1	**36,000**	6.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.1	**32,500**	4.0	**1.49**
	07/23/99	---	0.012	0.12	<0.01	<0.01	---	0.006	---	**0.00082**	<0.005	0.17	---	4,932	2	0.27	<0.04	1,600	2,982	8.34	**15,500**	8.0	**0.97**
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.00	**18,000**	9.0	0.16
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.01	**20,500**	10.0	0.20
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.00	**20,000**	**13.0**	0.26
	10/20/99	---	0.007	0.076	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	0.13	---	2,035	0.86	0.48	<0.04	1,200	1,668	7.6	12,500	7.0	0.13
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	**14,500**	4.0	0.37
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	**17,250**	4.0	0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	**17,500**	4.0	**0.78**
	01/27/00	---	<0.005	0.049	<0.01	<0.01	---	<0.02	---	<0.0005	<0.005	0.02	---	5,204	0.70	0.62	<0.04	**4,924**	3,697	7.3	**18,500**	<3	0.338
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.2	**18,500**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.2	**18,500**	<3	0.373
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.2	**18,500**	<3	0.296
	12/11/00	---	<0.005	0.10	<0.01	<0.01	---	0.032	---	**0.00082**	<0.01	<0.01	---	3,906	6.8	0.61	<0.04	**4,547**	3,281	6.9	**24,000**	5.4	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.9	**24,000**	5.3	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.8	**25,000**	5.5	<0.75
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.8	**25,000**	5.5	<0.75
	06/14/01	---	0.011	0.075	<0.01	<0.01	---	<0.02	---	<0.0005	<0.005	0.024	---	**8,181**	2.9	0.63	<0.04	**4,554**	**4,143**	7.27	**14,420**	7.0	0.072
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.35	**17,810**	6.4	0.105
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.36	**17,840**	5.9	0.253
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.33	**17,870**	6.6	0.094
(dup)	06/14/01	---	0.013	0.051	<0.01	<0.01	---	<0.02	---	<0.0005	<0.005	0.021	---	**9,289**	0.65	0.62	<0.04	**4,632**	**3,876**	7.33	**17,870**	5.3	0.097

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
MW-8	12/12/01	---	0.015	0.037	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	0.28	---	**5,572**	0.48	0.14	<0.02	**3,891**	3,437	7.55	**17,470**	8.8	0.0944
(cont.)	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.45	**17,470**	10	0.119
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.40	**17,470**	9.3	0.130
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.35	**17,470**	8.8	0.0855
	06/11/02	---	0.013	<0.05	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	0.035	---	**6,254**	0.33	0.45	<0.04	**4,460**	3,641	7.59	**18,920**	8.9	0.096
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	**>20,000**	8.4	0.177
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	**>20,000**	8.1	0.192
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.59	**>20,000**	8.7	0.059
	12/05/02	---	0.011	0.055	<0.005	<0.01	---	0.006	---	<0.0005	<0.008	0.12	---	3,733	0.70	0.31	<0.04	2,600	2,331	7.20	11,900	7.5	<0.1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.22	11,980	7.0	0.057
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.26	11,890	6.6	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.24	11,930	6.0	<0.05
	06/05/03	---	0.010	0.070	<0.005	<0.01	---	0.007	---	<0.0005	<0.005	0.041	---	**5,646**	0.99	0.44	<0.04	**4,585**	3,086	7.01	**>20,000**	8.5	0.089
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.02	**>20,000**	8.2	0.100
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.04	**>20,000**	8.0	0.088
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.04	**>20,000**	8.3	0.120
	12/05/03	---	0.023	0.063	<0.002	<0.02	---	<0.005	---	<0.0006	<0.005	0.16	---	**5,600**	0.6	0.22	<0.04	**4,550**	3,196	7.48	6,000	**14**	<0.1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.34	6,000	1.1	<0.01
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.38	6,000	**16**	0.06
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.40	6,000	**17**	**0.85**
(dup)	12/05/03	---	0.022	0.064	<0.002	<0.02	---	<0.005	---	<0.0006	<0.005	0.15	---	**5,631**	0.41	0.24	<0.04	**4,599**	3,208	7.40	6,000	6.2	<0.04
MW-9	04/29/99	---	0.02	0.5	<0.01	0.063	---	0.053	---	0.00044	<0.005	<0.01	---	**10,487**	67	1.8	<0.04	**8,500**	1,773	8.4	**29,500**	6.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.3	**28,500**	8.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.3	**28,500**	8.0	<1
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.3	**28,500**	**12.0**	<1
	07/23/99	---	0.015	0.039	<0.01	<0.01	---	<0.005	---	<0.0005	<0.005	<0.005	---	1,501	1.5	0.62	<0.04	1,750	2,553	9.32	12,500	6.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.49	13,000	**14.0**	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.27	11,500	6.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.29	11,500	6.0	<0.05
	10/20/99	---	0.017	0.029	<0.01	<0.01	---	<0.01	---	<0.0005	<0.005	<0.01	---	994	0.67	1.1	<0.04	800	1,694	7.5	5,000	4.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	5,250	2.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	6,000	9.0	<0.05
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.5	6,000	3.0	<0.05
	01/27/00	---	<0.005	0.045	<0.01	<0.01	---	<0.02	---	<0.0005	<0.005	<0.01	---	**8,364**	0.73	0.56	<0.04	**5,409**	2,279	7.1	**20,000**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	**20,000**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	**20,000**	<3	<0.12
	(rep)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.1	**20,000**	<3	<0.12

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
MW-9	12/11/00	—	0.012	<0.05	<0.01	<0.01	—	<0.02	—	<0.0005	<0.01	0.011	—	3,490	1.6	0.21	<0.04	3,094	2,386	6.9	**32,500**	3.9	<0.75
(cont.)	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.8	**32,300**	3.3	<0.75
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	**32,300**	3.5	<0.75
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	**32,300**	3.2	<0.75
(dup)	12/11/00	—	0.014	<0.05	<0.01	<0.01	—	<0.02	—	<0.0005	<0.01	0.011	—	3,076	2.3	0.2	<0.04	2,782	2,329	6.9	**32,500**	3.4	<0.75
	06/14/01	—	0.017	0.057	0.01	<0.01	—	<0.02	—	<0.0005	<0.005	0.016	—	**9,698**	0.65	0.43	<0.04	**4,910**	2,441	7.35	**18,630**	2.2	0.065
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.36	**18,480**	4.3	0.042
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.36	**18,460**	5.9	<0.01
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.35	**18,450**	3.8	0.052
	12/12/01	—	0.025	0.043	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	751	1.4	0.77	<0.02	1,031	2,133	7.56	6,140	<5	0.013
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.55	6,140	<5	<0.01
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.55	6,140	<5	<0.01
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.45	6,140	<5	0.016
(dup)	12/12/01	—	0.025	0.05	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	770	1.9	0.81	<0.02	1,033	2,118	7.45	6,140	<5	0.026
	06/11/02	—	0.014	<0.05	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	0.018	—	**6,480**	0.12	0.35	<0.04	**4,625**	2,507	7.59	**18,200**	7.0	<0.035
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.59	**18,150**	7.3	0.206
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.59	**18,180**	7.7	<0.035
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.59	**18,160**	7.1	<0.035
	12/05/02	—	0.017	0.041	<0.005	<0.01	—	<0.005	—	<0.0005	<0.008	<0.005	—	337	2.0	2.0	<0.04	680	1,960	7.49	5,310	3.2	0.031
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.42	5,150	2.9	0.020
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.42	5,030	3.2	<0.02
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.41	5,020	2.9	0.020
(dup)	12/05/02	—	0.023	0.036	<0.005	<0.01	—	<0.005	—	<0.0005	<0.008	<0.005	—	332	2.0	1.7	<0.04	647	1,932	7.41	5,020	2.7	<0.02
	06/05/03	—	0.012	0.044	<0.005	<0.01	—	<0.003	—	<0.0005	<0.005	<0.005	—	105	0.76	0.45	<0.04	195	432	7.02	3,320	2.4	<0.02
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.10	3,310	2.3	<0.02
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.08	3,300	2.5	<0.02
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.08	3,320	2.4	0.028
(dup)	06/05/03	—	0.019	0.042	<0.005	<0.01	—	0.003	—	<0.0005	<0.005	<0.005	—	111	1.0	0.60	<0.04	241	534	7.06	3,330	2.0	<0.02
	12/05/03	—	0.009	0.075	<0.002	<0.02	—	<0.005	—	<0.0006	<0.005	<0.005	—	103	0.46	0.81	<0.04	194	541	7.22	3,000	**21**	<0.1
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.22	3,000	**22**	0.210
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.22	3,000	**23**	0.170
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.22	3,000	**23**	0.110

Table 4. Analytical Results Summary - Groundwater (mg/L), East and West Lagoons, Encycle/Texas, Inc., Corpus Christi, Texas

Well	Sample Date	TDS	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Silver	Selenium	Zinc	Chloride	Iron	Manganese	Phenols	Sodium	Sulfate	pH	Specific Conductance	TOC	TOH
Field	04/29/99	—	<0.005	<0.05	<0.01	<0.01	—	<0.02	—	<0.0005	<0.005	<0.01	—	2.6	<0.05	<0.015	<0.04	11	3.6	—	—	3.0	<1
Blank	12/11/00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<0.04	—	—	—	—	<1	<0.75
	12/12/01	—	<0.005	<0.01	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.015	<0.02	<1	<1	—	—	<5	<0.01
	06/11/02	—	<0.005	<0.05	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.015	<0.04	<4	<1	—	—	<2	<0.035
	12/05/02	—	<0.005	<0.01	<0.005	<0.01	—	<0.005	—	<0.0005	<0.008	<0.005	—	<1	<0.05	<0.015	<0.04	<2	<2	—	—	<2	<0.01
	06/05/03	—	<0.005	<0.01	<0.005	<0.01	—	<0.003	—	<0.0005	<0.005	<0.005	—	<1	<0.05	<0.010	<0.04	<2	<2	—	—	<2	<0.02
	12/05/03	—	<0.005	<0.02	<0.002	<0.02	—	<0.005	—	<0.0006	<0.005	<0.005	—	<1	<0.03	<0.030	<0.04	<5	<2	—	—	4.8	<0.04
Trip	07/23/99	—	<0.005	<0.01	<0.01	<0.01	—	<0.005	—	<0.0005	<0.005	<0.005	—	<1	<0.1	<0.015	<0.04	<2	3.6	—	—	<1.0	<0.05
Blank	10/20/99	---	<0.005	<0.01	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.01	<0.04	<2	2.1	—	—	---	---
	01/27/00	---	<0.005	<0.05	<0.01	<0.01	—	<0.02	—	<0.0005	<0.005	<0.01	—	<1	<0.05	0.02	<0.04	<4	<2	—	—	—	—
	04/25/00	---	<0.005	<0.01	<0.005	<0.01	—	<0.005	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.015	<0.04	<4	<2	—	—	<1	0.12
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<1	<0.05
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<1	<0.05
	(rep)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<1	<0.05
	12/11/00	—	<0.005	<0.05	<0.01	<0.01	—	<0.02	—	<0.0005	<0.01	<0.01	—	<1	<0.05	<0.015	—	<2	<2	—	—	—	—
	06/14/01	—	<0.005	<0.05	<0.01	<0.01	—	<0.02	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.015	<0.04	<5	<1	—	—	<1	0.012
	12/12/01	—	<0.005	<0.01	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.015	<0.02	<1	<1	—	—	<5	<0.01
	06/11/02	—	<0.005	<0.05	<0.01	<0.01	—	<0.01	—	<0.0005	<0.005	<0.01	—	<1	<0.05	<0.015	—	<4	<1	—	—	—	—
	12/05/02	—	<0.005	<0.01	<0.005	<0.01	—	<0.005	—	<0.0005	<0.008	<0.005	—	<1	<0.05	<0.015	<0.04	<2	<2	—	—	<2	<0.02
	06/05/03	—	<0.005	<0.01	<0.005	<0.01	—	<0.003	—	<0.0005	<0.005	<0.005	—	<1	<0.05	<0.010	<0.04	<2	<2	—	—	<2	0.021

* Sample collected with Teflon bailer from top of water column in well bore.

** Sample collected with bottom-filling Teflon bailer from base of well bore.

— Not analyzed

dup Duplicate

rep Replicate (4 replicate measurements as specified in 40 CFR Part 265.92(b)(3))

TDS Total dissolved solids

TOC Total organic carbon

TOH Total organic halogen

a Non-detects were assigned a value of one-half the detection limit.

b K=Tolerance factor for one-sided normal tolerance interval with 0.95 probability level (U.S. EPA, Feb. 1989)

Notes: 1) Numbers in **bold** indicate concentrations above detection limit and the background upper tolerance limit.

2) Background statistical evaluation based on April 1999 through April 2000 analytical data from hydraulically upgradient monitor wells MW-3 and MW-10. Therefore, analytical data obtained from hydraulically upgradient monitoring wells after April 2000 is not included in the background statistical evaluation.

APPENDIX B

ARCADIS

Appendix B

Soil Analytical Data Summary Tables

RFI
Soil Borings

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
Background Soil Borings																							
B-1	11/23/92	0-0.5	---	1.9	11.6	170	---	44.1	14.7	6.4	72	---	211	561	0.22	13.4	0.97	2.3	0.11	<12	11	354.1	---
		2-2.5	---	---	3.89	---	---	3.4	---	---	11.1	---	35	247.1	---	20.5	---	---	---	---	---	45	---
		7-8	---	---	17.24	---	---	3.1	---	---	9.6	---	29	242.8	---	19.8	---	---	---	---	---	44.7	---
		11-12	---	---	6.15	---	---	2	---	---	5.5	---	15	234.9	---	8.2	---	---	---	---	---	24	---
B-2	11/23/92	0-0.5	---	1.09	12.19	40	---	66.1	12.6	3.8	74.6	---	278	378.2	0.24	7.5	1.58	1.3	0.05	6	25	354.4	---
		2-2.5	---	---	4.8	---	---	1.3	---	---	12.1	---	18	187.5	---	11.4	---	---	---	---	---	35.7	---
		7-8	---	---	4.51	---	---	2.4	---	---	8.6	---	23	379.9	---	14.5	---	---	---	---	---	37.3	---
		11-12	---	---	4.86	---	---	1.5	---	---	10.1	---	18	322	---	13.4	---	---	---	---	---	40.8	---
B2-R*	09/24/94	0-0.5	---	---	<5	---	---	45	---	---	38	---	94	198	---	11	---	---	---	---	---	1,490	---
B-3	11/24/92	0-0.5	---	0.98	11.21	190	---	6.5	13.2	6.9	27.1	---	87	390.1	0.01	14.9	0.8	0.8	0.05	6	15	342.9	---
		2-2.5	---	---	3.13	---	---	1.5	---	---	8.8	---	16	253.5	---	6.6	---	---	---	---	---	29.2	---
		7-8	---	---	5.86	---	---	1.5	---	---	9	---	24	405.2	---	13.8	---	---	---	---	---	64.5	---
		10-11	---	---	3.54	---	---	1.3	---	---	3.3	---	7	279.5	---	6.2	---	---	---	---	---	17	---
B-4	11/24/92	0-0.5	---	1.08	35.54	240	---	25.7	18	6.8	110	---	866	689.3	0.48	13.7	1.49	3.9	0.28	98	19	355.6	---
		2-2.5	---	---	4.88	---	---	2	---	---	10.4	---	39	273.7	---	15.2	---	---	---	---	---	59.6	---
		7-8	---	---	8.49	---	---	3.1	---	---	9.2	---	17	267.7	---	14.5	---	---	---	---	---	65.6	---
		10-11	---	---	5.26	---	---	1.9	---	---	6.3	---	10	233.5	---	10.2	---	---	---	---	---	22.8	---
B4-R*	09/24/94	0-0.5	---	---	<5	---	---	34	---	---	111	---	274	470	---	9	---	---	---	---	---	6,690	---
B-5	11/25/92	0-0.5	---	2.45	21.77	160	---	39.3	17.8	5.6	99.2	---	391	613.5	0.87	16.9	4.45	5.5	0.05	19	9	357.1	---
		2-2.5	---	---	4.39	---	---	1.6	---	---	4.6	---	12	161.9	---	4.9	---	---	---	---	---	16.3	---
		7-8	---	---	5.22	---	---	0.26	---	---	3.7	---	16	177.6	---	8.1	---	---	---	---	---	38.2	---
		13-14	---	---	3.14	---	---	2.4	---	---	2.3	---	9	33.3	---	2.1	---	---	---	---	---	122.4	---
B5-R*	09/24/94	0-0.5	---	---	<5	---	---	<5	---	---	10	---	19	158	---	<5	---	---	---	---	---	623	---
B-6	11/25/92	0-0.5	---	1.6	3.48	260	---	6.3	13.6	5.1	12.9	---	54	193.4	0.01	20.8	1.89	4.7	0.23	6	20	228.5	---
		2-2.5	---	---	5.41	---	---	1	---	---	6.7	---	10	153.6	---	8.9	---	---	---	---	---	20.1	---
		9-10	---	---	3.31	---	---	1.8	---	---	3.9	---	9	183.2	---	3	---	---	---	---	---	12.6	---
B-7	11/25/92	0-0.5	---	0.78	8.61	100	---	3.8	10.8	3.9	19	---	75	220.4	0.06	8.3	0.63	0.7	0.18	6	11	286.2	---
		2-2.5	---	---	1.66	---	---	0.49	---	---	5.9	---	19	177.5	---	9	---	---	---	---	---	26.9	---
		5-6	---	---	2.68	---	---	2	---	---	4.6	---	15	138.2	---	4.4	---	---	---	---	---	8.4	---
B-8	11/25/92	0-0.5	---	0.15	10.59	120	---	2.9	11.6	4.1	13.9	---	47	222.5	0.12	12.9	1.17	1.6	0.15	6	14	191.3	---
		2-2.5	---	---	2.4	---	---	0.5	---	---	5.5	---	16	144.8	---	13	---	---	---	---	---	14.2	---
		12-13	---	---	1.84	---	---	1.3	---	---	1.9	---	20	88.8	---	5.1	---	---	---	---	---	6.1	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
RS-5	7/22/96	0-0.5	u	0.62	6.4	96.4	---	8.3	5.1	5.3	36	<0.25	10.1	236	<0.1	2.6	<0.5	0.49	1.1	5.1	4.4	2,280	---
RS-6	7/22/96	0-0.5	u	0.67	4.8	76.6	---	4.6	4.7	3.1	20.4	<0.25	66.8	286	<0.1	2.3	0.54	0.33	<1	4	3.7	1,480	---
RS-9	7/22/96	0-0.5	u	<0.5	11.9	86.2	---	5.8	2.9	2.6	14	<0.25	43.6	200	<0.1	2.7	0.73	<0.2	<1	3	4.6	1,820	---
RS-10	7/22/96	0-0.5	u	<0.5	8.4	100	---	1.5	3.7	3.6	13.5	<0.25	31.8	174	<0.1	3.9	<0.5	<0.2	<1	2.2	5.2	270	---
RS-11	7/22/96	0-0.5	u	<0.5	5.1	122	---	1.5	5	6.3	17	<0.25	39.6	185	<0.1	4.4	<0.5	0.23	<1	3.4	7	296	---
RS-12	7/22/96	0-0.5	u	<0.5	2.4	90	---	0.58	1.8	2.4	11.6	<0.25	12	137	<0.1	4.2	0.51	<0.2	<1	<2	4.7	58.1	---
B-174	01/15/01	2.5-3.5	u	<0.8	---	245	---	---	7.8	---	---	---	---	---	---	---	---	<0.5	<1	---	17	---	---
		6-7	u	<0.8	---	87	---	---	11	---	---	---	---	---	---	---	---	<0.5	<1	---	7.7	---	---
B-175	01/15/01	3-4	u	<0.8	---	132	---	---	7.5	---	---	---	---	---	---	---	---	<0.5	<1	---	16	---	---
		6-7	u	<0.8	---	134	---	---	6.4	---	---	---	---	---	---	---	---	<0.5	<1	---	9.3	---	---
B-176	01/15/01	2.5-3.5	u	<0.8	---	307	---	---	10	---	---	---	---	---	---	---	---	<0.5	<1	---	16	---	---
		5-6	u	<0.8	---	81	---	---	17	---	---	---	---	---	---	---	---	<0.5	<1	---	9.9	---	---
B-177	01/15/01	2.5-3.5	u	<0.8	---	639	---	---	9.4	---	---	---	---	---	---	---	---	<0.5	<1	---	25	---	---
		5-6	u	<0.8	---	57	---	---	14	---	---	---	---	---	---	---	---	<0.5	<1	---	12	---	---
B-178	01/15/01	2.5-3.5	u	<0.8	---	241	---	---	11	---	---	---	---	---	---	---	---	<0.5	<1	---	28	---	---
		5-6	u	<0.8	---	45	---	---	19	---	---	---	---	---	---	---	---	<0.5	<1	---	7.4	---	---
B-179	01/15/01	2.5-3.5	u	<0.8	---	504	---	---	9.5	---	---	---	---	---	---	---	---	<0.5	<1	---	16	---	---
		7-8	u	<0.8	---	43	---	---	22	---	---	---	---	---	---	---	---	<0.5	<1	---	7.4	---	---
Soil Borings																							
B-30	06/09/93	0-0.5	(u)	---	5.7	---	---	**44**	---	---	**183**	---	**331**	**757**	---	16	---	---	---	---	---	2128	7.9
(01 Landfill - East Side)		2-2.5	(u)	---	**8.1**	---	---	**47**	---	---	**120**	---	**431**	**698**	---	6.1	---	---	---	---	---	2287	7.9
		5.5-6	(u)	---	11	---	---	**22**	---	---	**77**	---	**220**	561	---	6.1	---	---	---	---	---	1550	8.1
		6.5-7	(s)	---	**25**	---	---	**42**	---	---	**137**	---	**276**	521	---	6.6	---	---	---	---	---	1864	8.2
B-31	06/09/93	0-0.5	(u)	---	7.6	---	---	**23**	---	---	**111**	---	**213**	**1023**	---	14	---	---	---	---	---	1392	8.1
(01 Landfill - East Side)		2-2.5	(u)	---	**12**	---	---	**15**	---	---	**185**	---	**261**	**665**	---	<5.0	---	---	---	---	---	1357	7.9
		4.5-5	(s)	---	6.4	---	---	**24**	---	---	**59**	---	**319**	**2450**	---	<5.0	---	---	---	---	---	24245	7.6

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-32	06/09/93	0-0.5	(u)	---	<5.0	---	---	83	---	---	94	---	60	9305	---	29	---	---	---	---	---	14990	7.5
(01 Landfill - East Side)		2-2.5	(u)	---	<5.0	---	---	24	---	---	55	---	72	1336	---	6.1	---	---	---	---	---	3452	8.3
		5.5-6	(u)	---	5.1	---	---	6	---	---	19	---	22	303	---	15	---	---	---	---	---	422	8.7
		6-6.5	(s)	---	<5.0	---	---	4.1	---	---	15	---	13	380	---	6.1	---	---	---	---	---	598	8.5
B-9	05/18/93	0-0.5	(u)	---	8.4	---	---	<2.5	---	---	9.8	---	9.3	180	---	6	---	---	---	---	---	48	---
(01 Landfill - North Side		2-2.5	(u)	---	9.9	---	---	<2.5	---	---	11	---	12	213	---	7.6	---	---	---	---	---	262	---
		5-5.5	(u)	---	<5.0	---	---	8.7	---	---	1199	---	14	869	---	28	---	---	---	---	---	4802	---
		6.5-7	(s)	---	<5.0	---	---	52	---	---	841	---	14	1689	---	6.6	---	---	---	---	---	4070	---
B-10	05/18/93	0-0.5	(u)	---	8.1	---	---	<2.5	---	---	15	---	6.8	126	---	<5.0	---	---	---	---	---	29	---
(01 Landfill - North Side		2-2.5	(u)	---	<5.0	---	---	<2.5	---	---	11	---	15	295	---	7.3	---	---	---	---	---	25	---
		6-6.5	(s)	---	<5.0	---	---	93	---	---	22	---	18	456	---	<5.0	---	---	---	---	---	2116	---
B-11	05/18/93	0-0.5	(u)	---	<5.0	---	---	<2.5	---	---	11	---	9.3	168	---	<5.0	---	---	---	---	---	36	--- 7.9
(01 Landfill - North Side		2-2.5	(u)	---	7.9	---	---	<2.5	---	---	9.5	---	19	284	---	7.3	---	---	---	---	---	33	8
		5.5-6	(u)	---	7.7	---	---	8.1	---	---	14	---	14	384	---	5.5	---	---	---	---	---	298	---
		8-8.5	(s)	---	30	---	---	9.7	---	---	304	---	936	5455	---	<5.0	---	---	---	---	---	962	---
B-12	05/18/93	0-0.5	(u)	---	14	---	---	20	---	---	42	---	101	476	---	7	---	---	---	---	---	1758	---
(01 Landfill - North Side		2-2.5	(u)	---	42	---	---	40	---	---	454	---	394	806	---	14	---	---	---	---	---	3922	---
		5-5.5	(s)	---	36	---	---	60	---	---	280	---	477	2087	---	14	---	---	---	---	---	9195	---
B-13	05/18/93	0-0.5	(u)	---	24	---	---	39	---	---	168	---	200	909	---	9.6	---	---	---	---	---	4486	---
(West Lagoon)		2-2.5	(u)	---	28	---	---	26	---	---	202	---	267	635	---	6.8	---	---	---	---	---	3190	---
		5.5-6	(u)	---	<5.0	---	---	<2.5	---	---	14	---	13	310	---	9.2	---	---	---	---	---	167	---
		6-6.5	(s)	---	<5.0	---	---	4.5	---	---	37	---	24	135	---	13	---	---	---	---	---	450	---
B-14	05/09/93	0-0.5	(u)	---	26	---	---	65	---	---	266	---	740	530	---	30	---	---	---	---	---	4736	8.3
(West Lagoon)		2.0-2.5	(u)	---	24	---	---	4.7	---	---	115	---	45	642	---	11	---	---	---	---	---	532	7.8
		4.5-5	(s)	---	7.7	---	---	16	---	---	30	---	68	447	---	7.2	---	---	---	---	---	1198	---
B-15	05/09/93	0-0.5	(u)	---	31	---	---	77	---	---	246	---	359	373	---	7.4	---	---	---	---	---	7720	---
(West Lagoon)		2-2.5	(u)	---	58	---	---	13	---	---	740	---	148	441	---	17	---	---	---	---	---	1180	---
		6-6.5	(s)	---	5.3	---	---	<2.5	---	---	13	---	15	66	---	<5	---	---	---	---	---	147	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-16	05/19/93	0-0.5	(u)	---	**25**	---	---	**48**	---	---	**154**	---	**273**	**452**	---	7	---	---	---	---	---	3008	---
(West Lagoon)		2-2.5	(u)	---	**14**	---	---	**10**	---	---	**87**	---	**94**	332	---	9.3	---	---	---	---	---	1139	---
		4-4.5	(s)	---	<5	---	---	**14**	---	---	**84**	---	**74**	98	---	8.5	---	---	---	---	---	1184	---
B-17	05/19/93	0-0.5	(u)	---	**21**	---	---	**31**	---	---	**131**	---	**235**	**470**	---	8.4	---	---	---	---	---	3196	8
(West Lagoon)		2-2.5	(u)	---	**13**	---	---	**15**	---	---	**260**	---	**66**	**464**	---	13	---	---	---	---	---	974	7.8
		4-4.5	(s)	---	7.6	---	---	**7.7**	---	---	**74**	---	**58**	174	---	<5	---	---	---	---	---	1429	---
B-24	06/08/93	0-0.5	(u)	---	<5	---	---	3.1	---	---	18	---	17	207	---	7.5	---	---	---	---	---	113	7.8
(East Lagoon)		2.0-2.5	(u)	---	<5	---	---	<2.5	---	---	11	---	16	**401**	---	11	---	---	---	---	---	430	7.9
		4-4.5	(s)	---	<5	---	---	<2.5	---	---	13	---	16	57	---	5.2	---	---	---	---	---	183	8.1
B-25	06/08/93	0-0.5	(u)	---	**30**	---	---	**163**	---	---	**276**	---	**734**	**469**	---	15	---	---	---	---	---	7380	7.6
(East Lagoon)		2-2.5	(u)	---	<5	---	---	4.4	---	---	16	---	26	**536**	---	11	---	---	---	---	---	338	8
		2.5-3	(s)	---	<5	---	---	<2.5	---	---	5.8	---	<5	26	---	<5	---	---	---	---	---	44	8.2
B-26	06/08/93	0-0.5	(u)	---	**41**	---	---	**235**	---	---	**249**	---	**979**	**506**	---	20	---	---	---	---	---	9265	7.7
(East Lagoon)		1.5-2	(u)	---	**13**	---	---	**21**	---	---	**106**	---	**293**	**427**	---	6.9	---	---	---	---	---	4694	8.2
		2-2.5	(s)	---	<5	---	---	<2.5	---	---	15	---	15	154	---	11	---	---	---	---	---	107	8.5
B-27	06/08/93	0-0.5	(u)	---	9.2	---	---	**28**	---	---	**49**	---	**144**	178	---	6.6	---	---	---	---	---	1140	7.9
(East Lagoon)		2-2.5	(u)	---	<5	---	---	<2.5	---	---	11	---	15	324	---	11	---	---	---	---	---	137	8.1
		3.5-4	(s)	---	<5	---	---	<2.5	---	---	7.4	---	8.4	62	---	5.1	---	---	---	---	---	56	8.4
B-28	06/08/93	0-0.5	(u)	---	15	---	---	**42**	---	---	**67**	---	**367**	267	---	6.6	---	---	---	---	---	2352	7.8
(East Lagoon)		2-2.5	(u)	---	<5	---	---	3.4	---	---	**29**	---	**93**	331	---	10	---	---	---	---	---	658	8
		2.5-3	(s)	---	<5	---	---	<2.5	---	---	5.6	---	<5	39	---	5.4	---	---	---	---	---	36	8.2
B-29	06/08/93	0-0.5	(u)	---	**20**	---	---	**83**	---	---	**153**	---	**603**	**346**	---	21	---	---	---	---	---	4033	7.8
(East Lagoon)		0.5-1	(u)	---	<5	---	---	<2.5	---	---	14	---	23	342	---	9.7	---	---	---	---	---	169	7.9
		1-1.5	(s)	---	<5	---	---	<2.5	---	---	6.4	---	5.7	40	---	<5	---	---	---	---	---	109	8.1
B-18	05/20/93	0-0.5	(u)	---	16	---	---	**57**	---	---	29	---	45	**341**	---	11	---	---	---	---	---	2798	---
(Waste Pile)		2-2.5	(u)	---	**12**	---	---	2.6	---	---	8.7	---	11	259	---	9.7	---	---	---	---	---	163	---
		5.5-6	(u)	---	11	---	---	<2.5	---	---	8	---	8.4	374	---	9.1	---	---	---	---	---	58	---
		9-9.5	(u)	---	11	---	---	<2.5	---	---	13	---	11	359	---	12	---	---	---	---	---	67	---
		12.5-13	(u)	---	9.1	---	---	<2.5	---	---	8.6	---	11	476	---	8.8	---	---	---	---	---	51	---
		16-16.5	(u)	---	<5	---	---	<2.5	---	---	15	---	11	485	---	12	---	---	---	---	---	63	---
		20-20.5	(u)	---	15	---	---	<2.5	---	---	13	---	12	246	---	13	---	---	---	---	---	60	---
		21.5-22	(s)	---	9.2	---	---	<2.5	---	---	<5	---	6	138	---	<5	---	---	---	---	---	31	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-19	05/20/93	0-0.5	(u)	---	16	---	---	**41**	---	---	20	---	53	316	---	8.6	---	---	---	---	---	2367	7.6
(Waste Pile)		2-2.5	(u)	---	**12**	---	---	<2.5	---	---	8.5	---	8.6	343	---	10	---	---	---	---	---	68	---
		5.5-6	(u)	---	7.5	---	---	<2.5	---	---	8.7	---	10	290	---	12	---	---	---	---	---	56	---
		9-9.5	(u)	---	10	---	---	<2.5	---	---	6.6	---	11	365	---	11	---	---	---	---	---	53	8.4
		12.5-13	(u)	---	12	---	---	<2.5	---	---	7.8	---	7.9	430	---	12	---	---	---	---	---	50	---
		16-16.5	(u)	---	19	---	---	<2.5	---	---	11	---	12	229	---	13	---	---	---	---	---	95	---
		19.5-20	(u)	---	<5	---	---	<2.5	---	---	12	---	9.5	247	---	11	---	---	---	---	---	58	---
		21-21.5	(s)	---	<5	---	---	<2.5	---	---	<5	---	6.5	140	---	5.7	---	---	---	---	---	44	---
B-20	05/20/93	0-0.5	(u)	---	**30**	---	---	**226**	---	---	**84**	---	**298**	**636**	---	12	---	---	---	---	---	10340	---
(Waste Pile)		2-2.5	(u)	---	7.4	---	---	<2.5	---	---	14	---	13	302	---	12	---	---	---	---	---	94	---
		5.5-6	(u)	---	10	---	---	<2.5	---	---	7.7	---	10	349	---	10	---	---	---	---	---	75	---
		9-9.5	(u)	---	<5	---	---	<2.5	---	---	8.1	---	7.8	198	---	11	---	---	---	---	---	58	---
		12.5-13	(u)	---	14	---	---	<2.5	---	---	8.4	---	9	464	---	12	---	---	---	---	---	56	---
		16-16.5	(u)	---	<5	---	---	<2.5	---	---	13	---	12	**617**	---	14	---	---	---	---	---	**123**	---
		19-19.5	(u)	---	13	---	---	<2.5	---	---	12	---	11	195	---	12	---	---	---	---	---	92	---
		22-22.5	(s)	---	6	---	---	<2.5	---	---	<5	---	<5	138	---	<5	---	---	---	---	---	22	---
B-21	05/20/93	0-0.5	(u)	---	**115**	---	---	**1113**	---	---	**374**	---	**1504**	**1678**	---	16	---	---	---	---	---	71000	7.7
(Waste Pile)		2-2.5	(u)	---	**8.8**	---	---	**30**	---	---	**19**	---	**68**	276	---	9.7	---	---	---	---	---	1152	---
		5.5-6	(u)	---	12	---	---	<2.5	---	---	9.2	---	12	284	---	8.5	---	---	---	---	---	79	---
		9-9.5	(u)	---	13	---	---	<2.5	---	---	12	---	8.6	307	---	10	---	---	---	---	---	69	8.3
		12.5-13	(u)	---	<5	---	---	<2.5	---	---	11	---	11	169	---	10	---	---	---	---	---	78	---
		16-16.5	(u)	---	<5	---	---	<2.5	---	---	12	---	16	476	---	14	---	---	---	---	---	93	---
		19.5-20	(u)	---	8.3	---	---	<2.5	---	---	10	---	9.1	186	---	12	---	---	---	---	---	55	---
		21-21.5	(s)	---	<5	---	---	<2.5	---	---	<5	---	5.3	126	---	5.3	---	---	---	---	---	29	---
B-22	05/21/93	0-0.5	(u)	---	8.5	---	---	7	---	---	13	---	22	**463**	---	11	---	---	---	---	---	1596	7.7
(Waste Pile)		2-2.5	(u)	---	**39**	---	---	**203**	---	---	**117**	---	**439**	**586**	---	11	---	---	---	---	---	21600	---
		5.5-6	(u)	---	<5	---	---	3.3	---	---	8.5	---	14	317	---	9.9	---	---	---	---	---	342	---
		9-9.5	(u)	---	7.6	---	---	<2.5	---	---	5.5	---	7.4	245	---	7.9	---	---	---	---	---	52	8.5
		12.5-13	(u)	---	10	---	---	<2.5	---	---	10	---	11	411	---	12	---	---	---	---	---	61	---
		16-16.5	(u)	---	13	---	---	<2.5	---	---	11	---	10	**1331**	---	17	---	---	---	---	---	66	---
		19.5-20	(u)	---	<5	---	---	<2.5	---	---	7.2	---	7.1	153	---	6.3	---	---	---	---	---	29	---
		21-21.5	(s)	---	<5	---	---	<2.5	---	---	<5	---	5.9	151	---	5	---	---	---	---	---	35	---
B-23	05/21/93	0-0.5	(u)	---	7.4	---	---	**13**	---	---	22	---	45	238	---	9.8	---	---	---	---	---	701	---
(Waste Pile)		2-2.5	(u)	---	7.5	---	---	<2.5	---	---	8.2	---	7.1	277	---	9.8	---	---	---	---	---	43	---
		5.5-6	(u)	---	<5	---	---	<2.5	---	---	6.3	---	8.6	285	---	8.8	---	---	---	---	---	41	---
		9-9.5	(u)	---	16	---	---	<2.5	---	---	9	---	**53**	319	---	13	---	---	---	---	---	54	---
		12.5-13	(u)	---	9.1	---	---	<2.5	---	---	9	---	11	361	---	12	---	---	---	---	---	52	---
		16-16.5	(u)	---	6.9	---	---	<2.5	---	---	10	---	10	**862**	---	15	---	---	---	---	---	68	---
		19.5-20	(u)	---	<5	---	---	<2.5	---	---	9.6	---	9.9	186	---	11	---	---	---	---	---	57	---
		23-23.5	(s)	---	<5	---	---	<2.5	---	---	6.1	---	7.3	167	---	7.3	---	---	---	---	---	44	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-33	06/26/00	0-0.5	(u)	2	6	228	<4	166	19	22	10	<0.04	22	1440	<0.05	16	<0.8	1	<1	<5	25	18820	---
	Duplicate 29	0-0.5	(u)	6	19	441	7	263	15	14	77	<0.04	201	1934	<0.05	13	<0.8	3	<1	<5	18	47720	---
		2-2.5	(u)	3	<5	755	<4	2	11	<5	7	---	9	531	---	---	---	<0.5	---	---	29	304	---
	Duplicate 30	2-2.5	(u)	<0.8	<5	701	<4	3	12	6	7	<0.04	9	573	<0.05	9	<0.8	<0.5	<1	<5	31	581	---
(Building C)		5.5	(u)	3	---	304	---	---	---	---	---	---	---	400	---	---	---	---	---	---	---	389	---
		8.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	28	---
		11.5	(u)	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47	---
		13-14	(s)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	---
B-34	06/26/00	0-0.5	(u)	3	<5	249	<4	426	77	28	490	<0.04	16	1490	0.13	40	<0.8	2	<1	<5	13	16750	---
(Building C)		2-2.5	(u)	2	---	292	---	53	14	6	66	---	---	392	---	10	---	<0.5	---	---	---	1690	---
		5.5	(u)	3	---	---	---	8	---	---	25	---	---	481	<0.05	---	---	---	---	---	---	404	---
		8.5	(u)	2	---	---	---	3	---	---	8	---	---	---	---	---	---	---	---	---	---	99	---
		11.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	70	---
		14-14.5	(s)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	33	---
B-35	06/13/00	0-0.5	(u)	28	110	665	41	785	235	64	2272	1.2	12260	234	1.5	403	10	31	15	116	23	4283	---
	Duplicate 4	0-0.5	(u)	93	428	418	87	1668	311	272	11060	0.6	42850	276	7.8	1600	24	47	20	317	20	8811	---
		2-2.5	(u)	1	12	---	<4	177	8	9	141	<0.04[a]	272	---	<0.05	12	<0.8	2	<1	<5	---	25570	---
		5.5	(u)	<0.8	7	---	---	17	---	---	13	<0.04[a]	20	---	---	---	---	<0.5	---	---	---	602	---
	Duplicate 50	5.5	(u)	---	---	---	---	---	---	---	---	<0.04[a]	---	---	---	---	---	---	---	---	---	---	---
(Road to west		8.5	(u)	---	---	---	---	39	---	---	---	---	---	---	---	---	---	---	---	---	---	487	---
of building C)		11.5	(u)	---	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	61	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	57	---
		16.5-17	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	97	---
B-36	06/13/00	0-0.5	(u)	2	12	170	<4	31	47	6	126	<0.04	160	235	1.7	26	<0.8	5	2	6	19	2490	---
(Road to west		2-2.5	(u)	1	---	---	---	11	7	---	162	---	74	---	0.3	6	---	1	<1	---	---	1370	---
of building C)		5.5	(u)	<0.8	---	---	---	<1	---	---	6	---	7	---	<0.05	---	---	<0.5	---	---	---	53	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	407	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	132	---
		12.5-13	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	86	---
B-37	06/13/00	0-0.5	(u)	11	44	310	4	155	61	16	393	<0.04	985	640	7.2	42	6	14	<1	27	17	18660	---
	(SPLP)	*0-0.5*	*(u)*	*<0.1*	*<0.1*	*0.13*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	---	*<0.1*	*<0.1*	---	*<0.1*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	*1.3*	---
(Road to west		2-2.5	(u)	1	6	---	---	13	18	6	35	---	52	330	---	11	<0.8	1	---	<5	---	1700	---
of building C)		5.5	(u)	<0.8	---	---	---	1	10	---	8	---	---	---	<0.05	---	---	<0.5	---	---	---	137	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	45	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	53	---
		13-14	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-38	06/13/00	0-0.5	(u)	8	43	222	<4	100	53	12	405	<0.04	1020	939	0.35	32	1	9	<1	19	24	13540	---
	Duplicate 5	0-0.5	(u)	20	77	294	9	369	38	20	887	<0.04	2170	1000	0.92	38	1	23	<1	46	11	34130	---
		2-2.5	(u)	<0.8	<5	---	<4	<1	10	<5	12	---	15	233	---	9	<0.8	<0.5	---	<5	---	57	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	<0.05	---	---	---	---	---	---	1210	---
(Road to west		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	487	---
of building C)		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	45	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---
		17.5-18	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---
B-39	06/13/00	0-0.5	(u)	3	6	233	<4	3	24	7	28	<0.04	60	371	1.1	16	<0.8	2	1	9	28	1700	---
(Road to west		2-2.5	(u)	<0.8	---	---	---	---	9	---	---	---	---	248	<0.05	---	---	<0.5	---	<5	---	172	---
of building C)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	25	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	25	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	28	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8	---
		16-16.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	114	---
B-40	06/13/00	0-0.5	(u)	96	140	546	5	53	40	21	1050	<0.04	2420	3786	0.26	178	<0.8	11	<1	253	27	29800	---
	Duplicate 6	0-0.5	(u)	7	13	261	<4	14	22	7	132	<0.04	274	309	<0.05	39	<0.8	4	8	22	23	3195	---
		2-2.5	(u)	2	11	---	<4	8	17	10	508	---	267	355	<0.05	69	---	1	2	21	---	867	---
		5.5	(u)	2	12	---	---	5	13	7	164	---	196	---	---	40	---	1	2	17	---	788	---
(Road to west		8.5	(u)	1	---	---	---	1	---	---	54	---	70	---	---	13	---	<0.5	1	9	---	395	---
of building C)		11.5	(u)	<0.8	---	---	---	---	---	---	9	---	11	---	---	---	---	---	---	<5	---	93	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9559	---
		17-17.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	944	---
B-41	06/19/00	0-0.5	(u)	7	23	245	<4	72	75	9	138	<0.04	425	504	1.4	32	1	6	<1	26	18	8,745	---
	Duplicate 17	0-0.5	(u)	11	36	245	<4	120	73	11	208	<0.04	492	576	0.22	29	<0.8	6	<1	35	30	10,610	---
		2-2.5	(u)	1	<5	---	---	2	18	<5	6	---	12	190	<0.05	10	<0.8	<0.5	---	<5	---	185	---
(reactor clarifier)		5.5	(u)	1	---	---	---	---	29	---	---	---	---	---	---	---	---	---	---	---	---	204	---
		8.5	(u)	2	---	---	---	---	24	---	---	---	---	---	---	---	---	---	---	---	---	1760	---
		11.5	(u)	2	---	---	---	---	35	---	---	---	---	---	---	---	---	---	---	---	---	531	---
		14.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	829	---
		15.5-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	745	---
B-42	06/19/00	0-0.5	(u)	38	129	341	<4	93	40	11	433	0.07	1,730	933	1.9	21	2	13	<1	156	15	15,580	---
	Duplicate 15	0-0.5	(u)	40	61	149	<4	89	19	<5	181	0.06	921	637	2.7	12	<0.8	12	<1	81	11	9,184	---
		2-2.5	(u)	1	6	---	---	<1	16	5	10	---	11	362	<0.05	---	<0.8	<0.5	---	<5	---	66	---
(reactor clarifier)		5.5	(u)	1	---	---	---	---	16	---	---	---	---	302	---	---	---	---	---	---	---	52	---
		8.5	(u)	2	---	---	---	---	16	---	---	---	---	---	---	---	---	---	---	---	---	106	---
		11.5	(u)	2	---	---	---	---	7	---	---	---	---	---	---	---	---	---	---	---	---	21	---
		14.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	---
		15.5-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	14	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-43	06/19/00	0-0.5	(u)	<0.8	<5	449	<4	6	16	7	80	<0.04	97	155	0.15	27	1	2	2	5	19	354	---
	Duplicate 16	0-0.5	(u)	<0.8	<5	444	<4	5	23	5	54	<0.04	32	203	<0.05	14	<0.8	1	2	<5	24	320	---
		2-2.5	(u)	---	---	---	---	---	44	---	66	---	---	---	0.09	17	1	1	2	---	---	2260	---
(reactor clarifier)		5.5	(u)	---	---	---	---	---	14	---	7	---	---	---	<0.05	---	<0.8	<0.5	1	---	---	78	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	28	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	21	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---
		17-17.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	15	---
B-44	06/15/00	0-0.5	(u)	5	28	369	<4	99	60	60	287	0.16	431	917	2.1	35	5	4	3	36	20	7725	---
(reactor clarifier)		2-2.5	(u)	3	10	---	---	17	20	7	55	---	95	256	0.3	10	2	1	1	12	---	1810	---
		5.5	(u)	3	9	---	---	8	14	---	39	---	77	---	0.19	---	<0.8	1	---	12	---	2280	---
		8.5	(u)	2	---	---	---	2	---	---	18	---	21	---	<0.05	---	---	<0.5	---	<5	---	433	---
		11.5	(u)	1	---	---	---	---	---	---	<5	---	---	---	---	---	---	---	---	---	---	32	---
		14.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	---
		15-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22	---
B-45	06/15/00	0-0.5	(u)	<0.8	22	185	<4	31	204	36	269	0.59	59	193	0.3	74	5	<0.5	8	8	27	1588	---
(reactor clarifier)		2-2.5	(u)	---	8	---	---	36	19	11	37	<0.04	---	---	0.11	35	<0.8	---	8	<5	---	965	---
		5.5	(u)	---	---	---	---	<1	12	<5	56	---	---	---	1.8	8	---	---	4	---	---	197	---
		8.5	(u)	---	---	---	---	---	---	---	50	---	---	---	0.17	---	---	---	3	---	---	434	---
		11.5	(u)	---	---	---	---	---	---	---	<5	---	---	---	<0.05	---	---	---	1	---	---	186	---
		13-14	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	228	---
B-46	06/22/00	0-0.5	(u)	3	<5	165	<4	9	12	<5	10	<0.04	12	258	0.13	9	<0.8	<0.5	<1	<5	17	551	---
	Duplicate 25	0-0.5	(u)	3	<5	164	<4	23	9	<5	11	<0.04	14	272	<0.05	8	<0.8	<0.5	2	<5	14	915	---
		2-2.5	(u)	<0.8	---	---	---	7	---	---	---	---	---	---	<0.05	---	---	---	1	---	---	55	---
		5.5	(u)	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	---	---	---	---	37	---
(former sludge		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38	---
drying beds)		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26	---
		16-16.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	---
B-47	06/22/00	0-0.5	(u)	4	6	168	<4	12	19	8	26	<0.04	53	321	<0.05	12	<0.8	<0.5	<1	7	16	1650	---
(former sludge		2-2.5	(u)	<0.8	---	---	---	<1	15	---	---	---	---	---	---	---	---	---	---	---	---	41	---
drying beds)		5.5	(u)	---	---	---	---	---	10	---	---	---	---	---	---	---	---	---	---	---	---	35	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	35	---
		11.5-12	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-48	06/23/00	0-0.5	(u)	3	<5	561	<4	27	25	6	16	<0.04	20	361	<0.05	14	<0.8	1	<1	<5	34	1560	---
(former sludge		2-2.5	(u)	3	---	---	---	<1	14	---	---	---	---	295	---	---	---	<0.5	---	---	---	88	---
drying beds)		5.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	50	---
		8.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38	---
		11.5-12	(s)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	25	---
B-49	06/15/00	0-0.5	(u)	2	13	409	<4	37	63	34	254	<0.04	423	462	0.43	42	<0.8	2	1	23	30	3715	---
	Duplicate 10	0-0.5	(u)	5	31	409	<4	54	99	24	271	0.14	722	645	0.62	48	<0.8	2	1	33	25	7562	---
(north/south		2-2.5	(u)	2	6	---	---	2	15	<5	24	---	64	255	0.12[a]	8	---	<0.5	---	8	---	775	---
demin tanks)		5.5	(u)	2	---	---	---	---	15	---	7	---	10	---	<0.05[a]	---	---	---	---	<5	---	54	---
		8.5	(u)	2	---	---	---	---	14	---	---	---	---	---	---	---	---	---	---	---	---	73	---
		11.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	50	---
		14-14.5	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39	---
B-50	06/15/00	0-0.5	(u)	3	17	339	<4	36	73	9	165	2.8	424	651	0.51	29	<0.8	2	<1	32	29	6892	---
	Duplicate 9	0-0.5	(u)	3	18	674	<4	6	60	8	99	2.2	301	586	0.23	19	<0.8	1	2	34	29	4347	---
(north/south		2-2.5	(u)	3	6	---	---	<1	17	---	12	<0.04[a]	16	373	0.05[a]	13	---	<0.5	2	<5	---	160	---
demin tanks)		5.5	(u)	2	---	---	---	---	15	---	---	<0.04[a]	---	334	<0.05[a]	---	---	---	1	---	---	48	---
		8.5	(u)	1	---	---	---	---	11	---	---	<0.04[a]	---	---	---	---	---	---	---	---	---	58	---
		11.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	---
		12.5-13	(s)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	486	---
B-51	06/15/00	0-0.5	(u)	3	14	299	<4	24	165	17	291	2.6	675	372	0.4	48	<0.8	3	<1	22	16	5798	---
	Duplicate 11	0-0.5	(u)	3	18	242	<4	20	169	12	294	1.6	495	447	0.16	54	<0.8	2	<1	23	18	5508	---
(north/south		2-2.5	(u)	11	32	---	---	24	104	6	477	4.2[a]	647	682	1.3[a]	15	---	3	---	54	---	11940	---
demin tanks)		5.5	(u)	<0.8	6	---	---	<1	16	---	13	<0.04[a]	14	344	<0.05[a]	---	---	<0.5	---	<5	---	138	---
		8.5	(u)	---	---	---	---	---	13	---	---	<0.04[a]	---	---	---	---	---	---	---	---	---	57	---
	Duplicate 48	8.5	(u)	---	---	---	---	---	---	---	---	<0.04[a]	---	---	<0.05	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	54	---
		12.5-13	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	327	---
B-52	06/15/00	0-0.5	(u)	<0.8	<5	181	<4	4	46	7	23	<0.04	66	312	0.07	25	<0.8	1	<1	<5	22	707	---
(north/south		2-2.5	(u)	---	---	---	---	---	13	---	---	---	---	---	---	---	---	<0.5	---	---	---	70	---
demin tanks)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	57	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	59	---
		14.5-15	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	25	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-53	06/22/00	0-0.5	(u)	7	9	209	<4	1214	15	32	52	0.13	195	721	0.22	13	<0.8	1	<1	20	17	15810	---
(product storage		2-2.5	(u)	2	---	---	---	1055	12	6	12	---	13	430	<0.05[a]	---	---	<0.5	---	<5	---	15330	---
bins)		5.5	(u)	1	---	---	---	16	---	---	---	---	---	232	<0.05[a]	---	---	---	---	---	---	172	---
	Duplicate 49	5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	<0.05[a]	---	---	---	---	---	---	---	---
		8.5	(u)	1	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	36	---
		11.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	29	---
		14.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	29	---
		17.5-18	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12	---
B-54	06/22/00	0-0.5	(u)	2	<5	323	<4	9	10	6	7	<0.04	11	400	<0.05	9	1	<0.5	1	<5	27	134	---
(product storage		2-2.5	(u)	2	---	---	---	---	---	---	---	---	---	401	---	---	<0.8	---	---	---	---	42	---
bins)		5.5	(u)	1	---	---	---	---	---	---	---	---	---	155	---	---	---	---	---	---	---	50	---
		8.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	---
		14-15	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11	---
B-55		0-0.5	(u)	1	<5	224	<4	<1	14	6	9	<0.04	8	415	<0.05	9	<0.8	<0.5	<1	<5	21	28	---
(product storage		2-2.5	(u)	2.2	---	---	---	---	---	---	---	---	---	524	---	---	---	---	---	---	---	---	---
bins)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	232	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		12-12.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-56	06/28/00	0-0.5	(u)	1	<5	211	<4	6	16	36	10	<0.04	10	385	<0.05	11	<0.8	4	1	<5	20	215	---
(product storage		2-2.5	(u)	1	---	---	---	---	12	7	---	---	---	260	---	---	---	<0.5	---	---	---	95	---
bins)		5.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	34	---
		8.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37	---
		11.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	33	---
		14-15.5	(s)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37	---
B-57	06/19/00	0-0.5	(u)	<0.8	6	210	<4	<1	11	6	22	<0.04	15	318	0.052	23	<0.8	<0.5	<1	<5	21	56	---
(old casting		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	---	<0.05	---	---	---	---	---	---	36	---
building)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9	---
		15.6-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-58	06/19/00	0-0.5	(u)	<0.8	5	198	<4	<1	**17**	7	9	<0.04	9	254	<0.05	12	<0.8	<0.5	<1	<5	20	55	---
(old casting		2-2.5	(u)	---	---	---	---	---	**17**	---	---	---	---	---	---	---	---	---	---	---	---	46	---
building)		5.5	(u)	---	---	---	---	---	12	---	---	---	---	---	---	---	---	---	---	---	---	34	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7	---
		15.7-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9	---
B-59	06/19/00	0-0.5	(u)	<0.8	5	221	<4	3	**18**	**11**	12	<0.04	22	309	<0.05	**40**	<0.8	<0.5	<1	<5	16	577	---
(old casting		2-2.5	(u)	---	---	---	---	---	11	6	---	---	---	---	---	10	---	---	---	---	---	48	---
building)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	65	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	33	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	---
		15.5-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	---
B-60	06/19/00	0-0.5	(u)	**1**	10	244	<4	2	**18**	9	**74**	<0.04	27	**464**	**0.11**	14	<0.8	<0.5	**7**	<5	35	407	---
(old casting		2-2.5	(u)	**2**	---	---	---	---	**20**	---	**53**	---	---	238	**0.26**[a]	---	---	---	1	---	---	619	---
building)		5.5	(u)	**1**	---	---	---	---	9	---	6	---	---	---	<0.05[a]	---	---	---	---	---	---	34	---
		8.5	(u)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36	---
		10-11	(s)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	40	---
B-61	06/20/00	0-0.5	(u)	**3**	**61**	87	<4	**48**	**60**	**19**	**232**	<0.04	**317**	149	**18**	**28**	**9**	**4**	<1	7	26	3,288	---
	(SPLP)	*0-0.5*	*(u)*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*1.5*	*<0.1*	*<0.1*	*<0.1*	---	*<0.1*	*0.58*	---	*<0.1*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	29	---
(feedtank No.1)		2-2.5	(u)	<0.8	6	596	<4	<1	**20**	6	15	<0.04	13	333	0.05	13	<0.8	<0.5	**2**	<5	24	85	---
		5.5	(u)	<0.8	6	362	<4	<1	9	5	7	<0.04	9	295	<0.05	8	<0.8	<0.5	1	<5	35	44	---
	Duplicate 19	5.5	(u)	<0.8	6	302	<4	<1	**17**	6	14	<0.04	10	313	<0.05	11	<0.8	<0.5	**2**	<5	**39**	70	---
		8.5	(u)	**1**	<5	189	<4	<1	12	6	7	<0.04	9	307	<0.05	8	**1**	<0.5	**7**	<5	28	42	---
		11.5	(u)	<0.8	<5	58	<4	<1	**49**	8	<5	<0.04	<5	205	<0.05	24	<0.8	<0.5	**3**	<5	8	22	---
		14.5	(u)	<0.8	<5	67	<4	<1	**73**	**12**	<5	<0.04	<5	370	<0.05	**34**	**1**	<0.5	**2**	<5	7	11	---
		15-16	(s)	<0.8	<5	67	<4	<1	**60**	**12**	<5	<0.04	<5	274	<0.05	**28**	**1**	<0.5	1	<5	5	11	---
B-62	06/20/00	0-0.5	(u)	**1**	<5	---	---	4	**34**	6	8	---	11	---	<0.05	18	<0.8	<0.5	---	---	---	385	---
(feedtank No.1)		2-2.5	(u)	---	---	---	---	---	**15**	---	---	---	---	---	---	---	---	---	**2**	---	---	36	---
		5.5	(u)	---	---	---	---	---	11	---	---	---	---	---	---	---	---	---	**2**	---	34	38	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	<0.8	---	<1	---	---	26	---
		11.5	(u)	---	---	---	---	---	27	---	---	---	---	---	---	---	---	---	<1	---	---	20	---
		14.5	(u)	---	---	---	---	---	26	6	---	---	---	---	---	12	<0.8	---	<1	---	---	8	---
		15-16	(s)	---	---	---	---	---	**54**	**10**	---	---	---	---	---	**26**	**1**	---	---	---	---	8	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-63	06/20/00	0-0.5	(u)	<0.8	---	---	---	---	18	---	---	---	---	---	---	---	---	---	---	---	---	59	---
(feedtank No.1)		2-2.5	(u)	---	---	---	---	---	14	---	---	---	---	---	---	---	---	---	2	---	---	66	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	64	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	34	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	14	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9	---
		15-16	(s)	---	---	---	---	---	45	10	---	---	---	---	---	21	<0.8	---	---	---	---	6	---
B-64	06/20/00	0-0.5	(u)	<0.8	7	305	<4	623	16	7	13	<0.04	39	1725	<0.05	22	<0.8	0.54	2	6	27	9393	---
(feedtank No.1)		2-2.5	(u)	2	7	282	<4	193	27	30	540	0.08	60	4188	0.08	47	<0.8	2	<1	9	26	59140	---
	(SPLP)	*2-2.5*	*(u)*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*1.0*	*<0.1*	*<0.1*	*<0.1*	*---*	*<0.1*	*0.36*	*---*	*<0.1*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	*16*	*---*
		5.5	(u)	1	<5	203	<4	3	10	<5	11	<0.04	14	2305	<0.05	11	<0.8	1	<1	<5	25	62460	---
		8.5	(u)	1	6	292	<4	<1	15	7	9	<0.04	24	415	<0.05	11	<0.8	<0.5	2	10	36	757	---
		11.5	(u)	<0.8	<5	51	<4	1	29	7	<5	<0.04	<5	139	<0.05	14	1	<0.5	<1	<5	8	671	---
		14.5	(u)	<0.8	<5	51	<4	<1	62	13	<5	<0.04	<5	283	<0.05	29	1	<0.5	<1	<5	6	143	---
		15-15.5	(s)	<0.8	<5	71	<4	<1	82	16	6	<0.04	<5	176	<0.05	38	1	0.52	<1	<5	5	64	---
B-65	06/20/00	0-0.5	(u)	---	---	---	---	10	21	---	---	---	---	419	---	---	---	---	2	---	---	1110	---
(feedtank No.1)		2-2.5	(u)	3	---	---	---	2	28	6	30	---	1570	386	---	9	---	1	---	518	---	684	---
		5.5	(u)	1	---	---	---	---	---	---	---	---	---	349	---	---	---	<0.5	---	---	---	1750	---
		8.5	(u)	1	---	---	---	---	16	---	---	---	---	---	---	---	---	---	2	11	38	57	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.8	---	---	---	---	39	---
		14.5	(u)	---	---	---	---	---	23	7	---	---	---	---	---	---	1	---	---	---	---	17	---
		15.3-16	(s)	---	---	---	---	---	39	9	---	---	---	---	---	18	1	<0.5	---	---	---	18	---
B-66	06/20/00	0-0.5	(u)	---	---	---	---	---	93	---	---	---	---	532	---	---	---	---	<1	---	---	4176	---
	Duplicate 18	0-0.5	(u)	4	9	123	<4	74	222	60	1380	<0.04	427	559	0.08	69	<0.8	1	3	30	10	2200	---
(feedtank No.1)		2-2.5	(u)	1	---	---	---	---	12	---	29	---	29	257	---	---	---	<0.5	---	6	---	99	---
		5.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	110	---
		8.5	(u)	1	---	---	---	---	11	---	---	---	---	---	---	---	---	---	6	5	25	72	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.8	---	---	---	---	13	---
		15.7-16	(s)	---	---	---	---	---	49	---	---	---	---	---	---	---	1	---	---	---	---	11	---
B-67	06/15/00	0-0.5	(u)	<0.8	<5	161	12	326	17	8	407	<0.04	56	1297	0.1	16	<0.8	2	<1	12	18	52100	---
(Facility No. 1)		2-2.5	(u)	---	---	---	<4	<1	---	---	8	----	---	349	<0.05[a]	---	---	<0.5	---	<5	---	103	---
		5.5	(u)	---	---	---	---	---	---	---	---	----	---	---	<0.05[a]	---	---	---	---	---	---	180	---
		8.5	(u)	---	---	---	---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	138	---
		11.5-12.5	(s)	---	---	---	---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	73	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-68	06/27/00	0-0.5	(u)	**2**	<5	134	<4	**129**	13	**11**	25	<0.04	9	**1528**	<0.05	20	<0.8	<0.5	<1	<5	18	40160	---
(Facility No. 1)		2-2.5	(u)	**4**	---	---	---	**302**	---	**10**	---	---	---	**1560**	---	---	---	---	---	---	---	14400	---
		5.5	(u)	**3**	---	---	---	2	---	7	---	---	---	445	---	---	---	---	---	---	---	247	---
		8.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	71	---
		11.5	(u)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	71	---
		14.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	35	---
		15.7-16	(s)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	---
B-69	06/15/00	0-0.5	(u)	<0.8	<5	132	**6**	**512**	**67**	**68**	**295**	<0.04	14	**746**	<0.05	**149**	**3**	<0.5	<1	6	15	25520	---
(Facility No. 1)		2-2.5	(u)	---	---	---	<4	**27**	11	7	**51**	---	---	**872**	---	11	<0.8	---	---	---	---	29520	---
		5.5	(u)	---	---	---	---	**54**	---	---	16	---	---	**2200**	---	---	---	---	---	---	---	74080	---
		8.5	(u)	---	---	---	---	2	---	---	---	---	---	269	---	---	---	---	---	---	---	779	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	273	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2340	---
		15.6-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26790	---
B-70	06/19/00	0-0.5	(u)	<0.8	<5	131	<4	**875**	**16**	8	13	0.11	10	**545**	<0.05	11	<0.8	<0.5	**5**	<5	17	6,289	---
(Facility No. 1)		2-2.5	(u)	---	---	---	---	**13**	**16**	---	---	---	---	311	---	---	---	---	**2**	---	---	296	---
		5.5	(u)	---	---	---	---	**16**	**15**	---	---	---	---	---	---	---	---	---	**2**	---	---	342	---
		8.5	(u)	---	---	---	---	4	11	---	---	---	---	---	---	---	---	---	**7**	---	---	101	---
		11.5-12	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3**	---	---	20	---
B-71	06/14/00	0-0.5	(u)	<0.8	<5	65	<4	3	**28**	**20**	**178**	<0.04	31	**2356**	<0.05	17	<0.8	**1**	**3**	<5	13	983	---
(west cell house)		2-2.5	(u)	---	---	---	---	---	11	5	**20**	---	---	284	---	---	---	<0.5	<1	---	---	130	---
		5.5	(u)	---	---	---	---	---	---	---	11	---	---	---	---	---	---	---	---	---	---	118	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	34	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	48	---
		20.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		22.5-23	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24	---
B-72	06/14/00	0-0.5	(u)	**2**	<5	66	<4	3	11	<5	**74**	<0.04	42	**1484**	<0.05	6	<0.8	<0.5	<1	<5	13	19120	---
(west cell house)		2-2.5	(u)	<0.8	---	---	---	---	---	---	10	---	---	93	---	---	---	---	---	---	---	836	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	616	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	676	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	56	---
		17-17.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-73	07/11/00	0-0.5	(u)	**0.9**	<5	80	<4	2	12	**13**	8	<0.04	15	201	<0.05	11	<0.8	<0.5	<1	**9**	15	251	---
(west cell house)		2-2.5	(u)	<0.8	---	---	---	---	---	7	---	---	---	---	---	---	---	---	---	<5	---	220	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		20.5-21	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-74	06/14/00	0-0.5	(u)	<0.8	<5	79	<4	<1	**22**	6	10	<0.04	13	204	<0.05	16	<0.8	<0.5	**2**	<5	17	399	---
(west cell house)		2-2.5	(u)	---	---	---	---	---	8	---	---	---	---	---	---	---	---	---	**2**	---	---	318	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3**	---	---	53	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2**	---	---	41	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3**	---	---	31	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3**	---	---	45	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2**	---	---	42	---
		20.5-21	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2**	---	---	41	---
B-75	06/26/00	0-0.5	(u)	**3**	<5	56	<4	2	10	<5	6	<0.04	6	159	<0.05	6	<0.8	<0.5	**2**	<5	16	83	---
(NOR 43)		2-2.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	58	---
		5.5	(u)	**4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	48	---
		8.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49	---
		11.5	(u)	**5**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	58	---
		14.5	(u)	**4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	62	---
		17.5	(u)	**4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	54	---
		20.5	(u)	**4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	41	---
		23.5	(u)	**5**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	57	---
		26-26.5	(s)	**4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	63	---
B-76	06/26/00	0-0.5	(u)	**4**	<5	215	<4	**23**	**32**	6	30	<0.04	27	**466**	0.09	18	<0.8	<0.5	<1	<5	21	1040	---
(NOR 43)		2-2.5	(u)	**2**	---	---	---	<1	**16**	---	---	---	---	**491**	<0.05	---	---	---	---	---	---	60	---
		5.5	(u)	**3**	---	---	---	---	13	---	---	---	---	370	---	---	---	---	---	---	---	47	---
		8.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		11.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	61	---
		14.5	(u)	**4**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	63	---
		17.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		20.5	(u)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	62	---
		23.4-24	(s)	**3**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	14	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-77	06/27/00	0-0.5	(u)	<0.8	<5	67	<4	<1	9	<5	6	<0.04	16	171	<0.05	6	<0.8	<0.5	3	<5	13	121	---
(NOR 43)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	45	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	43	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	48	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	62	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	57	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	55	---
		19.7-20	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	15	---
B-78	06/27/00	0-0.5	(u)	<0.8	<5	122	<4	<1	13	6	7	<0.04	19	198	<0.05	8	<0.8	<0.5	2	<5	14	155	---
(NOR 43)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	43	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	46	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	40	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	65	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		19.5-20	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	36	---
B-79	06/21/00	0-0.5	(u)	3	<5	101	<4	12	28	13	11	<0.04	14	665	<0.05	15	<0.8	<0.5	<1	<5	14	2867	---
(feedtank #2)		2-2.5	(u)	3	<5	142	<4	<1	14	5	10	<0.04	9	367	<0.05	10	<0.8	<0.5	<1	<5	25	74	---
		5.5	(u)	3	8	303	<4	<1	21	7	11	<0.04	11	373	<0.05	12	<0.8	<0.5	<1	<5	61	69	---
	Duplicate 21	5.5	(u)	2	8	389	<4	<1	12	6	8	<0.04	9	629	<0.05	9	<0.8	<0.5	<1	<5	39	43	---
		8.5	(u)	2	6	193	<4	<1	9	6	7	<0.04	9	372	<0.05	9	<0.8	<0.5	<1	<5	27	36	---
		11.5	(u)	2	7	312	<4	<1	12	6	7	<0.04	9	337	<0.05	8	<0.8	<0.5	<1	<5	30	41	---
		14.5	(u)	2	7	337	<4	<1	15	7	10	<0.04	11	325	<0.05	16	<0.8	<0.5	1	<5	34	56	---
		17.5	(u)	2	6	357	<4	<1	12	8	10	<0.04	13	690	<0.05	13	<0.8	<0.5	<1	<5	31	51	---
		18-18.5	(s)	2	<5	375	<4	<1	16	7	9	<0.04	10	389	<0.05	12	<0.8	<0.5	<1	<5	33	73	---
B-80	06/21/00	0-0.5	(u)	<0.8	---	---	---	82	16	8	---	---	---	652	---	---	---	---	---	---	---	6729	---
(feedtank #2)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	406	---	---	---	---	---	---	---	86	---
		5.5	(u)	<0.8	---	---	---	---	12	---	---	---	---	375	---	---	---	---	---	---	32	52	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	59	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	63	---
		14.5	(u)	<0.8	---	---	---	---	12	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		17.5-18	(s)	<0.8	---	---	---	---	7	---	---	---	---	566	---	---	---	---	---	---	---	31	---
B-81	06/21/00	0-0.5	(u)	---	---	---	---	6	15	---	---	---	---	210	---	---	---	---	---	---	---	623	---
(feedtank #2)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	293	---	---	---	---	---	---	---	56	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	48	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	48	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	59	---
		20.7-21	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-82	06/21/00	0-0.5	(u)	4	7	86	5	133	59	15	1130	0.05	57	956	0.07	250	<0.8	1	7	7	15	16920	---
(feedtank #2)		2-2.5	(u)	2	<5	103	<4	159	27	7	14	<0.04	<5	445	<0.05	37	<0.8	<0.5	4	<5	9	4204	---
		5.5	(u)	2	<5	50	<4	410	17	7	5	<0.04	<5	3615	<0.05	17	<0.8	1	<1	<5	11	26850	---
	(SPLP)	*5.5*	*(u)*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*1.7*	*<0.1*	*<0.1*	*<0.1*	---	*<0.1*	*2.6*	---	*<0.1*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	*20*	---
		8.5	(u)	1	<5	63	<4	261	34	9	6	<0.04	7	1651	<0.05	25	<0.8	<0.5	<1	<5	12	12400	---
		11.5	(u)	2	7	387	<4	4	15	9	12	<0.04	12	515	<0.05	13	<0.8	<0.5	<1	<5	37	210	---
		14.5	(u)	2	6	339	<4	3	14	9	12	<0.04	13	794	<0.05	14	<0.8	<0.5	1	<5	33	170	---
		17.5	(u)	3	10	224	<4	2	21	9	12	<0.04	12	399	<0.05	15	<0.8	<0.5	1	<5	44	144	---
	Duplicate 22	17.5	(u)	2	8	179	<4	1	11	6	9	<0.04	10	267	<0.05	10	<0.8	<0.5	1	<5	30	86	---
		19-20	(s)	3	<5	224	<4	167	15	6	10	<0.04	13	918	<0.05	19	<0.8	<0.5	<1	<5	26	3902	---
B-83	06/21/00	0-0.5	(u)	2.3	---	---	<4	273	25	11	359	---	---	3384	---	30	---	3.8	<5	---	---	38770	---
(feedtank #2)		2-2.5	(u)	<0.8	---	---	---	21	19	---	---	---	---	517	---	17	---	---	<5	---	---	2829	---
		5.5	(u)	<0.8	---	---	---	1	13	---	---	---	---	378	---	---	---	<0.5	---	---	---	151	---
		8.5	(u)	<0.8	---	---	---	2	13	---	---	---	---	348	---	---	---	---	---	---	---	190	---
		11.5	(u)	<0.8	---	---	---	---	12	---	---	---	---	---	---	---	---	---	---	---	31	64	---
		14.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	397	---	---	---	---	---	---	---	57	---
		17.5	(u)	<0.8	---	---	---	---	12	---	---	---	---	---	---	---	---	---	---	---	32	68	---
		20.5	(u)	<0.8	---	---	---	<1	15	---	---	---	---	360	---	---	---	---	---	---	---	62	---
		23.5-24	(s)	<0.8	---	---	---	<1	13	---	---	---	---	254	---	---	---	---	---	---	---	77	---
B-84	06/22/00	0-0.5	(u)	5.8	---	---	---	92	45	12	646	---	---	4274	---	39	---	11.3	<5	---	---	22850	---
(feedtank #2)		2-2.5	(u)	---	---	---	---	3	15	---	---	---	---	476	---	---	---	---	2	---	---	211	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	58	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	75	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	58	---
		17.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	54	---
		20.5	(u)	---	---	---	---	---	12	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		23.5-24	(s)	---	---	---	---	---	9	---	---	---	---	---	---	---	---	---	---	---	---	39	---
B-85	06/22/00	0-0.5	(u)	3	13	232	<4	62	15	7	74	0.22	178	584	0.13	15	<0.8	1	<1	6	19	3925	---
	Duplicate 23	0-0.5	(u)	7	36	430	<4	185	35	13	237	<0.04	375	1170	0.14	40	1	4	1	11	22	10940	---
		2-2.5	(u)	1	<5	---	---	2	11	5	9	<0.04	23	327	<0.05[a]	10	<0.8	<0.5	---	<5	---	149	---
(Facility #2)		5.5	(u)	1	---	---	---	---	---	---	---	---	---	---	<0.05[a]	---	---	---	---	---	---	2480	---
	Duplicate 51	5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	<0.05[a]	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	745	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1040	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	31	---
		17.5-18	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-86	06/28/00	0-0.5	(u)	1	6	222	<4	10	11	10	27	<0.04	27	276	0.051	8	<0.8	<0.5	2	<5	21	658	---
(Facility #2)		2-2.5	(u)	2	---	---	---	---	---	7	---	---	---	---	---	---	---	---	<1	---	---	132	---
		5.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49	---
		8.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---
		11.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		14.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	---
		16-16.5	(s)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24	---
B-87	06/22/00	0-0.5	(u)	2	<5	84	<4	345	19	13	17	0.17	22	1210	<0.05	12	<0.8	2	<1	<5	12	30480	---
(Facility #2)		2-2.5	(u)	1	---	---	---	39	12	6	---	---	---	805	---	---	---	1	---	---	---	3500	---
		5.5	(u)	<0.8	---	---	---	1	---	---	---	---	---	312	---	---	---	<0.5	---	---	---	134	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	93	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	---
		16-16.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	29	---
B-88	06/28/00	0-0.5	(u)	<0.8	10	488	<4	1255	102	31	178	<0.04	30	357	<0.05	51	<0.8	<0.5	<1	<5	13	2440	---
	Duplicate 34	0-0.5	(u)	<0.8	10	221	<4	2440	59	43	188	0.15	26	529	<0.05	36	<0.8	<0.5	<1	<5	12	5292	---
		2-2.5	(u)	---	---	---	---	12	17	8	20	---	---	502	---	12.8	---	---	---	---	---	93	---
(Facility #2)		5.5	(u)	---	---	---	---	10	13	---	13	---	---	346	---	---	---	---	---	---	---	74	---
		8.5	(u)	---	---	---	---	11	---	---	---	---	---	---	---	---	---	---	---	---	---	183	---
		11.5	(u)	---	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	75	---
		17-17.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	28	---
B-89	07/10/00	0-0.5	(u)	3	11	114	<4	749	12	50	876	<0.04	27	251	<0.05	31	<0.8	<0.5	5	<5	14	11430	---
	Duplicate 44	0-0.5	(u)	3	24	117	<4	800	15	95	898	<0.04	29	482	<0.05	30	<0.8	<0.5	4	<5	16	16490	---
		2-2.5	(u)	<0.8	6	---	---	86	11	70	12	---	---	577	---	36	---	---	<5	---	---	2490	---
		5.5	(u)	---	---	---	---	6	---	8	---	---	---	347	---	11	---	---	<1	---	---	178	---
(3 sided bin)		8.5	(u)	---	---	---	---	3	---	---	---	---	---	---	---	---	---	---	---	---	---	102	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	69	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		15.8-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-90	07/10/00	0-0.5	(u)	4	38	100	<4	731	15	81	914	<0.04	47	381	<0.05	68	<0.8	<0.5	3	<5	12	14890	---
(3 sided bin)		2-2.5	(u)	<0.8	6	---	---	116	23	54	22	---	---	623	---	117	---	---	<5	---	---	3390	---
		5.5	(u)	---	---	---	---	45	12	13	10	---	---	281	---	17	---	---	<1	---	---	1120	---
		8.5	(u)	---	---	---	---	8	---	7	---	---	---	---	---	---	---	---	---	---	---	222	---
		11.5	(u)	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	---	---	---	---	37	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		17-18	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-91	07/10/00	0-0.5	(u)	3	7	110	<4	781	64	49	401	0.12	40	283	<0.05	466	<0.8	<0.5	3	5	15	8794	---
(3 sided bin)		2-2.5	(u)	<0.8	---	---	---	1971	10	523	12	---	---	---	---	55	---	---	<1	---	---	63510	---
		5.5	(u)	---	---	---	---	17	---	11	---	---	---	---	---	11	---	---	---	---	---	401	---
		8.5	(u)	---	---	---	---	1	---	6	---	---	---	---	---	---	---	---	---	---	---	63	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		16.16.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-92	06/29/00	0-0.5	(u)	1	<5	162	<4	5	25	63	17	<0.04	17	340	0.2	22	<0.8	1	2	<5	23	290	---
(Facility #3)		2-2.5	(u)	2	---	---	---	---	16	6	---	---	---	394	<0.05	---	---	<0.5	<1	---	---	108	---
		5.5	(u)	2	---	---	---	---	11	---	---	---	---	322	---	---	---	---	---	---	---	38	---
		8.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38	---
		11.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	54	---
		14-14.5	(s)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	28	---
B-93	06/27/00	0-0.5	(u)	<0.8	6	154	<4	105	23	9	78	<0.04	168	343	10	22	18	3	2	5	16	1430	---
(Facility #3)		2-2.5	(u)	---	---	---	---	1	14	---	13	---	10	344	0.6	---	<0.8	<0.5	<1	---	---	242	---
		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	<0.05	---	---	---	---	---	---	85	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	56	---
		15.5-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26	---
B-94	06/27/00	0-0.5	(u)	1	6	86	<4	53	24	6	69	<0.04	192	147	0.4	12	1	4	1	<5	10	3712	---
(Facility #3)		2-2.5	(u)	4	---	---	---	12	12	---	25	---	28	---	0.055	---	<0.8	<0.5	---	---	---	789	---
		5.5	(u)	4	---	---	---	<1	---	---	11	---	---	---	---	---	---	---	---	---	---	55	---
		8.5	(u)	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	48	---
		11.5	(u)	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		11.7-12.5	(s)	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	166	---
B-95	06/23/00	0-0.5	(u)	4	<5	88	<4	22	12	8	30	0.06	61	310	0.07	25	<0.8	1	1	<5	9	722	---
(Facility #3)		2-2.5	(u)	2	---	---	---	<1	---	---	---	---	---	---	---	---	---	<0.5	<1	---	---	58	---
		5.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49	---
		8.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		11.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		14.3-15	(s)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
B-96	06/12/00	0-0.5	(u)	128	3353	1665	92	2795	351	363	30530	1.6	28300	8209	11	457	39	345	<20	332	21	117600	---
(Railroad		2-2.5	(u)	0.8	6.8	403	<4	2.9	21	7.2	12	<0.04	15	366	<0.05	13	<5	4.3	1.4	<5	---	125	---
Tracks)		5.5	(u)	1.9	---	---	---	---	24	---	---	---	---	372	---	---	<5	12	1.8	---	---	147	---
		8.5	(u)	<0.8	---	---	---	---	27	---	---	---	---	---	---	---	<5	6.3	<1	---	---	33	---
		11.5	(u)	---	---	---	---	---	56	---	---	---	---	---	---	---	<5	2.2	---	---	---	24	---
		14.5	(u)	---	---	---	---	---	20	---	---	---	---	---	---	---	<5	42	---	---	---	54	---
		16-16.5	(s)	---	---	---	---	---	17	---	---	---	---	---	---	---	<5	1.8	---	---	---	55	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-97	06/12/00	0-0.5	(u)	336	3197	759	129	3051	2471	5568	22470	21.0	65760	17930	11	3562	21	320	<20	1342	28	149300	---
	Duplicate 1	(0-0.5)	(u)	163	1794	1065	142	3911	4691	14450	44110	14.0	40450	22500	6.5	18280	28	287	<20	2073	88	111400	---
(Railroad Tracks)		2-2.5	(u)	2.5	8.1	432	<4	2,165	26	204	56	<0.04	90	1,656	<0.05	56	<5	9.1	<1	<5	45	20,000	---
	(SPLP)	*2-2.5*	*(u)*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*15.0*	*<0.1*	*0.53*	*<0.1*	---	*<0.1*	*1.4*	---	*0.24*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	*64*	---
		5.5	(u)	1.1	<5	---	---	976	17	59	35	---	37	450	---	31	---	1.9	---	<5	33	6285	---
		8.5	(u)	2.5	---	---	---	13	13	12	14	---	---	---	---	10	---	13	---	<5	---	175	---
		11.5	(u)	9	---	---	---	7.2	---	6.3	---	---	---	---	---	---	---	11	---	<5	---	108	---
		14.5	(u)	<0.8	---	---	---	11	---	---	---	---	---	---	---	---	---	21	---	<5	---	92	---
		15.5-16	(s)	---	---	---	---	4.8	---	---	---	---	---	---	---	---	---	3.7	---	<5	---	57	---
B-98	06/12/00	0-0.5	(u)	79	1542	1536	90	2046	717	517	12230	0.83	20870	9205	2.2	963	31	352	<20	271	24	87900	---
(Railroad		2-2.5	(u)	<0.8	5.3	416	<4	1.1	19	6.6	11	<0.04	14	327	<0.05	13	<5	2.9	2.6	<5	---	82	---
Tracks)		5.5	(u)	---	---	---	---	---	24	---	---	---	---	---	---	---	<5	21	1.6	---	---	76	---
		8.5	(u)	---	---	---	---	---	25	---	---	---	---	---	---	---	<5	2.4	2	---	---	93	---
		11.5	(u)	---	---	---	---	---	15	---	---	---	---	---	---	---	<5	1.9	<1	---	---	49	---
		14-14.5	(s)	---	---	---	---	---	16	---	---	---	---	---	---	---	<5	9	---	---	---	52	---
B-99	06/12/00	0-0.5	(u)	139	8018	1181	82	2970	930	1209	104400	7.0	25130	11910	16	1369	83	321	<20	472	20	145500	---
(Railroad		2-2.5	(u)	1.5	15	370	<4	27	19	41	165	<0.04	45	311	0.08	18	<5	1.8	1.1	<5	---	2,900	---
Tracks)		5.5	(u)	1.1	25	---	---	85	20	37	274	---	---	---	---	---	---	2.2	1.9	---	---	2,045	---
		8.5	(u)	1.6	7.9	---	---	1.9	24	10	18	---	---	---	---	---	---	0.96	2	---	---	130	---
		11.5	(u)	1.6	---	---	---	---	32	13	124	---	---	---	---	---	---	1.6	2.3	---	---	281	---
		14-14.5	(s)	1.5	---	---	---	---	13	5.2	16	---	---	---	---	---	---	1.9	1.5	---	---	51	---
B-100	06/13/00	0-0.5	(u)	<0.8	<5	134	<4	13	14	<5	17	<0.04	27	185	0.29	10	<0.8	5	2	<5	19	516	---
(Railroad		2-2.5	(u)	---	---	---	---	1	---	---	---	---	---	---	<0.05	---	---	<0.5	3	---	---	65	---
Tracks)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	223	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	587	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	30	---
		14.5-15	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	---
B-101	06/12/00	0-0.5	(u)	21	359	448	12	334	23	12	2334	<0.04	5451	1083	11	22	20	120	<20	36	13	66230	---
	Duplicate 3	(0-0.5)	(u)	20	298	348	12	436	28	52	2554	0.31	4048	1132	22	71	14	81	<20	51	16	62730	---
(Railroad		2-2.5	(u)	<0.8	6	---	<4	3	9	<5	11	<0.04[a]	16	222	<0.05	7	<0.8	<0.5	2	<5	---	495	---
Tracks)		5.5	(u)	---	---	---	---	---	---	---	---	<0.04[a]	---	---	---	---	---	---	2	---	---	56	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	81	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	99	---
		14.5-15	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-102	06/12/00	0-0.5	(u)	2.1	24	237	<4	236	13	11	187	<0.04	338	349	0.46	19	0.96	4.4	<20	6.6	20	16260	---
	Duplicate 2	(0-0.5)	(u)	1.7	23	273	<4	81	43	117	414	<0.04	467	433	23	136	<0.8	4.7	<20	27	24	3045	---
(Railroad		2-2.5	(u)	<0.8	<5	---	---	3	10	<5	10	---	13	254	<0.05	7	<0.8	<0.5	1	<5	---	217	---
Tracks)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	102	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	60	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	34	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39	---
		14.8-15.3	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	---
B-103	06/12/00	0-0.5	(u)	2.1	46	311	<4	157	19	12	415	<0.04	680	404	1.5	18	1.7	11	<20	13	27	16600	---
(Railroad		2-2.5	(u)	<0.8	5	---	---	5	12	<5	11	---	18	253	<0.05	---	<0.8	<0.5	1	<5	---	333	---
Tracks)		5.5	(u)	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	---	---	---	---	57	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	199	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	65	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	79	---
		15-15.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	35	---
B-104	06/13/00	0-0.5	(u)	64	603	990	18	566	102	93	6961	0.88	5971	2665	3.4	110	6	74	<1	128	23	130200	---
(Railroad		2-2.5	(u)	<0.8	<5	114	<4	3	11	<5	26	<0.04	19	260	<0.05[a]	9	<0.8	<0.5	---	<5	---	315	---
Tracks)		5.5	(u)	---	---	---	---	---	---	---	12	---	---	---	<0.05[a]	---	---	---	---	---	---	60	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	481	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39	---
		14.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	---
		15.5-16	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22	---
B-105	06/23/00	0-0.5	(u)	404	1310	95	75	1077	33	13	1151	0.56	13160	2294	6.2	11	4	182	<1	75	<5	239900	---
	(SPLP)	*0-0.5*	*(u)*	*<0.1*	*<0.1*	*0.11*	*<0.1*	*5.3*	*<0.1*	*<0.1*	*<0.1*	---	*0.83*	*13*	---	*<0.1*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	*750*	---
(Boneyard)		2-2.5	(u)	3	<5	87	<4	48	13	6	29	0.16	27	1490	<0.05	12	<0.8	<0.5	<1	<5	14	6434	---
		5.5	(u)	2	<5	508	<4	<1	10	<5	10	<0.04	11	274	<0.05	8	<0.8	<0.5	<1	<5	29	124	---
		8.5	(u)	2	5	355	<4	<1	11	<5	10	---	10	265	---	7	<0.8	<0.5	6	<5	34	89	---
		10.5-11	(s)	2	<5	246	<4	<1	8	<5	7	---	9	314	---	7	<0.8	<0.5	2	<5	22	45	---
B-106	06/23/00	0-0.5	(u)	8	42	159	<4	99	29	10	321	0.18	391	911	0.19	18	<0.8	5	<1	9	13	7268	---
	Duplicate 26	0-0.5	(u)	10	51	163	<4	106	22	10	372	0.14	445	1100	0.54	19	1	6	4	10	18	7541	---
		2-2.5	(u)	2	<5	101	<4	22	16	6	18	---	16	392	<0.05	12	<0.8	<0.5	<1	<5	18	864	---
(Boneyard)		5.5	(u)	2	<5	235	<4	4	12	<5	9	---	9	308	<0.05	8	<0.8	<0.5	<1	<5	25	159	---
		8.5	(u)	2	5	373	<4	2	11	<5	7	---	8	287	---	7	<0.8	<0.5	<1	<5	32	139	---
		10-11	(s)	2	<5	220	<4	2	8	<5	5	---	8	222	---	6	<0.8	<0.5	<1	<5	20	134	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-107	06/23/00	0-0.5	(u)	13	44	155	<4	99	18	7	346	0.11	685	812	0.24	12	2	13	<1	6	19	7579	---
	Duplicate 27	0-0.5	(u)	6	19	171	<4	109	12	8	184	0.04	350	764	0.58	10	2	6	4	7	16	6467	---
		2-2.5	(u)	2	<5	134	<4	1	12	5	14	---	13	331	<0.05	10	<0.8	<0.5	<1	<5	18	137	---
(Boneyard)		5.5	(u)	2	5	521	<4	<1	14	5	8	---	8	283	<0.05	9	<0.8	<0.5	1	7	45	45	---
		8.5	(u)	3	<5	275	<4	<1	10	<5	8	---	8	290	---	7	<0.8	<0.5	<1	<5	28	39	---
		10-11	(s)	2	<5	230	<4	<1	10	<5	10	---	7	246	---	6	<0.8	<0.5	<1	<5	22	35	---
B-108	06/20/00	0-0.5	(u)	4	12	296	<4	160	16	7	60	0.07	133	602	<0.05	12	<0.8	<0.5	1	17	22	6933	---
(storm sewer		2-2.5	(u)	2	6	209	<4	49	14	6	30	<0.04	52	420	<0.05	11	<0.8	<0.5	2	8	22	3234	---
system)		5.5	(u)	1	<5	384	<4	2	12	5	9	<0.04	11	308	<0.05	10	<0.8	<0.5	3	<5	29	143	---
		8.5	(u)	<0.8	<5	328	<4	<1	14	6	7	<0.04	10	355	<0.05	10	<0.8	<0.5	2	<5	32	53	---
		11.5	(u)	<0.8	<5	284	<4	<1	6	<5	<5	<0.04	5	218	<0.05	<5	<0.8	<0.5	2	<5	15	26	---
		14.5	(u)	<0.8	<5	68	<4	<1	91	13	<5	<0.04	<5	159	<0.05	43	<0.8	<0.5	<1	<5	6	25	---
		16.3-17	(s)	<0.8	<5	46	<4	<1	71	14	<5	<0.04	<5	142	<0.05	33	1	<0.5	1	<5	6	19	---
B-109	06/20/00	0-0.5	(u)	<0.8	<5	184	<4	240	66	18	16	<0.04	18	376	<0.05	36	<0.8	<0.5	2	<5	20	15900	---
(storm sewer		2-2.5	(u)	<0.8	<5	185	<4	4	12	5	10	<0.04	8	303	<0.05	10	<0.8	<0.5	2	<5	19	246	---
system)		5.5	(u)	<0.8	6	321	<4	<1	13	6	12	<0.04	9	401	<0.05	10	<0.8	3	1	<5	34	110	---
		8.5	(u)	<0.8	<5	125	<4	<1	11	<5	9	<0.04	7	269	<0.05	9	<0.8	<0.5	2	<5	16	37	---
	Duplicate 20	8.5	(u)	<0.8	<5	170	<4	<1	16	5	12	<0.04	8	228	<0.05	12	<0.8	<0.5	2	<5	16	40	---
		11.5	(u)	<0.8	<5	116	<4	<1	46	8	<5	<0.04	<5	271	<0.05	23	<0.8	<0.5	7	<5	10	56	---
		14-14.5	(s)	<0.8	<5	49	<4	<1	85	14	<5	<0.04	<5	112	<0.05	40	2	<0.5	3	<5	6	22	---
B-110	06/14/00	0-0.5	(u)	7	30	441	<4	109	60	16	443	<0.04	2150	727	0.24	45	2	19	2	25	20	8113	---
	Duplicate 8	0-0.5	(u)	22	104	444	7	374	82	52	1380	0.66	4214	1370	1.4	93	3	31	<1	58	14	27130	---
		2-2.5	(u)	<0.8	5	273	<4	1	22	<5	16	<0.04	25	280	<0.05	13	<0.8	2	7	<5	25	147	---
		5.5	(u)	<0.8	6	226	<4	<1	13	6	9	<0.04	13	372	<0.05	10	<0.8	1	5	<5	33	62	---
(storm sewer		8.5	(u)	<0.8	<5	212	<4	2	17	<5	16	<0.04	32	237	<0.05	10	<0.8	<0.5	2	<5	20	353	---
system)		11.5	(u)	<0.8	9	56	<4	<1	22	7	12	<0.04	11	436	<0.05	15	<0.8	<0.5	4	<5	43	81	---
		14.5	(u)	<0.8	11	267	<4	<1	18	10	11	<0.04	11	1480	<0.05	15	<0.8	<0.5	2	<5	37	57	---
		15.5-16	(s)	<0.8	<5	240	<4	<1	16	<5	5	<0.04	7	294	<0.05	9	<0.8	<0.5	2	<5	12	26	---
B-111	06/14/00	0-0.5	(u)	61	412	886	20	545	183	383	3785	2.2	11970	24850	3.7	288	6	73	<1	154	31	48330	---
	Duplicate 7	0-0.5	(u)	112	698	1329	18	696	215	291	5575	5.5	18730	37330	2.8	234	11	144	<1	234	43	78920	---
		2-2.5	(u)	6	24	207	<4	24	52	17	282	<0.04	1490	6229	0.47	34	<0.8	12	<1	10	23	12900	---
		5.5	(u)	2	10	384	<4	3	18	8	32	<0.04	70	1040	0.26	13	<0.8	<0.5	2	5	51	2250	---
(storm sewer		8.5	(u)	<0.8	<5	227	<4	<1	12	<5	12	<0.04	13	301	<0.05	9	<0.8	2	2	<5	40	88	---
system)		11.5	(u)	1	6	254	<4	<1	14	7	11	<0.04	13	354	<0.05	11	<0.8	<0.5	2	<5	31	61	---
		14.5	(u)	1	6	223	<4	<1	12	7	18	<0.04	34	430	<0.05	10	<0.8	1	2	<5	25	118	---
		17.5	(u)	2	7	269	<4	<1	16	9	15	<0.04	38	439	<0.05	13	<0.8	<0.5	2	<5	34	84	---
		20-20.5	(s)	2	9	371	<4	<1	18	9	25	<0.04	93	649	<0.05	14	1	3	2	<5	40	150	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-112	06/27/00	0-0.5	(u)	<0.8	<5	100	<4	4	81	5	15	<0.04	35	190	0.16	36	<0.8	2	<1	<5	8	584	---
(storm sewer		2-2.5	(u)	<0.8	<5	449	<4	<1	17	6	11	<0.04	9	367	<0.05	12	<0.8	<0.5	1	<5	36	55	---
system)		5.5	(u)	<0.8	<5	384	<4	<1	12	6	9	<0.04	10	321	<0.05	9	<0.8	<0.5	2	<5	34	71	---
	Duplicate 33	5.5	(u)	1	<5	370	<4	<1	18	7	9	<0.04	11	373	<0.05	11	<0.8	<0.5	3	<5	47	118	---
		8.5	(u)	<0.8	<5	311	<4	<1	12	6	9	<0.04	15	341	<0.05	9	<0.8	<0.5	1	<5	27	116	---
		11.5	(u)	<0.8	7	298	<4	<1	14	8	10	<0.04	11	420	<0.05	12	<0.8	<0.5	1	<5	32	58	---
		14.5	(u)	1	8	569	<4	<1	15	9	12	<0.04	13	751	<0.05	14	<0.8	<0.5	<1	<5	33	75	---
		17.5	(u)	1	7	314	<4	<1	15	7	10	<0.04	11	424	<0.05	13	<0.8	<0.5	<1	<5	29	57	---
		18.5-19	(s)	<0.8	<5	111	<4	<1	24	8	<5	<0.04	<5	171	<0.05	15	<0.8	<0.5	<1	<5	6	15	---
B-113	06/22/00	0-0.5	(u)	19	415	712	7	1548	45	44	1670	0.75	2150	3080	0.5	107	2	11	<1	24	20	32860	---
	(SPLP)	*0-0.5*	*(u)*	*<0.1*	*<0.1*	*0.14*	*<0.1*	*2.1*	*<0.1*	*<0.1*	*<0.1*	*---*	*<0.1*	*<0.1*	*---*	*<0.1*	*<0.1*	*<0.05*	*<0.1*	*<0.1*	*<0.1*	*14*	---
(storm sewer		2-2.5	(u)	3	6	125	<4	411	14	6	26	<0.04	20	414	<0.05	11	<0.8	<0.5	<1	<5	13	2825	---
system)		5.5	(u)	3	<5	329	<4	3	14	6	10	<0.04	10	378	<0.05	10	<0.8	<0.5	<1	<5	33	76	---
	Duplicate 24	5.5	(u)	3	<5	362	<4	2	18	7	12	<0.04	12	387	<0.05	11	<0.8	<0.5	2	<5	37	120	---
		8.5	(u)	3	<5	267	<4	1	13	7	7	<0.04	11	372	<0.05	11	<0.8	<0.5	6	<5	32	62	---
		11.5	(u)	3	7	438	<4	<1	11	8	9	<0.04	12	469	<0.05	11	<0.8	<0.5	4	<5	29	53	---
		14.5	(u)	3	8	189	<4	1	8	7	5	<0.04	10	1679	<0.05	5	<0.8	<0.5	<1	<5	16	37	---
		17.3-18	(s)	2	<5	145	<4	480	12	<5	6	<0.04	5	962	<0.05	7	<0.8	<0.5	<1	<5	11	1500	---
B-114	07/10/00	0-0.5	(u)	<0.8	<5	88	<4	9	11	14	21	<0.04	37	228	8.1	8	1.4	1.3	<1	<5	16	589	---
(storm sewer		2-2.5	(u)	1.9	11	208	<4	94	13	10	82	<0.04	150	553	15	14	1.8	2.4	9	<5	32	2170	---
system)		5.5	(u)	1.1	6	268	<4	5	12	6	17	<0.04	19	318	<0.05	10	0.8	<0.5	3	<5	33	320	---
		8.5	(u)	1.2	6	300	<4	3	10	6	10	<0.04	13	368	0.08	9	<0.8	<0.5	2	<5	30	144	---
		11.5	(u)	0.9	<5	257	<4	<1	9	5	7	<0.04	8	291	<0.05	7	<0.8	<0.5	2	<5	24	41	---
		14-14.5	(s)	0.9	<5	177	<4	<1	5	<5	<5	<0.04	<5	193	<0.05	<5	<0.8	<0.5	2	<5	14	24	---
B-115	06/26/00	0-0.5	(u)	<0.8	<5	147	<4	2	15	6	7	<0.04	9	273	<0.05	9	<0.8	<0.5	1	<5	21	358	---
(storm sewer		2-2.5	(u)	<0.8	<5	314	<4	<1	12	6	7	<0.04	9	277	<0.05	9	<0.8	<0.5	1	<5	26	85	---
system)		5.5	(u)	<0.8	5	360	<4	<1	14	6	7	<0.04	8	294	<0.05	9	<0.8	<0.5	1	<5	41	57	---
		8.5	(u)	<0.8	<5	200	<4	<1	16	7	8	<0.04	9	361	<0.05	13	<0.8	<0.5	<1	<5	35	53	---
		11.5	(u)	<0.8	<5	274	<4	<1	8	<5	6	<0.04	6	261	<0.05	6	<0.8	<0.5	<1	<5	20	32	---
		14-14.5	(s)	<0.8	<5	201	<4	<1	5	<5	<5	<0.04	6	327	<0.05	6	<0.8	<0.5	<1	<5	14	29	---
B-116	06/27/00	0-0.5	(u)	<0.8	<5	140	<4	6	18	6	8	<0.04	12	229	<0.05	11	<0.8	<0.5	<1	<5	17	178	---
(storm sewer		2-2.5	(u)	<0.8	<5	278	<4	<1	9	<5	6	<0.04	7	237	<0.05	7	<0.8	<0.5	3	<5	18	32	---
system)		5.5	(u)	1	6	435	<4	<1	13	5	9	<0.04	8	289	<0.05	9	<0.8	<0.5	8	<5	47	41	---
		8.5	(u)	<0.8	<5	301	<4	<1	17	8	8	<0.04	9	366	<0.05	12	<0.8	<0.5	3	<5	39	55	---
	Duplicate 31	8.5	(u)	2	<5	281	<4	1	15	8	9	<0.04	10	374	<0.05	11	<0.8	<0.5	2	<5	34	309	---
		11.5	(u)	1	8	320	<4	<1	19	10	11	<0.04	12	520	<0.05	14	<0.8	<0.5	3	<5	41	67	---
	Duplicate 32	11.5	(u)	2	7	288	<4	<1	18	8	10	<0.04	11	410	<0.05	13	<0.8	<0.5	7	<5	36	111	---
		14.5	(u)	<0.8	10	698	<4	<1	11	8	8	<0.04	9	792	<0.05	10	<0.8	<0.5	2	<5	25	40	---
		16.5-17	(s)	<0.8	<5	169	<4	<1	8	<5	<5	<0.04	5	183	<0.05	6	<0.8	<0.5	1	<5	15	22	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-117	06/23/00	0-0.5	(u)	4	<5	236	<4	9	15	<5	41	<0.04	100	153	<0.05	8	<0.8	3	<1	<5	22	731	---
	Duplicate 28	0-0.5	(u)	3	<5	274	<4	1	11	<5	8	<0.04	11	302	<0.05	7	<0.8	<0.5	2	<5	25	95	---
		2-2.5	(u)	4	7	219	<4	35	19	7	46	0.11	73	450	0.19	12	2	1	<1	<5	24	5054	---
		5.5	(u)	3	5	473	<4	<1	19	6	11	<0.04	12	333	<0.05	17	<0.8	<0.5	<1	<5	44	125	---
(storm sewer		8.5	(u)	3	6	374	<4	<1	16	7	8	<0.04	10	353	<0.05	10	<0.8	<0.5	<1	<5	40	57	---
system)		11.5	(u)	3	8	273	<4	<1	18	9	11	<0.04	12	511	<0.05	14	<0.8	<0.5	<1	<5	39	66	---
		14-15	(s)	3	<5	292	<4	<1	9	6	7	<0.04	9	334	<0.05	7	<0.8	<0.5	<1	<5	22	37	---
B-118	06/27/00	0-0.5	(u)	3	8	155	<4	33	15	7	41	<0.04	102	556	0.63	---	2	1	<1	6	15	3855	---
(waste pile)		2-2.5	(u)	3	5	508	<4	9	13	5	19	<0.04	42	379	0.06	---	<0.8	1	<1	<5	20	953	---
		5.5	(u)	2	<5	259	<4	1	12	6	8	<0.04	11	259	<0.05	---	<0.8	<0.5	<1	<5	26	86	---
		8.5	(u)	2	5	254	<4	4	12	<5	12	<0.04	16	432	<0.05	---	<0.8	<0.5	<1	<5	29	184	---
		11.5	(u)	3	7	311	<4	<1	11	7	12	<0.04	12	434	<0.05	---	<0.8	<0.5	<1	<5	25	57	---
		14.5	(u)	3	6	307	<4	<1	12	7	13	<0.04	12	716	<0.05	---	<0.8	<0.5	<1	<5	27	60	---
		17.5	(u)	3	7	122	<4	1	14	8	13	<0.04	14	500	<0.05	---	<0.8	<0.5	<1	<5	29	78	---
		18-18.5	(s)	2	<5	185	<4	<1	9	6	13	<0.04	9	205	<0.05	---	<0.8	<0.5	<1	<5	19	36	---
B-119	06/27/00	0-0.5	(u)	2.9	---	---	---	10	12	---	23	---	---	178	0.12	---	<0.8	0.8	---	---	---	784	---
(waste pile)		2-2.5	(u)	2.9	---	---	---	<1	---	---	11	---	---	321	<0.05	---	---	<0.5	---	---	---	40	---
		5.5	(u)	2.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	105	---
		8.5	(u)	3.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	53	---
		11.5	(u)	3.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	54	---
		14.5	(u)	3.4	---	---	---	---	---	---	---	---	---	798	---	---	---	---	---	---	---	59	---
		17.5	(u)	2.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	538	---
		19.7-20	(s)	2.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	46	---
B-120	06/28/00	0-0.5	(u)	1.7	---	---	---	---	---	---	---	---	---	---	0.28	---	---	1.2	---	---	---	353	---
(waste pile)		2-2.5	(u)	1.8	---	---	---	---	---	---	---	---	---	---	<0.05	---	---	---	---	---	---	42	---
		5.5	(u)	2.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	55	---
		8.5	(u)	2.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		11.5	(u)	2.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	45	---
		14.5	(u)	1.1	---	---	---	---	---	---	---	---	---	683	---	---	---	---	---	---	---	64	---
		17.5	(u)	1.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		20.3-21	(s)	1.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	25	---
B-121	06/30/00	0-0.5	(u)	4	18	282	<4	98	35	8	89	<0.04	167	691	8.8	---	18	5	<1	10	29	6973	---
(waste pile)		2-2.5	(u)	5	<5	206	<4	12	20	9	19	<0.04	26	563	0.21	---	<0.8	<0.5	<1	<5	42	720	---
		5.5	(u)	3	<5	166	<4	6	17	6	14	<0.04	17	299	0.15	---	<0.8	<0.5	<1	<5	34	418	---
		8.5	(u)	3	<5	265	<4	3	14	8	14	<0.04	16	431	<0.05	---	<0.8	<0.5	<1	<5	29	224	---
	Duplicate 40	8.5	(u)	4	<5	266	<4	2	13	6	11	<0.04	12	284	<0.05	---	<0.8	<0.5	<1	<5	27	156	---
		11.5	(u)	4	6	326	<4	1	14	12	14	<0.04	17	996	<0.05	---	<0.8	<0.5	<1	<5	30	100	---
		14.5	(u)	3	8	397	<4	2	13	8	13	<0.04	15	548	<0.05	---	<0.8	<0.5	7	6	30	114	---
		17.5	(u)	3	9	48	<4	<1	13	7	13	<0.04	12	301	<0.05	---	<0.8	<0.5	3	<5	30	61	---
	Duplicate 41	17.5	(u)	4	8	43	<4	<1	14	8	14	<0.04	14	295	<0.05	---	<0.8	<0.5	<1	<5	30	68	---
		19.7-20	(s)	3	<5	192	<4	<1	14	5	9	<0.04	11	265	<0.05	---	<0.8	<0.5	<1	<5	25	65	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-122	06/30/00	0-0.5	(u)	4	<5	---	---	23	16	---	56	---	118	442	0.38	---	1	1	---	5	---	1560	---
(waste pile)		2-2.5	(u)	3	---	---	---	1	16	---	14	---	---	385	<0.05	---	---	---	---	---	18	71	---
		5.5	(u)	3	---	---	---	<1	17	---	---	---	---	---	<0.05	---	---	---	---	---	---	54	---
		8.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		11.5	(u)	3	---	---	---	---	---	9	---	---	---	464	---	---	---	---	---	---	---	61	---
		14.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	56	---
		17.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	62	---
		20.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47	---
		23-23.5	(s)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	29	---
B-123	06/30/00	0-0.5	(u)	4	---	---	---	27	15	---	86	---	189	319	0.74	---	<0.8	1	---	---	---	1750	---
(waste pile)		2-2.5	(u)	3	---	---	---	---	14	---	---	---	---	407	<0.05	---	---	---	---	---	---	70	---
		5.5	(u)	3	---	---	---	---	17	---	---	---	---	---	<0.05	---	---	---	---	---	---	52	---
		8.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		11.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	60	---
		14.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	61	---
		17.5	(u)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	52	---
		19.7-20	(s)	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	34	---
B-124	06/29/00	0-0.5	(u)	3	6	298	<4	24	16	6	22	<0.04	39	450	0.33	---	<0.8	<0.5	<1	<5	24	1500	---
(waste pile)		2-2.5	(u)	2	<5	294	<4	2	16	7	11	<0.04	12	432	<0.05	---	<0.8	<0.5	<1	<5	33	122	---
	Duplicate 37	2-2.5	(u)	<0.8	<5	310	<4	2	21	7	11	<0.04	11	408	<0.05	15	<0.8	<0.5	2	<5	41	141	---
		5.5	(u)	2	5	258	<4	2	9	5	7	<0.04	10	320	<0.05	---	<0.8	<0.5	<1	<5	24	132	---
	Duplicate 38	5.5	(u)	1	<5	288	<4	3	18	7	9	<0.04	11	369	<0.05	16	<0.8	<0.5	3	<5	37	210	---
		8.5	(u)	2	7	313	<4	<1	15	8	13	<0.04	13	507	<0.05	---	<0.8	<0.5	<1	<5	34	76	---
		11.5	(u)	3	6	309	<4	2	16	8	14	<0.04	14	390	<0.05	---	<0.8	<0.5	<1	<5	32	118	---
		14.5	(u)	2	<5	250	<4	<1	14	7	12	<0.04	10	485	<0.05	---	<0.8	<0.5	<1	<5	26	64	---
		17.5	(u)	2	7	204	<4	<1	15	7	15	<0.04	13	353	<0.05	---	<0.8	<0.5	<1	<5	31	62	---
		20.5	(u)	2	<5	455	<4	<1	13	7	15	<0.04	12	266	<0.05	---	<0.8	<0.5	6	<5	28	64	---
		23.5-24	(s)	2	<5	888	<4	<1	8	5	8	<0.04	8	221	<0.05	---	<0.8	<0.5	2	<5	18	36	---
B-125	06/29/00	0-0.5	(u)	2.4	---	---	---	6	16	---	---	---	---	437	0.19	---	---	---	---	---	---	508	---
(waste pile)		2-2.5	(u)	3.4	---	---	---	---	14	---	---	---	---	399	<0.05	---	---	---	1	---	41	68	---
		5.5	(u)	2.8	---	---	---	---	11	---	---	---	---	---	---	---	---	---	1	---	31	39	---
		8.5	(u)	3	---	---	---	---	14	---	---	---	---	---	---	---	---	---	---	---	---	61	---
		11.5	(u)	2.5	---	---	---	---	18	---	---	---	---	---	---	---	---	---	---	---	---	88	---
		14.5	(u)	1.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		17.5	(u)	1.9	---	---	---	---	15	---	---	---	---	---	---	---	---	---	---	---	---	58	---
		20.5	(u)	1.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	54	---
		23.5-24	(s)	1.8	---	178	---	---	---	---	---	---	---	---	---	---	---	---	9	---	---	49	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-126	06/29/00	0-0.5	(u)	2.8	---	---	---	---	20	---	---	---	---	460	0.86	---	---	---	---	---	---	1720	---
(waste pile)		2-2.5	(u)	2.4	---	---	---	---	---	---	---	---	---	395	<0.05	---	---	---	---	---	42	61	---
		5.5	(u)	2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		8.5	(u)	2.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	56	---
		11.5	(u)	2.1	---	---	---	---	14	---	---	---	---	---	---	---	---	---	---	---	---	54	---
		14.5	(u)	2.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	61	---
		17.5	(u)	2.6	---	---	---	---	13	---	---	---	---	---	---	---	---	---	---	---	---	51	---
		20.5	(u)	2.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	59	---
		23.5-24	(s)	3.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	51	---
B-127	06/28/00	0-0.5	(u)	3	13	325	<4	55	15	6	38	<0.04	82	397	0.31	---	2	1	<1	6	41	3193	---
(waste pile)		2-2.5	(u)	2	<5	350	<4	2	10	<5	8	<0.04	10	256	0.31	---	<0.8	<0.5	<1	<5	30	110	---
		5.5	(u)	2	7	272	<4	3	11	7	11	<0.04	13	437	<0.05	---	<0.8	<0.5	7	<5	29	172	---
		8.5	(u)	3	7	320	<4	2	12	7	12	<0.04	13	451	<0.05	---	<0.8	<0.5	1	<5	28	104	---
	Duplicate 35	8.5	(u)	1	7	307	<4	18	20	11	12	<0.04	13	528	<0.05	15	<0.8	<0.5	<1	<5	41	132	---
		11.5	(u)	3	6	261	<4	1	17	8	13	<0.04	12	794	<0.05	---	<0.8	<0.5	<1	<5	33	76	---
	Duplicate 36	11.5	(u)	1	6	255	<4	3	15	8	11	<0.04	11	777	<0.05	14	<0.8	<0.5	8	<5	30	73	---
		14.5	(u)	3	7	355	<4	<1	14	6	13	<0.04	11	274	<0.05	---	<0.8	<0.5	<1	<5	29	59	---
		17.2-18	(s)	3	<5	270	<4	<1	12	<5	10	<0.04	11	231	<0.05	---	<0.8	<0.5	<1	<5	20	41	---
B-128	06/28/00	0-0.5	(u)	3.5	---	---	---	19	16	---	---	---	---	445	0.58	---	2.4	1.1	---	---	16	1560	---
(waste pile)		2-2.5	(u)	2.8	---	---	---	---	---	---	---	---	---	---	<0.05	---	---	---	---	---	---	49	---
		5.5	(u)	2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	128	---
		8.5	(u)	2.6	---	---	---	<1	13	8	---	---	---	---	---	---	---	---	---	---	33	53	---
		11.5	(u)	2.8	---	---	---	---	14	---	---	---	---	453	---	---	---	---	1	---	---	58	---
		14.5	(u)	2.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	44	---
		17.5	(u)	3.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	64	---
		20.5	(u)	2.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47	---
		23.7-24	(s)	2.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	45	---
B-129	06/29/00	0-0.5	(u)	1.3	---	---	---	141	15	---	---	---	---	523	0.21	---	1.3	2.4	---	---	---	5747	---
(waste pile)		2-2.5	(u)	1.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	72	---
		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	46	---
		8.5	(u)	1.8	---	---	---	---	11	---	---	---	---	---	---	---	---	---	---	---	---	47	---
		11.5	(u)	2	---	---	---	---	13	---	---	---	---	---	---	---	---	---	---	---	---	53	---
		14-14.5	(s)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---
B-130	06/16/00	0-0.5	(u)	3	<5	349	<4	5	20	<5	38	<0.04	52	242	0.07	11	<0.8	2	<1	<5	17	607	---
(Grain elevator)		2-2.5	(u)	<0.8	---	---	---	---	16	---	---	---	---	---	---	---	---	<0.5	---	---	---	47	---
		5.5	(u)	---	---	---	---	---	10	---	---	---	---	---	---	---	---	---	---	---	---	37	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		13.7-14.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-131	06/16/00	0-0.5	(u)	**2**	5	448	<4	3	**141**	**10**	19	<0.04	22	127	0.19	**64**	<0.8	**2**	<1	<5	8	194	---
(Grain elevator)		2-2.5	(s)	<0.8	---	---	---	---	**30**	7	---	---	---	---	<0.05	15	---	<0.5	---	---	---	42	---
B-132	06/16/00	0-0.5	(u)	**3.8**	<5	263	<4	<1	13	6	15	0.08	15	**373**	<0.05	11	<0.8	<0.5	1	<5	20	90	---
	Duplicate 14	0-0.5	(u)	**3**	<5	310	<4	<1	**18**	6	13	0.04	14	**387**	<0.05	13	<0.8	<0.5	**2**	<5	28	81	---
		2-2.5	(u)	**2**	---	---	---	---	12	---	---	---	---	344	---	---	---	---	**9**	---	---	35	---
(Grain elevator)		5.5	(u)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**4**	---	---	45	---
		8.5	(u)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2**	---	---	24	---
		11.5	(u)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1**	---	---	24	---
		14.5	(u)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	20	---
		15.6-16	(s)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22	---
B-133	06/16/00	0-0.5	(u)	**3**	6	**856**	<4	2	**78**	7	27	<0.04	35	252	<0.05	**37**	<0.8	**1**	**2**	<5	23	250	---
(Grain elevator)		2-2.5	(s)	<0.8	---	486	---	---	**64**	---	---	---	---	---	---	**32**	---	**1**	**2**	---	---	16	---
B-134	06/16/00	0-0.5	(u)	**4**	<5	304	<4	1	**17**	<5	12	<0.04	26	235	<0.05	9	<0.8	**2**	**4**	<5	17	124	---
	Duplicate 13	0-0.5	(u)	**3**	<5	238	<4	3	**23**	<5	32	<0.04	77	183	**0.18**	12	<0.8	**1**	**2**	<5	17	241	---
		2-2.5	(u)	**2**	---	---	---	---	12	---	---	---	---	---	0.07[a]	---	---	**1**	<1	---	---	62	---
(Grain elevator)		5.5	(u)	**1**	---	---	---	---	---	---	---	---	---	---	<0.05[a]	---	---	**2**	---	---	---	30	---
		8.5	(u)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.5	---	---	---	25	---
		11-12	(s)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	32	---
B-135	06/16/00	0-0.5	(u)	**4**	<5	461	<4	3	**18**	5	19	0.05	40	**345**	0.08	11	<0.8	**1**	<1	<5	21	286	---
(Grain elevator)		2-2.5	(u)	**1**	---	---	---	---	12	---	---	---	---	170	---	---	---	<0.5	---	---	---	226	---
		5.5	(u)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	165	---
		8.5	(u)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38	---
		11.5	(u)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	---
		13-14	(s)	**1**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	---
B-136	06/16/00	0-0.5	(u)	**3**	<5	165	<4	3	**21**	<5	24	0.06	46	224	**0.19**	11	<0.8	**1**	<1	<5	13	250	---
	Duplicate 12	0-0.5	(u)	**2**	<5	149	<4	3	**27**	<5	16	<0.04	42	245	**2.5**	13	<0.8	**2**	<1	<5	13	254	---
(Grain elevator)		2-2.5	(s)	<0.8	---	---	---	---	**35**	---	---	---	---	---	**0.13**	---	---	**1**	---	---	---	276	---
B-137	06/16/00	0-0.5	(u)	**4**	5	286	<4	2	**28**	7	25	0.21	32	**418**	<0.05	17	<0.8	**1**	**7**	<5	35	208	---
(Grain elevator)		2-2.5	(u)	**2**	---	---	---	---	**55**	---	---	---	---	**460**	---	---	---	**1**	**2**	---	---	686	---
		5.5	(u)	**2**	---	---	---	---	**15**	---	---	---	---	287	---	---	---	<0.5	<1	---	---	305	---
		8.5	(u)	**2**	---	---	---	---	10	---	---	---	---	---	---	---	---	---	---	---	---	36	---
		11-12	(s)	**2**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	38	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-138	06/16/00	0-0.5	(u)	3	7	376	<4	18	121	12	66	<0.04	164	204	0.87	57	2	3	<1	6	10	1750	---
(Grain elevator)		2-2.5	(s)	<0.8	---	---	---	<1	44	11	<5	---	<5	---	<0.05	21	<0.8	<0.5	---	---	---	14	---
B-139	06/16/00	0-0.5	(u)	1	<5	170	<4	<1	30	<5	5	<0.04	<5	151	<0.05	14	<0.8	3	<1	<5	7	45	---
(Grain elevator)		2-2.5	(u)	1	---	---	---	---	14	---	---	---	---	---	---	---	---	<0.5	---	---	---	48	---
		5.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	50	---
		8.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---
		11.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	45	---
		14.5	(u)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49	---
		17.5	(u)	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	62	---
		20.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	53	---
		23.5-24	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-140	06/29/00	0-0.5	(u)	6	---	210	<4	38	15	6	---	<0.04	---	---	2.6	---	3	2	<4	12	17	---	---
	(SPLP)	*0-0.5*	*(u)*	---	---	---	---	*<0.05*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(O1 landfill)		2-2.5	(u)	9	30	248	<4	28	61	22	266	<0.04	371	---	2.2	---	3	2	<10	31	13	7989	---
	(SPLP)	*2-2.5*	*(u)*	---	*<0.10*	---	---	*<0.05*	---	---	*<0.10*	---	*<0.10*	---	---	---	---	---	---	---	---	*0.19*	---
		5-5.5	(s)	87	253	603	10	42	32	16	2350	<0.04	4212	10990	1.3	---	31	21	<10	516	16	74690	---
	(SPLP)	*5-5.5*	*(s)*	---	*<0.10*	---	---	*<0.05*	---	---	*<0.10*	---	*<0.10*	*0.47*	---	---	---	---	---	---	---	*0.27*	---
B-141	06/29/00	0-0.5	(u)	3	---	156	<4	---	16	5	---	<0.04	---	---	<0.05	---	<0.8	<0.5	<1	<5	12	---	---
	(SPLP)	*0-0.5*	*(u)*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(O1 landfill)		2-2.5	(u)	3	---	623	<4	---	15	6	---	<0.04	---	---	<0.05	---	<0.8	<0.5	<2	<5	25	---	---
	(SPLP)	*2-2.5*	*(u)*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		5-5.6	(u)	3	---	234	<4	2	11	<5	---	<0.04	---	---	<0.05	---	<0.8	<0.5	<2	<5	20	---	---
	(SPLP)	*5-5.6*	*(u)*	---	---	---	---	*<0.05*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8-8.5	(s)	2	9	86	<4	16	24	11	195	<0.04	12	787	0.068	---	<0.8	<0.5	<4	<5	6	---	---
	(SPLP)	*8-8.5*	*(s)*	---	*<0.10*	---	---	*<0.05*	---	---	*<0.10*	---	*<0.10*	*2.0*	---	---	---	---	---	---	---	---	---
B-142	06/29/00	0-0.5	(u)	2	---	151	<4	---	10	<5	---	<0.04	---	---	<0.05	---	<0.8	<0.5	8	<5	10	---	---
	(SPLP)	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(O1 landfill)		2-2.5	(u)	3	---	229	<4	---	16	7	---	<0.04	---	---	<0.05	---	<0.8	<0.5	2	<5	28	---	---
	(SPLP)	2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		6-6.5	(s)	10	---	181	<4	97	21	10	---	0.08	---	---	0.74	---	11	11	<40	38	6	---	---
	(SPLP)	6-6.5	(s)	---	---	---	---	*0.15*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-143	06/29/00	0-0.5	(u)	28	---	480	6	---	48	46	---	0.3	---	---	1.9	---	6	35	<20	50	7	---	---
	Duplicate 39	0-0.5	(u)	15	56	241	5	447	23	53	626	0.13	1070	14270	0.31	41	1	15	<1	42	9	44310	---
	(SPLP)	*0-0.5*	*(u)*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(O1 landfill)		2-2.5	(u)	3	<5	181	<4	---	25	6	---	<0.04	---	---	0.052	---	<0.8	<0.5	<1	<5	21	---	---
	(SPLP)	*2-2.5*	*(u)*	---	*<0.10*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		5-5.5	(u)	3	---	117	<4	9	18	7	20	<0.04	---	---	0.28	---	<0.8	<0.5	<15	<5	14	1400	---
	(SPLP)	*5-5.5*	*(u)*	---	---	---	---	*<0.05*	---	---	*<0.10*	---	---	---	---	---	---	---	---	---	---	*0.16*	---
		6-6.5	(s)	3	---	58	<4	209	19	38	14	<0.04	---	15240	0.2	---	4	4	<5	<5	8	34500	---
	(SPLP)	*6-6.5*	*(s)*	---	---	---	---	*0.062*	---	---	*<0.10*	---	---	*28*	---	---	---	---	---	---	---	*19.0*	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-144	07/11/00	0-0.5	(u)	1	7	303	<4	4	16	8	23	<0.04	55	472	0.072	12	<0.8	<0.5	<5	<5	29	519	---
(O1 landfill)		2-2.5	(u)	1	5	289	<4	2	13	<5	21	<0.04	53	286	<0.05	9	<0.8	1	<1	<5	25	159	---
(stepout borings)		5.2-6	(s)	1	<5	211	<4	3	16	5	20	<0.04	23	180	<0.05	13	<0.8	<0.5	4	<5	36	203	---
Duplicate 46		5.2-6	(s)	1	6	309	<4	4	15	6	34	<0.04	29	205	<0.05	12	<0.8	<0.5	2	<5	34	323	---
B-145	07/11/00	0-0.5	(u)	1	---	---	---	---	15	---	---	---	---	357	---	---	---	---	<5	---	---	654	---
(O1 landfill)		2-2.5	(u)	1	---	---	---	---	---	---	43	---	---	---	---	---	---	4	---	---	---	508	---
(stepout borings)		5.2-6	(s)	3	---	---	---	---	15	---	351	---	---	---	---	---	---	---	<5	---	15	7965	---
B-146	07/11/00	0-0.5	(u)	1	---	---	---	---	12	---	---	---	---	349	---	---	---	---	<1	---	---	394	---
(O1 landfill)		2-2.5	(u)	1	---	---	---	---	---	---	83	---	---	---	---	---	---	9	---	---	---	2030	---
(stepout borings)		5.2-6	(s)	1	---	---	---	---	15	---	57	---	---	---	---	---	---	---	<5	---	---	1010	---
B-147	07/11/00	0-0.5	(u)	1	14	198	<4	10	21	6	174	<0.04	94	664	0.22	11	1	2	<5	<5	24	754	---
(O1 landfill)		2-2.5	(u)	1	12	292	<4	17	17	5	103	<0.04	292	569	2	12	10	2	<5	75	19	1230	---
(stepout borings)		3.7-4	(s)	4	33	148	<4	78	11	<5	362	<0.04	831	549	363	10	641	46	<5	5	12	9900	---
B-148	07/11/00	0-0.5	(u)	<0.8	---	---	---	---	13	---	42	---	---	510	0.41[a]	---	<0.8	1	<5	---	---	337	---
(O1 landfill)		2-2.5	(u)	2	24	---	---	69	13	---	218	---	219	1270	13[a]	---	18	4	<5	8	---	4594	---
(stepout borings)		5-5.5	(s)	<0.8	11	---	---	18	---	---	50	---	105	---	34[a]	---	35	3	<5	---	---	3000	---
B-149	07/11/00	0-0.5	(u)	---	---	---	---	---	---	---	42	---	---	351	0.096[a]	---	---	2	<5	---	---	326	---
(O1 landfill)		2-2.5	(u)	<0.8	5	---	---	10	---	---	14	---	23	216	0.64[a]	---	2	<0.5	<5	<5	---	272	---
(stepout borings)		5-5.5	(s)	---	<5	---	---	2	---	---	10	---	11	---	0.37[a]	---	<0.8	<0.5	<1	---	---	76	---
B-150	11/05/01	0-0.5	(u)	<0.8	<5.0	87	<4.0	6.6	7.6	<5.0	20	<0.05	19	195	0.07	6.4	<0.8	<0.5	<1	<5.0	14	268	---
Duplicate B-150		0-0.5	(u)	<0.8	7	192	4	23	11	7.5	50	0.08	51	368	0.41	9.4	0.89	0.7	<1	6	17	909	---
(O1 landfill)		2-2.5	(u)	<0.8	5.9	236	6.9	28	18	12	29	<0.05	38	951	0.8	15	<0.8	<0.5	<1	5.5	35	791	---
(stepout borings)		2.5-3	(s)	3.1	39	753	12	443	13	92	386	0.18	1390	9498	56	45	28	17	<1	11	21	23820	---
B-151	11/05/01	0-0.5	(u)	---	---	---	---	87	---	---	153	---	---	---	1.6	---	---	4.7	---	---	---	4341	---
(O1 landfill)		1.5-2	(s)	0.91	48	526	10	281	23	76	612	---	531	2176	5.1	39	4.3	15	---	34	---	12140	---
(stepout borings)																							
B-152	11/05/01	0-0.5	(u)	---	---	---	---	171	---	---	464	---	---	---	0.25	---	---	20	---	---	---	27200	---
(O1 landfill)		1.5-2	(s)	<0.8	<5.0	---	<4.0	1.5	12	<5.0	8.8	---	18	225	<0.05	8	<0.8	<0.5	---	5.5	---	192	---
(stepout borings)																							

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-153	07/10/00	0-0.5	(u)	0.9	<5	625	<4	7	9	<5	15	<0.04	11	259	<0.05	6	1.1	0.6	<1	<5	18	184	---
(O1 landfill)		2-2.5	(u)	3.3	26	293	<4	39	13	6	245	<0.04	283	803	1.5	10	2.6	2.8	<5	7	24	3126	---
(stepout borings)		5.5-6	(s)	11.6	82	313	<4	253	18	66	2584	0.11	1040	7285	23	56	2.9	9.2	<5	29	21	17320	---
	Duplicate 42	5.5-6	(s)	32	165	280	6	153	31	51	5872	0.17	1570	5084	7.5	68	7	11	<1	45	14	19580	---
B-154	07/10/00	0-0.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	2.7	3.5	---	---	---	618	---
(O1 landfill)		2-2.5	(u)	3.1	12	---	---	13	---	---	163	---	411	562	2.3	---	23.5	3.3	<5	---	---	2470	---
(stepout borings)		4.7-5.5	(s)	95.9	86	---	<4	15	30	8	796	---	2920	4915	7.5	10	11.3	7.6	<5	526	---	34140	---
B-155	07/10/00	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	3.2	3.1	---	---	---	4350	---
(O1 landfill)		2-2.5	(u)	<0.8	11	---	---	4	---	---	323	---	1890	705	8.7	---	50.2	4.5	2	---	---	382	---
(stepout borings)		3-3.5	(s)	<1.5	<5	---	---	1	---	---	12	---	28	134	0.16	---	1.2	<0.5	8	<5	---	300	---
B-156	07/10/00	0-0.5	(u)	2.8	30	182	<4	23	13	8	520	<0.04	157	487	0.1	12	1	2.3	<5	<5	22	2200	---
		2.3-3	(s)	<0.8	<5	99	<4	1	15	6	8	<0.04	6	191	<0.05	8	1.3	<0.5	<5	<5	7	51	---
	Duplicate 43	2.3-3	(s)	2	<5	68	<4	2	18	8	27	<0.04	9	86	<0.05	9	<0.8	<0.5	4	<5	<5	98	---
(east/west lagoons)																							
(stepout borings)																							
B-157	07/10/00	0-0.5	(u)	<0.8	5	---	---	2	---	---	25	---	57	291	0.51	---	<0.8	<0.5	4	---	---	285	---
(east/west lagoons)		2.3-3	(s)	0.9	---	---	---	---	---	---	<5	---	---	---	---	---	0.9	---	<5	---	---	35	---
(stepout borings)																							
B-158	07/10/00	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	---	4.5	---	---	---	<5	---	---	5255	---
(east/west lagoons)		2.3-3	(s)	0.8	---	---	---	---	---	---	---	---	---	---	---	---	1	---	<5	---	---	58	---
(stepout borings)																							
B-159	07/11/00	0-0.5	(u)	3	21	285	<4	35	17	6	169	<0.04	250	558	4	11	2	3	<5	13	18	3762	---
		2-2.5	(s)	1	<5	255	<4	1	28	7	8	<0.04	13	110	0.27	16	<0.8	<0.5	<5	<5	15	129	---
	Duplicate 45	2-2.5	(s)	<0.8	<5	135	<4	2	38	8	8	<0.04	13	83	<0.05	20	1	<0.5	<5	<5	13	107	---
(east/west lagoons)																							
(stepout borings)																							
B-160	07/11/00	0-0.5	(u)	3	11	---	---	94	14	---	315	---	787	423	39[a]	---	168	14	<5	7	---	4379	---
(east/west lagoons)		2-2.5	(s)	<0.8	---	---	---	---	12	---	---	---	---	---	1.2[a]	---	21	---	<5	---	---	980	---
(stepout borings)																							
B-161	07/11/00	0-0.5	(u)	19	---	---	---	166	---	---	1640	---	9746	442	213[a]	---	1620	211	<5	---	---	4993	---
(east/west lagoons)		2-2.5	(s)	---	---	---	---	---	---	---	---	---	---	---	2.5[a]	---	363	---	<5	---	---	1150	---
(stepout borings)																							

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-162	11/05/01	0-0.5	(u)	0.82	23	580	7.3	74	18	10	135	<0.05	349	470	0.56	15	1	5	<1	15	35	6653	---
(east/west lagoons)		1-1.2	(s)	<0.8	11	653	5.4	23	14	7.3	32	<0.05	135	345	0.75	11	<0.8	1.3	<1	8	37	1495	---
(stepout borings)																							
B-163	11/05/01	0-0.5	(u)	<0.8	9.3	---	<4.0	19	11	7.8	31	---	100	762	0.07	---	<0.8	0.81	---	7.1	---	1178	---
(east/west lagoons)		1-1.2	(s)	---	12	---	<4.0	31	---	---	59	---	136	---	0.32	---	---	2.8	---	7.2	27	2091	---
(stepout borings)																							
B-164	11/05/01	0-0.5	(u)	---	---	---	---	262	---	---	---	---	---	710	---	---	---	11	---	---	---	10740	---
(east/west lagoons)		1-1.2	(s)	---	6.4	---	---	20	---	---	24	---	57	---	0.09	---	---	0.52	---	---	---	789	---
(stepout borings)																							
B-165	11/05/01	0-0.5	(u)	1.3	32	269	8	55	15	7.4	337	<0.05	260	742	2.9	10	3.7	2.2	<1	15	25	6764	---
Duplicate B-165		0-0.5	(u)	0.96	31	295	8.6	45	14	7.6	248	<0.05	248	766	3.2	11	3.5	1.8	<1	13	26	5304	---
(east/west lagoons)		2-2.5	(s)	<0.8	8.9	256	7.9	1.4	18	8.9	21	<0.05	17	431	<0.05	14	<0.8	<0.5	<1	6	43	137	---
(stepout borings)																							
B-166	11/05/01	0-0.5	(u)	1.3	22	---	7.2	29	13	---	170	---	285	559	1.4	---	1.6	2.2	---	14	---	2621	---
(east/west lagoons)		2-2.3	(s)	---	---	---	6.4	---	18	---	353	---	---	---	---	---	---	---	---	---	21	3173	---
(stepout borings)																							
B-167	11/05/01	0-0.5	(u)	2.2	39	---	7.9	120	---	---	220	---	634	937	1.2	---	1	7.1	---	33	---	11010	---
(east/west lagoons)		2-2.3	(s)	---	---	---	6.7	---	14	---	144	---	---	---	---	---	---	---	---	---	---	10260	---
(stepout borings)																							
B-168	11/05/01	0-0.5	(u)	<0.8	<5	75	11	5.5	12	7.7	57	<0.05	44	257	<0.05	9.7	<0.8	<0.5	<1	6.5	11	388	---
(east/west lagoons)		2-2.5	(u)	<0.8	27	273	8.4	6.3	18	8.6	34	0.09	40	448	<0.05	15	<0.8	0.960	<1	6.1	40	492	---
(stepout borings)		2.5-3.1	(s)	<0.8	16	344	11	4.4	21	8.8	110	<0.05	58	387	0.09	15	<0.8	<0.5	<1	8.8	46	653	---
B-169	11/05/01	0-0.5	(u)	---	---	---	<4.0	---	---	---	19	---	---	---	---	---	---	---	---	---	---	953	---
(east/west lagoons)		1-1.5	(s)	---	16	---	<4.0	29	13	---	60	---	173	1091	---	---	---	5.8	---	13	21	2677	---
(stepout borings)																							
B-170	11/05/01	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3349	---
(east/west lagoons)		2-2.5	(u)	---	8.2	---	---	5.9	---	---	57	---	68	326	---	---	---	<0.5	---	8.5	---	805	---
(stepout borings)		2.7-3	(s)	---	8.9	---	---	8.8	---	---	19	---	48	451	---	---	---	<0.5	---	6.4	---	781	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-171	11/05/01	0-0.5	(u)	<0.8	9.1	283	**11**	3.4	**20**	8.5	**46**	<0.05	57	**480**	0.07	14	<0.8	<0.5	<1	**8.6**	**40**	496	---
(east/west lagoons)		2-2.5	(u)	<0.8	7.2	277	**10**	<1.0	**22**	9	11	<0.05	13	**569**	<0.05	15	<0.8	<0.5	<1	5.6	**46**	67	---
(stepout borings)		3.8-4.2	(s)	<0.8	8.5	280	**12**	<1.0	**20**	8.8	16	<0.05	18	448	<0.05	14	<0.8	<0.5	<1	5.7	**45**	108	---
B-172	11/05/01	0-0.5	(u)	---	---	---	**6.3**	---	**23**	---	**155**	---	---	**679**	---	---	---	---	---	**15**	20	3096	---
(east/west lagoons)		1.8-2.3	(s)	---	---	---	**10**	---	**21**	---	---	---	---	**796**	---	---	---	---	---	---	25	4305	---
(stepout borings)																							
B-173	11/05/01	0-0.5	(u)	---	---	---	**6.3**	---	13	---	**64**	---	---	**476**	---	---	---	---	---	**22**	---	3234	---
(east/west lagoons)		2-2.5	(u)	---	---	---	**6.7**	---	14	---	---	---	---	**373**	---	---	---	---	---	---	---	233	---
(stepout borings)		2.8-3	(s)	---	---	---	**5.4**	---	12	---	---	---	---	**1279**	---	---	---	---	---	---	---	2195	---
B-174 through B-179 (see Background)																							
B-180	11/07/01	0-0.5	(u)	---	---	---	---	---	**16**	5.3	---	---	---	---	---	11	---	---	---	---	---	---	---
(Old Casting Building)																							
(Step out from B-59)																							
B-181	11/07/01	0-0.5	(u)	---	---	---	---	---	8.3	5.6	---	---	---	---	---	5.2	---	---	---	---	---	---	---
(Old Casting Building)																							
(Step out from B-180)																							
B-182	11/06/01	0-0.5	(u)	---	---	---	4.7	<1.0	14	---	9.9	---	---	309	<0.05	---	---	<0.5	---	<5	---	---	---
(Facility NO. 1)		2-2.5	(u)	---	---	---	---	---	**17**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Step out from B-67)																							
B-183	11/06/01	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Facility NO. 1)		2-2.5	(u)	---	---	---	---	---	**16**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Step out from B-182)																							
B-184	11/06/01	0-0.5	(u)	**571**	---	---	---	---	---	---	---	---	---	**9576**	---	---	---	---	---	---	---	---	---
Duplicate B-184		0-0.5	(u)	**606**	---	---	---	---	---	---	---	---	---	**10340**	---	---	---	---	---	---	---	---	---
(Numbered Bins)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	323	---	---	---	---	---	---	---	---	---
(Step out from B-55)																							
B-185	11/06/01	0-0.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	265	---	---	---	---	---	---	---	---	---
(Numbered Bins)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	204	---	---	---	---	---	---	---	---	---
(Step out from B-184)																							

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-186	11/06/01	0-0.5	(u)	<0.8	---	---	---	1.7	<5	---	14	---	7.6	---	<0.05	---	<0.8	<0.5	---	---	---	---	---
(Building No. 3)		2-2.5	(u)	<0.8	---	---	---	<1	---	---	14	---	---	---	---	---	---	---	---	---	---	---	---
(Step out from B-94)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.7-12.5	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-187	11/06/01	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Building No. 3)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Step out from B-186)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.7-12.5	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-188	11/06/01	0-0.5	(u)	**7**	**80**	---	<5	**126**	**945**	**12**	**451**	0.09	**1758**	**427**	**4.36**	---	**6.7**	**17**	<1	**28**	28	---	---
	Duplicate B-188	0-0.5	(u)	**8.6**	**113**	---	<5	**156**	**1202**	**15**	**574**	0.16	**2745**	**544**	**3.24**	---	**7.6**	**21**	<1	**40**	27	---	---
(Bone Yard)		2-2.5	(u)	<0.8	---	---	---	**244**	**37**	---	**29**	---	---	**1207**	---	---	---	---	---	---	---	---	---
(Step out from B-105)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10.5-11	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-188a	02/11/03	5.5	(u)	---	5.7	---	---	<1	14	5.2	7.5	---	<5	322	<0.05	---	<0.8	<0.5	---	<5	---	---	---
	Duplicate-1	5.5	(u)	---	<5	---	---	<1	13	5.3	7.3	---	6.8	298	---	---	<0.8	<0.5	---	<5	---	---	---
(Bone Yard)																							
(Step out from B-105)																							
(Offset of B-188)																							
B-189	11/06/01	0-0.5	(u)	**19**	**170**	---	---	**371**	**18**	**10**	**687**	---	**3510**	**1008**	**1.69**	---	**7.3**	**73**	---	**76**	---	---	---
(Bone Yard)		2-2.5	(u)	---	---	---	---	<1	12	---	13	---	---	**387**	---	---	---	---	---	---	---	---	---
(Step out from B-188)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10.5-11	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-190	11/07/01	0-0.5	(u)	<0.8	5.3	---	<5	**292**	14	7.2	19	0.07	61	**621**	<0.05	---	<0.8	<0.5	<1	6.1	19	---	---
(Bone Yard)		2-2.5	(u)	<0.8	---	---	---	**90**	14	---	14	---	---	**438**	---	---	---	---	---	---	---	---	---
(Step out from B-107)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10.5-11	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-191	11/07/01	0-0.5	(u)	---	---	---	---	**149**	---	---	---	---	---	**454**	---	---	---	---	---	---	---	---	---
(Bone Yard)		2-2.5	(u)	---	---	---	---	**5**	---	---	---	---	---	**397**	---	---	---	---	---	---	---	---	---
(Step out from B-190)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10.5-11	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-192	11/07/01	0-0.5	(u)	<0.8	12	---	<5	**94**	11	6.1	**60**	0.08	**110**	**537**	**0.43**	---	<0.8	**1.6**	<1	5.7	13	---	---
Duplicate B-192		0-0.5	(u)	<0.8	9.9	---	<5	**99**	11	6.1	**46**	<0.05	**62**	**585**	**0.21**	---	<0.8	**1.1**	<1	5.2	14	---	---
(Bone Yard)		2-2.5	(u)	<0.8	---	---	---	**24**	12	---	16	---	---	305	---	---	---	---	---	---	---	---	---
(Step out from B-106)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10.5-11	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-193	11/07/01	0-0.5	(u)	---	---	---	---	**73**	---	---	**142**	---	**270**	**596**	**4.13**	---	---	**3.7**	---	---	---	---	---
(Bone Yard)		2-2.5	(u)	---	---	---	---	1.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Step out from B-192)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10.5-11	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-194	11/08/01	0-0.5	(u)	<0.8	<5	513	4.7	3.8	14	**13**	12	---	8.6	208	---	---	---	<0.5	---	---	32	---	---
(Building C)		2-2.5	(u)	<0.8	---	321	---	---	---	---	---	---	---	272	---	---	---	---	---	---	---	---	---
(Step out from B-33)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		13-14	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-195	11/07/01	0-0.5	(u)	---	---	---	---	---	---	**26**	---	---	---	---	---	---	---	---	---	---	---	---	---
Duplicate B-195		0-0.5	(u)	---	---	---	---	---	---	**22**	---	---	---	---	---	---	---	---	---	---	---	---	---
(Building C)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(Step out from B-194)		5.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		13-14	(s)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-196	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	**15**	---	---	---	---	---	---	---	---	<0.5	---	---	---	---	---
(Grain Elev.)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(step out from B-139)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		17.5	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-197	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	**440**	---	---	---	---	<1	---	---	---	---
(Grain Elev.)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	---	---
(step out from B-132)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1	---	---	---	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		15-16	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-198	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	12	---	---	---	---	---	---	---	---	<0.5	---	---	---	---	---
(Grain Elev.)		2-2.5	(u)	---	---	---	---	---	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(step out from B-130)																							
B-199	11/08/01	0-0.5	(u)	<0.8	---	---	---	12	9.1	7.1	38	---	49	---	**0.24**	7.9	<0.8	**0.57**	---	---	---	---	---
	Duplicate	0-0.5	(u)	<0.8	---	---	---	12	8.3	5.9	33	---	45	---	**0.21**	7.2	<0.8	**0.67**	---	---	---	---	---
(Grain Elev.)		2-2.5	(u)	---	---	---	---	---	<5	9.5	---	---	---	---	---	---	---	---	---	---	---	---	---
(step out from B-138)																							
B-200	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	8.7	**9.9**	---	---	---	---	0.05	7	---	<0.5	---	---	---	---	---
(Grain Elev.)																							
(step out from B-131)																							
B-201	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	12	---	---	---	---	---	<0.05	---	---	<0.5	---	---	---	---	---
(Grain Elev.)		2-2.5	(u)	---	---	---	---	---	8.2	---	---	---	---	---	<0.05	---	---	<0.5	---	---	---	---	---
(step out from B-136)																							
B-202	11/08/01	0-0.5	(u)	<0.8	---	136	---	---	18	---	---	---	---	---	---	9.4	---	<0.5	<1	---	<5	---	---
(Grain Elev.)		2-2.5	(s)	---	---	**620**	---	---	20	---	---	---	---	---	---	11	---	<0.5	<1	---	---	---	---
(step out from B-133)																							
B-203	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	**15**	---	---	---	---	---	<0.05	---	---	<0.5	<1	---	---	---	---
(Grain Elev.)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	<0.05	---	---	<0.5	---	---	---	---	---
(step out from B-134)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	0.54	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11-12	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-204	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	**20**	---	---	---	---	**365**	---	---	---	<0.5	---	---	---	---	---
(Grain Elev.)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(step out from B-135)		5.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		13-14	(s)	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-205	11/08/01	0-0.5	(u)	<0.8	---	---	---	---	13	---	---	---	---	**407**	---	---	---	<0.5	<1	---	---	---	---
Duplicate B-205		0-0.5	(u)	<0.8	---	---	---	---	13	---	---	---	---	**431**	---	---	---	<0.5	<1	---	---	---	---
(Grain Elev.)		2-2.5	(u)	<0.8	---	---	---	---	**15**	---	---	---	---	315	---	---	---	<0.5	<1	---	---	---	---
(step out from B-137)		5.5	(u)	<0.8	---	---	---	---	**15**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-206	02/11/03	0-0.5	(u)	<0.8	---	---	---	<1	**18**	---	14	---	11	---	<0.05	---	---	<0.5	---	---	---	---	---
(waste pile)		2-2.5	(u)	<0.8	---	---	---	---	---	---	---	---	---	**441**	---	---	---	---	---	---	---	---	---
(step out boring)		5.5	(u)	<0.8	---	---	---	---	**22**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	<0.8	---	---	---	---	**17**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	<0.8	---	---	---	---	**18**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	<0.8	---	---	---	---	**17**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		17-17.5	(s)	<0.8	---	---	---	---	8.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-207	02/11/03	0-0.5	(u)	---	---	---	---	---	**18**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(waste pile)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	**396**	---	---	---	---	---	---	---	---	---
(step out boring)		5.5	(u)	---	---	---	---	---	**18**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	**20**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	**26**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	---	---	---	---	---	**15**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-208	02/11/03	0-0.5	(u)	---	---	---	---	---	**22**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
(waste pile)		2-2.5	(u)	---	---	---	---	---	---	---	---	---	---	**458**	---	---	---	---	---	---	---	---	---
(step out boring)		5.5	(u)	---	---	---	---	---	**20**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8.5	(u)	---	---	---	---	---	**18**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		11.5	(u)	---	---	---	---	---	**23**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		14.5	(u)	---	---	---	---	---	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-209	02/12/03	0-0.5	(u)	---	---	---	---	**73**	---	---	---	---	**420**	---	**4.5**	---	**6.4**	---	---	---	---	---	---
Duplicate-3		0-0.5	(u)	---	---	---	---	**55**	---	---	---	---	**244**	---	**2.5**	---	**3.1**	---	---	---	---	---	---
(east/west lagoons)		1.2-1.6	(s)	---	---	---	---	**70**	---	---	---	---	**288**	---	**10**	---	**4.3**	---	---	---	---	---	---
(stepout borings)																							
B-210	02/12/03	0-0.5	(s)	---	---	---	---	9.4	---	---	---	---	57	---	**0.78**	---	**2.5**	---	---	---	---	---	---
(east/west lagoons)																							
(stepout borings)																							
B-211	02/12/03	0-0.5	(s)	---	---	---	---	**70**	---	---	---	---	**328**	---	**0.37**	---	**3.5**	---	---	---	---	---	---
(east/west lagoons)																							
(stepout borings)																							
B-212	02/12/03	0-0.5	(u)	---	---	---	---	**31**	---	---	---	---	45	---	0.054	---	<0.8	---	---	---	---	---	---
(east/west lagoons)		0.5-1	(s)	---	---	---	---	3.0	---	---	---	---	6.1	---	<0.05	---	<0.8	---	---	---	---	---	---
(stepout borings)																							

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-213	02/12/03	0-0.5	(u)	---	---	---	---	88	---	---	---	---	733	---	94	---	43	---	---	---	---	---	---
(east/west lagoons)		1.2-1.6	(s)	---	---	---	---	62	---	---	---	---	233	---	1.5	---	28	---	---	---	---	---	---
(stepout borings)																							
B-214	02/12/03	0-0.5	(s)	---	---	---	---	2.6	---	---	---	---	66	---	2.1	---	1.7	---	---	---	---	---	---
(east/west lagoons)																							
(stepout borings)																							
B-215	02/12/03	0-0.5	(s)	---	---	---	---	51	---	---	---	---	401	---	1.9	---	<0.8	---	---	---	---	---	---
(east/west lagoons)																							
(stepout borings)																							
B-216	02/12/03	0-0.5	(s)	---	---	---	---	15	---	---	---	---	96	---	0.46	---	0.93	---	---	---	---	---	---
(east/west lagoons)																							
(stepout borings)																							
B-217	02/11/03	0-0.5	(u)	1.2	---	---	---	23	14	---	91	---	---	702	10	---	1.6	2.0	---	6.7	---	---	---
(O1 landfill)		2-2.5	(u)	0.83	18	---	---	28	13	8.0	83	---	118	511	0.4	---	2.9	2.1	<1	<5	---	---	---
(stepout borings)		3-3.5	(s)	14	23	---	---	177	12	28	453	---	524	2827	0.28	---	0.9	2.0	4	78	---	---	---
B-218	02/11/03	0-0.5	(s)	4.3	14	---	---	94	---	41	252	---	303	3818	0.21	---	0.92	0.8	2	9.1	---	---	---
(O1 landfill)																							
(stepout borings)																							
B-219	02/11/03	0-0.5	(u)	<0.8	6.9	---	---	<1	13	5.6	5.9	---	13	367	---	---	---	---	---	---	---	---	---
	Duplicate-2	0-0.5	(u)	<0.8	<5	---	---	<1	13	5.6	9.9	---	10	333	---	---	---	---	---	---	---	---	---
(O1 landfill)		2-2.5	(u)	<0.8	<5	---	---	<1	14	5.7	7.0	---	11	325	---	---	---	---	---	---	---	---	---
(stepout borings)		4-4.5	(s)	<0.8	12	---	---	130	12	9.2	1176	---	11	6203	---	---	---	---	---	---	---	---	---
B-220	02/11/03	0-0.5	(u)	---	---	---	---	---	---	---	---	---	---	384	---	---	---	---	---	---	---	---	---
(O1 landfill)		4.5-5	(s)	---	<5	---	---	82	---	---	315	---	---	7863	---	---	---	---	---	---	---	---	---
(stepout borings)																							
B-221	02/11/03	0-0.5	(u)	1.1	---	---	---	21	16	---	205	---	---	---	0.38	---	<0.8	<0.5	<1	5.2	---	---	---
(O1 landfill)		2-2.5	(u)	1.5	---	---	---	<1	17	---	8.7	---	---	---	<0.05	---	<0.8	<0.5	<1	<5	---	---	---
(stepout borings)		4.7-5	(s)	1.4	---	---	---	327	10	---	260	---	---	---	0.17	---	<0.8	2.6	<1	6.1	---	---	---
B-222	02/11/03	0-0.5	(u)	2.9	---	---	---	26	32	---	522	---	---	---	<0.05	---	---	---	---	---	---	---	---
(O1 landfill)		2-2.5	(u)	<0.8	---	---	---	---	40	---	---	---	---	---	<0.05	---	---	---	---	---	---	---	---
(stepout borings)		4.7-5	(s)	0.84	---	---	---	181	---	---	80	---	---	---	2.3	---	---	0.58	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
B-223	02/11/03	0-0.5	(u)	**24**	**553**	---	<10	**343**	**27**	**53**	**9588**	<0.1	**5184**	**37520**	**1.1**	**49**	**1.0**	**37**	---	**215**	---	---	---
(O1 landfill)		0.9-1.2	(s)	**82**	**4443**	---	<50	**364**	**18**	**65**	**53520**	**0.26**	**9904**	**11320**	**0.56**	**82**	**23**	**30**	---	**130**	---	---	---
(stepout borings)																							
B-224	02/11/03	0-0.4	(u)	**3.0**	**23**	---	<4	**30**	**31**	9.0	**471**	<0.1	**370**	**1941**	**0.28**	17	<0.8	**1.6**	---	**14**	---	---	---
(O1 landfill)		0.4-0.9	(s)	**0.84**	11	---	<4	**26**	**19**	6.7	**131**	<0.1	57	**353**	**0.28**	12	<0.8	<0.5	---	<5	---	---	---
(stepout borings)																							

Field Quality Control Samples

Identification	Sample Date	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
Field Blank	6/13/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/14/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/15/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/16/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/19/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/20/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/21/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/22/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/23/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/26/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.092	<0.05	<0.05	---
Field Blank	6/27/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/28/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.083	<0.05	<0.05	---
Field Blank	6/29/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	6/30/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.07	<0.05	<0.05	---
Field Blank	7/10/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.08	<0.05	<0.05	---
Field Blank	7/11/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Field Blank	1/15/01	---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	0.07	<0.05	<0.05	---
Field Blank	1/16/01	---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---
Field Blank	1/17/01	---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---
Field Blank	11/6/01	---	---	---	<0.05	<0.01	<0.01	---	<0.05	---	---	<0.015	<0.0005	---	---	---	---	---	---	---	---
Field Blank	11/8/01	<0.05	---	---	---	<0.01	<0.01	<0.05	<0.05	---	<0.05	---	<0.0005	<0.05	<0.01	<0.005	---	<0.05	---	---	---
Field Blank-2	11/8/01	<0.05	---	---	---	---	<0.01	---	---	---	---	<0.015	---	---	---	<0.005	<0.002	---	---	---	---
Field Blank	2/11/03	---	---	---	---	<0.005	<0.01	---	<0.025	---	---	<0.015	---	---	---	---	---	---	---	---	---
Field Blank-2	2/11/03	<0.05	<0.005	---	---	<0.005	<0.01	<0.05	<0.025	---	<0.01	<0.015	<0.0005	---	<0.01	<0.005	<0.002	<0.05	---	---	---
Field Blank-3	2/12/03	<0.05	<0.005	---	<0.05	<0.005	<0.01	<0.05	<0.025	<0.004	<0.01	<0.015	<0.0005	<0.05	<0.01	<0.005	---	<0.05	---	---	---
Equipment 1	6/12/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	---	<0.02	<0.015	---	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 2	6/12/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	---	<0.02	<0.015	---	<0.05	0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 3	6/12/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	---	<0.02	<0.015	---	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 4	6/13/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 5	6/13/00	<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
Equipment 6		6/13/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.05	---
Equipment 7		6/14/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.05	---
Equipment 8		6/14/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.05	---
Equipment 9		6/15/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.24	---
Equipment 10		6/15/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 11		6/15/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 12		6/16/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 13		6/16/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 14		6/16/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 15		6/19/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 16		6/19/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 17		6/19/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 18		6/20/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 19		6/20/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 20		6/20/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 21		6/21/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 22		6/21/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 23		6/22/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 24		6/22/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 25		6/23/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.11	<0.05	<0.05	---
Equipment 26		6/23/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.11	<0.05	<0.05	---
Equipment 27		6/23/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.097	<0.05	<0.05	---
Equipment 28		6/23/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.081	<0.05	<0.05	---
Equipment 29		6/26/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 30		6/26/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	<0.05	---
Equipment 31		6/27/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.08	<0.05	<0.05	---
Equipment 32		6/27/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.078	<0.05	<0.05	---
Equipment 33		6/27/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.082	<0.05	<0.05	---
Equipment 34		6/28/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.07	<0.05	<0.05	---
Equipment 35		6/28/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.07	<0.05	<0.05	---
Equipment 36		6/28/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.08	<0.05	<0.05	---
Equipment 37		6/29/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.05	<0.05	<0.05	---
Equipment 38		6/29/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.06	<0.05	<0.05	---
Equipment 39		6/29/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	0.06	<0.05	<0.05	---
Equipment 40		6/30/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.05	---
Equipment 41		6/30/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	0.05	---
Equipment 42		7/10/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	0.1	<0.05	0.05	---
Equipment 43		7/10/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	0.1	<0.05	0.05	---
Equipment 44		7/10/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	0.09	<0.05	0.05	---
Equipment 45		7/11/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	0.06	<0.05	0.05	---
Equipment 46		7/11/00		<0.05	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	0.0006	<0.05	<0.01	<0.005	<0.002	0.05	<0.05	0.05	---
Equipment 48		1/15/01		---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---
Equipment 49		1/16/01		---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---
Equipment 50		1/17/01		---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---
Equipment 51		1/17/01		---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---

Table 5. Analytical Results Summary - Soil (mg/kg), Updated April 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Boring ID	Date Sampled	Sample Depth (ft)	u/s	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc	pH
Equipment 52	1/17/01			---	---	---	---	---	---	---	---	<0.008	---	---	<0.0005	---	---	---	---	---	---	---	---
Equipment Blank	11/6/01			---	---	---	<0.05	<0.01	<0.01	---	<0.05	---	---	<0.015	<0.0005	---	---	<0.005	---	<0.05	---	---	---
Equipment Blank	11/8/01			<0.05	---	---	---	<0.01	<0.01	<0.05	<0.05	---	<0.05	---	<0.0005	<0.05	<0.01	<0.005	---	---	---	---	---
Equipment Blank-2	11/8/01			<0.05	---	---	---	---	<0.01	---	---	---	---	<0.015	---	---	---	<0.005	<0.002	---	---	---	---
Equipment Blank	2/11/03			---	---	---	---	<0.005	<0.01	---	<0.025	---	---	<0.015	---	---	---	---	---	---	---	---	---
Equipment Blank-2	2/11/03			<0.05	<0.005	---	---	<0.005	<0.01	<0.05	<0.025	---	<0.01	<0.015	<0.0005	---	<0.01	<0.005	<0.002	<0.05	---	---	---
Equipment Blank-3	2/12/03			<0.05	<0.005	---	<0.05	<0.005	<0.01	<0.05	<0.025	<0.004	<0.01	<0.015	<0.0005	<0.05	<0.01	<0.005	---	<0.05	---	---	---

(u) Unsaturated soil sample.

(s) Saturated soil sample.

(dup) Duplicate soil sample.

(SPLP) Synthetic Precipitation Leaching Procedure - analytical results shown in *italics.*

* Surface soil sample adjacent to previously constructed background soil boring.

a Sample re-collected and re-analyzed within EPA-specified holding time. Initially collected sample not analyzed within EPA-specified holding time.

Notes: (1) Numbers in **bold** exceed TCEQ-approved background concentrations established for the site.

na or — - Not Analyzed

Soil Data – Soils Below Tears in West Lagoon HDPE Liner (November 2003)

Table 3. Analytical Results Summary - Soil Samples Below Tears in West Lagoon HDPE Liner (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	DATE SAMPLED	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
W Lagoon Tear 1 (0-0.5')	11/13/03	<5	14	**896**	<6	**66**	**17**	**27**	**205**	0.1	**211**	**351**	**2.5**	20	<5	<2	<5	**8**	27	2,890
W Lagoon Tear 2 (0-0.5')	11/13/03	<5	**20**	208	<6	**70**	**18**	8	**104**	<0.1	**182**	**541**	<0.5	12	<5	<2	<5	**13**	32	8,030
W Lagoon Tear 3 (0-0.5')	11/14/03	<5	10	156	<6	**36**	**18**	**27**	**78**	<0.1	**192**	276	**0.9**	21	<5	<2	<5	**9**	22	2,450
Soil Background Concentrations																				
0-0.5':			16.65		4.9	11.70		9.72	40.33	0.24	109.16	333.73	0.09	25.8	0.89			7.65		(a)
2-2.5':			8.01			4.47			17.20		54.36	360.83		27.21						
unsaturated below 2.5':			21.86			4.97			16.15		38.96	592.50		29.74						
saturated soil sample:			9.8			3.64			18.26		30.92	686.68		25.86						
clay/silt strata:		0.77		720			14.9									0.54	1.02		35.6	
clean sand strata (SP/SW):		0.80		202			35.9									0.50	1.0		15.7	
TNRCC RRS2 MSCs[b]																				
SAI-Ind (mg/kg):		490	200	58000	680000	1500	350000	1E+05	74000	37000	1000	110000	9.6	12000	9200	2800	150	6E+05	2900	410000
Adjusted GWP-Ind (mg/kg):		60	100	20000	510000	50	1000	61000	13000	2000	150	140000	20	20000	500	5100	20	6E+05	7200	310000
Adjusted GW (mg/L):		0.6	1	200	1,800	0.5	10	610	130	20	1.5	1400	0.2	200	5	51	0.2	6100	72	3100

mg/kg	Milligrams per kilogram
MSCs	Medium specific concentrations
SAI-Ind	Soil/Air and Ingestion Standard for Industrial Use (Applies to upper 2 feet of soil at commercial/industrial sites - 30 TAC Chapter 335.559(g))
Adjusted GWP-Ind	Adjusted Soil-to-Groundwater Protection Standard for Industrial Use (adjusted for saline groundwater - 30 TAC Chapter 335.559(d)(3))
Adjusted GW	Adjusted RRS2 MSC for groundwater (adjusted for saline groundwater)
a	April 28, 1997 TNRCC letter stated zinc would not be a good release indicator for a unit at the site. Therefore, zinc background level not given.
b	30 TAC Chapter 335, Subchapter S.

Notes: 1) Numbers in **bold** exceed TNRCC-approved background concentrations established for the site.
2) Numbers **boxed** exceed both background and the RRS2 adjusted GWP-Ind. The RRS2 SAI-Ind was not exceeded in any soil sample.

Final Facility Closure Soil
Data for Containment Building and Facility No. 3
December 2003 – January 2004

Table 2. Analytical Results Summary - Soil Samples Below Cracks in Containment Building (Numbered Bins) Concrete Floor (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	Date Sampled	Sample Depth (ft)	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	CN	Lead	Mn	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Bin 1, Crack 1	12/8/03	0-0.5	<1	2.71	129	<2	<0.2	4.35	3.66	4.46	<0.2	7.45	217	<0.04	**68.5**	<1	**1.74**	<1	<1	17.3	20.1
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	6.21	---	**1.19**	---	---	---	---
Bin 1, Crack 2	12/8/03	0-0.5	<1	3.07	182	<2	0.931	4.48	3.87	11.7	<0.2	8.71	287	<0.04	**26.5**	<1	**2.01**	<1	1.23	18.2	58.4
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	7.01	---	**1.52**	---	---	---	---
Bin 1, Crack 3	12/8/03	0-0.5	<1	2.07	176	<2	0.359	4.55	3.61	6.97	<0.2	15.40	260	<0.04	9.31	<1	**2.14**	<1	<1	16.8	30.7
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2.14**	---	---	---	---
Bin 1, Crack 4	12/8/03	0-0.5	<1	3.49	138	<2	0.593	4.20	4.44	5.64	<0.2	8.48	**359**	<0.04	6.55	<1	**1.47**	<1	<1	15.5	23.6
		2-2.5	---	---	---	---	---	---	---	---	---	---	**366**	---	---	---	**1.03**	---	---	---	---
Bin 2, Crack 1	12/8/03	0-0.5	<1	2.13	113	<2	0.434	4.40	3.5	6.30	<0.2	7.60	227	<0.04	5.62	<1	**1.46**	<1	<1	14.2	20.8
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.83**	---	---	---	---
Bin 2, Crack 2	12/8/03	0-0.5	<1	1.99	163	<2	<0.2	4.60	5.44	5.26	<0.2	9.06	309	<0.04	5.97	<1	**1.74**	<1	<1	15.2	20.5
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.55**	---	---	---	---
Bin 2, Crack 3	12/8/03	0-0.5	<1	2	130	<2	<0.2	3.57	3.11	6.15	<0.2	6.57	235	<0.04	6.31	<1	**1.5**	<1	<1	12.4	20.0
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.77**	---	---	---	---
Bin 2, Crack 4	12/8/03	0-0.5	<1	2.97	141	<2	<0.2	7.27	5.45	5.57	<0.2	11.30	**383**	<0.04	7.37	<1	**2.1**	<1	<1	18.4	24.2
(duplicate)		0-0.5	<1	2.45	101	<2	<0.2	5.61	3.73	4.71	<0.2	7.61	217	<0.04	5.87	<1	**1.99**	<1	<1	14.3	22.0
		2-2.5	---	---	---	---	---	---	---	---	---	---	266	---	---	---	**0.948**	---	---	---	---
(duplicate)		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.29**	---	---	---	---
Bin 3, Crack 1	12/9/03	0-0.5	<1	2.72	144	<2	<0.2	4.27	4.01	5.32	<0.2	8.21	281	<0.04	7.49	<1	**1.78**	<1	<1	14.8	21.6
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.52**	---	---	---	---
Bin 3, Crack 2	12/8/03	0-0.5	<1	2.5	178	<2	<0.2	4.34	4.02	4.61	<0.2	7.83	248	<0.04	5.55	<1	**1.64**	<1	<1	19.7	28.0
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.56**	---	---	---	---

Table 2. Analytical Results Summary - Soil Samples Below Cracks in Containment Building (Numbered Bins) Concrete Floor (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	Date Sampled	Sample Depth (ft)	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	CN	Lead	Mn	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Bin 3, Crack 3	12/9/03	0-0.5	<1	3.02	115	<2	<0.2	5.06	4.4	5.65	<0.2	9.30	299	<0.04	6.45	<1	**2.56**	<1	<1	16	24.5
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.17**	---	---	---	---
Bin 3, Crack 4	12/9/03	0-0.5	<1	2.49	161	<2	0.288	5.03	4.02	16.50	<0.2	8.65	244	<0.04	6.44	<1	**1.47**	<1	<1	19	38.8
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.58**	---	---	---	---
Bin 4, Crack 1	12/9/03	0-0.5	<1	2.78	151.0	<2	0.308	4.58	4.8	4.86	<0.2	9.95	310	<0.04	6.38	<1	**2.33**	<1	<1	16.7	22.1
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.23**	---	---	---	---
Bin 4, Crack 2	12/9/03	0-0.5	<1	13.5	98.2	<2	7.90	4.24	3.69	4.83	<0.2	7.77	244	<0.04	5.63	<1	**1.84**	<1	<1	15.6	340
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.49**	---	---	---	---
Bin 4, Crack 3	12/9/03	0-0.5	<1	2.35	98.8	<2	8.72	4.26	6.8	5.45	<0.2	8.26	**340**	<0.04	8.81	<1	**1.57**	<1	<1	15.3	1,160
		2-2.5	---	---	---	---	---	---	---	---	---	---	277	---	---	---	<0.5	---	---	---	63.3
Bin 4, Crack 4	12/9/03	0-0.5	<1	2.49	122	<2	2.55	4.11	3.26	5.20	<0.2	**551**	171	<0.04	5.3	<1	**1.64**	**11.4**	<1	16.2	336
	(SPLP)	0-0.5	---	---	---	---	---	---	---	---	---	*(0.177)*	---	---	---	---	---	---	---	---	---
		2-2.5	---	---	---	---	---	---	---	---	---	9.93	---	---	---	---	**1**	**1.12**	---	---	---
Bin 5, Crack 1	12/9/03	0-0.5	<1	1.65	86.7	<2	**416**	6.62	**11.9**	**53.2**	<0.2	86.5	**844**	<0.04	13.7	<1	**1.01**	**1.08**	<1	11.9	9,840
	(SPLP)	0-0.5	---	---	---	---	*(0.156)*	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		2-2.5	---	---	---	---	0.923	---	4.07	6.01	---	---	**406**	---	---	---	**1.14**	<1	---	---	53.5
Bin 5, Crack 2	12/9/03	0-0.5	<1	**126**	108	<2	**332**	4.40	4.19	20.40	<0.2	8.23	306	<0.04	19.3	<1	**1.7**	<1	<1	15.5	1,830
	(SPLP)	0-0.5	---	***(1.41)***	---	---	***(0.59)***	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		2-2.5	---	6.47	---	---	<0.2	---	---	---	---	---	---	---	---	---	**1.79**	---	---	---	25.4
Bin 5, Crack 3	12/9/03	0-0.5	<1	4.71	196	<2	<0.2	5.17	4.91	6.89	<0.2	13	**422**	<0.04	7.36	<1	**2.43**	<1	<1	19.8	28.8
(duplicate)		0-0.5	<1	1.74	145	<2	<0.2	4.07	4.81	5.18	<0.2	7.95	257	<0.04	5.21	<1	**1.51**	<1	<1	15.7	40.5
		2-2.5	---	---	---	---	---	---	---	---	---	---	<0.5	---	---	---	**1.72**	---	---	---	---
(duplicate)		2-2.5	---	---	---	---	---	---	---	---	---	---	305	---	---	---	**1.82**	---	---	---	---

Table 2. Analytical Results Summary - Soil Samples Below Cracks in Containment Building (Numbered Bins) Concrete Floor (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	Date Sampled	Sample Depth (ft)	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	CN	Lead	Mn	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Bin 6, Crack 1	12/10/03	0-0.5	<1	1.76	99.4	<2	2.81	3.08	2.72	4	<0.2	**467**	167	<0.04	4.52	<1	**0.8**	**1.78**	<1	11.5	957
	(SPLP)	0-0.5	---	---	---	---	---	---	---	---	---	*(0.0359)*	---	---	---	---	---	---	---	---	---
		2-2.5	---	---	---	---	---	---	---	---	---	9.42	---	---	---	---	**1.81**	<1	---	---	270
Bin 6, Crack 2	12/9/03	0-0.5	<1	2.58	79	<2	**639**	4.07	8.19	5.77	<0.2	**1380**	**832**	<0.04	6.34	<1	**1.38**	**4.57**	<1	12.9	8,930
	(SPLP)	0-0.5	---	---	---	---	*(0.0602)*	---	---	---	---	*(0.0205)*	---	---	---	---	---	---	---	---	---
		2-2.5	---	---	---	---	**7.36**	---	---	---	---	31.9	324	---	---	---	**1.65**	<1	---	---	620
Bin 6, Crack 3	12/10/03	0-0.5	**289**	<100	<100	<2	**327**	<50	<100	<100	<0.2	**842**	**792**	<0.04	<100	<100	**<50**	<100	<100	<100	21100
	(SPLP)	0-0.5	*(0.0478)*	---	---	---	*(0.113)*	---	---	---	---	*(<0.01)*	---	---	---	---	---	---	---	---	---
		2-2.5	<1	6.86	---	---	**14**	5.43	4.45	8.42	---	28.8	247	---	6.9	<1	**2.72**	**1.04**	<1	---	1,520
Bin 11, Crack 1	12/9/03	0-0.5	<1	3.5	303	<2	3.27	4.32	6.76	17.5	<0.2	**207**	**410**	<0.04	10.4	<1	**1.76**	**3.1**	<1	14.1	9,410
	(SPLP)	0-0.5	---	---	---	---	---	---	---	---	---	*(<0.01)*	---	---	---	---	---	---	---	---	---
		2-2.5	---	---	---	---	---	---	---	---	---	17	258	---	---	---	**1.52**	**1.57**	---	---	382
Bin 12, Crack 1	12/9/03	0-0.5	<1	2.24	123	<2	**93.3**	4.54	5.53	10.8	<0.2	18.7	211	<0.04	9.31	<1	**1.39**	<1	<1	11.8	1,410
	(SPLP)	0-0.5	---	---	---	---	*(0.0381)*	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		2-2.5	---	---	---	---	0.692	---	---	---	---	---	---	---	---	---	**1.28**	---	---	---	35.2
Bin 12, Crack 2	12/9/03	0-0.5	<1	2.13	136	<2	1.26	4.74	4.66	10.4	<0.2	11.7	245	<0.04	6.91	<1	**1.17**	<1	<1	14.1	152
		2-2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**1.23**	---	---	---	---
Field Blank	12/8/03	---	0.0156	<0.01	<0.005	<0.05	<0.002	0.0135	<0.02	<0.01	<0.02	<0.01	<0.005	<0.0002	<0.01	<0.01	<0.01	<0.02	<0.02	0.0173	0.0084
Field Blank	12/9/03	---	0.0221	<0.01	<0.005	<0.05	<0.002	<0.005	<0.01	<0.01	<0.02	<0.01	<0.005	<0.0002	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.005

Table 2. Analytical Results Summary - Soil Samples Below Cracks in Containment Building (Numbered Bins) Concrete Floor (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	Date Sampled	Sample Depth (ft)	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	CN	Lead	Mn	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Soil Background Concentrations																					
0-0.5':				16.65		4.9	11.70		9.72	40.33	0.24	109.16	333.73	0.09	25.8	0.89			7.65		(a)
2-2.5':				8.01			4.47			17.20		54.36	360.83		27.21						
unsaturated below 2.5':				21.86			4.97			16.15		38.96	592.50		29.74						
saturated soil sample:				9.8			3.64			18.26		30.92	686.68		25.86						
clay/silt strata:			0.77		720			14.9									0.54	1.02		35.6	
clean sand strata (SP/SW):			0.80		202			35.9									0.50	1.0		15.7	
TCEQ TRRP PCLs[b]																					
Residential $^{Tot}Soil_{Comb}$ Tier 1 PCL:[c]			15	24	2,800	37000	52	30000	3400	550	1600	500	3700	8.3	840	310	96	6.3	35000	290	9900
Commercial/Ind $^{Tot}Soil_{Comb}$ Tier 1 PCL:[c]			310	200	39,000	410000	850	95000	19000	38000	19000	1600	36000	19	8800	4800	1900	78	40000	2400	2.5E+05
Residential $^{GW}Soil_{Class\ 3}$ Tier 1 PCL:[d]			540	500	44,000		150	240000	1.3E+05	1E+05	4000	300	120000	210	16000	230	48	170	1E+06	340000	240000
Commercial/Ind $^{GW}Soil_{Class\ 3}$ Tier 1 PCL:[d]			540	500	44,000		150	240000	4E+05	1E+05	4000	300	1000000	210	47000	230	140	170	1E+06	1E+06	7E+05
Tier 1 Groundwater PCL (Class 3):[e]			0.6	1	200	1,200	0.5	10	150	130	20	1.5	110	0.2	49	5	12	0.2	1500	17	730

mg/kg	Milligrams per kilogram
CN	Cyanide
Mn	Manganese
SPLP	Synthetic precipitation leaching procedure
a	April 28, 1997 TNRCC letter stated zinc would not be a good release indicator for a unit at the site. Therefore, zinc background level not given.
b	Texas Risk Reduction Program (TRRP) Tier 1 Protective Concentration Levels (PCLs) - 30 TAC Chapter 350.
c	TRRP Tier 1 soil PCL for combined ingestion, dermal contact, inhalation of volatiles and particulates, and ingestion of above-ground and below-ground vegetables with constituents of concern (COCs) in soil. 0.5 acre source area.
d	TRRP Tier 1 soil PCL for soil-to-groundwater leaching of COCs to saline (Class 3) groundwater. 0.5 acre source area.
e	TRRP Tier 1 Groundwater PCL for Class 3 groundwater (total dissolved solids >10,000 mg/L).

Notes: 1) Numbers in **bold** exceed TCEQ-approved background concentrations established for the site.
2) SPLP results parenthesized in *italics*.
3) Numbers **boxed** exceed the TRRP Tier 1 Residential PCL for soil-to-groundwater leaching to Class 3 groundwater based on SPLP results.
4) The TRRP Tier 1 commercial/industrial $^{Tot}Soil_{Comb}$ PCL was not exceeded in any soil sample.
5) Field blank results in milligrams per liter.

Table 3. Analytical Results Summary - Soil Samples Below Cracks in Facility No. 3 Non-Permitted Concrete Floor (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	Date Sampled	Sample Depth (ft)	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	CN	Lead	Mn	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
Facility 3, Crack 1	1/21/04	0-0.5	<0.48	5	24	<5	**334**	4	4	6	<1	7	188	**1.1**	**2,060**	<1	<0.5	**2.6**	<2	10	4,060
	(SPLP)	0-0.5	---	---	---	---	*(0.02)*	---	---	---	---	---	---	---	*(0.62)*	---	---	---	---	---	---
		2-2.5	---	---	---	---	**23.8**	---	---	---	---	---	---	<0.1	**230**	---	---	<0.4	---	---	1,400
Facility 3, Crack 2	1/21/04	0-0.5	<0.47	<1	27	<5	**72**	5	3	4	<1	4	123	<0.1	**2,340**	<1	<0.5	**1.3**	<2	11	338
	(SPLP)	0-0.5	---	---	---	---	*(0.03)*	---	---	---	---	---	---	---	*(0.93)*	---	---	---	---	---	---
		1.5-2*	---	---	---	---	**28.4**	---	---	---	---	---	---	---	**2,220**	---	---	<0.36	---	---	---
Facility 3, Crack 3	1/21/04	0-0.5	**3.0**	11	104	<5	**1,030**	5	6	7	<1	4	257	<0.1	**3,050**	<1	<0.5	**1.3**	<2	14	7,590
	(SPLP)	0-0.5	---	---	---	---	*(0.77)*	---	---	---	---	---	---	---	*(36.9)*	---	---	---	---	---	---
		2-2.5	0.62	---	---	---	**78.2**	---	---	---	---	---	---	---	**1,500**	---	---	0.39	---	---	2,770
Soil Background Concentrations																					
0-0.5':				16.65		4.9	11.70		9.72	40.33	0.24	109.16	333.73	0.09	25.8	0.89			7.65		(a)
2-2.5':				8.01			4.47			17.20		54.36	360.83		27.21						
unsaturated below 2.5':				21.86			4.97			16.15		38.96	592.50		29.74						
saturated soil sample:				9.8			3.64			18.26		30.92	686.68		25.86						
clay/silt strata:			0.77		720			14.9									0.54	1.02		35.6	
clean sand strata (SP/SW):			0.80		202			35.9									0.50	1.0		15.7	
TCEQ TRRP PCLs[b]																					
Residential $^{Tot}Soil_{Comb}$ Tier 1 PCL:[c]			15	24	2,800	37000	52	30000	3400	550	1600	500	3700	8.3	840	310	96	6.3	35000	290	9900
Commercial/Ind $^{Tot}Soil_{Comb}$ Tier 1 PCL:[c]			310	200	39,000	410000	850	95000	19000	38000	19000	1600	36000	19	8800	4800	1900	78	40000	2400	2.5E+05
Residential $^{GW}Soil_{Class\ 3}$ Tier 1 PCL:[d]			540	500	44,000		150	240000	1.3E+05	1E+05	4000	300	120000	210	16000	230	48	170	1E+06	340000	240000
Commercial/Ind $^{GW}Soil_{Class\ 3}$ Tier 1 PCL:[d]			540	500	44,000		150	240000	4E+05	1E+05	4000	300	1000000	210	47000	230	140	170	1E+06	1E+06	7E+05
Tier 1 Groundwater PCL (Class 3):[e]			0.6	1	200	1,200	0.5	10	150	130	20	1.5	110	0.2	49	5	12	0.2	1500	17	730

mg/kg	Milligrams per kilogram
CN	Cyanide
Mn	Manganese

Table 3. Analytical Results Summary - Soil Samples Below Cracks in Facility No. 3 Non-Permitted Concrete Floor (mg/kg), Encycle/Texas, Inc., Corpus Christi, Texas

SAMPLE ID	Date Sampled	Sample Depth (ft)	Antimony	Arsenic	Barium	Bismuth	Cadmium	Chromium	Cobalt	Copper	CN	Lead	Mn	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc

SPLP Synthetic precipitation leaching procedure

a April 28, 1997 TNRCC letter stated zinc would not be a good release indicator for a unit at the site. Therefore, zinc background level not given.

b Texas Risk Reduction Program (TRRP) Tier 1 Protective Concentration Levels (PCLs) - 30 TAC Chapter 350.

c TRRP Tier 1 soil PCL for combined ingestion, dermal contact, inhalation of volatiles and particulates, and ingestion of above-ground and below-ground vegetables with constituents of concern (COCs) in soil. 0.5 acre source area.

d TRRP Tier 1 soil PCL for soil-to-groundwater leaching of COCs to saline (Class 3) groundwater. 0.5 acre source area.

e TRRP Tier 1 Groundwater PCL for Class 3 groundwater (total dissolved solids >10,000 mg/L).

* A concrete footing was encountered at Crack 2 at a depth of 2 feet. Therefore a soil sample was collected directly above the footing at a depth of 1.5-2 foot.

Notes: 1) Numbers in **bold** exceed TCEQ-approved background concentrations established for the site.

2) SPLP results parenthesized in *italics.*

3) Numbers **boxed** exceed the TRRP Tier 1 comm/ind PCL for $^{Tot}Soil_{Comb}$, and soil-to-groundwater leaching to Class 3 groundwater based on SPLP results.

APPENDIX C

ARCADIS

Appendix C

Surface Water Analytical Data
Summary Tables

Table 1. Analytical Results Summary - Total Metals, Corpus Christi Ship Channel Surface Water (mg/L), February 16, 2004, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Antimony	Arsenic	Cadmium	Cobalt	Copper	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc
Background Surface Water Samples (> 0.5 Miles from Encycle)														
BKG-1	<0.006	<0.01	<0.005	<0.01	0.02	<0.01	0.02	<0.002	0.01	<0.01	<0.005	<0.002	<0.02	0.05
BKG-2	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	0.02	<0.002	0.01	<0.01	<0.005	<0.002	<0.02	0.07
BKG-3	<0.006	<0.01	<0.005	<0.01	0.03	<0.01	0.02	<0.002	0.01	<0.01	<0.005	<0.002	<0.02	0.05
BKG-4	0.034	<0.01	<0.005	<0.01	0.03	<0.01	0.02	<0.002	0.02	<0.01	<0.005	<0.002	<0.02	0.04
Background Surface Water Upper Tolerance Limits[a]														
Background Mean (x):[b]	0.0108	0.005	0.0025	0.005	0.021	0.005	0.02	0.001	0.0125	0.005	0.0025	0.001	0.01	0.0525
Background Standard Deviation (S):	0.0155	0	0	0	0.012	0	0	0	0.005	0	0	0	0	0.013
Background Upper Tolerance Interval (X + KS):[c]	0.09	0.005	0.0025	0.005	0.08	0.005	0.02	0.001	0.038	0.005	0.0025	0.001	0.01	0.12
01 Landfill Area Surface Water Samples														
SED-1	0.017	<0.01	<0.005	<0.01	0.04	<0.01	**0.04**	<0.002	**0.07**	<0.01	<0.005	<0.002	<0.02	0.11
SED-4	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	0.02	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.09
SED-7	<0.006	<0.01	<0.005	<0.01	0.02	<0.01	0.02	<0.002	0.01	<0.01	<0.005	<0.002	<0.02	0.08
SED-10	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	0.02	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.07
Equipment Blank	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.02
Field Blank	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	<0.01

a *"Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Interim Final Guidance"*, U.S. Environmental Protection Agency, 1989.

b For non-detects, one-half of the detection limit was used as the constituent concentration.

c K = Tolerance factor for one-sided normal tolerance interval with 0.95 probability level (U.S. EPA, 1989).

Notes: (1) Results in milligrams per liter (mg/L)
(2) Numbers in **Bold** exceed background upper tolerance interval.

Table 2. Analytical Results Summary - Dissolved Metals, Corpus Christi Ship Channel Surface Water (mg/L), February 16, 2004, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Antimony	Arsenic	Cadmium	Cobalt	Copper	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc
Background Surface Water Samples (> 0.5 Miles from Encycle)														
BKG-1	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.04
BKG-2	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.05
BKG-3	<0.006	<0.01	<0.005	<0.01	0.02	<0.01	0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.06
BKG-4	<0.006	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.04
Background Surface Water Upper Tolerance Limits[a]														
Background Mean (x):[b]	0.003	0.005	0.0025	0.005	0.0087	0.005	0.006	0.001	0.005	0.005	0.0025	0.001	0.01	0.0475
Background Standard Deviation (S):	0	0	0	0	0.0075	0	0.0025	0	0	0	0	0	0	0.0096
Background Upper Tolerance Interval (X + KS):[c]	0.003	0.005	0.0025	0.005	0.047	0.005	0.019	0.001	0.005	0.005	0.0025	0.001	0.01	0.097
01 Landfill Area Surface Water Samples														
SED-1	**0.055**	<0.01	<0.005	<0.01	0.02	<0.01	**0.03**	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.09
SED-4	**0.012**	<0.01	<0.005	<0.01	0.01	<0.01	0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.08
SED-7	<0.006	<0.01	<0.005	<0.01	0.02	<0.01	0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.08
SED-10	<0.006	<0.01	<0.005	<0.01	0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.005	<0.002	<0.02	0.06

a *"Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Interim Final Guidance"*, U.S. Environmental Protection Agency, 1989.

b For non-detects, one-half of the detection limit was used as the constituent concentration.

c K = Tolerance factor for one-sided normal tolerance interval with 0.95 probability level (U.S. EPA, 1989).

Notes:
(1) Results in milligrams per liter (mg/L)
(2) Samples were filtered (0.45 micron) at analytical laboratory.
(3) Numbers in **Bold** exceed background upper tolerance interval.

Table 3. Surface Water Salinity Data, Corpus Christi Ship Channel (mg/L), February 16, 2004, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID[a]	Sample Date	Total Dissolved Solids (mg/L)	Specific Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	pH	Temperature[b]
SED-1	2/16/04	29,100	39,700	9.6	8.0	12.7°C
SED-4	2/16/04	29,400	40,600	11	8.0	12.7°C
SED-7	2/16/04	29,000	37,700	10	8.1	12.7°C
SED-10	2/16/04	28,700	38,400	11	8.2	12.7°C

mg/L Milligrams per liter

a Surface water sample identifications and sample locations correspond to sediment samples SED-1, SED-4, SED-7, and SED-10 collected directly north of the Encycle 01 Landfill on September 30, 2003.

b Temperature measured in the field at the time of sampling using a hand-held temperature meter (Hanna Instruments Model HI 991301.

APPENDIX D

ARCADIS

Appendix D

Pore Water Analytical Data
Summary Tables

Pore Water Analtyical Data - January 2004
Encycle/Texas, Inc., Corpus Christi, Texas.

Analyte	*Sample:*	SED-1	SED-4	SED-7	SED-10
	Date:	1/30/04	1/30/04	1/30/04	1/30/04
Dissolved Metals (ug/L)					
Antimony, Dissolved		21.4	2.59	58.4	356
Arsenic, Dissolved		17.8	11.6	27.9	11.4
Cobalt, Dissolved		<5	20.9	<5	8.2
Manganese, Dissolved		476	31200	1790	154
Selenium, Dissolved		10.6	1.9	9.2	10.4
Thallium, Dissolved		0.06	0.03	0.09	0.28
Tin, Dissolved		<1	<1	<1	<1
Mercury, Dissolved		10.3	1.3	16.3	1.9

<1 Not Detected; value equals the SQL.

Note: January 2004 pore water samples SED-1, SED-4, SED-7, and SED-10 were taken at the same locations as the September 30, 2003 sediment samples SED-1, SED-4, SED-7, and SED-10.

APPENDIX E

ARCADIS

Appendix E

Sediment Analytical Data Summary Tables

Table 1. Sediment Sample Analytical Results (mg/kg) - September - October 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Sediment Lithology	Sample Date	Water Depth (ft)	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc	pH
Background Sediment Samples - North Side of Corpus Christi Ship Channel																				
BKG-N1	Gray clay with shell fragments	9/30/03	3	<0.8	6	<1	14	7	15	<0.1	15	167	<0.05	10	<1.3	<0.5	0.5	<5	73	8.8
BKG-N2	Gray silty fine sand with shell fragments	9/30/03	2	<0.8	<5	<1	37	43	7	<0.1	6	30	<0.05	18	<0.8	<0.5	0.7	<5	39	8.2
BKG-N3	Brown silty clay and fine sand	9/30/03	3	<0.8	<5	1	58	76	8	<0.1	11	59	<0.05	28	<0.8	<0.5	<0.5	<5	42	8.7
BKG-N4	Brown clay with silty sand with shell fragments	9/30/03	4	<0.8	7	<1	24	12	12	<0.1	40	149	<0.05	14	<1.9	<0.5	<0.5	<5	65	9.0
BKG-N5	Brown clayey silty sand	9/30/03	2	<0.8	<5	2	43	73	13	<0.1	12	43	0.08	22	<0.8	<0.5	<0.5	<5	126	9.0
BKG-N6	Brown fine sand with shell fragments	9/30/03	3	<0.8	<5	<1	63	121	6	<0.1	6	35	<0.05	32	<0.8	<0.5	<0.5	<5	29	8.6
BKG-N7	Brown fine sand with shell fragments	9/30/03	2	<0.8	<5	<1	54	94	<5	<0.1	5	31	<0.05	27	<0.8	<0.5	<0.5	<5	22	8.7
BKG-N8	Brown v. fine sand with shell fragments	9/30/03	2	<0.8	<5	<1	57	90	<5	<0.1	<5	27	<0.05	29	<0.8	<0.5	<0.5	<5	19	8.4
Background Sediment Samples - South Side of Corpus Christi Ship Channel																				
BKG-S1	Brown fine sand with shell fragments	9/30/03	3	<0.8	<5	<1	39	70	<5	<0.1	<5	42	<0.05	20	<0.8	<0.5	<0.5	<5	13	8.3
BKG-S2	Brown fine sand	9/30/03	4	<0.8	<5	<1	51	96	<5	<0.1	<5	37	<0.05	26	<0.8	<0.5	<0.5	<5	16	8.1
BKG-S3	Brown silty clayey fine sand	9/30/03	5	<0.8	<5	1	33	59	23	<0.1	13	86	0.08	29	<0.8	<0.5	<0.5	<5	117	8.7
BKG-S4	Brown fine sand	9/30/03	2	<0.8	<5	2	55	108	6	<0.1	15	30	<0.05	28	<0.8	<0.5	<0.5	<5	69	8.6
BKG-S5	Brown clayey sand	9/30/03	3	<0.8	<5	1	43	73	8	<0.1	34	70	<0.05	22	<0.8	<0.5	<0.5	<5	78	8.9
BKG-S6	Brown fine to med. sand w/shell fragments	9/30/03	2	<0.8	<5	1	66	120	6	<0.1	8	41	<0.05	33	<0.8	<0.5	<0.5	<5	31	8.8
BKG-S7	Brown clayey fine sand	9/30/03	4	<0.8	<5	<1	45	67	7	<0.1	8	67	<0.05	23	<0.8	<0.5	<0.5	<5	25	8.8
BKG-S8	Brown clayey fine sand	9/30/03	4	<0.8	<5	<1	28	65	6	<0.1	7	56	<0.05	16	<0.8	<0.5	<0.5	<5	24	8.6
Sediment Background Upper Tolerance Limits[a]																				
Sediment on north side of Corpus Christi Ship Channel:				0.4	9.46	2.44	99.95	193	23.27	0.05	50.38	249	0.093	47.56	1.14	0.25	0.88	2.5	165	7.8min 9.6max
Sediment on south side of Corpus Christi Ship Channel:				0.4	2.5	2.54	84.05	155	28.42	0.05	43.74	115	0.093	41.97	0.4	0.25	0.25	2.5	165	7.7min 9.5max
01 Landfill Step-Out Sediment Samples																				
SED-1 (step-out from boring B-224)	Brown fine sand with shell fragments	9/30/03	2	**2.6**	**33**	**163**	36	95	**743**	<0.1	**337**	**6,120**	0.09	29	**2.5**	**1.3**	<0.5	**11**	**15,800**	8.7
SED-2 (step-out from SED-1)	Gray fine sand	9/30/03	3	<0.8	**10**	**55**	23	69	**148**	<0.1	**118**	**2,610**	**0.29**	16	**1.2**	<0.5	<0.5	**5**	**6,430**	8.3
SED-3 (step-out from SED-2)	Gray fine sand	9/30/03	4	**0.9**	9	**44**	42	86	**256**	<0.1	**97**	**1,470**	**0.15**	25	<0.8	**0.5**	<0.5	**6**	**4,260**	8.2
SED-4 (step-out from boring B-222)	Gray sandy clay with shell fragments	9/30/03	2	<0.8	**10**	**69**	18	32	**93**	<0.1	**187**	**5,810**	**0.23**	**48**	<0.8	**0.6**	<0.5	<5	**8,630**	8.8
SED-5 (step-out from SED-4)	Gray fine sand with shell fragments	9/30/03	3	<0.8	<5	**30**	42	115	**83**	<0.1	42	**1,870**	0.05	25	<0.8	<0.5	<0.5	<5	**3,890**	8.7
SED-6 (step-out from SED-5)	Brown fine sand with shell fragments	9/30/03	4	<0.8	<5	**24**	32	92	**73**	<0.1	47	**1,500**	0.05	19	<0.8	<0.5	0.8	<5	**3,260**	8.6

Table 1. Sediment Sample Analytical Results (mg/kg) - September - October 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Sediment Lithology	Sample Date	Water Depth (ft)	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc	pH
SED-7 (step-out from boring B-220)	Brown sandy clay with shell fragments	9/30/03	2	**1.9**	**11**	**23**	18	25	**120**	<0.1	**240**	**3,120**	**0.95**	31	**4.7**	**0.9**	0.6	<5	**12,200**	8.3
SED-8 (step-out from SED-7)	Gray sandy clay	9/30/03	4	<0.8	**13**	**18**	18	20	**43**	<0.1	40	**988**	0.07	17	<0.8	<0.5	0.7	<5	**2,020**	8.8
SED-9 (step-out from SED-8)	Gray sandy clay	9/30/03	5	**0.8**	7	**23**	18	24	**65**	<0.1	**70**	**826**	<0.05	28	<0.8	<0.5	**0.9**	<5	**3,090**	8.3
SED-10 (step-out from boring B-218)	Brown fine sand with shell fragments	9/30/03	2	**7.9**	**45**	**156**	43	**211**	**509**	<0.1	**465**	**7,650**	**0.43**	**162**	**2**	**2.4**	<0.5	**36**	**22,400**	7.9
SED-11 (step-out from SED-10)	Gray sandy clay with shell fragments	9/30/03	3	**97**	**83**	**18**	30	39	**174**	<0.1	**3,530**	**1,140**	**0.45**	19	**3.9**	**6.1**	<0.5	**619**	**4,900**	9.0
SED-12 (step-out from SED-11)	Gray sandy clay with shell fragments	9/30/03	4	**82**	**65**	**19**	29	39	**107**	<0.1	**2,340**	**512**	**0.11**	16	**5**	**4.5**	<0.5	**453**	**2,840**	8.8
SED-13	Gray fine sand with shell fragments	10/23/03	4	<0.8	6	**8**	---	130	**37**	---	23	232	0.09	22	<0.8	<0.5	<5	<5	**668**	---
SED-19 (step-out from SED-13)	Brownish gray silty v. fine to fine sand	10/23/03	10	---	---	**5**	---	---	**86**	---	---	227	**0.2**	---	---	---	---	---	**590**	---
SED-25 (step-out from SED-19)	Stiff, lt. gray clay	10/23/03	53	---	---	<1	---	---	19	---	---	**450**	<0.05	---	---	---	---	---	66	---
SED-31 (step-out from SED-25)	Soft, gray clay, silt, and v. fine sand	10/23/03	45	---	---	**3**	---	---	**1250**	---	---	**575**	**0.27**	---	---	---	---	---	**473**	---
SED-14 (step-out from SED-12)	Gray fine sand with shell fragments	10/23/03	9	<0.8	<5	**6**	---	69	**37**	---	24	**275**	**0.1**	11	<0.8	<0.5	<5	<5	**660**	---
SED-20 (step-out from SED-14)	Gray clayey silt	10/23/03	20	---	---	1	---	---	**54**	---	---	**321**	**0.21**	---	---	---	---	---	**232**	---
SED-26 (step-out from SED-20)	Firm, tan to gray v. fine sandy clay	10/23/03	52	---	---	<1	---	---	**24**	---	---	**1260**	<0.05	---	---	---	---	---	71	---
SED-32 (step-out from SED-26)	Soft, gray clay, silt, and v. fine sand	10/23/03	46	---	---	**3**	---	---	**2580**	---	---	**673**	**0.29**	---	---	---	---	---	**571**	---
SED-15 (step-out from SED-9)	Gray clayey v. fine sand with shell fragments	10/23/03	12	<0.8	6	1	---	36	20	---	9	88	0.06	7	<0.8	<0.5	<5	<5	108	---

Table 1. Sediment Sample Analytical Results (mg/kg) - September - October 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Sediment Lithology	Sample Date	Water Depth (ft)	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc	pH
SED-21 (step-out from SED-15)	Gray clayey v. fine sand	10/23/03	21	---	---	**5**	---	---	**122**	---	---	246	**0.41**	---	---	---	---	---	**529**	---
SED-27 (step-out from SED-21)	Firm, tan to lt. gray clay	10/23/03	52	---	---	<1	---	---	**34**	---	---	**551**	<0.05	---	---	---	---	---	76	---
SED-33 (step-out from SED-27)	Soft, gray clay, silt, and v. fine sand	10/23/03	45	---	---	**3**	---	---	**2460**	---	---	**490**	**0.24**	---	---	---	---	---	**537**	---
SED-16 (step-out from SED-6)	Gray clayey v. fine sand	10/23/03	10	<0.8	<5	**3**	---	57	**64**	---	19	207	**0.12**	9	<0.8	<0.5	<5	<5	**398**	---
SED-22 (step-out from SED-16)	Gray silty clayey fine sand with shell fragments	10/23/03	20	---	---	**3**	---	---	**108**	---	---	**287**	**0.69**	---	---	---	---	---	**424**	---
SED-28 (step-out from SED-22)	Soft, gray clay and v. fine sand	10/23/03	53	---	---	2	---	---	**363**	---	---	**693**	**0.18**	---	---	---	---	---	**365**	---
SED-34 (step-out from SED-28)	Soft, gray v. fine to fine sand	10/23/03	39	---	---	2	---	---	**411**	---	---	168	**0.21**	---	---	---	---	---	**268**	---
SED-17 (step-out from SED-3)	Gray clayey v. fine sand with shell fragments	10/23/03	9	<0.8	<5	**5**	---	48	**66**	---	19	150	0.09	8	<0.8	<0.5	<5	<5	**399**	---
SED-23 (step-out from SED-17)	Gray silty v. fine to fine sand	10/23/03	19	---	---	**3**	---	---	**54**	---	---	143	**0.13**	---	---	---	---	---	**281**	---
SED-29 (step-out from SED-23)	Soft, gray clay, silt, and v. fine sand	10/23/03	53	---	---	**3**	---	---	**290**	---	---	**750**	**0.26**	---	---	---	---	---	**426**	---
SED-35 (step-out from SED-29)	Soft, gray v. fine to fine sand	10/23/03	45	---	---	1	---	---	**534**	---	---	**275**	**0.15**	---	---	---	---	---	**185**	---
SED-18	Gray clayey v. fine sand with shell fragments	10/23/03	4	<0.8	<5	1	---	55	**31**	---	20	76	**0.1**	11	<0.8	<0.5	<5	<5	**196**	---
SED-24 (step-out from SED-18)	Gray clayey v. fine sand	10/23/03	22	---	---	**11**	---	---	**105**	---	---	**263**	**0.94**	---	---	---	---	---	**1010**	---
SED-30 (step-out from SED-24)	Soft, gray clay, silt, and v. fine sand	10/23/03	50	---	---	2	---	---	**102**	---	---	**374**	**0.22**	---	---	---	---	---	**328**	---
SED-36 (step-out from SED-30)	Soft, gray clay, silt, and v. fine sand	10/23/03	49	---	---	2	---	---	**206**	---	---	**274**	**0.26**	---	---	---	---	---	**315**	---

Table 1. Sediment Sample Analytical Results (mg/kg) - September - October 2003, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Sediment Lithology	Sample Date	Water Depth (ft)	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc	pH
Equipment Blank		9/30/03	---	<0.05	<0.005	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	---
Field Blank		9/30/03	---	<0.05	<0.005	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	0.055	---
Equipment Blank		10/23/03	---	<0.05	<0.005	<0.01	<0.01	<0.05	<0.05	<0.004	<0.02	<0.015	<0.0005	<0.05	<0.01	<0.005	<0.002	<0.05	<0.05	---

mg/kg Milligrams per kilogram

--- Not analyzed

a See Table 2 for Upper Tolerance Limit Calculations

Note: 1) Numbers in **bold** exceed sediment background upper tolerance limit from north side of Corpus Christi Ship Channel.

Table 2. Background Sediment Sample Statistical Calculations, Encycle/Texas, Inc., Corpus Christi, Texas

Sample ID	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Copper	Cyanide	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Zinc	pH
Background Sediment Samples - North Side of Corpus Christi Ship Channel																	
BKG-N1	<0.8	6	<1	14	7	15	<0.1	15	167	<0.05	10	<1.3	<0.5	0.5	<5	73	8.8
BKG-N2	<0.8	<5	<1	37	43	7	<0.1	6	30	<0.05	18	<0.8	<0.5	0.7	<5	39	8.2
BKG-N3	<0.8	<5	1	58	76	8	<0.1	11	59	<0.05	28	<0.8	<0.5	<0.5	<5	42	8.7
BKG-N4	<0.8	7	<1	24	12	12	<0.1	40	149	<0.05	14	<1.9	<0.5	<0.5	<5	65	9.0
BKG-N5	<0.8	<5	2	43	73	13	<0.1	12	43	0.08	22	<0.8	<0.5	<0.5	<5	126	9.0
BKG-N6	<0.8	<5	<1	63	121	6	<0.1	6	35	<0.05	32	<0.8	<0.5	<0.5	<5	29	8.6
BKG-N7	<0.8	<5	<1	54	94	<5	<0.1	5	31	<0.05	27	<0.8	<0.5	<0.5	<5	22	8.7
BKG-N8	<0.8	<5	<1	57	90	<5	<0.1	<5	27	<0.05	29	<0.8	<0.5	<0.5	<5	19	8.4
Number of samples (n):	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Mean (X):	0.4	3.5	0.75	43.75	64.5	8.25	0.05	12.19	67.63	0.032	22.5	0.50	0.25	0.34	2.5	51.88	8.68
Standard Deviation (S):	0	1.87	0.53	17.63	40.4	4.71	0	11.98	56.88	0.019	7.86	0.20	0	0.17	0	35.60	0.28
Tolerance Interval (X + KS):[a]	0.4	9.46	2.44	99.95	193	23.27	0.05	50.38	249	0.093	47.56	1.14	0.25	0.88	2.5	165	7.8min 9.6max
Background Sediment Samples - South Side of Corpus Christi Ship Channel																	
BKG-S1	<0.8	<5	<1	39	70	<5	<0.1	<5	42	<0.05	20	<0.8	<0.5	<0.5	<5	13	8.3
BKG-S2	<0.8	<5	<1	51	96	<5	<0.1	<5	37	<0.05	26	<0.8	<0.5	<0.5	<5	16	8.1
BKG-S3	<0.8	<5	1	33	59	23	<0.1	13	86	0.08	29	<0.8	<0.5	<0.5	<5	117	8.7
BKG-S4	<0.8	<5	2	55	108	6	<0.1	15	30	<0.05	28	<0.8	<0.5	<0.5	<5	69	8.6
BKG-S5	<0.8	<5	1	43	73	8	<0.1	34	70	<0.05	22	<0.8	<0.5	<0.5	<5	78	8.9
BKG-S6	<0.8	<5	1	66	120	6	<0.1	8	41	<0.05	33	<0.8	<0.5	<0.5	<5	31	8.8
BKG-S7	<0.8	<5	<1	45	67	7	<0.1	8	67	<0.05	23	<0.8	<0.5	<0.5	<5	25	8.8
BKG-S8	<0.8	<5	<1	28	65	6	<0.1	7	56	<0.05	16	<0.8	<0.5	<0.5	<5	24	8.6
Number of samples (n):	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Mean (X):	0.4	2.5	0.88	45	82	7.63	0.05	11.25	53.63	0.032	24.6	0.4	0.25	0.25	2.5	46.63	8.60
Standard Deviation (S):	0	0	0.52	12.25	23	6.52	0	10.19	19.38	0.019	5.45	0	0	0	0	37.28	0.27
Tolerance Interval (X + KS):[a]	0.4	2.5	2.54	84.05	155	28.42	0.05	43.74	115	0.093	41.97	0.4	0.25	0.25	2.5	165	7.7min 9.5max

a K = Tolerance factor for one-sided normal tolerance interval with 0.95 probability level (U.S. EPA, Feb. 1989)

Note: For non-detects, one-half of the detection limit was used as the constituent concentration.

Table 3. Sediment Sample TOC and Grain Size Analytical Results Summary, Encycle/Texas, Inc., Corpus Christi, Texas

					Grain Size Evaluation						
					Percent Passing Sieve by Weight						
Sample ID	Sediment Lithology	Sample Date	Water Depth (ft)	TOC (ppm)	#4 sieve (4.75 mm)	#8 sieve (2.36 mm)	#16 sieve (1.18 mm)	#30 sieve (0.6 mm)	#50 sieve (0.3 mm)	#100 sieve (0.15 mm)	#200 sieve (0.075 mm)
Background Sediment Samples - North Side of Corpus Christi Ship Channel											
BKG-N1	Gray clay with shell fragments	9/30/03	3	5.4	89.6	87.0	83.1	81.2	77.7	68.0	47.8
BKG-N7	Brown fine sand with shell fragments	9/30/03	2	<2	99.2	98.9	98.1	91.7	68.3	29.6	7.1
01 Landfill Step-Out Sediment Samples											
SED-1	Brown fine sand with shell fragments	9/30/03	2	3.7	74.1	64.7	55.3	42.1	12.8	1.4	0.5
SED-11	Gray sandy clay with shell fragments	9/30/03	3	3.1	99.2	98.5	96.6	91.7	75.6	58.1	29.4

TOC Total organic carbon
ppm Parts per million
mm Millimeters (sieve size openings)

Sediment Analytical Data - January 2004
Encycle/Texas, Inc., Corpus Christi, Texas.

Analyte	*Sample:*	SED-1	SED-4	SED-7	SED-10
	Depth (inches)	0-6	0-6	0-6	0-6
	Date:	01/30/2004	01/30/2004	01/30/2004	01/30/2004
Inorganics (mg/kg)					
Antimony		0.87	0.43	1.22	1.22
Arsenic		12.3	7.8	9.7	8.9
Cadmium		43.9	43.2	189	167
Chromium		*	*	*	*
Cobalt		6.39	22.8	83.6	20.2
Copper		73.9	26.8	47.7	289
Cyanide		*	*	*	*
Lead		116	49.5	32.4	163
Manganese		315	6090	14900	2910
Mercury		19.5	0.43	2.21	0.16
Nickel		11.5	42.3	29.8	13.5
Selenium		10	2.8	1.2	<1.2
Silver		1.22	0.28	0.35	0.19
Thallium		0.66	0.23	0.18	0.28
Tin		7	<5.3	6	10.7
Zinc		4380	14100	36400	8430
pH		*	*	*	*
SEM Metals (mg/kg)					
Cadmium		56.3	55.6	285	374
Copper		<0.2	14.4	26.9	52.4
Lead		119	30.3	38.7	112
Nickel		3.2	22	13.5	22.7
Silver		<0.2	<0.2	<0.3	<0.3
Zinc		8350	16100	17400	22500
AVS (mg/kg)		2610	563	327	96

<1 Not Detected; value equals the SQL.
* Not Analyzed.
SEM Simtaneously Extracted Metals.
AVS Acid Volatile Sulfide.

Note: January 2004 sediment samples SED-1, SED-4, SED-7, and SED-10 were taken in 2-foot water depths at the same locations as the September 30, 2003 sediment samples SED-1, SED-4, SED-7, and SED-10.

APPENDIX F

ARCADIS

Appendix F

Site Photographs

Photograph 1. Landfill 01 looking south towards the Encycle facility (taken January 30, 2004).

Photograph 2. Corpus Christi Ship Channel adjacent to the Encycle Property, view facing west. The orange cone marks sediment and surface water sampling location SED-4 (taken January 30, 2004).

Photograph 3. Sediment and surface water sampling location SED-10. Note rip rap along banks (taken January 30, 2004).

Photograph 4. Permitted outfall between 01 Landfill and East Lagoon, looking south from the ship channel. The East Lagoon perimeter wall is to the right and the 01 Landfill is to the left (taken January 30, 2004).

Photograph 5. Looking northwest at the East Lagoon. Aquatic vegetation was removed during the week of March 22, 2004 as part of the TCEQ-approved closure plan for the East Lagoon (taken January 30, 2004).

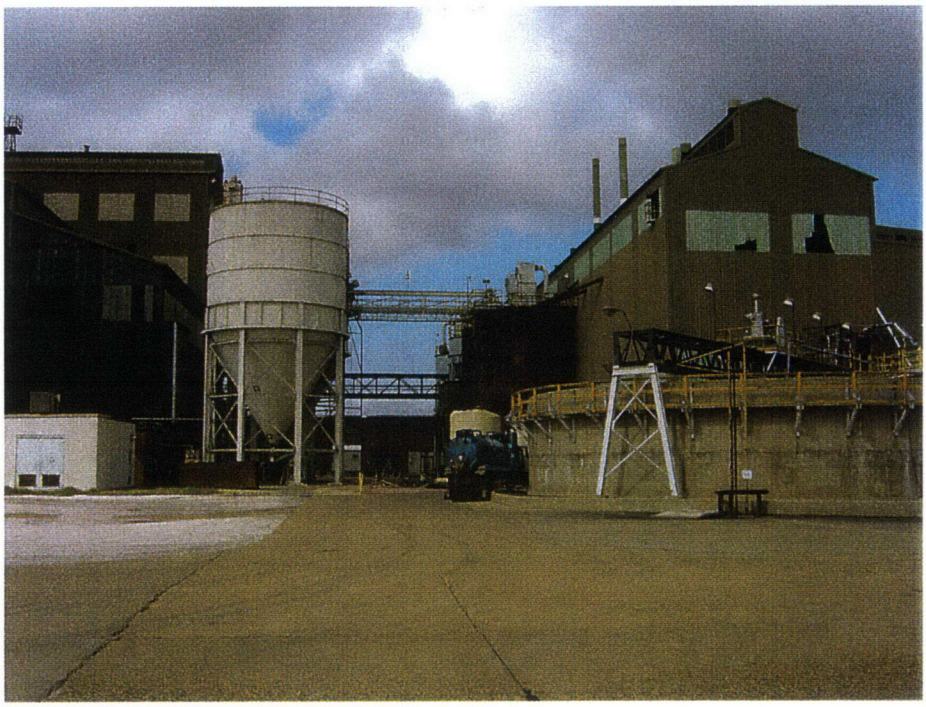
Photograph 6. East and West Lagoons looking west. Note the water fowl present. The railroad right-of-way is to the left (taken January 30, 2004).

Photograph 7. Looking south toward the Encycle plant area. Note the steep bluff line and fence separating the topographically higher plant area (Beaumont Formation) from the topographically lower alluvial sediments in the foreground (taken January 30, 2004).

Photograph 8. Looking west at railroad right-of-way. The East and West Lagoons are to the right and the Encycle Plant area is to the left (taken January 30, 2004).

Photograph 9. Plant area looking east at water tower from main entrance gate directly north of Up River Road (taken March 26, 2004).

Photograph 10. Plant area looking north at West Cell House (left) and Utilities Building (east) (taken March 26, 2004).



Photograph 11. Plant area looking north at Facility No. 3 (left) and Facility No. 2 (right) (taken March 26, 2004).

Photograph 12. Plant area looking northeast at Facility No. 3 (taken March 26, 2004).

APPENDIX G

ARCADIS

Appendix G

Ecotoxicological Profiles

Appendix G. Ecotoxicological Profiles

ANTIMONY

Antimony is a naturally occurring metalloid element existing in valence states of 3 and 5 (Budavari 1989, ATSDR, 1990). Mean antimony concentrations in the earth's crust have been estimated to be 0.2 parts per million (ppm) (NAS, 1980). Metallic antimony and a few trivalent antimony compounds are the most significant forms regarding exposure potential and toxicity (ATSDR, 1990). Antimony is a common urban air pollutant occurring at an average concentration of 0.001 ug/m^3 (Beliles, 1979). Antimony is used in metallurgical processes, paints and enamels, various textiles, rubber, and fire retardation (antimony trioxide).

Exposure routes for aquatic organisms include ingestion and gill uptake with antimony bioconcentrating in aquatic organisms. Exposure routes for mammals include ingestion and inhalation. It does not biomagnify in terrestrial food chains and adsorption is low (Meyers et al., 1978 in USEPA, 1999). Ingested antimony is absorbed slowly with observed affects including degeneration of the myocardium, arterial hypotension, heart dysfunction, arrhythmia and altered electrocardiogram pattern (Rossi et al, 1987). Antimony is not significantly metabolized and is excreted in the urine and feces.

Acute oral exposure of animals to high doses of antimony or antimony-containing compounds (antimonials) may cause gastrointestinal disorders (vomiting, diarrhea), respiratory difficulties, and death at extremely high doses (Bradley and Frederick, 1941; Beliles, 1979; ATSDR, 1990). Long term exposure to high doses of antimony has been shown to adversely affect longevity in animals (Schroeder et al., 1970). Limited data suggest that prenatal and postnatal exposure of rats to antimony interferes with vasomotor responses (Marmo et al., 1987, Rossi et al., 1987). Long term exposure studies have also reported liver damage and blood changes in study animals that ingested antimony.

ARSENIC

Arsenic, because of its complex chemistry, exists in the environment in many different inorganic and organic forms, which have different toxicological and physicochemical properties. Inorganic arsenic exists as either the trivalent (3+) form or the pentavalent (5+) form. The inorganic trivalent arsenic forms are more toxic than the pentavalent forms. Elemental arsenic is essentially nontoxic even at high intakes. The dominant form of arsenic in soil and its transport are largely dependent on the physical characteristics of the soil matrix. Insoluble arsenic compounds, such as arsenic trioxide, bind tightly to organic matter in soil or sediment (USEPA, 1984; ATSDR, 1993). Various forms of arsenic in soil are interconverted by chemical reactions and microbial activity. Soil microorganisms convert small amounts of arsenic to volatile arsines. These volatile arsines are released to the air, become adsorbed to particles, and are redeposited (ATSDR, 1993) or, under certain conditions, react to form oxides (Ghassemi et al., 1981).

Arsenic in soil is usually tightly bound and therefore the bioconcentration potential in soil invertebrates and aquatic species is low. Biomagnification through the food chain is minimal because once ingested, arsenic is metabolized to methylated compounds that are rapidly excreted. Absorbed arsenic is distributed to all tissues where it interferes with normal enzymatic activity or disrupts the functioning of other cellular macromolecules. Evaluation of the potential for toxicity from exposure to low levels of arsenic is complicated by the current understanding that arsenic is an essential element in some mammalian species, and that arsenic deficiency may result in adverse reproductive and developmental effects.

Exposure routes for aquatic organisms include gill uptake, ingestion of arsenic suspended on particles in the water column or deposited in sediment, and ingestion of plant matter and lower trophic level aquatic species. Soil invertebrates are directly exposed to arsenic found in soil and soil pore water. Exposure routes for soil invertebrates include ingestion and dermal absorption.. The majority of ecological mammalian exposure occurs through ingestion.

BARIUM

Barium is a divalent alkaline-earth metal found only in combination with other elements in nature. The most important of these combinations involve the following: peroxide, chloride, sulfate, carbonate, nitrate, and chlorate. Due to the element's tendency to form salts with limited solubility in soil and water, it is expected to have a residence time of hundreds of years and is not expected to be very mobile. Acidic conditions, however, will increase the solubility of some barium compounds, facilitating their movement from the soil to the groundwater (USEPA, 1984). Trace amounts of barium were found in over 99% of the surface waters and finished drinking water samples (average values of 43 ug/L, and 28.6 ug/L, respectively) across the United States (NAS, 1977).

The soluble salts of barium are toxic in mammalian systems. They are absorbed rapidly from the gastrointestinal tract and are deposited in the muscles, lungs and bone. Barium is excreted primarily in the feces.

At low doses, barium acts as a muscle stimulant and at higher doses affects the nervous system eventually leading to paralysis. Acute and subchronic oral doses of barium cause vomiting and diarrhea, followed by decreased heart rate and elevated blood pressure. Higher doses result in cardiac irregularities, weakness, tremors, anxiety and dyspnea.

BISMUTH

Bismuth is produced as a byproduct of lead ore processing. Among the heavy metals, it is the heaviest and is the only one that is non-toxic. Bismuth has been used in solders, a variety of other alloys, metallurgical additives, medications, and in atomic research (USGS, 2004). In the early 1990's, research began on the evaluation of bismuth as a nontoxic replacement for lead in such uses as ceramic glazes, fishing sinkers, food processing equipment, free-machining brasses for plumbing applications, lubricating greases, and shot for waterfowl hunting.

Most bismuth compounds are insoluble and poorly absorbed if ingested or contacted. The urine is the major route of excretion of bismuth with traces found in saliva and milk. The total elimination of the compound is slow and is dependent on the mobilization from the injection site. Chronic toxicity effects are relatively minor and include decreased appetite, weakness and fever (Klaassen, 1996).

CADMIUM

Cadmium exists in the elemental (0+) state or the (2+) valance state in nature. Cadmium compounds in soil are stable and are not subject to degradation (ATSDR, 1993). Cadmium compounds can be transformed by precipitation, dissolution, complexation, and ion exchange (McComish and Ong, 1988). Cadmium compounds in aquatic environments are not affected by photolysis, volatilization, or biological methylation (Callahan et al., 1979). Precipitation and sorption to mineral surfaces and organic materials are important removal processes for cadmium compounds (ATSDR, 1993) in environmental media. Concentrations of cadmium are generally higher in sediments than in overlying water (Callahan et al., 1979).

Exposure routes for aquatic organisms include ingestion and gill uptake. Freshwater biota are the most sensitive organisms to cadmium exposure, with toxicity inversely proportional to water hardness. Cadmium bioaccumulates in both aquatic and terrestrial animals, with higher bioconcentration in aquatic organisms. Exposure routes for ecological mammalian species include ingestion and inhalation, while dermal absorption is negligible (Goodman and Gilman, 1985). Cadmium interferes with the absorption and distribution of other metals and causes renal toxicity in vertebrates. Absorption and retention of cadmium decreases with prolonged exposure. Cadmium absorption through ingestion is inversely proportional to intake of other metals, especially iron and calcium (Friberg, 1979).

CHROMIUM

Chromium exists in multiple forms, of which the trivalent (Cr (III)) and hexavalent (Cr (VI)) states are of greatest interest with regard to potential environmental toxicity. Chromium is found in nature as the trivalent form (Barnhart, 1997). The hexavalent state is the second most stable state, but rarely occurs in nature (NPS, 1997) with the majority being man-made and released into the environment by industrial emissions (WHO, 1984; Hertel, 1986). In the environment, Cr (III) is generally immobile in soil and is not very toxic to plants and animals (Kabata-Pendias and Pendias, 1984), whereas (Cr (VI) is both mobile and toxic. Based on research conducted by EPA, if acid volatile sulfide (AVS) is present in sediment, then the sediments represent a reducing environment, and all chromium is present as the trivalent form (Boothman, Berry et al., 1999). Also, the pH and Eh (reduction/oxidation potential) environment of carbon-based biological systems reduce hexavalent chromium to trivalent chromium (Nieboer and Jusys, 1988; Barnhart, 1997). Therefore, all chromium present in biological tissue is in the trivalent form. Hexavalent chromium is not expected to be present in surface water in the absence of a direct source, due to the very slow kinetics of oxidation.

Chromium plays a role in glucose and cholesterol metabolism and is thus an essential element to animals (Schroeder et al., 1962). Chromium (III) is poorly absorbed, regardless of the route of exposure, whereas chromium (VI) is more readily absorbed (Hamilton and Wetterhahn, 1988). Animals localize chromium in the lung, liver, kidney, spleen, adrenals, plasma, bone marrow, and red blood cells (Langard 1982; ATSDR, 1989; Bragt and van Dura, 1983; Hamilton and Wetterhahn, 1988). There is no evidence that chromium is biotransformed, but Cr(VI) does undergo enzymatic reduction, resulting in the formation of reactive intermediates and Cr(III) (Hamilton and Wetterhahn, 1988). The main routes for the excretion of chromium are via the kidneys/urine and the bile/feces (Guthrie 1982; Langard, 1982).

COBALT

Cobalt makes up about 0.0023% of the earth's crust and usually occurs with nickel or sulfide and arsenic ores (NAS, 1980). Its primary industrial use is in alloy steel. It is a dietary essential as a component of vitamin B_{12}, especially for ruminants. Insufficiencies can lead to "coast disease" and "wasting" disease in cattle and sheep (Underwood, 1977).

Ingested cobalt is not absorbed to a high degree by the gut and in mammals, is excreted in urine, feces, milk, and sweat. In rats and cattle, 80 percent is eliminated in the feces. Hyperglycemia due to pancreatic damage has been reported after injection of cobalt in rats. Single and repeated subcutaneous or intramuscular injections of cobalt powder and salts in rats may cause sarcomas at the site of injection however no other evidence of carcinogenicity from any other route of exposure is known (Klaassen, 1996).

COPPER

Copper occurs naturally in elemental form and as a component of many minerals. Because of its high electrical and thermal conductivity, it is widely used in the manufacture of electrical equipment. Common copper salts, such as the sulfate, carbonate, cyanide, oxide, and sulfide are used as fungicides, as components of ceramics and pyrotechnics, for electroplating, and fir numerous other industrial applications (ACGIH, 1986). Copper is an essential element that is widely distributed in animal and plant tissues. It is a component of a number of metalloenzymes such as catalase, peroxidases, and cytochrome oxidase, and is essential for the utilization of iron (Goyer,1991; Stokinger,1981). Although most copper salts occur in two valences states, as cuprous (Cu^{+}) or cupric (Cu^{2+}) ions, the biological availability and toxicity of copper is most likely associated with the divalent state (ATSDR,1990).

In the aquatic environment, the fate of copper is determined by the formation of complexes, especially with humic substances, and sorption to hydrous metal oxides, clays, and organic materials. The amount of copper able to remain in solution is directly dependent on water chemistry, especially pH and temperature, and the concentration of other chemical species (Callahan et al., 1979; Tyler and McBride, 1982; Fuhrer, 1986).

Copper does not bioaccumulate in mammals and is excreted primarily in the bile (Bush et al., 1955). Copper is known to inhibit photosynthesis and plant growth however because copper is an essential micronutrient for plant nutrition, most adverse effects result from copper deficiency (Adriano, 1986).

CYANIDE

Cyanides are a group of compounds formed with nitrogen and carbon combine. Many chemical forms of cyanide are present in the environment. These include free cyanide, metallocyanides, and synthetic organocyanides. The most common compounds found in the environment are hydrogen cyanide (in air), sodium cyanide and potassium cyanide. Free cyanide is the primary toxic agent.

Cyanides are produced naturally by certain bacteria, fungi and algae (ATSDR, 1993) yet most sources of the compound are anthropogenic. Cyanide is ubiquitous in the environment however concentrations tend to be elevated near anthropogenic sources, such as metal processing operations, electroplaters, gold mining facilities, oil refineries, power plants, and solid waste combustion (Eisler, 1991). Cyanides are also used in the manufacture of synthetic fabrics and plastics, in electroplating baths and metal mining operations, as pesticidal agents and in animal control devises.

Elevated cyanide levels are normally encountered in more than 1000 species of food plants and forage crops, representing probably the greatest source of cyanide exposure and toxicosis in livestock (Eisler, 1991). Cyanides are easily absorbed by animals via inhalation, dermal contact or ingestion and are distributed throughout the body by the circulatory system.

LEAD

Lead is a comparatively rare metal, averaging 16 ppm in the earth's crust that is neither essential nor beneficial in living organisms (Eisler, 1988). One of the major sources of lead contamination in the air, soil, and water is combustion of fuel containing lead additives.

At high concentrations under laboratory conditions, lead adversely affects the survival, growth, reproduction, development, behavior, learning, and metabolism of most species (Eisler, 1988). Numerous physical, chemical, and biological variables substantially influence its effects. In general, organically complexed lead is more toxic than inorganic lead salts, biomagnification of lead is

negligible and younger, immature individuals are more susceptible to lead exposures than are mature individuals.

Absorption and retention of lead from the gastrointestinal tract varies widely with the age, sex, and diet of the organism and the chemical form of the lead. Composition of the diet is a major modifier to lead absorption (and toxic effects) in many species of domestic and laboratory animals, waterfowl, and aquatic organisms. For example, the lack of certain major minerals in the diet can affect toxicity and storage of lead in tissues to a greater extent than doubling the dosages of lead in the diet. Many other conditions also affect lead absorption, including size of lead particle, specific lead compound ingested, presence of other compounds that act synergistically or antagonistically, and dosage when large pieces of lead are ingested (such as lead shot). Lead shot, for example, may lodge in the gastrointestinal tract, dissolve slowly, and cause lead toxicity, or may pass quickly through the tract and leave the body with the feces.

The effects of lead and its compounds on birds held under controlled conditions vary widely with species, age, and sex of exposed birds, as well as with the form and dose of administered lead. Lead shot and certain organic complexes of lead are the most toxic forms of lead. Nestlings are more sensitive than older life stages to lead exposure. Tissue concentrations of lead and pathological lesions both increase in birds given multiple doses over extended periods.

Signs of lead toxicity in domestic and laboratory mammals have been well documented (Eisler, 1988). Generally, significant differences occur between species in response to lead exposure. Effects of lead are more pronounced with organically complexed lead than with inorganic lead salts, younger developmental stages are the most sensitive, and the effects are exacerbated by elevated temperatures and by diets deficient in minerals, fats, and proteins.

MANGANESE

Manganese, as the 12th most abundant element, makes up about 0.1% of the earth's crust. It can exist in oxidation states from -3 to +7, with the most common being +4 in the chemical form of manganese dioxide (Keen and Leach, 1988). The oxides and peroxides are used in industry as oxidizers, and the metal is used for manufacturing metal alloys to increase hardness and corrosion resistance. In living systems, manganese is an essential element that is found most often in the +2 valence state (Keen and Leach, 1988, Stokinger, 1981).

Manganese is an essential trace element for a number of enzymatic reactions, but can elicit a variety of serious toxic responses upon prolonged exposure to elevated concentrations either orally or by inhalation. The central nervous system is the primary target (ATSDR, 2000). Initial symptoms include disorientation, and lethargy. Effects on reproduction (decreased fertility) have been observed in animals via oral exposure at the same or at similar doses that initiate the central nervous system effects.

MERCURY

Mercury is a metal with no known biological function and exists in three valence states: mercuric (Hg^{2+}), mercurous (Hg^{1+}), and elemental (Hg^{0+}) mercury. It is present in the environment in both inorganic and organic forms. Inorganic mercury compounds are less toxic than organomercury compounds; however, the inorganic forms are readily converted to organic forms by bacteria commonly present in the environment. The organomercury compound of greatest concern is methylmercury.

In aquatic organisms, mercury is primarily absorbed through the gills. Mercury (2+) is the predominant form of mercury in surface waters (ATSDR, 1993). Nonvolatile mercury in surface water binds to

organic matter and sediment particles (Lee and Iverfeldt, 1991). In soil, mercury exists in the mercuric (Hg^{2+}) and mercurous (Hg^{1+}) states. Mercury adsorbs to soil or is converted to volatile forms (Krabbenhoft and Babiarz, 1992; Callahan et al., 1979). Mercury can migrate by volatilization from aquatic and terrestrial sources through the reduction of metallic mercury to complex species and by the deposition in reducing sediments. Atmospheric transport is a major environmental distribution pathway. In aquatic and terrestrial receptors, some forms of mercury, especially organomercury compounds, bioaccumulate significantly and biomagnify in the food chain. In all receptors, the target organs are the kidney and central nervous system. However, mercury causes numerous other effects including teratogenicity and mutagenicity.

Sorption to suspended and bed sediments is one of the most important processes determining the fate of mercury in aquatic systems; sorption onto organic materials is the strongest for Hg^{2+}. As a result, mercury is generally complexed to organic compounds and is not readily leached from either organic-rich or mineral-rich soils (Rosenblatt et al., 1975). Most mercury compounds can be remobilized in aquatic systems by microbial conversion to methyl and dimethyl forms. Conditions reported to enhance microbial conversion include large amounts of available mercury, large numbers of bacteria, absence of strong complexing agents, near neutral pH, high temperatures, and moderately aerobic conditions.

Sorption at the gill surface is the major pathway of mercury entry in aquatic organisms (USEPA,1985). In aquatic organisms, bioaccumulation is rapid and elimination is slow. Biomagnification occurs in the aquatic food chain (NRCC, 1979). Absorbed mercury is distributed to the blood and ultimately the internal organs. Mercury which is not absorbed is eliminated rapidly in the feces (Eisler, 1987). The biological half-life of mercury in fish is approximately 2 to 3 years (USEPA, 1985). In general, mercury accumulation is enhanced by elevated water temperatures, reduced organic matter content of the medium, and the presence of zinc, cadmium, or selenium in solution.

Mercury is readily absorbed by terrestrial species following oral and inhalation exposure. Elemental and organomercury compounds are readily transferred across the placenta and blood-brain barrier. Mercury is bioaccumulated primarily in the kidney (Rothstein and Hayes, 1964; Nielsen and Andersen, 1991), and mercury is biomagnified in mammals (Eisler, 1987). Retention of mercury in mammals is longer for organomercury compounds (especially methylmercury) than for inorganic forms. Mercury elimination occurs via the urine, feces, expired air, and breast milk (Clarkson, 1989; Yoshida et al., 1992).

All mercury compounds interfere with metabolism in organisms, causing inhibition or inactivation of proteins containing thiol ligands and ultimately leading to miotic disturbances (Das et al., 1982; Elhassani, 1983). Mercury also binds strongly with sulfhydryl groups. Phenyl and methyl mercury compounds are among the strongest known inhibitors of cell division (Birge et al., 1979). In mammals, methyl mercury irreversibly destroys the neurons of the central nervous system. Information was not available on the fate of mercury in birds.

Mercury in soils is generally not available for uptake by plants due to the high binding capacity to clays and other charged particles (Beauford et al., 1977). However, mercury levels in plant tissues increase as soil levels increase with 95 percent of the accumulation and retention in the root system (Beauford et al., 1977; Cocking et al., 1991). Mercury is reported to inhibit protein synthesis in plant leaves and may affect water-adsorbing and transporting mechanisms in plants (Adriano, 1986).

NICKEL

Nickel is a naturally occurring element that makes up 0.008% of the earth's crust and may exist in various mineral forms (NAS, 1980). Soil and sediment are the primary receptacles for nickel but mobilization may occur depending on physico-chemical characteristics of the soil (ATSDR, 1993;

USAF, 1990). Nickel is used in a wide variety of applications including metallurgical processes and electrical components, such as batteries (ATSDR, 1993; USAF, 1990). There is some evidence that nickel may be an essential trace element for mammals.

The absorption of nickel is dependent on its physiochemical form, with water soluble forms being more readily absorbed. The metabolism of nickel involves conversion to various chemical forms and binding to various ligands (ATSDR, 1993). Nickel is excreted in the urine and feces with relative amounts for each route being dependent on the route of exposure and the chemical form.

SELENIUM

While selenium is an essential nutrient that interacts with Vitamin E and maintains muscle integrity; it has a very narrow tolerance range. In mammals, chronic selenium poisoning is induced by diets containing 1-44 ppm selenium (Harr, 1978). Symptoms include liver cirrhosis, lameness, loss of hair, emaciation, reduced conception, and increased fatal resorption. Plants convert inorganic selenium to organic selenium compounds, thereby increasing their biological availability (Lo and Sandi, 1980).

Metabolism of selenium may be significantly modified through interactions with heavy metals, and selenium may provide some protection from adverse effects associated with various metals, including cadmium and mercury (Eisler, 1985). Arsenite inhabits methylation of selenium but increases fecal excretion of selenite (Venugopal and Luckey, 1978).

SILVER

Silver occurs in the form of silver sulfide or is intimately associated with other metal sulfides, especially those of lead and copper (USEPA, 1979). Concentrations of silver in natural waters are relatively low, and it occurs primarily as a chloride and sulfide. Precipitation from water and sorption to sediments are the dominant mechanisms for the removal of dissolved silver from waters (USEPA, 1979). Silver is not stored significantly in animal tissues and is readily excreted in the feces. Therefore, bioconcentration in animals does not occur.

In long-term oral studies with experimental animals, silver compounds have produced slight thickening of the basement membranes of the renal glomeruli, growth depression, shortened lifespan, and granular silver-containing deposits in skin, eyes, and internal organs (Matuk et al., 1981; Olcott 1948, 1950). Hypoactivity was seen in rats subchronically exposed to silver nitrate in drinking water (Rungby and Danscher, 1984).

THALLIUM

Thallium exists in either the monovalent or trivalent form in nature. Thallium is chemically reactive with air and moisture (oxidation). The elemental form is relatively insoluble in water while thallium compounds have solubilities ranging from 220 mg/L to 700,000 mg/L (Standen 1967; Weast 1975; Windholz, 1976). It absorbs to soil and sediment and is not transformed or biodegraded.

In aquatic systems, thallium is absorbed primarily from ingestion of soil, water and plant material (Lie et al., 1960 in USEPA, 1999) and bioconcentrates in the organism. Toxic effects have been observed in numerous aquatic organisms including daphnia, fathead minnow, and Atlantic salmon. In birds and mammals, thallium is absorbed primarily from ingestion and is distributed to several organs and tissues (skin, liver, muscle) with the highest levels reported in the kidneys. Thallium exposure in mammals causes cardiac, neurologic, reproductive, and dermatological effects. Thallium is taken up by plants and inhibits chlorophyll formation and seed germination (USEPA, 1999).

TIN

Tin is a soft, white, lustrous, crystalline, malleable metal that has been economically important since the Bronze Age when tin-copper alloys were used to make weapons and utensils (NAS, 1980). Tin is not ubiquitous in the environment. Tinstone (SnO_2) deposits in the Bolivian Alps and in Malaya provide 60% of the world's tin needs (NAS, 1980). The major use has been to manufacture tin cans. Tin is also used to tin copper and steel wire, in the manufacture of various alloys, such as solder and bronze, as a component of plasticizers, as fungicides, and in radiopharmaceuticals for nuclear medicine (LaSpada, 1969).

Schwarz et al (1970) demonstrated that both inorganic and organic forms of tin are essential for growth in rats. Inorganic tin compounds are not highly toxic, due to their low solubility, low absorption, low accumulation and rapid excretion (Eisler, 1989). Synthetic organic tin compounds, manufactured since the early 1960's have various toxic properties, with triethyl tin forms being the most toxic (Eisler, 1989, NAS, 1980).

The potential effects of oral exposure to both inorganic and organic tin have been identified in many animal studies. Triethyl and trimethyl tin compounds have been demonstrated to have neurotoxic effects in animals by acute and intermediate duration studies (ATSDR, 1992). Effects observed in animals following oral exposures to inorganic tin are much less pronounced than those observed for organic tin (ATSDR, 1992). These effects from inorganic tin include gastrointestinal disturbance, anemia, and liver and kidney changes. Organotin compounds resulted in similar effects, with the addition of immunological, neurological, developmental and reproductive effects (ATSDR, 1992).

VANADIUM

Vanadium is a metallic element that occurs in six oxidation states and numerous inorganic compounds. Some of the more important compounds are vanadium pentoxide (V_2O_5), sodium metavanadate ($NaVO_3$), sodium orthovanadate ($NaVO_4$), vanadyl sulfate ($VOSO_4$), and ammonium vanadate (NH_4VO_3). Vanadium is used primarily as an alloying agent in steels and non-ferrous metals (ATSDR, 1990). Vanadium compounds are also used as catalysts and in chemical, ceramic or specialty applications.

Vanadium compounds are not absorbed efficiently via the gastrointestinal system (0.5-2% of dietary amount) (NRCC, 1980; ICRP, 1960; Byrne and Kosta, 1978), while absorption via the lungs is slightly higher (20 to 25%) (ICRP, 1960; Davies and Bennett, 1983). Absorbed vanadium is widely distributed in the body, but short term localization occurs primarily in bone, kidneys, and liver (Vouk 1979, Roshchin et al., 1980, Parker et al., 1980, Sharma et al., 1980, Wiegmann et al., 1982). Vanadium is excreted primarily in the feces following oral exposures and primarily in the urine following inhalation exposures (Tipton et al., 1969, ATSDR, 1990).

The toxicity of vanadium is dependent on its chemical and physical properties; especially on its valence state and solubility. Based on acute toxicity, pentavalent NH_4VO_3 has been reported to be more than twice as toxic as trivalent VCl_3 and more than 6 times as toxic as divalent VI_2. Pentavalent V_2O_5 has been reported to be more than 5 times as toxic as trivalent V_2O_3 (Roschin, 1967). Studies have shown that for subchronic and chronic oral exposures the primary targets are the digestive system, kidneys, and blood.

In animals, acutely toxic oral doses cause vasoconstriction, diffuse desquamative enteritis, congestion and fatty degeneration of the liver, congestion and focal hemorrhages in the lungs and adrenal cortex (Gosselin et al., 1984). Minimal effects seen after subchronic oral exposures to animals include diarrhea, altered renal function, and decreases in erythrocyte counts, hemoglobin, and hematocrit (Domingo et al., 1985, Zaporowska and Wasilewski, 1990).

Inhalation exposures to vanadium and vanadium compounds result primarily in adverse effects to the respiratory system (Sax, 1984, ATSDR, 1990). There is little evidence that vanadium or vanadium compounds are reproductive toxins or teratogens.

ZINC

Zinc is a naturally occurring element that can occur in both the dissolved and precipitated forms in the environment. Dissolved zinc may occur as the free (hydrated) zinc ion or as dissolved complexes. Precipitated zinc may be dissolved following changes in water chemistry or may be sorbed to suspended matter (USEPA, 1985). Zinc is most commonly found in the +2 oxidation state. It is highly reactive in soils and can be absorbed to clay minerals or metallic oxides (Sachdev et al., 1992). Metallic zinc is insoluble while the various zinc compounds range from insoluble to extremely soluble (EC, 1996). Sorption of the divalent zinc cation by hydrous iron and manganese oxides and carbonate minerals is most likely the predominant fate of zinc at the site.

The concentration of zinc in porewater depends on soil pH, the form of zinc, contents of clays and minerals, organic matter and other factors. Zinc becomes more soluble with decreasing soil pH and therefore become more mobile and bioavailable in acidic environments. At a pH greater than 7.7, zinc as $Zn(OH)_2$, has a low solubility and is not readily bioavailable.

Zinc is a micronutrient for plants and is required to sustain regulation of growth, chlorophyll synthesis, carbohydrate formation, regulate enzymatic reactions and hormonal functions (TCEQ, 2001). However at high concentrations, zinc can cause toxicity.

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APPENDIX H

ARCADIS

Appendix H

Surface Water Laboratory Data Reports - 2004

SEVERN TRENT STL

RECEIVED
MAR 03 2004
BY:

ANALYTICAL REPORT

JOB NUMBER: 223231

Prepared For:

ARCADIS / G&M
711 North Carancahua, Suite 1700
Corpus Christi, TX 78475-1801

Attention: Ken Brandner

Date: 03/01/2004

Olga Verónica McDonald
Signature

Date 3/1/04

Name: Olga V. McDonald

Title: Project Manager

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Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX..: 361/289-2471

TOTAL # OF PAGES 9

SEVERN TRENT STL

SAMPLE INFORMATION
Date: 03/01/2004

Job Number.: 223231
Customer...: Encycle Texas, Inc.
Attn.....: Richard Marcus

Project Number.....: 98000084
Customer Project ID....: ENCYCLE BLRA
Project Description....: Project - OVM

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
223231-1	SED-1	Water	02/16/2004	08:40	02/16/2004	09:32
223231-2	SED-4	Water	02/16/2004	09:00	02/16/2004	09:32

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223231

Date: 03/01/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-1
Date Sampled.....: 02/16/2004
Time Sampled.....: 08:40
Sample Matrix.....: Water

Laboratory Sample ID: 223231-1
Date Received.....: 02/16/2004
Time Received.....: 09:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 120.1	Specific Conductivity @ 25 degrees C	39700	1	umhos/cm	02/16/04	tjo
EPA 150.1	pH measured at 25 deg. C	8.0	0.1	pH Units	02/16/04	akp
EPA 160.1	Solids, Total Dissolved (TDS)	29100	10	mg/L	02/20/04	tjo
EPA 360.1	Oxygen, Dissolved	9.6	0.05	mg/L	02/16/04	akp

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223231

Date: 03/01/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-4
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:00
Sample Matrix.....: Water

Laboratory Sample ID: 223231-2
Date Received.....: 02/16/2004
Time Received.....: 09:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 120.1	Specific Conductivity @ 25 degrees C	40600	1	umhos/cm	02/16/04	tjo
EPA 150.1	pH measured at 25 deg. C	8.0	0.1	pH Units	02/16/04	akp
EPA 160.1	Solids, Total Dissolved (TDS)	29400	10	mg/L	02/20/04	tjo
EPA 360.1	Oxygen, Dissolved	11	0.05	mg/L	02/16/04	akp

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223231

Report Date.: 03/01/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: EPA 160.1
Method Description.: Solids, Total Dissolved (TDS)
Parameter.....: Solids, Total Dissolved (TDS)

Batch.....: 90580
Units.....: mg/L

Analyst...: tjo
Test Code.: TDS

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		022004	0							02/20/2004	1220
LCS		T40120L	2396		2250		106.5	%	90-113	02/20/2004	1221
LCD		T40120L	2480	2396	2250	2396	110.2	%	90-113	02/20/2004	1223
							3.4	R	20		
MS	223279-1	T40120S	2878		2250	345	112.6	%	75-125	02/20/2004	1232
MSD	223279-1	T40120S	2766	2878	2250	345	107.6	%	75-125	02/20/2004	1233
							4.0	R	20		

Test Method.....: EPA 120.1
Method Description.: Specific Conductance @ 25 degrees C
Parameter.....: Specific Conductivity @ 25 degrees C

Batch.....: 90132
Units.....: umhos/cm

Analyst...: tjo
Test Code.: COND

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		021604	0.2							02/16/2004	1100
ICV		C40113A	10000		10000		100.0	%	90-110	02/16/2004	1101
MB		021604	0.4							02/16/2004	1103
LCS		G40122B	1000		1000		100.0	%	90-110	02/16/2004	1104
MD	223231-1		39600	39700		39700	0.3	R	20	02/16/2004	1107
CCB		021604	0.4							02/16/2004	1110
CCV		C40113A	10040		10000		100.4	%	90-110	02/16/2004	1111
CCB		021604	0.4							02/16/2004	1113
CCV		C40113A	9960		10000		99.6	%	90-110	02/16/2004	1114
CCB		021604	0.3							02/16/2004	1119
CCV		C40113A	9990		10000		99.9	%	90-110	02/16/2004	1120

Test Method.....: EPA 150.1
Method Description.: pH measured at 25 deg C
Parameter.....: pH measured at 25 deg. C

Batch.....: 90130
Units.....: pH Units

Analyst...: akp
Test Code.: PH

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		A090903Z	7.02		7.00		100.3	%	90-110	02/16/2004	1101
LCS		A021004Z	7.01		7.00		100.1	%	90-110	02/16/2004	1103
MD	223231-2		8.14			8.04	1.2	R	20	02/16/2004	1109
CCV		A090903Z	7.04		7.00		100.6	%	90-110	02/16/2004	1115

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/01/2004

(1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
(2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
(3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
(4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
(5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
(6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
(7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
(8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
(9) Hach Handbook of Water Analysis, 1979

Comments:
Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB	Method Blank
ICB	Initial Calibration Blank
CCB	Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion/Distillation Spike
SB	Spiked Blank
SBD	Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS	Laboratory Control Standard
RS	Reference Standard
ICV	Initial Calibration Verification Standard
CCV	Continuing Calibration Verification Standard
ISA/ISB	ICP Interference Check Sample
DSC	Distilled Standard Check

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SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/01/2004

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe	Tallahassee, FL	*tl

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx

EXPLANATION OF DATA FLAGS

B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
I - Used to indicate matrix interference.
X - Indicates that a surrogate recovery is outside the specified quality control limits.
Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
U - Indicates that a value is less than the MDL or was not detected.

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ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Project Number/Name: Encycle BLRA

Project Location: Corpus Christi, TX

Laboratory: STL

Project Manager: Ken Brandner

Sampler(s)/Affiliation: Ken Brandner & Richard Suenz/ ARCADIS

T = 3.2°C

223231

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Dissolved Oxygen, Conductivity, pH, TDS (1 liter poly, 500ml poly, 8oz plastic DO bottle)						Remarks	Total
SED-1	L	2/16/04 8:40		3							3
SED-4	L	↓ 9:00		3							3

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 6

Relinquished by: Arthur Suenz	Organization: ARCADIS	Date 2/16/04	Time 9:32	Seal Intact? Yes No N/A
Received by: [illegible]	Organization: STL-CC	Date 2/16/04	Time 0932	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Samples delivered in cooler w/ice. Results to Ken Brandner of ARCADIS
Invoice to Rich Marcus of Encycle

Delivery Method: ☒ In Person ☐ Common Carrier _____ (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

rpjsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 223231 Location.: 57203 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: Date of the Report..: 02/16/2004
Project Number.: 98000084 Project Description.: Project - OVM Project Manager.....: ovm
Customer.....: Encycle Texas, Inc. Contact.: Richard Marcus

Questions ?	(Y/N)	Comments
How did samples arrive?.....		CLIENT
Chain-of-Custody Present?.....	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples chilled?.....	Y	
Temperature blank in cooler?.....	Y	
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y	3.2 DEGREES C
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		N/A
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Additional.....		
Comments.....		
Sample Custodian Signature.....		AMBER BRINSON 2/16/04

SEVERN TRENT STL

ANALYTICAL REPORT

JOB NUMBER: 223232

Prepared For:

ARCADIS / G&M
711 North Carancahua, Suite 1700
Corpus Christi, TX 78475-1801

Attention: Ken Brandner

Date: 03/01/2004

Olga Veronica McDonald
Signature

Date 3/1/04

Name: Olga V. McDonald

Title: Project Manager

E-Mail: omcdonald@stl-inc.com

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX..: 361/289-2471

TOTAL # OF PAGES 9

SEVERN TRENT STL

SAMPLE INFORMATION
Date: 03/01/2004

Job Number.: 223232
Customer...: Encycle Texas, Inc.
Attn.....: Richard Marcus

Project Number.....: 98000084
Customer Project ID....: ENCYCLE BLRA
Project Description....: Project - OVM

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
223232-1	SED-7	Water	02/16/2004	09:40	02/16/2004	10:26
223232-2	SED-10	Water	02/16/2004	10:00	02/16/2004	10:26

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223232

Date: 03/01/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-7
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 223232-1
Date Received.....: 02/16/2004
Time Received.....: 10:26

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 120.1	Specific Conductivity @ 25 degrees C	37700	1	umhos/cm	02/16/04	tjo
EPA 150.1	pH measured at 25 deg. C	8.1	0.1	pH Units	02/16/04	akp
EPA 160.1	Solids, Total Dissolved (TDS)	29000	10	mg/L	02/20/04	tjo
EPA 360.1	Oxygen, Dissolved	10	0.05	mg/L	02/16/04	akp

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223232

Date: 03/01/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-10
Date Sampled.....: 02/16/2004
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 223232-2
Date Received.....: 02/16/2004
Time Received.....: 10:26

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 120.1	Specific Conductivity @ 25 degrees C	38400	1	umhos/cm	02/16/04	tjo
EPA 150.1	pH measured at 25 deg. C	8.2	0.1	pH Units	02/16/04	akp
EPA 160.1	Solids, Total Dissolved (TDS)	28700	10	mg/L	02/20/04	tjo
EPA 360.1	Oxygen, Dissolved	11	0.05	mg/L	02/16/04	akp

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223232

Report Date.: 03/01/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: EPA 160.1
Method Description.: Solids, Total Dissolved (TDS)
Parameter.....: Solids, Total Dissolved (TDS)

Batch.....: 90580
Units.....: mg/L

Analyst...: tjo
Test Code.: TDS

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		022004	0							02/20/2004	1220
LCS		T40120L	2396		2250		106.5	%	90-113	02/20/2004	1221
LCD		T40120L	2480	2396	2250	2396	110.2	%	90-113	02/20/2004	1223
							3.4	R	20		
MS	223279-1	T40120S	2878		2250	345	112.6	%	75-125	02/20/2004	1232
MSD	223279-1	T40120S	2766	2878	2250	345	107.6	%	75-125	02/20/2004	1233
							4.0	R	20		

Test Method.....: EPA 120.1
Method Description.: Specific Conductance @ 25 degrees C
Parameter.....: Specific Conductivity @ 25 degrees C

Batch.....: 90132
Units.....: umhos/cm

Analyst...: tjo
Test Code.: COND

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		021604	0.2							02/16/2004	1100
ICV		C40113A	10000		10000		100.0	%	90-110	02/16/2004	1101
MB		021604	0.4							02/16/2004	1103
LCS		G40122B	1000		1000		100.0	%	90-110	02/16/2004	1104
MD	223231-1		39600	39700		39700	0.3	R	20	02/16/2004	1107
CCB		021604	0.4							02/16/2004	1110
CCV		C40113A	10040		10000		100.4	%	90-110	02/16/2004	1111
CCB		021604	0.4							02/16/2004	1113
CCV		C40113A	9960		10000		99.6	%	90-110	02/16/2004	1114
CCB		021604	0.3							02/16/2004	1119
CCV		C40113A	9990		10000		99.9	%	90-110	02/16/2004	1120

Test Method.....: EPA 150.1
Method Description.: pH measured at 25 deg C
Parameter.....: pH measured at 25 deg. C

Batch.....: 90130
Units.....: pH Units

Analyst...: akp
Test Code.: PH

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		A090903Z	7.02		7.00		100.3	%	90-110	02/16/2004	1101
LCS		A021004Z	7.01		7.00		100.1	%	90-110	02/16/2004	1103
MD	223231-2		8.14			8.04	1.2	R	20	02/16/2004	1109
CCV		A090903Z	7.04		7.00		100.6	%	90-110	02/16/2004	1115

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/01/2004

(1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
(2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
(3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
(4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
(5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
(6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
(7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
(8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
(9) Hach Handbook of Water Analysis, 1979

Comments:
Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB	Method Blank
ICB	Initial Calibration Blank
CCB	Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion/Distillation Spike
SB	Spiked Blank
SBD	Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS	Laboratory Control Standard
RS	Reference Standard
ICV	Initial Calibration Verification Standard
CCV	Continuing Calibration Verification Standard
ISA/ISB	ICP Interference Check Sample
DSC	Distilled Standard Check

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/01/2004

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe	Tallahassee, FL	*tl

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx

EXPLANATION OF DATA FLAGS

B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
I - Used to indicate matrix interference.
X - Indicates that a surrogate recovery is outside the specified quality control limits.
Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
U - Indicates that a value is less than the MDL or was not detected.

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ARCADIS

Laboratory Task Order No./P.O. No. 223232

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name: Encycle BLRA

Project Location: Corpus Christi, TX

Laboratory: STL

Project Manager: Ken Brandner

Sampler(s)/Affiliation: Ken Brandner & Richard Saenz / ARCADIS

4.8°C just sampled

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Dissolved oxygen conductivity, pH, TDS (1 liter poly, 500-ml poly, 8oz plastic BOD bottle)						Remarks	Total
SED-7	L	2/16/04 9:40		3							3
SED-10	L	↓ 10:00		3							3

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 6

Relinquished by: Richard Saenz	Organization: ARCADIS	Date 2/16/04	Time 10:26	Seal Intact?
Received by: Olga Veronica McDonald	Organization: STL	Date 2/16/04	Time 10:26	Yes No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A

Special Instructions/Remarks: Samples delivered in cooler with ice. Results to Ken Brandner of ARCADIS. Invoice to Rich Marcus of Encycle

Delivery Method: ☒ In Person ☐ Common Carrier _____ SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

rpjsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 223232 Location.: 57203 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: Date of the Report..: 02/16/2004
Project Number.: 98000084 Project Description.: Project - OVM Project Manager.....: ovm
Customer.....: Encycle Texas, Inc. Contact.: Richard Marcus

Questions ?	(Y/N)	Comments
How did samples arrive?.....		Client delivered
Chain-of-Custody Present?.....	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples chilled?.....	Y	
Temperature blank in cooler?.....	Y	
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y	4.8 deg C
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		N/A
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Additional.....		
Comments.....		
Sample Custodian Signature.....		

am 2/16/04

SEVERN TRENT STL

RECEIVED
MAR 16 2004
BY:

ANALYTICAL REPORT

JOB NUMBER: 223239

Prepared For:

ARCADIS / G&M
711 North Carancahua, Suite 1700
Corpus Christi, TX 78475-1801

Attention: Ken Brandner

Date: 03/12/2004

Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

3/12/04
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX..: 361/289-2471

TOTAL # OF PAGES 37

CASE NARRATIVE

Job Number 223239

March 29, 2004

Revised

Total and Dissolved Metals Analysis

Samples 223239-1 through 10 were analyzed for total and dissolved metals using EPA Method 6010B. The low calibration standard for antimony, cadmium and thallium is 0.01 mg/L. The requested reporting limit for these metals is below the low calibration standard. Results reported below the low calibration standard should be J-flagged. The percent recovery results for the CCVs associated with samples 5, 6 and 8 for dissolved copper were above the acceptance criteria. The percent recovery results for the CCVs associated with samples 2, 4, 6, 9 and 10 for total copper were above the acceptance criteria. Copper was not detected in the these samples and the data are therefore reported.

The results for dissolved antimony in samples 1 and 2 were higher than the total antimony results. The client requested that the samples be reanalyzed. Reanalysis yielded similar results. These samples were high in sodium. High concentrations of sodium can cause interferences with the analysis of other metals. It is suspected that the discrepancy between the total and dissolved antimony results is due to the high sodium concentration.

Please contact me at 361-289-2673 or omcdonald@stl-inc.com if you have any questions regarding this report or if we can be of further assistance.

Olga Verónica McDonald
Project Manager

SEVERN TRENT STL

SAMPLE INFORMATION
Date: 03/12/2004

Job Number.: 223239
Customer...: Encycle Texas, Inc.
Attn.....: Richard Marcus

Project Number.....: 98000084
Customer Project ID....: ENCYCLE BLRA
Project Description....: Project - OVM

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
223239-1	SED-1	Water	02/16/2004	08:40	02/16/2004	13:52
223239-2	SED-4	Water	02/16/2004	09:00	02/16/2004	13:52
223239-3	SED-7	Water	02/16/2004	09:40	02/16/2004	13:52
223239-4	SED-10	Water	02/16/2004	10:00	02/16/2004	13:52
223239-5	BKG-1	Water	02/16/2004	11:00	02/16/2004	13:52
223239-6	BKG-2	Water	02/16/2004	11:30	02/16/2004	13:52
223239-7	BKG-3	Water	02/16/2004	12:40	02/16/2004	13:52
223239-8	BKG-4	Water	02/16/2004	13:20	02/16/2004	13:52
223239-9	Equipment Blank	Water	02/16/2004	09:50	02/16/2004	13:52
223239-10	Field Blank	Water	02/16/2004	12:50	02/16/2004	13:52

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-1
Date Sampled.....: 02/16/2004
Time Sampled.....: 08:40
Sample Matrix.....: Water

Laboratory Sample ID: 223239-1
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/10/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/17/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	0.055	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	0.017	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	0.02	0.01	mg/L	02/19/04	jem
SW-846 6010B	Copper (Cu), Total	0.04	0.01	mg/L	02/19/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	0.03	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.04	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	0.07	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-1
Date Sampled.....: 02/16/2004
Time Sampled.....: 08:40
Sample Matrix.....: Water

Laboratory Sample ID: 223239-1
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.09	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.11	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-4
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:00
Sample Matrix.....: Water

Laboratory Sample ID: 223239-2
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/10/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/16/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	0.012	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	0.01	0.01	mg/L	02/19/04	jem
SW-846 6010B	Copper (Cu), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-4
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:00
Sample Matrix.....: Water

Laboratory Sample ID: 223239-2
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.08	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.09	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239 Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-7
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 223239-3
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/10/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/16/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	0.02	0.01	mg/L	02/19/04	jem
SW-846 6010B	Copper (Cu), Total	0.02	0.01	mg/L	02/19/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-7
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 223239-3
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.08	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.08	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239 Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-10
Date Sampled.....: 02/16/2004
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 223239-4
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/09/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/15/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	0.01	0.01	mg/L	02/19/04	jem
SW-846 6010B	Copper (Cu), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: SED-10
Date Sampled.....: 02/16/2004
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 223239-4
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.06	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.07	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239 Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-1
Date Sampled.....: 02/16/2004
Time Sampled.....: 11:00
Sample Matrix.....: Water

Laboratory Sample ID: 223239-5
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/09/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/15/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Total	0.02	0.01	mg/L	02/19/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-1
Date Sampled.....: 02/16/2004
Time Sampled.....: 11:00
Sample Matrix.....: Water

Laboratory Sample ID: 223239-5
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.04	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.05	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239 Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-2
Date Sampled.....: 02/16/2004
Time Sampled.....: 11:30
Sample Matrix.....: Water

Laboratory Sample ID: 223239-6
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/08/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/14/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-2
Date Sampled.....: 02/16/2004
Time Sampled.....: 11:30
Sample Matrix.....: Water

Laboratory Sample ID: 223239-6
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.05	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.07	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-3
Date Sampled.....: 02/16/2004
Time Sampled.....: 12:40
Sample Matrix.....: Water

Laboratory Sample ID: 223239-7
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/08/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/14/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	0.02	0.01	mg/L	02/20/04	jem
SW-846 6010B	Copper (Cu), Total	0.03	0.01	mg/L	02/19/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-3
Date Sampled.....: 02/16/2004
Time Sampled.....: 12:40
Sample Matrix.....: Water

Laboratory Sample ID: 223239-7
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.06	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.05	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239 Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-4
Date Sampled.....: 02/16/2004
Time Sampled.....: 13:20
Sample Matrix.....: Water

Laboratory Sample ID: 223239-8
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Dissolved	<0.002	0.002	mg/L	02/07/04	edr
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/13/04	edr
SW-846 6010B	Antimony (Sb), Dissolved	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Antimony (Sb), Total	0.034	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Total	0.03	0.01	mg/L	02/19/04	jem
SW-846 6010B	Lead (Pb), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Dissolved	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Dissolved	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Dissolved	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Dissolved	<0.02	0.02	mg/L	02/17/04	jem

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: BKG-4
Date Sampled.....: 02/16/2004
Time Sampled.....: 13:20
Sample Matrix.....: Water

Laboratory Sample ID: 223239-8
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Dissolved	0.04	0.01	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.04	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			02/17/04	hmz
	0.45um Filter Prior to Metals Analysis	Complete			02/16/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: Equipment Blank
Date Sampled.....: 02/16/2004
Time Sampled.....: 09:50
Sample Matrix.....: Water

Laboratory Sample ID: 223239-9
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/13/04	edr
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	0.02	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz

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SEVERN TRENT STL

LABORATORY TEST RESULTS

Job Number: 223239

Date: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Customer Sample ID: Field Blank
Date Sampled.....: 02/16/2004
Time Sampled.....: 12:50
Sample Matrix.....: Water

Laboratory Sample ID: 223239-10
Date Received.....: 02/16/2004
Time Received.....: 13:52

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7470A	Mercury (Hg), Total	<0.002	0.002	mg/L	02/12/04	edr
SW-846 6010B	Antimony (Sb), Total	<0.006	0.006	mg/L	03/03/04	jem
SW-846 6010B	Arsenic (As), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Cadmium (Cd), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Cobalt (Co), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Copper (Cu), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Lead (Pb), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Manganese (Mn), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Nickel (Ni), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Selenium (Se), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 6010B	Silver (Ag), Total	<0.005	0.005	mg/L	02/17/04	jem
SW-846 6010B	Thallium (Tl), Total	<0.002	0.002	mg/L	02/17/04	jem
SW-846 6010B	Tin (Sn), Total	<0.02	0.02	mg/L	02/17/04	jem
SW-846 6010B	Zinc (Zn), Total	<0.01	0.01	mg/L	02/17/04	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			02/17/04	hmz

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 7470A Batch.....: 90378 Analyst...: edr
Method Description.: Mercury (CVAA) Units.....: mg/L Test Code.: HG
Parameter.....: Mercury (Hg)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			-0.000107							02/03/2004	0332
CCV		M022004HG	0.00491		0.005000		98.2	%	80-120	02/04/2004	0138
MSD	223291-1	M022004HG	0.00488	0.00486	0.005000	-0.000140	100.4	%	85-115	02/05/2004	1047
							0.4	R	20		
MS	223291-1	M022004HG	0.00486		0.005000	-0.000140	100.0	%	85-115	02/05/2004	2150
CCB			-0.000059							02/11/2004	1026
CCV		M022004HG	0.00508		0.005000		101.6	%	80-120	02/12/2004	0831
MB			-0.000053							02/18/2004	0810
LCS		M022004LG	0.00495		0.0050		99.0	%	85-115	02/18/2004	1913
ICB			-0.000088							02/19/2004	1719
ICV		M022004HG	0.00454		0.005000		90.8	%	90-110	02/20/2004	1525

Test Method.....: SW-846 6010B Batch.....: 90806 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: SB
Parameter.....: Antimony (Sb)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0371	1.05253449		1.00		105.3	%	90-110	03/03/2004	1005
ICV		M0368	1.06375720		1.00		106.4	%	90-110	03/03/2004	1143
CCB			0.01906429							03/03/2004	1206
MB		3010	0.00284969							03/03/2004	1209
LCS		M348	0.53755132		0.500		107.5	%	64-138	03/03/2004	1216
CCV		M0379	1.01915176		1.00		101.9	%	90-110	03/03/2004	1258
CCB			0.00548764							03/03/2004	1311
CCV		M0379	0.99633977		1.00		99.6	%	90-110	03/03/2004	1344
CCB			0.01024482							03/03/2004	1358
MB		3010	0.00781087							03/03/2004	1401
LCS		M348	0.51837425		0.500		103.7	%	64-138	03/03/2004	1404
MS	223239-9	M348	0.50139876		0.500	-0.0131182	102.9	%	75-125	03/03/2004	1433
MSD	223239-9	M348	0.63110374	0.50139876	0.500	-0.0131182	128.8	%	75-125	03/03/2004	1438
							22.9	R	20		
CCV		M0379	1.08451650		1.00		108.5	%	90-110	03/03/2004	1501
CCB			-0.0029727							03/03/2004	1532

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: AS
Parameter.....: Arsenic (As)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.95948419		2.00		98.0	%	90-110	02/17/2004	1026
ICV		M0368	1.03781376		1.00		103.8	%	90-110	02/17/2004	1118
ICV		M0356	1.00716964		1.00		100.7	%	90-110	02/17/2004	1133
ICB			-0.0026295							02/17/2004	1152
ICB			-0.0060216							02/17/2004	1205
CCV		M0379	1.05282347		1.00		105.3	%	90-110	02/17/2004	1211
CCB			-0.0068199							02/17/2004	1222
CCV		M0379	1.03805875		1.00		103.8	%	90-110	02/17/2004	1415
CCB			-0.0019027							02/17/2004	1430
CCV		M0379	1.04209933		1.00		104.2	%	90-110	02/17/2004	1530

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: AS
Parameter.....: Arsenic (As)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			-0.0072275							02/17/2004	1544
CCV		M0379	1.05513325		1.00		105.5	%	90-110	02/17/2004	1640
CCB			-0.0075449							02/17/2004	1655
CCV		M0379	1.04707717		1.00		104.7	%	90-110	02/17/2004	1727
CCB			-0.0041511							02/17/2004	1733
MB		3010	-0.0079357							02/17/2004	1805
LCS		M348	0.50478175		0.500		101.0	%	85-110	02/17/2004	1813
CCV		M0379	1.04228136		1.00		104.2	%	90-110	02/17/2004	1828
CCB			-0.0080350							02/17/2004	1842
MS	223233-1	M348	0.57373482		0.500	-0.0016604	115.1	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.57818511	0.57373482	0.500	-0.0016604	116.0	%	75-125	02/17/2004	1858
							0.8	R	20		
CCV		M0379	1.05565540		1.00		105.6	%	90-110	02/17/2004	1926
CCB			-0.0058811							02/17/2004	1941
CCV		M0379	1.04129746		1.00		104.1	%	90-110	02/17/2004	2022
CCB			-0.0079417							02/17/2004	2037
MB		3010.	-0.0124269							02/17/2004	2048
LCS		M348	0.49622222		0.500		99.2	%	85-110	02/17/2004	2051
CCV		M0379	1.03875190		1.00		103.9	%	90-110	02/17/2004	2119
CCB			-0.0097198							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: CD
Parameter.....: Cadmium (Cd)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.96850448		2.00		98.4	%	90-110	02/17/2004	1026
ICV		M0368	1.03010009		1.00		103.0	%	90-110	02/17/2004	1118
ICV		M0356	0.98248574		1.00		98.2	%	90-110	02/17/2004	1133
ICB			-0.0000773							02/17/2004	1152
ICB			-0.0000238							02/17/2004	1205
CCV		M0379	1.02741192		1.00		102.7	%	90-110	02/17/2004	1211
CCB			-0.0001561							02/17/2004	1222
CCV		M0379	1.03461010		1.00		103.5	%	90-110	02/17/2004	1415
CCB			-0.0002193							02/17/2004	1430
CCV		M0379	1.01809156		1.00		101.8	%	90-110	02/17/2004	1530
CCB			-0.0001606							02/17/2004	1544
CCV		M0379	1.03594354		1.00		103.6	%	90-110	02/17/2004	1640
CCB			-0.0001115							02/17/2004	1655
CCV		M0379	1.03598295		1.00		103.6	%	90-110	02/17/2004	1727
CCB			-0.0000443							02/17/2004	1733
MB		3010	-0.0001330							02/17/2004	1805
LCS		M348	0.52113941		0.500		104.2	%	87-110	02/17/2004	1813
CCV		M0379	1.04456971		1.00		104.5	%	90-110	02/17/2004	1828
CCB			-0.0000925							02/17/2004	1842
MS	223233-1	M348	0.57163578		0.500	0.05552787	103.2	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.57383354	0.57163578	0.500	0.05552787	103.7	%	75-125	02/17/2004	1858
							0.4	R	20		
CCV		M0379	1.01983526		1.00		102.0	%	90-110	02/17/2004	1926
CCB			-0.0000830							02/17/2004	1941
CCV		M0379	1.02005604		1.00		102.0	%	90-110	02/17/2004	2022

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: CD
Parameter.....: Cadmium (Cd)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			-0.0001015							02/17/2004	2037
MB		3010.	-0.0001494							02/17/2004	2048
LCS		M348	0.51191205		0.500		102.4	%	87-110	02/17/2004	2051
CCV		M0379	1.03167073		1.00		103.2	%	90-110	02/17/2004	2119
CCB			-0.0001287							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: CO
Parameter.....: Cobalt (Co)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.95155133		2.00		97.6	%	90-110	02/17/2004	1026
ICV		M0368	1.00885602		1.00		100.9	%	90-110	02/17/2004	1118
ICV		M0356	1.00372946		1.00		100.4	%	90-110	02/17/2004	1133
ICB			-0.0002918							02/17/2004	1152
ICB			0.00002484							02/17/2004	1205
CCV		M0379	1.02466463		1.00		102.5	%	90-110	02/17/2004	1211
CCB			-0.0005065							02/17/2004	1222
CCV		M0379	1.01065669		1.00		101.1	%	90-110	02/17/2004	1415
CCB			0.00010546							02/17/2004	1430
CCV		M0379	1.01961883		1.00		102.0	%	90-110	02/17/2004	1530
CCB			-0.0000200							02/17/2004	1544
CCV		M0379	1.02440041		1.00		102.4	%	90-110	02/17/2004	1640
CCB			0.00040093							02/17/2004	1655
CCV		M0379	1.01988316		1.00		102.0	%	90-110	02/17/2004	1727
CCB			0.00009860							02/17/2004	1733
MB		3010	-0.0001638							02/17/2004	1805
LCS		M348	0.51821071		0.500		103.6	%	90-110	02/17/2004	1813
CCV		M0379	1.00910555		1.00		100.9	%	90-110	02/17/2004	1828
CCB			0.00000966							02/17/2004	1842
MS	223233-1	M348	0.51681221		0.500	0.00188273	103.0	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.52098795	0.51681221	0.500	0.00188273	103.8	%	75-125	02/17/2004	1858
							0.8	R	20		
CCV		M0379	1.02947701		1.00		102.9	%	90-110	02/17/2004	1926
CCB			0.00007150							02/17/2004	1941
CCV		M0379	1.01860954		1.00		101.9	%	90-110	02/17/2004	2022
CCB			-0.0005722							02/17/2004	2037
MB		3010.	-0.0004376							02/17/2004	2048
LCS		M348	0.50890180		0.500		101.8	%	90-110	02/17/2004	2051
CCV		M0379	1.01110170		1.00		101.1	%	90-110	02/17/2004	2119
CCB			-0.0003408							02/17/2004	2133

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 | Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. | PROJECT: ENCYCLE BLRA | ATTN: Richard Marcus

Test Method.....: SW-846 6010B | Batch.....: 90236 | Analyst...: jem
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L | Test Code.: CU
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	2.01587341		2.00		100.8	%	90-110	02/17/2004	1026
ICV		M0368	1.08920516		1.00		108.9	%	90-110	02/17/2004	1118
ICV		M0356	1.07848246		1.00		107.8	%	90-110	02/17/2004	1133
ICB			0.00246158							02/17/2004	1152
ICB			0.00241549							02/17/2004	1205
CCV		M0379	1.09344755		1.00		109.3	%	90-110	02/17/2004	1211
CCB			0.00239012							02/17/2004	1222
CCV		M0379	1.10367269		1.00		110.4	%	90-110	02/17/2004	1415
CCB			0.00059977							02/17/2004	1430
CCV		M0379	1.12556161		1.00		112.6	%	90-110	02/17/2004	1530
CCB			0.00061226							02/17/2004	1544
CCV		M0379	1.11317137		1.00		111.3	%	90-110	02/17/2004	1640
CCB			-0.0007265							02/17/2004	1655
CCV		M0379	1.10852220		1.00		110.9	%	90-110	02/17/2004	1727
CCB			0.00042690							02/17/2004	1733
MB		3010	-0.0001442							02/17/2004	1805
LCS		M348	0.57379861		0.500		114.8	%	80-120	02/17/2004	1813
CV		M0379	1.11950013		1.00		112.0	%	90-110	02/17/2004	1828
CB			-0.0000317							02/17/2004	1842
MS	223233-1	M348	0.61658672		0.500	0.01509890	120.3	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.61858389	0.61658672	0.500	0.01509890	120.7	%	75-125	02/17/2004	1858
							0.3	R	20		
CCV		M0379	1.10459772		1.00		110.5	%	90-110	02/17/2004	1926
CCB			-0.0003730							02/17/2004	1941
CCV		M0379	1.11268811		1.00		111.3	%	90-110	02/17/2004	2022
CCB			0.00034818							02/17/2004	2037
MB		3010.	0.00035797							02/17/2004	2048
LCS		M348	0.55954162		0.500		111.9	%	89-112	02/17/2004	2051
CCV		M0379	1.11245805		1.00		111.2	%	90-110	02/17/2004	2119
CCB			0.00035460							02/17/2004	2133

Test Method.....: SW-846 6010B | Batch.....: 90361 | Analyst...: jem
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L | Test Code.: CU
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0375	10.1352		10.0		101.4	%	90-110	02/19/2004	1527
ICV		M0368	1.0420		1.00		104.2	%	90-110	02/19/2004	1547
M03		6	1.0367							02/19/2004	1551
ICB			0.0006							02/19/2004	1555
CCV		M0378	5.0418		5.00		100.8	%	90-110	02/19/2004	1603
CCB			0.0018							02/19/2004	1605
MB		200.7	0.0039							02/19/2004	1609
LCS		M348	0.5403		0.500		108.1	%	89-112	02/19/2004	1611
MS	223193-1	M348	0.6213		0.500	0.0731	109.6	%	75-125	02/19/2004	1618
MSD	223193-1	M348	0.6522	0.6213	0.500	0.0731	115.8	%	75-125	02/19/2004	1620
							4.9	R	20		
MB		3010	0.0024							02/19/2004	1623
LCS		M348	0.5471		0.500		109.4	%	89-112	02/19/2004	1626
S	223190-1	M348	0.5524		0.500	0.0248	105.5	%	75-125	02/19/2004	1631
SD	223190-1	M348	0.5470	0.5524	0.500	0.0248	104.4	%	75-125	02/19/2004	1633
							1.0	R	20		

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90361 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: CU
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		3010	0.0012							02/19/2004	1640
LCS		M348	0.5348		0.500		107.0	%	89-112	02/19/2004	1642
MS	223233-1	M348	0.5449		0.500	0.0195	105.1	%	75-125	02/19/2004	1647
CCV		M0378	4.9892		5.00		99.8	%	90-110	02/19/2004	1703
CCB			0.0024							02/19/2004	1704
MB		3010	0.0026							02/19/2004	1723
LCS		M348	0.4989		0.500		99.8	%	89-112	02/19/2004	1725
CCV		M0378	4.9373		5.00		98.7	%	90-110	02/19/2004	1729
CCB			0.0057							02/19/2004	1731

Test Method.....: SW-846 6010B Batch.....: 90384 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: CU
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0375	10.0882		10.0		100.9	%	90-110	02/20/2004	1513
ICV		M0368	1.0382		1.00		103.8	%	90-110	02/20/2004	1521
ICV		M0356	1.0656		1.00		106.6	%	90-110	02/20/2004	1526
ICB			-0.0023							02/20/2004	1533
CCV		M0378	5.0407		5.00		100.8	%	90-110	02/20/2004	1541
CCB			0.0011							02/20/2004	1544
MB		3010	-0.0023							02/20/2004	1603
LCS		M348	0.5047		0.500		100.9	%	89-112	02/20/2004	1604
MB		3010	0.0003							02/20/2004	1613
LCS		M348	0.5086		0.500		101.7	%	89-112	02/20/2004	1615
PDS	223145-1	M348D	2.0241		2.00	-0.0009	101.2	%	75-125	02/20/2004	1622
PSD	223145-1	M348D	2.0096	2.0241	2.00	-0.0009	100.5	%	75-125	02/20/2004	1624
							0.7	R	20		
MB		3010	-0.0021							02/20/2004	1634
LCS		M348	0.4923		0.500		98.5	%	89-112	02/20/2004	1638
CCV		M0378	5.0095		5.00		100.2	%	90-110	02/20/2004	1644
CCB			0.0009							02/20/2004	1651

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: PB
Parameter.....: Lead (Pb)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.97838893		2.00		98.9	%	90-110	02/17/2004	1026
ICV		M0368	1.05197012		1.00		105.2	%	90-110	02/17/2004	1118
ICV		M0356	1.01571382		1.00		101.6	%	90-110	02/17/2004	1133
ICB			-0.0007093							02/17/2004	1152
ICB			-0.0006243							02/17/2004	1205
CCV		M0379	1.06173042		1.00		106.2	%	90-110	02/17/2004	1211
CCB			-0.0007330							02/17/2004	1222
CCV		M0379	1.05269819		1.00		105.3	%	90-110	02/17/2004	1415
CCB			-0.0014405							02/17/2004	1430
CCV		M0379	1.04630651		1.00		104.6	%	90-110	02/17/2004	1530
CCB			-0.0015600							02/17/2004	1544

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: PB
Parameter.....: Lead (Pb)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCV		M0379	1.05923512		1.00		105.9	%	90-110	02/17/2004	1640
CCB			-0.0021563							02/17/2004	1655
CCV		M0379	1.05617261		1.00		105.6	%	90-110	02/17/2004	1727
CCB			-0.0011549							02/17/2004	1733
MB		3010	-0.0022724							02/17/2004	1805
LCS		M348	0.53992580		0.500		108.0	%	87-112	02/17/2004	1813
CCV		M0379	1.05411273		1.00		105.4	%	90-110	02/17/2004	1828
CCB			-0.0014725							02/17/2004	1842
MS	223233-1	M348	0.53215407		0.500	0.00525923	105.4	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.53696943	0.53215407	0.500	0.00525923	106.3	%	75-125	02/17/2004	1858
							0.9	R	20		
CCV		M0379	1.06340428		1.00		106.3	%	90-110	02/17/2004	1926
CCB			-0.0014143							02/17/2004	1941
CCV		M0379	1.05616135		1.00		105.6	%	90-110	02/17/2004	2022
CCB			-0.0012998							02/17/2004	2037
MB		3010.	-0.0029846							02/17/2004	2048
LCS		M348	0.53183333		0.500		106.4	%	87-112	02/17/2004	2051
CCV		M0379	1.06373703		1.00		106.4	%	90-110	02/17/2004	2119
CCB			-0.0015389							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: MN
Parameter.....: Manganese (Mn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.97481574		2.00		98.7	%	90-110	02/17/2004	1026
ICV		M0368	1.01482367		1.00		101.5	%	90-110	02/17/2004	1118
ICV		M0356	0.93493543		1.00		93.5	%	90-110	02/17/2004	1133
ICB			-0.0033040							02/17/2004	1152
ICB			-0.0034567							02/17/2004	1205
CCV		M0379	1.03414621		1.00		103.4	%	90-110	02/17/2004	1211
CCB			-0.0034783							02/17/2004	1222
CCV		M0379	1.04123097		1.00		104.1	%	90-110	02/17/2004	1415
CCB			-0.0035384							02/17/2004	1430
CCV		M0379	1.03752557		1.00		103.8	%	90-110	02/17/2004	1530
CCB			-0.0031145							02/17/2004	1544
CCV		M0379	1.04119133		1.00		104.1	%	90-110	02/17/2004	1640
CCB			-0.0033576							02/17/2004	1655
CCV		M0379	1.04530882		1.00		104.5	%	90-110	02/17/2004	1727
CCB			-0.0033304							02/17/2004	1733
MB		3010	-0.0036424							02/17/2004	1805
LCS		M348	0.53013696		0.500		106.0	%	88-110	02/17/2004	1813
CCV		M0379	1.04987539		1.00		105.0	%	90-110	02/17/2004	1828
CCB			-0.0035982							02/17/2004	1842
MS	223233-1	M348	0.54331796		0.500	0.01214849	106.2	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.54383031	0.54331796	0.500	0.01214849	106.3	%	75-125	02/17/2004	1858
							0.1	R	20		
CCV		M0379	1.05107099		1.00		105.1	%	90-110	02/17/2004	1926
CCB			-0.0036609							02/17/2004	1941
CCV		M0379	1.05733548		1.00		105.7	%	90-110	02/17/2004	2022
CCB			-0.0036765							02/17/2004	2037

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: MN
Parameter.....: Manganese (Mn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		3010.	-0.0034894							02/17/2004	2048
LCS		M348	0.52885653		0.500		105.8	%	88-110	02/17/2004	2051
CCV		M0379	1.05378179		1.00		105.4	%	90-110	02/17/2004	2119
CCB			-0.0036259							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: NI
Parameter.....: Nickel (Ni)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.97245983		2.00		98.6	%	90-110	02/17/2004	1026
ICV		M0368	1.03878807		1.00		103.9	%	90-110	02/17/2004	1118
ICV		M0356	1.01530384		1.00		101.5	%	90-110	02/17/2004	1133
ICB			-0.0004459							02/17/2004	1152
ICB			-0.0006132							02/17/2004	1205
CV		M0379	1.03755279		1.00		103.8	%	90-110	02/17/2004	1211
CCB			-0.0004740							02/17/2004	1222
CCV		M0379	1.05003019		1.00		105.0	%	90-110	02/17/2004	1415
CCB			-0.0011340							02/17/2004	1430
CCV		M0379	1.04660368		1.00		104.7	%	90-110	02/17/2004	1530
CCB			-0.0010471							02/17/2004	1544
CCV		M0379	1.05455444		1.00		105.5	%	90-110	02/17/2004	1640
CCB			-0.0006344							02/17/2004	1655
CCV		M0379	1.05278758		1.00		105.3	%	90-110	02/17/2004	1727
CCB			-0.0009539							02/17/2004	1733
MB		3010	-0.0009089							02/17/2004	1805
LCS		M348	0.53819131		0.500		107.6	%	90-112	02/17/2004	1813
CCV		M0379	1.06057907		1.00		106.1	%	90-110	02/17/2004	1828
CCB			-0.0008725							02/17/2004	1842
MS	223233-1	M348	0.58962457		0.500	0.05191682	107.5	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.58964376	0.58962457	0.500	0.05191682	107.5	%	75-125	02/17/2004	1858
							0.0	R	20		
CCV		M0379	1.06384360		1.00		106.4	%	90-110	02/17/2004	1926
CCB			-0.0007388							02/17/2004	1941
CCV		M0379	1.06733203		1.00		106.7	%	90-110	02/17/2004	2022
CCB			-0.0008565							02/17/2004	2037
MB		3010.	-0.0010231							02/17/2004	2048
LCS		M348	0.53481981		0.500		107.0	%	90-112	02/17/2004	2051
CCV		M0379	1.06267007		1.00		106.3	%	90-110	02/17/2004	2119
CCB			-0.0010307							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: SE
Parameter.....: Selenium (Se)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.97679900		2.00		98.8	%	90-110	02/17/2004	1026
CV		M0368	1.01296511		1.00		101.3	%	90-110	02/17/2004	1118
CV		M0356	0.97628662		1.00		97.6	%	90-110	02/17/2004	1133

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: SE
Parameter.....: Selenium (Se)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB			-0.0009244							02/17/2004	1152
ICB			-0.0030442							02/17/2004	1205
CCV		M0379	1.04351568		1.00		104.4	%	90-110	02/17/2004	1211
CCB			0.00107983							02/17/2004	1216
CCV		M0379	1.02883135		1.00		102.9	%	90-110	02/17/2004	1415
CCB			-0.0070749							02/17/2004	1430
CCV		M0379	1.02571654		1.00		102.6	%	90-110	02/17/2004	1530
CCB			0.00874894							02/17/2004	1544
CCV		M0379	1.04462019		1.00		104.5	%	90-110	02/17/2004	1640
CCB			0.00072407							02/17/2004	1655
CCV		M0379	1.03662077		1.00		103.7	%	90-110	02/17/2004	1727
CCB			-0.0023422							02/17/2004	1733
MB		3010	0.00266077							02/17/2004	1805
LCS		M348	0.51917774		0.500		103.8	%	82-111	02/17/2004	1813
CCV		M0379	1.03353515		1.00		103.4	%	90-110	02/17/2004	1828
CCB			0.00292872							02/17/2004	1842
MS	223233-1	M348	0.51693066		0.500	-0.0000284	103.4	%	75-125	02/17/2004	1853
D	223233-1	M348	0.52914318	0.51693066	0.500	-0.0000284	105.8	%	75-125	02/17/2004	1858
							2.3	R	20		
CCV		M0379	1.04603191		1.00		104.6	%	90-110	02/17/2004	1926
CCB			0.00692869							02/17/2004	1941
CCV		M0379	1.03758323		1.00		103.8	%	90-110	02/17/2004	2022
CCB			-0.0029214							02/17/2004	2037
MB		3010.	0.00255970							02/17/2004	2048
LCS		M348	0.50084300		0.500		100.2	%	82-111	02/17/2004	2051
CCV		M0379	1.03557001		1.00		103.6	%	90-110	02/17/2004	2119
CCB			-0.0016973							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: AG
Parameter.....: Silver (Ag)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	0.97833368		1.0		97.8	%	90-110	02/17/2004	1026
ICV		M0369	1.01222659		1.00		101.2	%	90-110	02/17/2004	1123
ICB			0.00037469							02/17/2004	1152
ICB			-0.0003811							02/17/2004	1205
CCV		M0379	0.51535655		0.50		103.1	%	90-110	02/17/2004	1211
CCB			0.00098150							02/17/2004	1222
CCV		M0379	0.50364830		0.50		100.7	%	90-110	02/17/2004	1415
CCB			0.00042440							02/17/2004	1430
CCV		M0379	0.51127008		0.50		102.3	%	90-110	02/17/2004	1530
CCB			0.00048030							02/17/2004	1544
CCV		M0379	0.50763216		0.50		101.5	%	90-110	02/17/2004	1640
CCB			0.00001424							02/17/2004	1655
CCV		M0379	0.51120373		0.50		102.2	%	90-110	02/17/2004	1727
CCB			0.00029322							02/17/2004	1733
MB		3010	0.00105092							02/17/2004	1805
LCS		M348	0.25753465		0.25		103.0	%	87-110	02/17/2004	1813
V		M0379	0.51142712		0.50		102.3	%	90-110	02/17/2004	1828
B			0.00059054							02/17/2004	1842

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: AG
Parameter.....: Silver (Ag)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MS	223233-1	M348	0.08876761		0.25	-0.0005932	35.7	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.10325428	0.08876761	0.25	-0.0005932	41.5	%	75-125	02/17/2004	1858
							15.1	R	20		
CCV		M0379	0.50643543		0.50		101.3	%	90-110	02/17/2004	1926
CCB			0.00078051							02/17/2004	1941
CCV		M0379	0.50305282		0.50		100.6	%	90-110	02/17/2004	2022
CCB			0.00141008							02/17/2004	2037
MB		3010.	0.00080926							02/17/2004	2048
LCS		M348	0.22251372		0.25		89.0	%	87-110	02/17/2004	2051
CCV		M0379	0.50624932		0.50		101.2	%	90-110	02/17/2004	2119
CCB			0.00008676							02/17/2004	2133

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: TL
Parameter.....: Thallium (Tl)

C	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.96776960		2.00		98.4	%	90-110	02/17/2004	1026
ICV		M0368	1.04515635		1.00		104.5	%	90-110	02/17/2004	1118
ICV		M0356	1.00652404		1.00		100.7	%	90-110	02/17/2004	1133
ICB			-0.0010627							02/17/2004	1152
ICB			-0.0028565							02/17/2004	1205
CCV		M0379	1.06193066		1.00		106.2	%	90-110	02/17/2004	1211
CCB			-0.0018687							02/17/2004	1222
CCV		M0379	1.04360444		1.00		104.4	%	90-110	02/17/2004	1415
CCB			-0.0064836							02/17/2004	1430
CCV		M0379	1.04042859		1.00		104.0	%	90-110	02/17/2004	1530
CCB			-0.0042920							02/17/2004	1544
CCV		M0379	1.06116085		1.00		106.1	%	90-110	02/17/2004	1640
CCB			-0.0001386							02/17/2004	1655
CCV		M0379	1.05350838		1.00		105.4	%	90-110	02/17/2004	1727
CCB			-0.0000969							02/17/2004	1733
MB		3010	-0.0050818							02/17/2004	1805
MB		3010.	-0.0024787							02/17/2004	1809
LCS		M348	0.54031767		0.500		108.1	%	79-116	02/17/2004	1813
CCV		M0379	1.04633013		1.00		104.6	%	90-110	02/17/2004	1828
CCB			-0.0029084							02/17/2004	1842
MS	223233-1	M348	0.49103219		0.500	-0.0089395	100.0	%	75-125	02/17/2004	1853
MSD	223233-1	M348	0.50162955	0.49103219	0.500	-0.0089395	102.1	%	75-125	02/17/2004	1858
							2.1	R	20		
CCV		M0379	1.06282105		1.00		106.3	%	90-110	02/17/2004	1926
CCB			-0.0018758							02/17/2004	1941
CCV		M0379	1.04963837		1.00		105.0	%	90-110	02/17/2004	2022
CCB			-0.0035175							02/17/2004	2037
MB		3010.	-0.0018885							02/17/2004	2048
LCS		M348	0.52536130		0.500		105.1	%	79-116	02/17/2004	2051
CCV		M0379	1.04875668		1.00		104.9	%	90-110	02/17/2004	2119
CCB			-0.0010127							02/17/2004	2133

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 | Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. | PROJECT: ENCYCLE BLRA | ATTN: Richard Marcus

Test Method.....: SW-846 6010B | Batch.....: 90236 | Analyst...: jem
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L | Test Code.: SN
Parameter.....: Tin (Sn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0371	1.96802125		2.00		98.4	%	90-110	02/17/2004	1030
ICV		M0374	0.95335888		1.00		95.3	%	90-110	02/17/2004	1142
ICB			0.00769622							02/17/2004	1152
ICB			0.01626863							02/17/2004	1205
CCV		M0379	2.10456699		2.00		105.2	%	90-110	02/17/2004	1211
CCB			0.00895079							02/17/2004	1222
CCV		M0379	2.07772465		2.00		103.9	%	90-110	02/17/2004	1415
CCB			0.00088543							02/17/2004	1430
CCV		M0379	2.03452595		2.00		101.7	%	90-110	02/17/2004	1530
CCB			-0.0015799							02/17/2004	1544
CCV		M0379	2.07559356		2.00		103.8	%	90-110	02/17/2004	1640
CCB			-0.0016482							02/17/2004	1655
CCV		M0379	2.07715175		2.00		103.9	%	90-110	02/17/2004	1727
CCB			0.03209060							02/17/2004	1733
MB		3010	-0.0052765							02/17/2004	1805
LCS		M348	1.04247097		1.00		104.2	%	83-118	02/17/2004	1813
CCV		M0379	2.05977653		2.00		103.0	%	90-110	02/17/2004	1828
CB			0.00242621							02/17/2004	1842
MS	223233-1	M348	1.05290209		1.00	-0.0183681	107.1	%	75-125	02/17/2004	1853
MSD	223233-1	M348	1.07676163	1.05290209	1.00	-0.0183681	109.5	%	75-125	02/17/2004	1858
							2.2	R	20		
CCV		M0379	2.07899769		2.00		103.9	%	90-110	02/17/2004	1926
CCB			-0.0008458							02/17/2004	1941
CCV		M0379	2.06594191		2.00		103.3	%	90-110	02/17/2004	2022
CCB			0.00024356							02/17/2004	2037
MB		3010.	-0.0076692							02/17/2004	2048
LCS		M348	1.01154259		1.00		101.2	%	83-118	02/17/2004	2051
CCV		M0379	2.07837558		2.00		103.9	%	90-110	02/17/2004	2119
CCB			0.00156443							02/17/2004	2133

Test Method.....: SW-846 6010B | Batch.....: 90236 | Analyst...: jem
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L | Test Code.: ZN
Parameter.....: Zinc (Zn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0370	1.97198107		2.00		98.6	%	90-110	02/17/2004	1026
ICV		M0368	1.00954037		1.00		101.0	%	90-110	02/17/2004	1118
ICB			-0.0015693							02/17/2004	1152
ICB			-0.0021580							02/17/2004	1205
CCV		M0379	1.01474041		1.00		101.5	%	90-110	02/17/2004	1211
CCB			-0.0021180							02/17/2004	1222
CCV		M0379	1.02620366		1.00		102.6	%	90-110	02/17/2004	1415
CCB			-0.0012209							02/17/2004	1430
CCV		M0379	1.02519987		1.00		102.5	%	90-110	02/17/2004	1530
CCB			-0.0000619							02/17/2004	1544
CCV		M0379	1.03118111		1.00		103.1	%	90-110	02/17/2004	1640
CCB			-0.0005909							02/17/2004	1655
CCV		M0379	1.03048411		1.00		103.0	%	90-110	02/17/2004	1727
CCB			-0.0011738							02/17/2004	1733
B		3010	-0.0029174							02/17/2004	1805
CS		M348	0.51243990		0.500		102.5	%	86-110	02/17/2004	1813

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 223239 Report Date.: 03/12/2004

CUSTOMER: Encycle Texas, Inc. PROJECT: ENCYCLE BLRA ATTN: Richard Marcus

Test Method.....: SW-846 6010B Batch.....: 90236 Analyst...: jem
Method Description.: Metals Analysis (ICAP) Units.....: mg/L Test Code.: ZN
Parameter.....: Zinc (Zn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCV		M0379	1.03668848		1.00		103.7	%	90-110	02/17/2004	1828
CCB			-0.0015746							02/17/2004	1842
MS	223233-1	M348	1.79657149		0.500	1.15499527	128.3	%	75-125	02/17/2004	1853
MSD	223233-1	M348	1.80017106	1.79657149	0.500	1.15499527	129.0	%	75-125	02/17/2004	1858
							0.2	R	20		
CCV		M0379	1.02438139		1.00		102.4	%	90-110	02/17/2004	1926
CCB			-0.0018370							02/17/2004	1941
CCV		M0379	1.02187578		1.00		102.2	%	90-110	02/17/2004	2022
CCB			-0.0021808							02/17/2004	2037
MB		3010.	0.00137992							02/17/2004	2048
LCS		M348	0.50684152		0.500		101.4	%	86-110	02/17/2004	2051
CCV		M0379	1.02499791		1.00		102.5	%	90-110	02/17/2004	2119
CCB			-0.0023376							02/17/2004	2133

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/12/2004

(1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
(2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
(3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
(4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
(5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
(6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
(7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
(8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
(9) Hach Handbook of Water Analysis, 1979

Comments:
Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/12/2004

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe	Tallahassee, FL	*tl

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx

EXPLANATION OF DATA FLAGS

B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
I - Used to indicate matrix interference.
X - Indicates that a surrogate recovery is outside the specified quality control limits.
Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
U - Indicates that a value is less than the MDL or was not detected.

1733 North Padre Island Drive • Corpus Christi, TX 78408 • Tel: 361 289 2673 • Fax: 361 289 2471 • www.stl-inc.com

ARCADIS

Laboratory Task Order No./P.O. No. 223239

CHAIN-OF-CUSTODY RECORD

Project Number/Name: Encycle BLRA

Project Location: Corpus Christi, TX

Laboratory: STL, Corpus Christi

Project Manager: Ken Brandner

Sampler(s)/Affiliation: Ken Brandner / ARCADIS

ANALYSIS / METHOD / SIZE

2-8°C
1,7°C

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Dissolved Antimony, As, Cd, Co, Cu, Pb, Mn, Hg, Ni, Se, silver, Thallium, tin, zinc (16 oz. polyethylene)						Remarks	Total
SED-1	L	2/16/04 8:40		2							2
SED-4		2/16/04 9:00		2							2
SED-7		9:40		2							2
SED-10		10:00		2							2
BKG-1		11:00		2							2
BKG-2		11:30		2							2
BKG-3		12:40		2							2
BKG-4	S	13:20		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 16

Relinquished by: Ken Brandner	Organization: ARCADIS	Date 2/16/04	Time 13:52	Seal Intact? Yes No N/A
Received by: Olga Veronica Mcdonald	Organization: STL	Date 2/16/04	Time 13:52	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Filter samples (0.45 micron) as soon as possible. Acidify to pH<2 with nitric acid after filtering. Results to Ken Brandner. Invoice to Rich Marcus of Encycle. Samples delivered in cooler with ice.

Delivery Method: ☒ In Person ☐ Common Carrier (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. 223239

CHAIN-OF-CUSTODY RECORD

Project Number/Name: Encycle BLRA

Project Location: Corpus Christi, TX

Laboratory: STL, Corpus Christi

Project Manager: Ken Brandner

Sampler(s)/Affiliation: Ken Brandner / ARCADIS

2.8°C
1.7°C

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Total Antimony, As, Cd, Co, Cu, Pb, Mn, Hg, Ni, Se, Silver, Thallium, Tin, Zinc (16 oz. Poly w/HNO3)						Remarks	Total
SED-1	L	2/16/04 8:40		2							2
SED-4		2/16/04 9:00		2							2
SED-7		9:40		2							2
SED-10		10:00		2							2
BKG-1		11:00		2							2
BKG-2		11:30		2							2
BKG-3		12:40		2							2
BKG-4		13:20		2							2
Equipment Blank		9:50		2							2
Field Blank		12:50		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 20

Relinquished by: Ken Brandner	Organization: ARCADIS	Date 2/16/04	Time 1352	Seal Intact?
Received by: Olga Burruca McDonald	Organization: STL	Date 2/16/04	Time 13:52	Yes No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A

Special Instructions/Remarks: Analyze for total metals - normal turnaround. Results to Ken Brandner. Invoice to Rich Marcus of Encycle. Samples delivered in cooler with ice.

Delivery Method: ☒ In Person ☐ Common Carrier _____ (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

rpjsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 223239 Location.: 57203 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: Date of the Report..: 02/16/2004
Project Number.: 98000084 Project Description.: Project - OVM Project Manager.....: ovm
Customer.....: Encycle Texas, Inc. Contact.: Richard Marcus

Questions ?	(Y/N)	Comments
How did samples arrive?.....		Client delivered
Chain-of-Custody Present?.....	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples chilled?.....	Y	
Temperature blank in cooler?.....	Y	
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y	2.8 deg C, 1.7 deg C
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		N/A
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Additional.....		
Comments.....		
Sample Custodian Signature.....		

om 2/16/04

APPENDIX I

ARCADIS

Appendix I

Pore Water and Sediment
Laboratory Data Reports – January
2004 Samples

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

February 19, 2004 Service Request No: K2400648

Ken Brandner
ARCADIS
11490 Westheimer Rd, Ste. 600
Houston, TX 77077-6841

RE: Corpus Christi, TX / CC000878.0001

Dear Ken:

Enclosed are the results of the sample(s) submitted to our laboratory on January 31, 2004. For your reference, these analyses have been assigned our service request number K2400648.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3316.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jeff Christian
Laboratory Director

JC/jeb

NELAP Accredited ACIL Seal of Excellence Award

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	ARCADIS	**Service Request No.:**	K2400648
Project:	Corpus Christi, TX	**Date Received:**	1/31/04
Sample Matrix:	Sediment		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Four sediment samples and one Equipment Blank were received for analysis at Columbia Analytical Services on 1/31/04. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

The four sediment samples designated for Porewater Extraction were processed on receipt at the laboratory. The aqueous porewater samples generated from the bulk sediments were assigned identifiers of SED-1-Porewater, SED-4-Porewater, SED-7-Porewater, and SED-10-Porewater.

General Comments Regarding Non-Homogenous Samples

Several data quality issues were observed that suggest the sediment samples contained non-homogenous distribution of certain heavy metals, as well as sulfide/metal sulfides. The laboratory replicate analyses for a number of parameters (Total Hg for bulk sediment; Cd, Cu, and Zn for Simultaneously Extracted Metals - SEM) yielded Percent Relative Differences (RPD) outside CAS/Kelso control criteria. In addition, the initial Acid Volatile Sulfide (AVS) determination yielded poor replication. Although the reanalysis for AVS produced an RPD within control criteria, significant variation was still present. Finally, the SEM values for Cd versus the Total Cd were significantly higher in two samples.

High RPDs for Total Metals and AVS/SEM:
An investigation was initiated by CAS/Kelso to determine potential explanations for the variability in laboratory replicate results. The original bulk sediments were visually inspected by senior level chemists for evidence of heterogeneous character (e.g. rocks, gravel, vegetation, shells, etc.). The samples appeared to be very homogenous (color, texture, no extraneous material, etc.). In addition, the samples showed signs that they had been mixed well by the laboratory analysts.

The conclusion was drawn that high metal-containing particulate with low water solubility (e.g. sulfides, oxides, elemental, etc.) was present in the sediment. Screens of the associated porewaters from the bulk sediments supported this. As a result, homogenization techniques within the scope of the EPA methods cited did not necessarily provide the level of mixing needed to provide homogenous distribution of all elements. The alternative to homogenization is drying and milling, either freeze-drying or 60°C oven drying. The use of drying and milling is outside the scope of the EPA procedures, but would be necessary to improve precision.

SEM/Cd versus Total Cd:
Note that SEM values should normally be expected to be equal to or less than the associated "total" values. The dissolution process incorporated in the AVS/SEM procedure is generally as aggressive as the digestion procedure defined under EPA Method 3050 when analyzing elements that form complex ions with chloride. This holds true

Approved by J. Clark **Date** 2/20/04

because the "total" analysis is not a true total determination. Sediment samples are not completely dissolved when digesting with $HNO_3/HCl/H_2O_2$. A true total metals content requires a more aggressive dissolution procedure (HF, fusion, etc.). However, the SEM/Cd for samples SED-7 and SED-10 was significantly higher than the corresponding "total" concentrations. These results considered in conjunction with the laboratory replicate analyses point to the same conclusion as drawn from that investigation. Non-homogenous distribution of high metal-containing particulate with low water solubility (e.g. sulfides, oxides, elemental, etc.) was present in the sediment.

Dissolved Organic Carbon (DOC) & pH in Porewater

Insufficient porewater volume was available to perform Duplicate/Matrix Spike determinations for DOC on these samples. A duplicate control sample was analyzed with the batch to provide accuracy and precision information.

No other anomalies associated with the analysis of these samples were observed.

Total Organic Carbon (TOC) – Bulk Sediment

No other anomalies associated with the analysis of these samples were observed.

Acid Volatile Sulfide (AVS)

The initial analysis for AVS produced replicate results outside CAS/Kelso control criteria. The samples were reanalyzed and produced values in control, although the RPD was still relatively high. Refer to the previous note "General Comments Regarding Non-Homogenous Samples".

No other anomalies associated with the analysis of these samples were observed.

Total Metals – Bulk Sediment

The control criteria for matrix spike recoveries of Cadmium, Mercury, and Zinc for sample SED-1 are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The matrix spike recovery of Antimony for sample SED-1 was below the CAS control criterion. Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analyses. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. Since low recoveries result from a method defect and can be magnified by certain matrix components, no corrective action is appropriate other than using alternative procedures that specifically target Antimony. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control.

The matrix spike recovery of Manganese for sample SED-1 was outside the CAS control criteria as a result of the heterogeneous character of the sample. The Relative Percent Difference (RPD) for the replicate analysis supports this. Since the unspiked samples contain high analyte concentrations relative to the amount spiked, the variability between replicates was sufficient to bias the percent recoveries outside normal CAS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control. No further corrective action was appropriate.

The Relative Percent Difference (RPD) for the replicate analysis of Mercury in sample SED-1 was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Refer to the previous note "General Comments Regarding Non-Homogenous Samples".

No other anomalies associated with the analysis of these samples were observed.

Approved by W. Clt **Date** 2/20/07

Simultaneously Extractable Metals (SEM)

The Relative Percent Difference (RPD) for the replicate analysis of Cadmium, Copper, and Zinc in sample SED-4 was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Refer to the previous note "General Comments Regarding Non-Homogenous Samples".

No other anomalies associated with the analysis of these samples were observed.

Dissolved Metals – Porewater

Insufficient porewater volume was available to perform Duplicate/Matrix Spike determinations for DOC on these samples. A duplicate control sample was analyzed with the batch to provide accuracy and precision information.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 2/20/07

Chain of Custody Documentation

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Project Number/Name CC0008780001

Project Location Corpus Christi, TX

Laboratory Columbia Analytical

Project Manager Ken Brandner

Sampler(s)/Affiliation B Heslep / Arcadis

K2400648

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Total Metals 200.8, 1631	TOC ASTM D1129-80M	SEM/AVS Cd, Cu, Ni, Pb, Zn, Ag	Porewater Extraction			Remarks	Total
SED-1	S	1/30/04 945		X	X	X	X			SEM/AVS jar has no	5
SED-4	S	1/30/04 1000		X	X	X	X			headspace ↓	5
~~SED-7~~ B+1	~~S~~	~~1/30/04 1040~~									
EB-1	W	1/30/04		X							1

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 11

Relinquished by: [signature]	Organization: ARCADIS	Date 1/30/04	Time	Seal Intact? Yes No N/A
Received by: [signature]	Organization: Jan Alan CAS	Date 1/31/04	Time 0900	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Total Metals: Antimony, arsenic, Cd, Cobalt, Cu, Pb, mercury, manganese, Ni, Selenium, silver, thallium, tin, zinc. Porewater will be analyzed for dissolved metals (antimony, arsenic, [illegible], cobalt, mercury, manganese, selenium, thallium & tin), DOC and pH

Delivery Method: ☐ In Person ☒ Common Carrier FED EX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name CC000878.0001

Project Location Corpus Christi, TX

Laboratory Columbia Analytical

Project Manager Ken Brandner

Sampler(s)/Affiliation B. Heslep/Arcadis

1C24006148

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	Total Metals 200.8, 1631	TOC ASTM D4129-5	SEM/AVS Cd, Cu, Pb, Ni, Ag, Zn	Porewater Extraction			Remarks	Total
SED-7	S	1/30/04 1040		X	X	X	X			SEM/AVS jar has no headspace	5
SED-10	S	1/30/04 1110		X	X	X	X			↓	5

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 10

Relinquished by: [signature]	Organization: ARCADIS	Date 1/30/04	Time	Seal Intact? Yes No N/A
Received by:	Organization: CAS	Date 1/31/04	Time 0900	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Total Metals: Antimony, As, Cd, Co, Cu, Pb, Hg, Mn, Ni, Se, Ag, Thallium, tin, zinc. Porewater extraction; porewater will be analyzed for dissolved metals (antimony, arsenic, Co, Hg, Mn, selenium, thallium and tin), DOC and pH.

Delivery Method: ☐ In Person ☒ Common Carrier FEDEX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

10

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

Project/Client Arcadis Work Order K240 0648

Cooler received on 1/31/04 and opened on 1/31/04 by A. Jurell

1. Were custody seals on outside of coolers? (Y) N
   If yes, how many and where? 1f
2. Were seals intact and signature & date correct? (Y) N
3. Is the shipper's airbill available and filed? If no, record airbill number: enclosed (Y) N
4. COC#
   Temperature of cooler(s) upon receipt: -0.9 0.5
   Temperature Blank: NA NA
5. Were custody papers properly filled out (ink, signed, etc.)? (Y) N
6. Type of packing material present bags
7. Did all bottles arrive in good condition (unbroken)? (Y) N
8. Were all bottle labels complete (i.e analysis, preservation, etc.)? (Y) N
9. Did all bottle labels and tags agree with custody papers? (Y) N
10. Were the correct types of bottles used for the tests indicated? (Y) N
11. Were all of the preserved bottles received at the lab with the appropriate pH? (Y) N
12. Were VOA vials checked for absence of air bubbles, and if present, noted below? ~~Y~~ ~~N~~
13. Did the bottles originate from CAS/K or a branch laboratory? Y (N)
14. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection? ~~Y~~ ~~N~~
15. Was C12/Res negative? ~~Y~~ ~~N~~

Explain any discrepancies: * Client bottles

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Arcadis
Project: Corpus Christi, TX/CC000878.0001
Sample Matrix: Sediment

Service Request: K2400648

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: WET

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
SED-1	K2400648-001	01/30/2004	01/31/2004	02/02/2004	51.8	
SED-4	K2400648-002	01/30/2004	01/31/2004	02/02/2004	52.6	
SED-7	K2400648-004	01/30/2004	01/31/2004	02/02/2004	71.3	
SED-10	K2400648-005	01/30/2004	01/31/2004	02/02/2004	72.0	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Arcadis	**Service Request:**	K2400648
Project:	Corpus Christi, TX/CC000878.0001	**Date Collected:**	01/30/2004
Sample Matrix:	Sediment	**Date Received:**	01/31/2004
		Date Analyzed:	02/02/2004

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	WET
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
SED-1	K2400648-001	51.8	51.6	51.7	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

Group ID:	KWG0401268				
Analyst:	ACheatle			**Reviewed By:**	[illegible]
Date Acquired:	02/02/2004 10:05	**Oven TempStart:**	104 DEG C	**Date Reviewed:**	2/3/04
Date Completed:	02/03/2004 09:00	**Oven TempEnd:**	104 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K2400594-001	PCS1-04b	SLUDGE	0.98g	6.27g	3.49g	47.4		
2	K2400604-001	NWO	MISC	11.35g	17.79g	17.00g	87.7		
3	K2400607-001	Potliner #515 Composite	SOLID	0.98g	10.58g	10.58g	100		
4	K2400612-001	SW07S021 DUP (4-8)	SOIL	0.98g	5.79g	5.30g	89.8		
5	K2400612-005	SW08SB22 (0-.5)	SOIL	0.99g	6.59g	6.14g	92.0		
6	K2400612-006	SW08SB22 (2-4)	SOIL	0.99g	8.39g	7.68g	90.4		
7	K2400612-007	SW08SB22 (4-8)	SOIL	0.99g	7.00g	6.20g	86.7		
8	K2400612-008	SW08SB23 (0-.5)	SOIL	1.00g	8.40g	7.80g	91.9		
9	K2400612-009	SW08SB23 (2-4)	SOIL	0.99g	8.34g	7.71g	91.4		
10	K2400612-010	SW08SB23 (4-8)	SOIL	0.99g	5.44g	4.67g	82.7		
11	K2400612-011	SW08SB24 (0-.5)	SOIL	1.00g	8.58g	7.98g	92.1		
12	K2400612-012	SW08SB24 (2-4)	SOIL	1.00g	8.08g	7.25g	88.3		
13	K2400612-013	SW08SB24 (4-8)	SOIL	0.99g	6.76g	5.86g	84.4		
14	K2400612-014	SW07SB19 (0-.5)	SOIL	0.99g	10.43g	9.52g	90.4		
15	K2400612-015	SW07SB19 (2-4)	SOIL	0.99g	8.06g	7.24g	88.4		
16	K2400612-016	SW07SB19 (4-8)	SOIL	0.99g	8.81g	7.51g	83.4		
17	K2400612-017	SW07SD19 DUP (4-8)	SOIL	1.00g	10.65g	9.15g	84.5		
18	K2400612-018	SW07SB20 (0-.5)	SOIL	0.98g	7.69g	7.11g	91.4		
19	K2400612-019	SW07SB20 (2-4)	SOIL	0.98g	7.27g	6.54g	88.4		
20	K2400612-020	SW07SB20 (4-8)	SOIL	0.97g	6.62g	6.07g	90.3		
21	K2400612-021	SW07SB21 (0-.5)	SOIL	0.98g	5.45g	5.00g	89.9		
22	K2400612-022	SW07SB21 (2-4)	SOIL	0.98g	5.55g	4.93g	86.4		
23	K2400612-023	SW07SB21 (4-8)	SOIL	0.98g	8.39g	7.53g	88.4		
24	K2400632-001	P23111103-C3	SEDIMENT	0.98g	8.93g	3.68g	34.0		
25	K2400632-002	P23111103-D3	SEDIMENT	0.99g	14.16g	10.57g	72.7		
26	K2400632-003	P23111103-E3	SEDIMENT	0.98g	9.73g	4.00g	34.5		

Group ID:	KWG0401268				
Analyst:	ACheatle			**Reviewed By:**	[illegible]
Date Acquired:	02/02/2004 10:05	**Oven TempStart:**	104 DEG C	**Date Reviewed:**	2/3/04
Date Completed:	02/03/2004 09:00	**Oven TempEnd:**	104 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K2400632-004	P23111103-F3	SEDIMENT	0.98g	11.94g	6.85g	53.6		
28	K2400632-005	P23111103-G1	SEDIMENT	0.99g	12.70g	7.49g	55.5		
29	K2400632-006	P23111103-G3	SEDIMENT	0.98g	13.73g	7.88g	54.1		
30	K2400632-007	P23111103-I1	SEDIMENT	0.98g	12.95g	11.10g	84.5		
31	K2400632-008	P23111103-I2	SEDIMENT	0.97g	12.48g	10.20g	80.2		
32	K2400632-009	P23111103-J1	SEDIMENT	0.98g	15.30g	11.77g	75.3		
33	K2400632-010	P23111103-I5	SEDIMENT	0.98g	11.42g	9.51g	81.7		
34	K2400648-001	SED-1	SEDIMENT	0.98g	11.47g	6.41g	51.8		
35	K2400648-002	SED-4	SEDIMENT	0.97g	12.44g	7.00g	52.6		
36	K2400648-004	SED-7	SEDIMENT	0.98g	16.89g	12.33g	71.3		
37	K2400648-005	SED-10	SEDIMENT	0.99g	15.33g	11.32g	72.0		
38	K2400650-001	MW-19-44.5	SOIL	0.98g	11.06g	8.36g	73.2		
39	KWG0401268-1	Duplicate Client Sample	SOIL	0.99g	7.11g	6.49g	89.9	K2400612-001	
40	KWG0401268-10	Duplicate Client Sample	SOIL	0.97g	13.68g	10.24g	72.9	K2400650-001	
41	KWG0401268-2	Duplicate Client Sample	SOIL	0.98g	13.49g	12.46g	91.8	K2400612-014	
42	KWG0401268-3	Duplicate Client Sample	SOLID	0.99g	10.55g	10.54g	99.9	K2400607-001	
43	KWG0401268-7	Duplicate Client Sample	SEDIMENT	0.98g	8.72g	4.12g	40.6	K2400632-001	
44	KWG0401268-9	Duplicate Client Sample	SEDIMENT	0.97g	11.81g	6.56g	51.6	K2400648-001	

15

Dissolved Organic Carbon (DOC) & pH – Porewater

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Arcadis
Project Name : Corpus Christi, TX
Project Number : CC000878.0001
Sample Matrix : WATER

Service Request : K2400648
Date Collected : 01/30/04
Date Received : 01/31/04

pH

Analysis Method : 150.1
Test Notes :

Units : pH UNITS
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
SED-1-Porewater	K2400648-006	-	1	02/06/04	7.73	
SED-4-Porewater	K2400648-007	-	1	02/06/04	7.46	
SED-7-Porewater	K2400648-008	-	1	02/06/04	7.93	
SED-10-Porewater	K2400648-009	-	1	02/06/04	8.09	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	NA
Project Number :	CC000878.0001	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	02/06/04

Duplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K2400842-002DUP
Test Notes :

Units : pH UNITS
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
pH	150.1	-	11.33	11.33	11.33	<1	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	NA
Project Number :	CC000878.0001	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	02/06/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	pH UNITS
Lab Code :	K2400648-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
pH	None	150.1	7.44	7.38	99	85-115	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Arcadis
Project Name : Corpus Christi, TX
Project Number : CC000878.0001
Sample Matrix : WATER

Service Request : K2400648
Date Collected : 01/30/04
Date Received : 01/31/04

Carbon, Dissolved Organic

Units : mg/L (ppm)
Basis : NA

Analysis Method : 415.1
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
SED-1-Porewater	K2400648-006	0.5	1	02/11/04	10.1	
SED-4-Porewater	K2400648-007	0.5	1	02/11/04	13.0	
SED-7-Porewater	K2400648-008	0.5	1	02/11/04	7.0	
SED-10-Porewater	K2400648-009	0.5	1	02/11/04	4.5	
Method Blank	K2400648-MB	0.5	1	02/11/04	ND	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	NA
Project Number :	CC000878.0001	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	02/11/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L (ppm)
Lab Code :	K2400648-LCS1	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Dissolved Organic	None	415.1	29.5	31.5	107	85-115	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	NA
Project Number :	CC000878.0001	**Date Received :**	NA
Sample Matrix :	WATER	**Date Extracted :**	NA
		Date Analyzed :	02/11/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L (ppm)
Lab Code :	K2400648-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Dissolved Organic	None	415.1	29.5	29.9	101	85-115	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Arcadis
'roject : Corpus Christi, TX

Service Request : K2400648
Date Collected : NA
Date Received : NA

Carbon, Dissolved Organic
EPA Method 415.1
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/11/04	25.0	25.3	101
CCV2 Result	02/11/04	25.0	25.5	102
CCV3 Result	02/11/04	25.0	25.6	102

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/11/04	0.5	ND
CCB2 Result	02/11/04	0.5	ND
CCB3 Result	02/11/04	0.5	ND

Total Organic Carbon (TOC) – Bulk Sediment

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Arcadis
Project Name : Corpus Christi, TX
Project Number : CC000878.0001
Sample Matrix : SEDIMENT

Service Request : K2400648
Date Collected : 01/30/04
Date Received : 01/31/04

Carbon, Total Organic

Units : Percent
Basis : Dry

Analysis Method : ASTM D4129-82M
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
SED-1	K2400648-001	0.05	1	02/17/04	1.46	
SED-4	K2400648-002	0.05	1	02/17/04	1.03	
SED-7	K2400648-004	0.05	1	02/17/04	0.77	
SED-10	K2400648-005	0.05	1	02/17/04	0.21	
Method Blank	K2400648-MB	0.05	1	02/17/04	ND	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	01/30/04
Project Number :	CC000878.0001	**Date Received :**	01/31/04
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	02/17/04

Duplicate Summary
Inorganic Parameters

Sample Name : SED-7
Lab Code : K2400648-004DUP
Test Notes :

Units : Percent
Basis : Dry

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	ASTM D4129-82M	0.05	0.77	0.69	0.73	11	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	01/30/04
Project Number :	CC000878.0001	**Date Received :**	01/31/04
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	02/17/04

Matrix Spike Summary
Inorganic Parameters

Sample Name : SED-7
Lab Code : K2400648-004MS
Test Notes :

Units : Percent
Basis : Dry

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	ASTM D4129-82M	0.05	3.31	0.77	3.53	83	75-125	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	NA
Project Number :	CC000878.0001	**Date Received :**	NA
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	02/17/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	Percent
Lab Code :	K2400648-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	None	ASTM D4129-82M	0.57	0.62	109	85-115	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Arcadis
roject : Corpus Christi, TX

Service Request : K2400648
Date Collected : NA
Date Received : NA

Carbon, Total Organic
ASTM D4129-82M
Units: Percent

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/17/04	20.0	18.1	91
CCV2 Result	02/17/04	20.0	19.4	97
CCV3 Result	02/17/04	20.0	18.3	92

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/17/04	0.05	ND
CCB2 Result	02/17/04	0.05	ND
CCB3 Result	02/17/04	0.05	ND

Acid Volatile Sulfide (AVS)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Arcadis
Project Name : Corpus Christi, TX
Project Number : CC000878.0001
Sample Matrix : SEDIMENT

Service Request : K2400648
Date Collected : 01/30/04
Date Received : 01/31/04

Sulfide, Acid Volatile

Units : mg/Kg (ppm)
Basis : Dry

Analysis Method : Draft 12/91
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
SED-1	K2400648-001	200	200	02/13/04	2610	
SED-4	K2400648-002	100	100	02/13/04	563	
SED-7	K2400648-004	50	50	02/13/04	327	
SED-10	K2400648-005	10	10	02/13/04	96	
Method Blank	K2400648-MB	1.0	1	02/13/04	ND	

Report By:BReller

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	01/30/04
Project Number :	CC000878.0001	**Date Received :**	01/31/04
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	02/13/04

Duplicate Summary
Inorganic Parameters

Sample Name : SED-4
Lab Code : K2400648-002DUP
Test Notes :

Units : mg/Kg (ppm)
Basis : Dry

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfide, Acid Volatile	Draft 12/91	100	563	665	614	17	

Report By:BReller

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	01/30/04
Project Number :	CC000878.0001	**Date Received :**	01/31/04
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	02/13/04

Matrix Spike Summary
Inorganic Parameters

Sample Name : SED-4
Lab Code : K2400648-002MS
Test Notes :

Units : mg/Kg (ppm)
Basis : Dry

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfide, Acid Volatile	Draft 12/91	200	565	563	1050	86	60-130	

Report By:BReller

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Arcadis	**Service Request :**	K2400648
Project Name :	Corpus Christi, TX	**Date Collected :**	NA
Project Number :	CC000878.0001	**Date Received :**	NA
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	02/13/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/Kg (ppm)
Lab Code :	K2400648-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfide, Acid Volatile	None	Draft 12/91	6.27	5.03	80	60-130	

Report By:PWiest

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Arcadis
Project : Corpus Christi, TX

Service Request : K2400648
Date Collected : NA
Date Received : NA

Sulfide, Acid Volatile
Draft 12/91
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/13/04	1.26	1.25	99
CCV2 Result	02/13/04	0.63	0.67	106
CCV3 Result	02/13/04	1.26	1.25	99
CCV4 Result	02/13/04	1.26	1.24	98

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/13/04	0.05	ND
CCB2 Result	02/13/04	0.05	ND
CCB3 Result	02/13/04	0.05	ND
CCB4 Result	02/13/04	0.05	ND

Total Metals – Bulk Sediment

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Sample No.	Lab Sample ID.
SED-1	K2400648-001
SED-1D	K2400648-001D
SED-1S	K2400648-001S
SED-4	K2400648-002
SED-7	K2400648-004
SED-10	K2400648-005
Method Blank	K2400648-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

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 the conditions detailed above. Release of the data contained 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: Date: 2/17/04

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	SEDIMENT	Units:	MG/KG
		Basis:	Dry

Sample Name: SED-1 Lab Code: K2400648-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	2/9/04	2/10/04	0.87		N
Arsenic	200.8	0.5	5	2/6/04	2/13/04	12.3		
Cadmium	200.8	1.07	100	2/6/04	2/13/04	43.9		
Cobalt	200.8	0.02	5	2/6/04	2/13/04	6.39		
Copper	200.8	2.2	100	2/6/04	2/13/04	73.9		
Lead	200.8	0.05	5	2/6/04	2/13/04	116		
Manganese	200.8	1.07	100	2/6/04	2/13/04	315		N
Mercury	7471A	0.76	40	2/9/04	2/10/04	19.5		*
Nickel	200.8	0.2	5	2/6/04	2/13/04	11.5		
Selenium	200.8	1.1	5	2/6/04	2/13/04	10.0		
Silver	200.8	0.02	5	2/9/04	2/10/04	1.22		
Thallium	200.8	0.02	5	2/6/04	2/13/04	0.66		
Tin	200.8	5.4	5	2/9/04	2/10/04	7.0		
Zinc	200.8	10.7	100	2/6/04	2/13/04	4380		

% Solids: 51.8

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	SEDIMENT	Units:	MG/KG
		Basis:	Dry

Sample Name: SED-4 Lab Code: K2400648-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	2/9/04	2/10/04	0.43		N
Arsenic	200.8	0.5	5	2/6/04	2/13/04	7.8		
Cadmium	200.8	0.05	5	2/6/04	2/13/04	43.2		
Cobalt	200.8	0.02	5	2/6/04	2/13/04	22.8		
Copper	200.8	0.1	5	2/6/04	2/13/04	26.8		
Lead	200.8	0.05	5	2/6/04	2/13/04	49.5		
Manganese	200.8	5.25	500	2/6/04	2/13/04	6090		N
Mercury	7471A	0.02	1	2/9/04	2/10/04	0.43		*
Nickel	200.8	0.2	5	2/6/04	2/13/04	42.3		
Selenium	200.8	1.1	5	2/6/04	2/13/04	2.8		
Silver	200.8	0.02	5	2/9/04	2/10/04	0.28		
Thallium	200.8	0.02	5	2/6/04	2/13/04	0.23		
Tin	200.8	5.3	5	2/9/04	2/10/04	5.3	U	
Zinc	200.8	52.5	500	2/6/04	2/13/04	14100		

% Solids: 52.6

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	SEDIMENT	Units:	MG/KG
		Basis:	Dry

Sample Name: SED-7 Lab Code: K2400648-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	2/9/04	2/10/04	1.22		N
Arsenic	200.8	0.6	5	2/6/04	2/13/04	9.7		
Cadmium	200.8	5.84	500	2/6/04	2/13/04	189		
Cobalt	200.8	0.02	5	2/6/04	2/13/04	83.6		
Copper	200.8	0.1	5	2/6/04	2/13/04	47.7		
Lead	200.8	0.06	5	2/6/04	2/13/04	32.4		
Manganese	200.8	5.84	500	2/6/04	2/13/04	14900		N
Mercury	7471A	0.12	10	2/9/04	2/10/04	2.21		*
Nickel	200.8	0.2	5	2/6/04	2/13/04	29.8		
Selenium	200.8	1.2	5	2/6/04	2/13/04	1.2		
Silver	200.8	0.02	5	2/9/04	2/10/04	0.35		
Thallium	200.8	0.02	5	2/6/04	2/13/04	0.18		
Tin	200.8	5.8	5	2/9/04	2/10/04	6.0		
Zinc	200.8	58.4	500	2/6/04	2/13/04	36400		

% Solids: 71.3

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	SEDIMENT	Units:	MG/KG
		Basis:	Dry

Sample Name: SED-10 Lab Code: K2400648-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.06	5	2/9/04	2/10/04	1.22		N
Arsenic	200.8	0.6	5	2/6/04	2/13/04	8.9		
Cadmium	200.8	0.06	5	2/6/04	2/13/04	167		
Cobalt	200.8	0.02	5	2/6/04	2/13/04	20.2		
Copper	200.8	11.5	500	2/6/04	2/13/04	289		
Lead	200.8	0.06	5	2/6/04	2/13/04	163		
Manganese	200.8	5.74	500	2/6/04	2/13/04	2910		N
Mercury	7471A	0.02	1	2/9/04	2/10/04	0.16		*
Nickel	200.8	0.2	5	2/6/04	2/13/04	13.5		
Selenium	200.8	1.2	5	2/6/04	2/13/04	1.2	U	
Silver	200.8	0.02	5	2/9/04	2/10/04	0.19		
Thallium	200.8	0.02	5	2/6/04	2/13/04	0.28		
Tin	200.8	5.7	5	2/9/04	2/10/04	10.7		
Zinc	200.8	57.4	500	2/6/04	2/13/04	8430		

% Solids: 72.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	NA
Project Name:	Corpus Christi, TX	Date Received:	NA
Matrix:	SEDIMENT	Units:	MG/KG
		Basis:	Dry

Sample Name: Method Blank Lab Code: K2400648-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	5	2/9/04	2/10/04	0.05	U	N
Arsenic	200.8	0.5	5	2/6/04	2/13/04	0.5	U	
Cadmium	200.8	0.05	5	2/6/04	2/13/04	0.05	U	
Cobalt	200.8	0.02	5	2/6/04	2/13/04	0.02	U	
Copper	200.8	0.1	5	2/6/04	2/13/04	0.1	U	
Lead	200.8	0.05	5	2/6/04	2/13/04	0.05	U	
Manganese	200.8	0.05	5	2/6/04	2/13/04	0.06		N
Mercury	7471A	0.10	1	2/9/04	2/10/04	0.10	U	*
Nickel	200.8	0.2	5	2/6/04	2/13/04	0.2	U	
Selenium	200.8	1.0	5	2/6/04	2/13/04	1.0	U	
Silver	200.8	0.02	5	2/9/04	2/10/04	0.02	U	
Thallium	200.8	0.02	5	2/6/04	2/13/04	0.02	U	
Tin	200.8	5.0	5	2/9/04	2/10/04	5.0	U	
Zinc	200.8	0.5	5	2/6/04	2/13/04	0.5	U	

% Solids: 100.0

Comments:

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	24.5	98	25.0	25.4	102	23.9	96	200.8
Arsenic	25.0	25.9	104	25.0	25.1	100	25.0	100	200.8
Cadmium	12.5	12.8	102	25.0	25.3	101	25.1	100	200.8
Cobalt	25.0	25.3	101	25.0	24.9	100	24.9	100	200.8
Copper	12.5	12.8	102	25.0	24.9	100	24.9	100	200.8
Lead	25.0	24.9	100	25.0	25.0	100	24.6	98	200.8
Manganese	25.0	25.1	100	25.0	25.0	100	25.2	101	200.8
Mercury	5.0	4.82	96	5.0	5.11	102	5.11	102	7471A
Nickel	25.0	25.5	102	25.0	24.9	100	24.9	100	200.8
Selenium	25.0	25.8	103	25.0	25.2	101	25.1	100	200.8
Silver	12.5	12.9	103	25.0	24.8	99	25.2	101	200.8
Thallium	25.0	25.1	100	25.0	25.1	100	24.5	98	200.8
Tin	25.0	25.8	103	25.0	25.2	101	24.6	98	200.8
Zinc	25.0	25.7	103	25.0	25.0	100	25.1	100	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/l

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	Method
Arsenic				25.0	24.6	98	24.9	100	200.8
Cadmium				25.0	25.1	100	25.0	100	200.8
Cobalt				25.0	25.0	100	25.1	100	200.8
Copper				25.0	24.9	100	24.9	100	200.8
Lead				25.0	22.7	91	22.4	90	200.8
Manganese				25.0	25.4	102	25.4	102	200.8
Mercury				5.0	5.18	104	5.23	105	7471A
Nickel				25.0	25.2	101	25.0	100	200.8
Selenium				25.0	24.7	99	24.5	98	200.8
Thallium				25.0	22.8	91	22.4	90	200.8
Zinc				25.0	25.7	103	25.0	100	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.28	106	5.27	105	7471A

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.26	105			7471A

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.10	0.11	109		
Arsenic				1.0	1.04	104		
Cadmium				0.10	0.11	107		
Cobalt				0.04	0.04	105		
Copper				0.20	0.22	108		
Lead				0.04	0.04	109		
Manganese				0.10	0.11	105		
Mercury	0.20	0.17	85					
Nickel				0.40	0.45	113		
Selenium				2.0	2.13	107		
Silver				0.04	0.04	110		
Thallium				0.04	0.04	111		
Tin				0.20	0.21	104		
Zinc				1.0	1.20	120		

METALS
- 3 -
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C			Method
Antimony	0.10	U	0.10	U	0.10	U								200.8
Arsenic	1.0	U	1.0	U	1.0	U	1.0	U						200.8
Cadmium	0.10	U	0.10	U	0.10	U	0.10	U						200.8
Cobalt	0.04	U	0.04	U	0.04	U	0.04	U						200.8
Copper	0.2	U	0.2	U	0.2	U	0.2	U						200.8
Lead	0.10	U	0.10	U	0.10	U	0.10	U						200.8
Manganese	0.10	U	0.10	U	0.10	U	0.10	U						200.8
Mercury	0.20	U	0.20	U	0.20	U	0.20	U						7471A
Nickel	0.4	U	0.4	U	0.4	U	0.4	U						200.8
Selenium	2.0	U	2.0	U	2.0	U	2.0	U						200.8
Silver	0.04	U	0.04	U	0.04	U								200.8
Thallium	0.04	U	0.04	U	0.04	U	0.04	U						200.8
Tin	10.0	U	10.0	U	10.0	U								200.8
Zinc	1.0	U	1.0	U	1.0	U	1.0	U						200.8

METALS
-3-
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank C			Method
Arsenic			1.0	U									200.8
Cadmium			0.10	U									200.8
Cobalt			0.04	U									200.8
Copper			0.2	U									200.8
Lead			0.10	U									200.8
Manganese			0.10	U									200.8
Mercury			0.20	U	0.20	U	0.20	U					7471A
Nickel			0.4	U									200.8
Selenium			2.0	U									200.8
Thallium			0.04	U									200.8
Zinc			1.0	U									200.8

METALS
- 3 -
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank C			Method
Mercury			0.20	U									7471A

METALS

- 5a -

SPIKE SAMPLE RECOVERY

Client: Arcadis

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Matrix: SEDIMENT

Service Request: K2400648

Units: mg/kg

Basis: Dry

% Solids: 51.8

Sample Name: SED-1S

Lab Code: K2400648-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	28.4		0.87		107	26	N	200.8
Arsenic	70 - 130	111		12.3		107	92		200.8
Cadmium		66.7		43.9		10.7	213		200.8
Cobalt	70 - 130	104		6.39		107	91		200.8
Copper	70 - 130	140		73.9		53.6	123		200.8
Lead	70 - 130	233		116		107	109		200.8
Manganese	70 - 130	468		315		107	143	N	200.8
Mercury		10.3		19.5		0.45	2013		7471A
Nickel	70 - 130	111		11.5		107	92		200.8
Selenium	70 - 130	111		10.0		107	94		200.8
Silver	70 - 130	11.2		1.22		10.7	93		200.8
Thallium	70 - 130	96.3		0.66		107	89		200.8
Tin	70 - 130	487		7.0		536	90		200.8
Zinc		5070		4380		107	645		200.8

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
- 6 -
DUPLICATES

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Units: mg/kg
Basis: Dry
% Solids: 51.8

Sample Name: SED-1D
Lab Code: K2400648-001D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	30	0.87		0.82		7		200.8
Arsenic	30	12.3		13.3		8		200.8
Cadmium	30	43.9		52.5		18		200.8
Cobalt	30	6.39		5.92		8		200.8
Copper	30	73.9		88.8		18		200.8
Lead	30	116		136		16		200.8
Manganese	30	315		375		17		200.8
Mercury	30	19.5		8.24		81	*	7471A
Nickel	30	11.5		12.2		6		200.8
Selenium	30	10.0		10.5		5		200.8
Silver	30	1.22		1.25		2		200.8
Thallium	30	0.66		0.56		16		200.8
Tin		7.0		6.5		7		200.8
Zinc	30	4380		5050		14		200.8

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source: ERA Lot #246

Analyte	Aqueous mg/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Antimony				32.6	27.6	0.500	68.1	85
Arsenic				187	200	139	235	107
Cadmium				67.9	69.9	52.0	83.6	103
Cobalt				221	211	176	266	95
Copper				91.3	94.2	74.8	108	103
Lead				125	121	95.2	155	97
Manganese				398	355	321	475	89
Mercury				1.49	1.40	0.852	2.12	94
Nickel				78.0	77.1	61.1	94.9	99
Selenium				154	182	114	194	118
Silver				90.0	97.3	67.0	113	108
Thallium				84.5	82.9	48.4	121	98
Tin				83.9	92.7	56.2	112	110
Zinc				283	310	219	347	110

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #:

GFAA ID #:

AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Mercury	253.70	BD	0.20		7471A

Comments

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #:

AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Arsenic	75		1.0		200.8
Cadmium	111		0.10		200.8
Cobalt	59		0.04		200.8
Copper	65		0.2		200.8
Lead	208		0.10		200.8
Manganese	55		0.10		200.8
Nickel	60		0.4		200.8
Selenium	78		2.0		200.8
Thallium	205		0.04		200.8
Zinc	66		1.0		200.8

Comments

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #: PQ-S

GFAA ID #:

AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Antimony	123		0.10		200.8
Silver	109		0.04		200.8
Tin	0		10.0		200.8

Comments

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: Excell ICPMS

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.00	700.0	200.8
Cadmium	15.00	300.0	200.8
Cobalt	15.00	1000.0	200.8
Copper	15.00	1000.0	200.8
Lead	15.00	1000.0	200.8
Manganese	15.00	1000.0	200.8
Nickel	15.00	1000.0	200.8
Selenium	15.00	900.0	200.8
Thallium	15.00	1000.0	200.8
Zinc	15.00	700.0	200.8

Comments:

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: PQ-S

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	1000.0	200.8
Silver	15.00	100.0	200.8

Comments:

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSS	2/9/04	METHOD	0.512	100
K2400648-MB	2/9/04	METHOD	0.200	100
K2400648-001	2/9/04	METHOD	2.03	100
K2400648-005	2/9/04	METHOD	1.42	100
K2400648-001D	2/9/04	METHOD	2.03	100
K2400648-001S	2/9/04	METHOD	2.13	100
K2400648-002	2/9/04	METHOD	2.07	100
K2400648-004	2/9/04	METHOD	2.26	100

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSS	2/6/04	EPA 3050B	1.00	100
K2400648-MB	2/6/04	EPA 3050B	1.00	100
K2400648-001	2/6/04	EPA 3050B	1.80	100
K2400648-005	2/6/04	EPA 3050B	1.21	100
K2400648-001D	2/6/04	EPA 3050B	1.80	100
K2400648-001S	2/6/04	EPA 3050B	1.80	100
K2400648-002	2/6/04	EPA 3050B	1.81	100
K2400648-004	2/6/04	EPA 3050B	1.20	100
LCSS	2/9/04	EPA 3050B	1.00	100
K2400648-MB	2/9/04	EPA 3050B	1.00	100
K2400648-001	2/9/04	EPA 3050B	1.80	100
K2400648-005	2/9/04	EPA 3050B	1.21	100
K2400648-001D	2/9/04	EPA 3050B	1.80	100
K2400648-001S	2/9/04	EPA 3050B	1.80	100
K2400648-002	2/9/04	EPA 3050B	1.80	100
K2400648-004	2/9/04	EPA 3050B	1.21	100

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: CETAC-1

Method: CV

Start Date: 2/10/04

End Date: 2/10/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	13:14																X									
STANDARD #1	1.00	13:16																X									
STANDARD #2	1.00	13:18																X									
STANDARD #3	1.00	13:19																X									
STANDARD #4	1.00	13:21																X									
STANDARD #5	1.00	13:23																X									
ICV	1.00	13:24																X									
ICB	1.00	13:26																X									
CCV1	1.00	13:27																X									
CCB1	1.00	13:29																X									
CRA	1.00	13:31																X									
K2400648-MB	1.00	13:32																X									
LCSS	1.00	13:34																X									
ZZZZZZ	1.00	13:35																									
ZZZZZZ	1.00	13:37																									
ZZZZZZ	1.00	13:39																									
ZZZZZZ	1.00	13:40																									
ZZZZZZ	1.00	13:42																									
ZZZZZZ	1.00	13:45																									
ZZZZZZ	1.00	13:48																									
CCV2	1.00	13:51																X									
CCB2	1.00	13:52																X									
ZZZZZZ	1.00	13:54																									
ZZZZZZ	1.00	13:56																									
ZZZZZZ	1.00	13:59																									
ZZZZZZ	1.00	14:01																									
ZZZZZZ	1.00	14:03																									
ZZZZZZ	1.00	14:04																									
ZZZZZZ	1.00	14:08																									
ZZZZZZ	1.00	14:11																									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: CETAC-1

Method: CV

Start Date: 2/10/04

End Date: 2/10/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZK2400648-001	1.00	14:13																									
ZK2400648-001D	1.00	14:18																									
CCV3	1.00	14:22																X									
CCB3	1.00	14:24																X									
ZK2400648-001S	1.00	14:26																									
K2400648-002	1.00	14:31																X									
ZK2400648-004	1.00	14:33																									
K2400648-005	1.00	14:36																X									
CCV4	1.00	14:38																X									
CCB4	1.00	14:40																X									
ZZZZZZ	1.00	14:45																									
ZZZZZZ	1.00	14:47																									
ZZZZZZ	1.00	14:49																									
ZZZZZZ	1.00	14:50																									
ZZZZZZ	1.00	14:53																									
ZZZZZZ	1.00	14:54																									
ZK2400648-001	10.00	14:56																									
ZK2400648-001D	10.00	14:59																									
ZK2400648-001S	10.00	15:01																									
K2400648-004	10.00	15:04																X									
CCV5	1.00	15:06																X									
CCB5	1.00	15:07																X									
ZK2400648-001	20.00	15:10																									
K2400648-001D	20.00	15:14																X									
K2400648-001S	20.00	15:16																X									
CCV6	1.00	15:17																X									
CCB6	1.00	15:19																X									
K2400648-001	40.00	15:21																X									
CCV7	1.00	15:23																X									
CCB7	1.00	15:24																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	08:01				X			X			X	X		X		X		X		X			X		X	
25 PPB STD. MS4-62-B	1.00	08:06				X			X			X	X		X		X		X		X			X		X	
ICV	1.00	08:18				X			X			X	X		X		X		X		X			X		X	
CCV1	1.00	08:22				X			X			X	X		X		X		X		X			X		X	
ICB	1.00	08:28				X			X			X	X		X		X		X		X			X		X	
CCB1	1.00	08:32				X			X			X	X		X		X		X		X			X		X	
ZZZZZZ	1.00	08:37																									
CRA	1.00	08:41				X			X			X	X		X		X		X		X			X		X	
ZZZZZZ	1.00	08:50																									
ZZZZZZ	1.00	08:56																									
ZZZZZZ	1.00	09:00																									
ZZZZZZ	1.00	09:04																									
ZZZZZZ	1.00	09:09																									
ZZZZZZ	1.00	09:13																									
CCV2	1.00	09:18				X			X			X	X		X		X		X		X			X		X	
CCB2	1.00	09:22				X			X			X	X		X		X		X		X			X		X	
K2400648-MB	5.00	09:26				X			X			X	X		X		X		X		X			X		X	
LCSS	20.00	09:29				X			X			X	X		X		X		X		X			X		X	
K2400648-001	5.00	09:33				X						X			X				X		X			X			
K2400648-001D	5.00	09:37				X						X			X				X		X			X			
K2400648-001S	25.00	09:49				X						X			X				X		X			X			
K2400648-002	5.00	09:52				X			X			X	X		X				X		X			X			
K2400648-004	5.00	10:24				X						X	X		X				X		X			X			
K2400648-005	5.00	10:27				X			X			X			X				X		X			X			
K2400648-002	500.00	10:39															X									X	
K2400648-004	500.00	10:43							X								X									X	
CCV3	1.00	10:47				X			X			X	X		X		X		X		X			X		X	
CCB3	1.00	10:52				X			X			X	X		X		X		X		X			X		X	
ZK2400648-001	50.00	10:56																									
K2400648-001	100.00	11:05							X				X				X									X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2400648-001D	100.00	11:10							X				X				X									X	
K2400648-001S	100.00	11:14							X				X				X									X	
K2400648-005	500.00	11:18											X				X									X	
CCV4	1.00	11:24				X			X			X	X		X		X		X		X			X		X	
CCB4	1.00	11:30				X			X			X	X		X		X		X		X			X		X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: PQ-S

Method: MS

Start Date: 2/10/04

End Date: 2/10/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
S0	1.00	11:42			X																	X						*
S25	1.00	11:43			X																	X						*
ICV	1.00	11:44			X																	X						*
CCV1	1.00	11:46			X																	X						*
ICB	1.00	11:47			X																	X						*
CCB1	1.00	11:48			X																	X						*
CRA	1.00	11:50			X																	X						*
K2400648-MB	5.00	12:13			X																	X						*
K2400648-001	5.00	12:15			X																	X						*
K2400648-001D	5.00	12:16			X																	X						*
K2400648-001S	25.00	12:20			X																	X						*
LCSS	20.00	12:22			X																	X						*
K2400648-002	5.00	12:24			X																	X						*
K2400648-004	5.00	12:26			X																	X						*
K2400648-005	5.00	12:27			X																	X						*
CCV2	1.00	12:29			X																	X						*
CCB2	1.00	12:30			X																	X						*

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: PQ-S

Method: MS

Start Date: 2/10/04

End Date: 2/10/04

Sample ID.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U	Th									
S0	1.00	11:42												X													
S25	1.00	11:43												X													
ICV	1.00	11:44												X													
CCV1	1.00	11:46												X													
ICB	1.00	11:47												X													
CCB1	1.00	11:48												X													
CRA	1.00	11:50												X													
K2400648-MB	5.00	12:13												X													
K2400648-001	5.00	12:15												X													
K2400648-001D	5.00	12:16												X													
K2400648-001S	25.00	12:20												X													
LCSS	20.00	12:22												X													
K2400648-002	5.00	12:24												X													
K2400648-004	5.00	12:26												X													
K2400648-005	5.00	12:27												X													
CCV2	1.00	12:29												X													
CCB2	1.00	12:30												X													

Total Metals – Equipment Blank

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Sample No.	Lab Sample ID.
EB-1	K2400648-003
EB-1D	K2400648-003D
EB-1S	K2400648-003S
Method Blank	K2400648-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

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 the conditions detailed above. Release of the data contained 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: Date: 2/17/x1

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: WATER

Service Request: K2400648
Date Collected: 01/30/04
Date Received: 01/31/04
Units: µG/L
Basis: NA

Sample Name: EB-1
Lab Code: K2400648-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	2/6/04	2/13/04	0.05	U	
Arsenic	200.8	0.5	1	2/6/04	2/13/04	0.5	U	
Cadmium	200.8	0.02	1	2/6/04	2/13/04	0.05		
Cobalt	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Copper	200.8	0.1	1	2/6/04	2/13/04	0.1		
Lead	200.8	0.02	1	2/6/04	2/13/04	0.12		
Manganese	200.8	0.05	1	2/6/04	2/13/04	1.57		
Mercury	7470A	0.20	1	2/5/04	2/9/04	0.20	U	
Nickel	200.8	0.2	1	2/6/04	2/13/04	0.2	U	
Selenium	200.8	1.0	1	2/6/04	2/13/04	1.0	U	
Silver	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Thallium	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Tin	200.8	0.1	1	2/6/04	2/13/04	0.1	U	
Zinc	200.8	0.5	1	2/6/04	2/13/04	4.2		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: WATER

Service Request: K2400648
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank
Lab Code: K2400648-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	1	2/6/04	2/13/04	0.05	U	
Arsenic	200.8	0.5	1	2/6/04	2/13/04	0.5	U	
Cadmium	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Cobalt	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Copper	200.8	0.1	1	2/6/04	2/13/04	0.1	U	
Lead	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Manganese	200.8	0.05	1	2/6/04	2/13/04	0.05	U	
Mercury	7470A	0.20	1	2/5/04	2/9/04	0.20	U	
Nickel	200.8	0.2	1	2/6/04	2/13/04	0.2	U	
Selenium	200.8	1.0	1	2/6/04	2/13/04	1.0	U	
Silver	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Thallium	200.8	0.02	1	2/6/04	2/13/04	0.02	U	
Tin	200.8	0.1	1	2/6/04	2/13/04	0.1	U	
Zinc	200.8	0.5	1	2/6/04	2/13/04	0.5	U	

% Solids: 0.0

Comments:

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	25.3	101	25.0	24.8	99	25.2	101	200.8
Arsenic	25.0	25.9	104	25.0	25.1	100	25.0	100	200.8
Cadmium	12.5	12.8	102	25.0	25.3	101	25.1	100	200.8
Cobalt	25.0	25.3	101	25.0	24.9	100	24.9	100	200.8
Copper	12.5	12.8	102	25.0	24.9	100	24.9	100	200.8
Lead	25.0	24.9	100	25.0	25.0	100	24.6	98	200.8
Manganese	25.0	25.1	100	25.0	25.0	100	25.2	101	200.8
Mercury	5.0	4.78	96	5.0	5.10	102	5.24	105	7470A
Nickel	25.0	25.5	102	25.0	24.9	100	24.9	100	200.8
Selenium	25.0	25.8	103	25.0	24.9	100	24.6	98	200.8
Silver	12.5	12.5	100	25.0	25.1	100	25.0	100	200.8
Thallium	25.0	25.1	100	25.0	25.1	100	24.5	98	200.8
Tin	25.0	24.6	98	25.0	25.0	100	24.9	100	200.8
Zinc	25.0	25.7	103	25.0	25.0	100	25.1	100	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	24.8	99	24.8	99	200.8
Arsenic				25.0	24.6	98	24.9	100	200.8
Cadmium				25.0	25.1	100	25.0	100	200.8
Cobalt				25.0	25.0	100	25.1	100	200.8
Copper				25.0	24.9	100	24.9	100	200.8
Lead				25.0	22.7	91	22.4	90	200.8
Manganese				25.0	25.4	102	25.4	102	200.8
Mercury				5.0	5.15	103	5.19	104	7470A
Nickel				25.0	25.2	101	25.0	100	200.8
Selenium				25.0	24.6	98	25.0	100	200.8
Silver				25.0	24.9	100	24.7	99	200.8
Thallium				25.0	22.8	91	22.4	90	200.8
Tin				25.0	25.1	100	24.8	99	200.8
Zinc				25.0	25.7	103	25.0	100	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.16	103			7470A

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05	0.05	107		
Arsenic				0.50	0.53	106		
Cadmium				0.05	0.05	102		
Cobalt				0.02	0.02	100		
Copper				0.10	0.10	102		
Lead				0.02	0.02	105		
Manganese				0.05	0.05	107		
Mercury	0.20	0.15	74					
Nickel				0.20	0.20	98		
Selenium				1.0	1.07	107		
Silver				0.02	0.02	102		
Thallium				0.02	0.02	108		
Tin				0.10	0.11	105		
Zinc				0.50	0.64	129		

METALS
-3-
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank C			Method
Antimony	0.05	U	0.05	U	0.05	U	0.05	U					200.8
Arsenic	0.5	U	0.5	U	0.5	U	0.5	U					200.8
Cadmium	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Cobalt	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Copper	0.1	U	0.1	U	0.1	U	0.1	U					200.8
Lead	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Manganese	0.05	U	0.05	U	0.05	U	0.05	U					200.8
Mercury	0.20	U	0.20	U	0.20	U	0.20	U					7470A
Nickel	0.2	U	0.2	U	0.2	U	0.2	U					200.8
Selenium	1.0	U	1.0	U	1.0	U	1.0	U					200.8
Silver	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Thallium	0.02	U	0.02	U	0.02	U	0.02	U					200.8
Tin	0.1	U	0.1	U	0.1	U	0.1	U					200.8
Zinc	0.5	U	0.5	U	0.5	U	0.5	U					200.8

METALS
-3-
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Antimony			0.05	U									200.8
Arsenic			0.5	U									200.8
Cadmium			0.02	U									200.8
Cobalt			0.02	U									200.8
Copper			0.1	U									200.8
Lead			0.02	U									200.8
Manganese			0.05	U									200.8
Mercury			0.20	U	0.20	U							7470A
Nickel			0.2	U									200.8
Selenium			1.0	U									200.8
Silver			0.02	U									200.8
Thallium			0.02	U									200.8
Tin			0.1	U									200.8
Zinc			0.5	U									200.8

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: WATER

Service Request: K2400648
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: EB-1S
Lab Code: K2400648-003S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	20.0		0.05	U	20.0	100		200.8
Arsenic	70 - 130	19.4		0.5	U	20.0	97		200.8
Cadmium	70 - 130	20.4		0.05		20.0	102		200.8
Cobalt	70 - 130	20.3		0.02	U	20.0	102		200.8
Copper	70 - 130	20.4		0.1		20.0	101		200.8
Lead	70 - 130	20.1		0.12		20.0	100		200.8
Manganese	70 - 130	21.8		1.57		20.0	101		200.8
Mercury	79 - 115	0.92		0.20	U	1.00	92		7470A
Nickel	70 - 130	20.1		0.2	U	20.0	101		200.8
Selenium	70 - 130	19.5		1.0	U	20.0	98		200.8
Silver	70 - 130	20.1		0.02	U	20.0	101		200.8
Thallium	70 - 130	19.7		0.02	U	20.0	99		200.8
Tin	70 - 130	19.9		0.1	U	20.0	100		200.8
Zinc	70 - 130	23.9		4.2		20.0	99		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: WATER

Service Request: K2400648
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: EB-1D
Lab Code: K2400648-003D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.05	U	0.05	U			200.8
Arsenic		0.5	U	0.5	U			200.8
Cadmium		0.05		0.05		6		200.8
Cobalt		0.02	U	0.02	U			200.8
Copper		0.1		0.1		9		200.8
Lead	20	0.12		0.12		1		200.8
Manganese	20	1.57		1.61		3		200.8
Mercury		0.20	U	0.20	U			7470A
Nickel		0.2	U	0.2	U			200.8
Selenium		1.0	U	1.0	U			200.8
Silver		0.02	U	0.02	U			200.8
Thallium		0.02	U	0.02	U			200.8
Tin		0.1	U	0.1	U			200.8
Zinc	20	4.2		4.3		2		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 7 -
LABORATORY CONTROL SAMPLE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L True	Aqueous ug/L Found	Aqueous ug/L %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony	20.0	20.0	100					
Arsenic	20.0	19.8	99					
Cadmium	20.0	20.5	103					
Cobalt	20.0	20.2	101					
Copper	20.0	20.2	101					
Lead	20.0	20.1	101					
Manganese	20.0	20.1	101					
Mercury	5.00	4.81	96					
Nickel	20.0	20.0	100					
Selenium	20.0	20.2	101					
Silver	20.0	19.8	99					
Thallium	20.0	20.0	100					
Tin	20.0	20.0	100					
Zinc	20.0	20.4	102					

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #:

GFAA ID #:

AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Mercury	253.70	BD	0.20		7470A

Comments

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #:

AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Antimony	123		0.05		200.8
Arsenic	75		0.5		200.8
Cadmium	111		0.02		200.8
Cobalt	59		0.02		200.8
Copper	65		0.1		200.8
Lead	208		0.02		200.8
Manganese	55		0.05		200.8
Nickel	60		0.2		200.8
Selenium	82		1.0		200.8
Silver	107		0.02		200.8
Thallium	205		0.02		200.8
Tin	0		0.1		200.8
Zinc	66		0.5		200.8

Comments

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: Excell ICPMS

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	1000.0	200.8
Arsenic	15.00	700.0	200.8
Cadmium	15.00	300.0	200.8
Cobalt	15.00	1000.0	200.8
Copper	15.00	1000.0	200.8
Lead	15.00	1000.0	200.8
Manganese	15.00	1000.0	200.8
Nickel	15.00	1000.0	200.8
Selenium	15.00	900.0	200.8
Silver	15.00	100.0	200.8
Thallium	15.00	1000.0	200.8
Tin	15.00	1000.0	200.8
Zinc	15.00	700.0	200.8

Comments:

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
K2400648-003	2/5/04	METHOD	20	20
K2400648-003D	2/5/04	METHOD	20	20
K2400648-003S	2/5/04	METHOD	20	20
LCSW	2/5/04	METHOD	20	20
K2400648-MB	2/5/04	METHOD	20	20

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
K2400648-003	2/6/04	CLAA	50	50
K2400648-003D	2/6/04	CLAA	50	50
K2400648-003S	2/6/04	CLAA	50	50
LCSW	2/6/04	CLAA	50	50
K2400648-MB	2/6/04	CLAA	50	50

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: CETAC-1

Method: CV

Start Date: 2/9/04

End Date: 2/9/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	09:00																X									
STANDARD #1	1.00	09:02																X									
STANDARD #2	1.00	09:03																X									
STANDARD #3	1.00	09:05																X									
STANDARD #4	1.00	09:07																X									
STANDARD #5	1.00	09:08																X									
ICV	1.00	09:10																X									
ICB	1.00	09:11																X									
CCV1	1.00	09:13																X									
CCB1	1.00	09:15																X									
CRA	1.00	09:16																X									
ZZZZZZ	1.00	09:18																									
ZZZZZZ	1.00	09:19																									
ZZZZZZ	1.00	09:21																									
ZZZZZZ	1.00	09:23																									
ZZZZZZ	1.00	09:24																									
ZZZZZZ	1.00	09:26																									
K2400648-MB	1.00	09:27																X									
LCSW	1.00	09:29																X									
ZZZZZZ	1.00	09:31																									
CCV2	1.00	09:32																X									
CCB2	1.00	09:34																X									
ZZZZZZ	1.00	09:35																									
ZZZZZZ	1.00	09:37																									
ZZZZZZ	1.00	09:39																									
ZZZZZZ	1.00	09:40																									
ZZZZZZ	1.00	09:42																									
ZZZZZZ	1.00	09:44																									
K2400648-003	1.00	09:45																X									
K2400648-003D	1.00	09:47																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: CETAC-1

Method: CV

Start Date: 2/9/04

End Date: 2/9/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2400648-003S	1.00	09:48																X									
ZZZZZZ	1.00	09:50																									
CCV3	1.00	09:52																X									
CCB3	1.00	09:53																X									
ZZZZZZ	1.00	09:55																									
ZZZZZZ	1.00	09:56																									
ZZZZZZ	1.00	09:58																									
ZZZZZZ	1.00	10:00																									
ZZZZZZ	1.00	10:01																									
ZZZZZZ	1.00	10:03																									
CCV4	1.00	10:05																X									
CCB4	1.00	10:06																X									
ZZZZZZ	1.00	10:17																									
ZZZZZZ	1.00	10:19																									
ZZZZZZ	1.00	10:20																									
CCV5	1.00	10:22																X									
CCB5	1.00	10:23																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CALIBRATION BLANK	1.00	08:01			X	X			X			X	X		X		X		X		X	X		X		X		*
25 PPB STD. MS4-62-B	1.00	08:06			X	X			X			X	X		X		X		X		X	X		X		X		*
ICV	1.00	08:18			X	X			X			X	X		X		X		X		X	X		X		X		*
CCV1	1.00	08:22			X	X			X			X	X		X		X		X		X	X		X		X		*
ICB	1.00	08:28			X	X			X			X	X		X		X		X		X	X		X		X		*
CCB1	1.00	08:32			X	X			X			X	X		X		X		X		X	X		X		X		*
ZZZZZZ	1.00	08:37																										
ZZZZZZ	1.00	08:41																										
K2400648-MB	1.00	08:50			X	X			X			X	X		X		X		X		X	X		X		X		*
CRA	1.00	08:56			X	X			X			X	X		X		X		X		X	X		X		X		*
K2400648-003	1.00	09:00			X	X			X			X	X		X		X		X		X	X		X		X		*
K2400648-003D	1.00	09:04			X	X			X			X	X		X		X		X		X	X		X		X		*
K2400648-003S	1.00	09:09			X	X			X			X	X		X		X		X		X	X		X		X		*
LCSW	1.00	09:13			X	X			X			X	X		X		X		X		X	X		X		X		*
CCV2	1.00	09:18			X	X			X			X	X		X		X		X		X	X		X		X		*
CCB2	1.00	09:22			X	X			X			X	X		X		X		X		X	X		X		X		*
ZZZZZZ	5.00	09:26																										
ZZZZZZ	20.00	09:29																										
ZZZZZZ	5.00	09:33																										
ZZZZZZ	5.00	09:37																										
ZZZZZZ	25.00	09:49																										
ZZZZZZ	5.00	09:52																										
ZZZZZZ	5.00	10:24																										
ZZZZZZ	5.00	10:27																										
ZZZZZZ	500.00	10:39																										
ZZZZZZ	500.00	10:43																										
CCV3	1.00	10:47			X	X			X			X	X		X		X		X		X	X		X		X		*
CCB3	1.00	10:52			X	X			X			X	X		X		X		X		X	X		X		X		*
ZZZZZZ	50.00	10:56																										
ZZZZZZ	10.00	11:05																										

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
ZZZZZZ	100.00	11:10																										
ZZZZZZ	100.00	11:14																										
ZZZZZZ	500.00	11:18																										
CCV4	1.00	11:24			X	X			X			X	X		X		X		X		X	X		X		X		*
CCB4	1.00	11:30			X	X			X			X	X		X		X		X		X	X		X		X		*

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U	Th									
CALIBRATION BLANK	1.00	08:01												X													
25 PPB STD.	1.00	08:06												X													
ICV	1.00	08:18												X													
CCV1	1.00	08:22												X													
ICB	1.00	08:28												X													
CCB1	1.00	08:32												X													
ZZZZZZ	1.00	08:37																									
ZZZZZZ	1.00	08:41																									
K2400648-MB	1.00	08:50												X													
CRA	1.00	08:56												X													
K2400648-003	1.00	09:00												X													
K2400648-003D	1.00	09:04												X													
K2400648-003S	1.00	09:09												X													
LCSW	1.00	09:13												X													
CCV2	1.00	09:18												X													
CCB2	1.00	09:22												X													
ZZZZZZ	5.00	09:26																									
ZZZZZZ	20.00	09:29																									
ZZZZZZ	5.00	09:33																									
ZZZZZZ	5.00	09:37																									
ZZZZZZ	25.00	09:49																									
ZZZZZZ	5.00	09:52																									
ZZZZZZ	5.00	10:24																									
ZZZZZZ	5.00	10:27																									
ZZZZZZ	500.00	10:39																									
ZZZZZZ	500.00	10:43																									
CCV3	1.00	10:47												X													
CCB3	1.00	10:52												X													
ZZZZZZ	50.00	10:56																									

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U	Th									
ZZZZZZ	10.00	11:05																									
ZZZZZZ	100.00	11:10																									
ZZZZZZ	100.00	11:14																									
ZZZZZZ	500.00	11:18																									
CCV4	1.00	11:24												X													
CCB4	1.00	11:30												X													

Form XIV - IN

Simultaneously Extracted Metals (SEM)

Columbia Analytical Services

Simultaneously Extractable Metals

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Sample No.	Lab Sample ID.
SED-1	K2400648-001
SED-4	K2400648-002
SED-4D	K2400648-002D
SED-4S	K2400648-002S
SED-7	K2400648-004
SED-10	K2400648-005
Method Blank	K2400648-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

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 the conditions detailed above. Release of the data contained 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: Eric M Arnold

Date: 2/20/04

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Date Collected: 01/30/04
Date Received: 01/31/04
Units: MG/KG
Basis: Dry

Sample Name: SED-1
Lab Code: K2400648-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	10.1	100	02/13/04	2/17/04	56.3		*
Copper	6010B	0.2	1	02/13/04	2/17/04	0.2	U	*
Lead	6010B	2.0	1	02/13/04	2/17/04	119		
Nickel	6010B	0.4	1	02/13/04	2/17/04	3.2		
Silver	6010B	0.2	1	02/13/04	2/17/04	0.2	U	
Zinc	6010B	20.3	100	02/13/04	2/17/04	8350		*

% Solids: 51.8

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Date Collected: 01/30/04
Date Received: 01/31/04
Units: MG/KG
Basis: Dry

Sample Name: SED-4
Lab Code: K2400648-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	9.5	100	02/13/04	2/17/04	55.6		*
Copper	6010B	0.2	1	02/13/04	2/17/04	14.4		*
Lead	6010B	1.9	1	02/13/04	2/17/04	30.3		
Nickel	6010B	0.4	1	02/13/04	2/17/04	22.0		
Silver	6010B	0.2	1	02/13/04	2/17/04	0.2	U	
Zinc	6010B	19.0	100	02/13/04	2/17/04	16100		*

% Solids: 52.6

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Date Collected: 01/30/04
Date Received: 01/31/04
Units: MG/KG
Basis: Dry

Sample Name: SED-7
Lab Code: K2400648-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	12.7	100	02/13/04	2/17/04	285		*
Copper	6010B	0.3	1	02/13/04	2/17/04	26.9		*
Lead	6010B	2.5	1	02/13/04	2/17/04	38.7		
Nickel	6010B	0.5	1	02/13/04	2/17/04	13.5		
Silver	6010B	0.3	1	02/13/04	2/17/04	0.3	U	
Zinc	6010B	25.4	100	02/13/04	2/17/04	17400		*

% Solids: 71.3

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Date Collected: 01/30/04
Date Received: 01/31/04
Units: MG/KG
Basis: Dry

Sample Name: SED-10
Lab Code: K2400648-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	13.7	100	02/13/04	2/17/04	374		*
Copper	6010B	0.3	1	02/13/04	2/17/04	52.4		*
Lead	6010B	2.7	1	02/13/04	2/17/04	112		
Nickel	6010B	0.5	1	02/13/04	2/17/04	22.7		
Silver	6010B	0.3	1	02/13/04	2/17/04	0.3	U	
Zinc	6010B	27.4	100	02/13/04	2/17/04	22500		*

% Solids: 72.0

Comments:

Simultaneously Extractable Metals

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Date Collected:
Date Received:
Units: MG/KG
Basis: Dry

Sample Name: Method Blank
Lab Code: K2400648-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Cadmium	6010B	0.1	1	02/13/04	2/17/04	0.1	U	*
Copper	6010B	0.2	1	02/13/04	2/17/04	0.3		*
Lead	6010B	2.0	1	02/13/04	2/17/04	2.0	U	
Nickel	6010B	0.4	1	02/13/04	2/17/04	0.4	U	
Silver	6010B	0.2	1	02/13/04	2/17/04	0.2	U	
Zinc	6010B	0.2	1	02/13/04	2/17/04	0.4		*

% Solids: 100.0

Comments:

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium	1250	1270	102	500	494	99	503	101	6010B
Copper	625	642	103	500	497	99	505	101	6010B
Lead	2500	2510	100	500	488	98	481	96	6010B
Nickel	1250	1280	102	500	492	98	499	100	6010B
Silver	625	637	102	500	490	98	500	100	6010B
Zinc	1250	1270	102	500	489	98	505	101	6010B

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium				500	497	99	502	100	6010B
Copper				500	494	99	507	101	6010B
Lead				500	514	103	510	102	6010B
Nickel				500	499	100	503	101	6010B
Silver				500	491	98	493	99	6010B
Zinc				500	494	99	497	99	6010B

Simultaneously Extractable Metals
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	Method
Cadmium				500	504	101			6010B
Copper				500	510	102			6010B
Lead				500	525	105			6010B
Nickel				500	505	101			6010B
Silver				500	494	99			6010B
Zinc				500	499	100			6010B

Simultaneously Extractable Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Cadmium				5.0	5.30	106		
Copper				10	9.78	98		
Lead				50	44.8	90		
Nickel				20	17.5	88		
Silver				10	12.8	128		
Zinc				10	8.75	88		

Simultaneously Extractable Metals
- 3 -
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C			Method
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U						6010B
Copper	10.0	U	10.0	U	10.0	U	10.0	U						6010B
Lead	100	U	100	U	100	U	100	U						6010B
Nickel	20.0	U	20.0	U	20.0	U	20.0	U						6010B
Silver	10.0	U	10.0	U	10.0	U	10.0	U						6010B
Zinc	10.0	U	10.0	U	10.0	U	10.0	U						6010B

Simultaneously Extractable Metals
- 3 -
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C			Method
Cadmium			5.0	U	5.0	U								6010B
Copper			10.0	U	10.0	U								6010B
Lead			100	U	100	U								6010B
Nickel			20.0	U	20.0	U								6010B
Silver			10.0	U	10.0	U								6010B
Zinc			10.0	U	10.0	U								6010B

Simultaneously Extractable Metals
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: Arcadis

Service Request:K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: TJA Iris ICP

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Cadmium		1000	6.9	887	89			
Copper		500	-4.6	453	91			
Lead		1000	-23.1	861	86			
Nickel		1000	-3.9	855	86			
Silver		1000	4.7	946	95			
Zinc		1000	12.6	867	87			

Simultaneously Extractable Metals
-5a-
SPIKE SAMPLE RECOVERY

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Units: mg/kg
Basis: Dry
% Solids: 52.6

Sample Name: SED-4S
Lab Code: K2400648-002S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Cadmium	75 - 125	4990		55.6		4740	104		6010B
Copper	75 - 125	26.1		14.4		11.8	99		6010B
Lead	75 - 125	70.7		30.3		47.4	85		6010B
Nickel	75 - 125	42.3		22.0		23.7	86		6010B
Silver	75 - 125	11.5		0.2	U	11.8	97		6010B
Zinc	75 - 125	20400		16100		4740	91		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Simultaneously Extractable Metals
- 6 -
DUPLICATES

Client: Arcadis
Project No.: CC000878.0001
Project Name: Corpus Christi, TX
Matrix: SEDIMENT

Service Request: K2400648
Units: mg/kg
Basis: Dry
% Solids: 52.6

Sample Name: SED-4D
Lab Code: K2400648-002D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Cadmium	30	55.6		106		62	*	6010B
Copper	30	14.4		20.6		35	*	6010B
Lead	30	30.3		36.5		19		6010B
Nickel	30	22.0		29.5		29		6010B
Silver		0.2	U	0.2	U			6010B
Zinc	30	16100		30600		62	*	6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Simultaneously Extractable Metals
- 7 -
LABORATORY CONTROL SAMPLE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits		%R
Cadmium	1250	1250	100						
Copper	625	616	99						
Lead	2500	2460	98						
Nickel	1250	1240	99						
Silver	625	607	97						
Zinc	1250	1230	98						

Simultaneously Extractable Metals
- 9 -
ICP SERIAL DILUTIONS

Client: Arcadis
Service Request: K2400648
Project No.: CC000878.0001
Units: ug/L
Project Name: Corpus Christi, TX

Sample Name: SED-10L
Lab Code: K2400648-005L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-	Q	Method
Cadmium	137		144		5		6010B
Copper	1920		2010		5		6010B
Lead	4080		4450		9		6010B
Nickel	830		927		12		6010B
Silver	10.0	U	68.4				6010B
Zinc	8220		7800		5		6010B

Simultaneously Extractable Metals
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #: TJA Iris ICP

GFAA ID #:

AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Cadmium	226.50		5.0		6010B
Copper	324.75		10.0		6010B
Lead	220.35		100		6010B
Nickel	231.60		20.0		6010B
Silver	328.07		10.0		6010B
Zinc	206.20		10.0		6010B

Comments

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Cr
Aluminum	237.3	0.0000000	0.0000000	0.0011200	0.0000000	-0.0022000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0200000
Arsenic	189.0	0.0000000	0.0000000	-0.0001200	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0005800	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000700	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	-0.0000240	0.0000000	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0003300	0.0000000	0.0000000	0.0000000	-0.0002000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	-0.0004900	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	-0.0000800	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	-0.0002700	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001700
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000	0.0000000	-0.0010000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Mo	Ni	Interelement Correction Factors for: Ti	V	Co
Aluminum	237.3	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.8	-0.0250000	0.0000000	0.0006800	0.0000000	0.0005600
Arsenic	189.0	0.0005600	0.0000000	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0003000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0001700	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000200	-0.0000110	0.0000330	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	-0.0130000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	-0.0002600	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0016000	0.0000000	0.0000000
Copper	324.7	0.0002300	0.0000000	0.0000000	-0.0020000	0.0000000
Iron	259.9	-0.0001800	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.1480000	0.0870000
Lead	220.3	-0.0025000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.1250000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0002700
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	-0.0004000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0087000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	-0.0003200	0.0000000	-0.0027000	-0.0007800	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	-0.0009000	0.0000000	-0.0002600	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.0017000	0.0008000	0.0031000
Tin	189.9	0.0000000	0.0000000	-0.0028000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	-0.0010000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	-0.0001300	0.0000000	0.0000000	0.0000000	0.0000000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Mn	P	C
Aluminum	237.3	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000
Arsenic	189.0	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0006600	0.0000300	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000
Iron	259.9	-0.0004300	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000
Silicon	251.6	-0.0021000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000
Thallium	190.8	-0.0004000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000

Simultaneously Extractable Metals

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Arcadis Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: TJA Iris ICP

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Cadmium	5.00	20000.0	6010B
Copper	5.00	50000.0	6010B
Lead	5.00	200000.0	6010B
Nickel	5.00	100000.0	6010B
Silver	5.00	2000.0	6010B
Zinc	15.00	100000.0	6010B

Comments:

Simultaneously Extractable Metals
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: P

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW	02/13/04	AVS/SEM	50	50
K2400648-MB	02/13/04	AVS/SEM	10.0	100
K2400648-001	02/13/04	AVS/SEM	9.53	100
K2400648-005	02/13/04	AVS/SEM	5.08	100
K2400648-002	02/13/04	AVS/SEM	10.0	100
K2400648-002D	02/13/04	AVS/SEM	9.87	100
K2400648-002S	02/13/04	AVS/SEM	10.0	100
K2400648-004	02/13/04	AVS/SEM	5.52	100

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: TJA Iris ICP

Method: P

Start Date: 2/17/04

End Date: 2/17/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL-BLANK	1.00	09:36							X				X		X				X			X				X	
CAL-STDA	1.00	09:39							X				X		X				X			X				X	
CAL-STDB	1.00	09:42																									
ICV	1.00	09:45							X				X		X				X			X				X	
ZZZZZZ	1.00	09:47																									
ZZZZZZ	1.00	09:50																									
ICB	1.00	09:54							X				X		X				X			X				X	
CCVA1	1.00	09:57							X				X		X				X			X				X	
ZZZZZZ	1.00	10:08																									
CCB1	1.00	10:12							X				X		X				X			X				X	
CRI	1.00	10:15							X				X		X				X			X				X	
ICSA	1.00	10:20							X				X		X				X			X				X	
ICSAB	1.00	10:24							X				X		X				X			X				X	
ZZZZZZ	1.00	10:41																									
LCSW	1.00	10:44							X				X		X				X			X				X	
K2400648-MB	1.00	10:47							X				X		X				X			X				X	
K2400648-001	1.00	10:52											X		X				X			X					
K2400648-002	1.00	10:58											X		X				X			X					
K2400648-002D	1.00	11:01											X		X				X			X					
K2400648-002S	1.00	11:05											X		X				X			X					
CCVA2	1.00	11:10							X				X		X				X			X				X	
ZZZZZZ	1.00	11:16																									
CCB2	1.00	11:20							X				X		X				X			X				X	
CCVA3	1.00	11:23							X				X		X				X			X				X	
ZZZZZZ	1.00	11:26																									
CCB3	1.00	11:29							X				X		X				X			X				X	
K2400648-004	1.00	11:31											X		X				X			X					
K2400648-005	1.00	11:38											X		X				X			X					
K2400648-005L	5.00	11:43											X		X				X			X					
K2400648-001	100.00	11:57							X																	X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

Simultaneously Extractable Metals
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: TJA Iris ICP

Method: P

Start Date: 2/17/04

End Date: 2/17/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K2400648-002	100.00	11:59							X																	X	
K2400648-002D	100.00	12:02							X																	X	
K2400648-002S	100.00	12:04							X																	X	
K2400648-004	100.00	12:08							X																	X	
K2400648-005	100.00	12:10							X																	X	
K2400648-005L	500.00	12:14							X																	X	
CCVA4	1.00	12:17							X				X		X				X			X				X	
ZZZZZZ	1.00	12:19																									
CCB4	1.00	12:22							X				X		X				X			X				X	
ZZZZZZ	1.00	13:56																									
ZZZZZZ	1.00	14:01																									
CCVA5	1.00	14:06							X				X		X				X			X				X	
ZZZZZZ	1.00	14:09																									
CCB5	1.00	14:12							X				X		X				X			X				X	

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

Metals in Porewater

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Arcadis	**Service Request:**	K2400648
Project:	Corpus Christi, TX/CC000878.0001	**Date Collected:**	1/30/04
Sample Matrix:	Water	**Date Received:**	1/31/04

Mercury, Dissolved

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SED-1 Porewater	K2400648-006	1.0	2	2/10/04	2/11/04	10.3	
SED-4 Porewater	K2400648-007	1.0	2	2/10/04	2/11/04	1.3	
SED-7 Porewater	K2400648-008	1.0	2	2/10/04	2/11/04	16.3	
SED-10 Porewater	K2400648-009	1.0	2	2/10/04	2/11/04	1.9	
Method Blank	K2400648-MB	1.0	2	2/10/04	2/11/04	ND	

Approved By: _____ Date: 2/17/04

1A/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Arcadis	**Service Request:**	K2400648
Project:	Corpus Christi, TX/CC000878.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	2/10/04
		Date Analyzed:	2/11/04

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC		Units:	ng/L
Lab Code:	K2400776-001MS,	K2400776-001MSD	Basis:	NA
Test Notes:				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631	1.0	5.0	5.0	0.7	5.6	5.6	98	98	71-125	<1	

Approved By: _____ Date: 2/14/04

VS/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Arcadis	**Service Request:**	K2400648
Project:	Corpus Christi, TX/CC000878.0001	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	2/10/04
		Date Analyzed:	2/11/04

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631	5.00	4.49	90	77-123	

Approved By: JC Date: 2/17/04

LCS/032295

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Arcadis	**Service Request:**	K2400648
Project:	Corpus Christi, TX/CC000878.0001	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	2/10/04
		Date Analyzed:	2/11/04

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631	5.00	4.75	95	77-123	

Approved By: _____ Date: 2/17/04

LCS/032295

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Arcadis	**Service Request:**	K2400648
Project:	Corpus Christi, TX/CC000878.0001	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	2/10/04
		Date Analyzed:	2/11/04

Quality Control Sample (QCS) Summary
Total Metals

Sample Name:	Quality Control Sample	Units:	ng/L
Lab Code:	K2400648-QCS	Basis:	NA
Test Notes:			

Source: Inorganic Ventures N-HG02019

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631	5.00	4.79	96	77-123	

Approved By: _____ Date: 2/17/04

LCS/032295

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Sample No.	Lab Sample ID.
SED-1-Porewater	K2400648-006 DISS
SED-4-Porewater	K2400648-007 DISS
SED-7-Porewater	K2400648-008 DISS
SED-10-Porewater	K2400648-009 DISS
Method Blank	K2400648-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

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 the conditions detailed above. Release of the data contained 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: Date: 2/17/04

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-1-Porewater Lab Code: K2400648-006 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	1.00	20	2/10/04	2/13/04	21.4		
Arsenic	200.8	0.5	1	2/11/04	2/13/04	17.8		
Cobalt	6010B	5.0	1	2/10/04	2/13/04	5.0	U	
Manganese	6010B	50.0	10	2/10/04	2/13/04	476		
Selenium	7742	1.0	2	2/10/04	2/12/04	10.6		
Thallium	200.8	0.02	1	2/11/04	2/13/04	0.06		
Tin	200.8	1.0	20	2/10/04	2/13/04	1.0	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-4-Porewater Lab Code: K2400648-007 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	1.00	20	2/10/04	2/13/04	2.59		
Arsenic	200.8	0.5	1	2/11/04	2/13/04	11.6		
Cobalt	6010B	5.0	1	2/10/04	2/13/04	20.9		
Manganese	6010B	50.0	10	2/10/04	2/13/04	31200		
Selenium	7742	1.0	2	2/10/04	2/12/04	1.9		
Thallium	200.8	0.02	1	2/11/04	2/13/04	0.03		
Tin	200.8	1.0	20	2/10/04	2/13/04	1.0	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-7-Porewater Lab Code: K2400648-008 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	1.00	20	2/10/04	2/13/04	58.4		
Arsenic	200.8	0.3	1	2/11/04	2/13/04	27.9		
Cobalt	6010B	5.0	1	2/10/04	2/13/04	5.0	U	
Manganese	6010B	50.0	10	2/10/04	2/13/04	1790		
Selenium	7742	1.0	2	2/10/04	2/12/04	9.2		
Thallium	200.8	0.01	1	2/11/04	2/13/04	0.09		
Tin	200.8	1.0	20	2/10/04	2/13/04	1.0	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	01/30/04
Project Name:	Corpus Christi, TX	Date Received:	01/31/04
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: SED-10-Porewater Lab Code: K2400648-009 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	1.00	20	2/10/04	2/13/04	356		
Arsenic	200.8	0.4	1	2/11/04	2/13/04	11.4		
Cobalt	6010B	5.0	1	2/10/04	2/13/04	8.2		
Manganese	6010B	50.0	10	2/10/04	2/13/04	154		
Selenium	7742	1.0	2	2/10/04	2/12/04	10.4		
Thallium	200.8	0.02	1	2/11/04	2/13/04	0.28		
Tin	200.8	1.0	20	2/10/04	2/13/04	1.0	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Arcadis	Service Request:	K2400648
Project No.:	CC000878.0001	Date Collected:	NA
Project Name:	Corpus Christi, TX	Date Received:	NA
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: Method Blank Lab Code: K2400648-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	1.00	20	2/10/04	2/13/04	1.00	U	
Arsenic	200.8	0.3	1	2/11/04	2/13/04	0.3	U	
Cobalt	6010B	5.0	1	2/10/04	2/13/04	5.0	U	
Manganese	6010B	5.0	1	2/10/04	2/13/04	5.0	U	
Selenium	7742	1.0	2	2/10/04	2/12/04	1.0	U	
Thallium	200.8	0.01	1	2/11/04	2/13/04	0.01	U	
Tin	200.8	1.0	20	2/10/04	2/13/04	1.0	U	

% Solids: 0.0

Comments:

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	24.2	97	25.0	24.8	99	24.9	100	200.8
Arsenic	25.0	25.9	104	25.0	24.8	99	24.9	100	6020
Cobalt	1250	1260	101	500	493	99	497	99	6010B
Manganese	1250	1260	101	500	485	97	488	98	6010B
Selenium	5.0	5.00	100	10.0	9.86	99	9.65	97	7742
Thallium	25.0	26.5	106	25.0	25.1	100	25.5	102	6020
Tin	25.0	25.0	100	25.0	25.4	102	25.4	102	200.8

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	Method
Cobalt				500	496	99	499	100	6010B
Manganese				500	489	98	490	98	6010B
Selenium				10.0	9.81	98			7742

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICV Source:

CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cobalt				500	497	99	503	101	6010B
Manganese				500	494	99	499	100	6010B

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Concentration Units: ug/l

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05	0.05	108		
Arsenic				5.0	5.07	101		
Cobalt				10	11.0	110		
Manganese				5.0	4.81	96		
Selenium	0.50	0.6	122					
Thallium				0.20	0.22	109		
Tin				0.10	0.11	112		

METALS
-3-
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C			Method
Antimony	0.05	U	0.05	U	0.05	U								200.8
Arsenic	0.5	U	0.5	U	0.5	U								6020
Cobalt	10	U	10	U	10	U	10	U						6010B
Manganese	5.0	U	5.0	U	5.0	U	5.0	U						6010B
Selenium	0.5	U	0.5	U	0.5	U	0.5	U						7742
Thallium	0.02	U	0.02	U	0.02	U								6020
Tin	0.1	U	0.1	U	0.1	U								200.8

METALS
- 3 -
BLANKS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C			Method
Cobalt			10	U	10	U	10	U						6010B
Manganese			5.0	U	5.0	U	5.0	U						6010B

METALS
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: Arcadis

Service Request:K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: TJA Iris ICP

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Cobalt		500	2	424	85			
Manganese		500	8.9	439	88			

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L True	Aqueous ug/L Found	Aqueous ug/L %R	Solid (mg/kg) True	Solid (mg/kg) Found	C	Limits		%R
Antimony	500	514	103						
Arsenic	5.00	4.43	88						
Cobalt	500	502	100						
Manganese	500	493	99						
Selenium	1000	1054	105						
Thallium	5.00	4.95	99						
Tin	200	193	97						

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L True	Aqueous ug/L Found	Aqueous ug/L %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C	Solid (mg/kg) Limits		Solid (mg/kg) %R
Antimony	500	502	100						
Arsenic	5.00	4.28	86						
Cobalt	500	499	100						
Manganese	500	490	98						
Selenium	1000	1120	112						
Thallium	5.00	5.08	101						
Tin	200	197	99						

METALS
-9-
ICP SERIAL DILUTIONS

Client: Arcadis
Service Request: K2400648
Project No.: CC000878.0001
Units: ug/L
Project Name: Corpus Christi, TX

Sample Name: SED-7-PorewaterL
Lab Code: K2400648-008L DISS

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-	Q	Method
Cobalt	10.0	U	50.0	U			6010B
Manganese	179		182		2		6010B

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #:

AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)		Method
Antimony	123		0.05		200.8
Arsenic	75		5.0		6020
Thallium	205		0.20		6020
Tin	0		0.1		200.8

Comments

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #: TJA Iris ICP

GFAA ID #:

AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Cobalt	228.62		10.0		6010B
Manganese	257.61		5.0		6010B

Comments

METALS
-10-
METHOD DETECTION LIMITS

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP/ICP-MS ID #:

GFAA ID #:

AA ID #: Varian-1

Analyte	Wave-length	Back-ground	MRL (ug/L)		Method
Selenium	196.00		0.5		7742

Comments

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Cr
Aluminum	237.3	0.0000000	0.0000000	0.0011200	0.0000000	-0.0022000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0200000
Arsenic	189.0	0.0000000	0.0000000	-0.0001200	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0005800	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000700	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	-0.0000240	0.0000000	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0003300	0.0000000	0.0000000	0.0000000	-0.0002000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	-0.0004900	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	-0.0000800	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	-0.0002700	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001700
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000	0.0000000	-0.0010000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Mo	Ni	Interelement Correction Factors for: Ti	V	Co
Aluminum	237.3	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.8	-0.0250000	0.0000000	0.0006800	0.0000000	0.0005600
Arsenic	189.0	0.0005600	0.0000000	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0003000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0001700	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000200	-0.0000110	0.0000330	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	-0.0130000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	-0.0002600	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0016000	0.0000000	0.0000000
Copper	324.7	0.0002300	0.0000000	0.0000000	-0.0020000	0.0000000
Iron	259.9	-0.0001800	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.1480000	0.0870000
Lead	220.3	-0.0025000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.1250000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0002700
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	-0.0004000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0087000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	-0.0003200	0.0000000	-0.0027000	-0.0007800	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	-0.0009000	0.0000000	-0.0002600	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.0017000	0.0008000	0.0031000
Tin	189.9	0.0000000	0.0000000	-0.0028000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	-0.0010000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	-0.0001300	0.0000000	0.0000000	0.0000000	0.0000000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Mn	P	C
Aluminum	237.3	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000
Arsenic	189.0	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0006600	0.0000300	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000
Iron	259.9	-0.0004300	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000
Silicon	251.6	-0.0021000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000
Thallium	190.8	-0.0004000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: Excell ICPMS

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	1000.0	200.8
Arsenic	15.00	700.0	6020
Thallium	15.00	1000.0	6020
Tin	15.00	1000.0	200.8

Comments:

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

ICP ID Number: TJA Iris ICP

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Cobalt	5.00	100000.0	6010B
Manganese	5.00	25000.0	6010B

Comments:

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: P

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW1	2/10/04	CLAA	50	50
LCSW2	2/10/04	CLAA	50	50
K2400648-MB	2/10/04	CLAA	50	50
K2400648-009 DI	2/10/04	CLAA	40	40
K2400648-006 DI	2/10/04	CLAA	40	40
K2400648-007 DI	2/10/04	CLAA	40	40
K2400648-008 DI	2/10/04	CLAA	40	40

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: AA

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW1	2/10/04	CLFAA	50	50
LCSW2	2/10/04	CLFAA	50	50
K2400648-MB	2/10/04	CLFAA	50	50
K2400648-009 DI	2/10/04	CLFAA	40	40
K2400648-006 DI	2/10/04	CLFAA	40	40
K2400648-007 DI	2/10/04	CLFAA	40	40
K2400648-008 DI	2/10/04	CLFAA	40	40

METALS
- 13 -
PREPARATION LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Corpus Christi, TX

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSW1	2/11/04	RED PPTN	400	100
LCSW2	2/11/04	RED PPTN	400	100
K2400648-MB	2/11/04	RED PPTN	400	100
K2400648-009 DI	2/11/04	RED PPTN	320	100
K2400648-006 DI	2/11/04	RED PPTN	260	100
K2400648-007 DI	2/11/04	RED PPTN	255	100
K2400648-008 DI	2/11/04	RED PPTN	400	100
LCSW1	2/10/04	CLAA	50	50
LCSW2	2/10/04	CLAA	50	50
K2400648-MB	2/10/04	CLAA	50	50
K2400648-009 DI	2/10/04	CLAA	40	40
K2400648-006 DI	2/10/04	CLAA	40	40
K2400648-007 DI	2/10/04	CLAA	40	40
K2400648-008 DI	2/10/04	CLAA	40	40

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: TJA Iris ICP

Method: P

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL-BLANK	1.00	09:36										X					X										
CAL-STDA	1.00	09:39										X					X										
CAL-STDB	1.00	09:41																									
ICV	1.00	09:45										X					X										
ZZZZZZ	1.00	09:48																									
ZZZZZZ	1.00	09:51																									
ICB	1.00	09:53										X					X										
CCV1	1.00	09:56										X					X										
ZZZZZZ	1.00	10:01																									
CCB1	1.00	10:06										X					X										
CRI	1.00	10:08										X					X										
ICSA	1.00	10:17										X					X										
ICSAB	1.00	10:20										X					X										
ZZZZZZ	1.00	10:51																									
ZZZZZZ	1.00	10:55																									
ZZZZZZ	1.00	11:03																									
ZZZZZZ	1.00	11:06																									
ZZZZZZ	1.00	11:09																									
ZZZZZZ	1.00	11:11																									
ZZZZZZ	5.00	11:15																									
CCV2	1.00	11:22										X					X										
ZZZZZZ	1.00	11:25																									
CCB2	1.00	11:29										X					X										
ZZZZZZ	1.00	11:31																									
ZZZZZZ	1.00	11:34																									
ZZZZZZ	1.00	11:36																									
ZZZZZZ	1.00	11:39																									
ZZZZZZ	1.00	11:46																									
ZZZZZZ	1.00	11:49																									
ZZZZZZ	1.00	11:53																									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: TJA Iris ICP

Method: P

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	11:57																									
ZZZZZZ	1.00	12:00																									
ZZZZZZ	5.00	12:02																									
CCV3	1.00	12:06										X					X										
ZZZZZZ	1.00	12:09																									
CCB3	1.00	12:12										X					X										
ZZZZZZ	1.00	12:17																									
ZZZZZZ	1.00	12:19																									
ZZZZZZ	1.00	12:23																									
ZZZZZZ	1.00	12:27																									
ZZZZZZ	1.00	12:30																									
ZZZZZZ	1.00	12:33																									
ZZZZZZ	1.00	12:36																									
ZZZZZZ	1.00	12:38																									
ZZZZZZ	5.00	12:41																									
CCV4	1.00	12:45										X					X										
ZZZZZZ	1.00	12:47																									
CCB4	1.00	13:13										X					X										
K2400648-MB	1.00	13:15										X					X										
LCSW1	1.00	13:18										X					X										
LCSW2	1.00	13:20										X					X										
K2400648-006 DISS	1.00	13:22										X															
K2400648-007 DISS	1.00	13:26										X															
K2400648-008 DISS	1.00	13:31										X															
K2400648-009 DISS	1.00	13:34										X															
K2400648-008L DISS	5.00	13:39										X															
K2400648-006 DISS	10.00	13:45															X										
K2400648-007 DISS	10.00	13:48															X										
CCV5	1.00	13:51										X					X										
CCVB5	1.00	13:53										X					X										

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Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: TJA Iris ICP

Method: P

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB5	1.00	13:56										X					X										
K2400648-008 DISS	10.00	13:58															X										
K2400648-009 DISS	10.00	14:01															X										
K2400648-008L DISS	50.00	14:03															X										
CCV6	1.00	14:06										X					X										
ZZZZZZ	1.00	14:08																									
CCB6	1.00	14:11										X					X										

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Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CALIBRATION BLANK	1.00	12:15			X																							*
25 PPB STD. MS4-62-B	1.00	12:17			X																							*
ICV	1.00	12:18			X																							*
CCV1	1.00	12:20			X																							*
ICB	1.00	12:21			X																							*
CCB1	1.00	12:22			X																							*
CRA	1.00	12:24			X																							*
K2400648-MB	20.00	12:26			X																							*
LCSW1	20.00	12:27			X																							*
LCSW2	20.00	12:28			X																							*
K2400648-006 DISS	20.00	12:34			X																							*
K2400648-007 DISS	20.00	12:35			X																							*
K2400648-008 DISS	20.00	12:36			X																							*
K2400648-009 DISS	20.00	12:38			X																							*
CCV2	1.00	12:43			X																							*
CCB2	1.00	12:45			X																							*

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																								
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U	Th										
CALIBRATION BLANK	1.00	12:15												X														
25 PPB STD.	1.00	12:17												X														
ICV	1.00	12:18												X														
CCV1	1.00	12:20												X														
ICB	1.00	12:21												X														
CCB1	1.00	12:22												X														
CRA	1.00	12:24												X														
K2400648-MB	20.00	12:26												X														
LCSW1	20.00	12:27												X														
LCSW2	20.00	12:28												X														
K2400648-006 DISS	20.00	12:34												X														
K2400648-007 DISS	20.00	12:35												X														
K2400648-008 DISS	20.00	12:36												X														
K2400648-009 DISS	20.00	12:38												X														
CCV2	1.00	12:43												X														
CCB2	1.00	12:45												X														

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Excell ICPMS

Method: MS

Start Date: 2/13/04

End Date: 2/13/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	15:33				X																		X			
25 PPB STD. MS4-62-D	1.00	15:35				X																		X			
ICV	1.00	15:36				X																		X			
CCV1	1.00	15:38				X																		X			
ICB	1.00	15:40				X																		X			
CCB1	1.00	15:41				X																		X			
CRA	1.00	15:44				X																		X			
K2400648-MB	1.00	15:45				X																		X			
LCSW1	1.00	15:47				X																		X			
LCSW2	1.00	15:49				X																		X			
K2400648-006 DISS	1.00	15:50				X																		X			
K2400648-007 DISS	1.00	15:52				X																		X			
K2400648-008 DISS	1.00	15:54				X																		X			
K2400648-009 DISS	1.00	15:57				X																		X			
CCV2	1.00	15:59				X																		X			
CCB2	1.00	16:01				X																		X			

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

METALS
- 14 -
ANALYSIS RUN LOG

Client: Arcadis

Service Request: K2400648

Project No.: CC000878.0001

Project Name: Corpus Christi, TX

Instrument ID Number: Varian-1

Method: AA

Start Date: 2/12/04

End Date: 2/12/04

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	15:00																			X						
S0	1.00	15:02																			X						
S0	1.00	15:04																			X						
S0	1.00	15:06																			X						
S0	1.00	15:08																			X						
S0	1.00	15:10																			X						
ICV	1.00	15:12																			X						
ICB	1.00	15:14																			X						
CCV1	1.00	15:16																			X						
CCB1	1.00	15:18																			X						
CRI	1.00	15:20																			X						
K2400648-MB	2.00	15:22																			X						
LCSW1	200.00	15:24																			X						
LCSW2	200.00	15:26																			X						
K2400648-006 DISS	2.00	15:28																			X						
K2400648-007 DISS	2.00	15:30																			X						
K2400648-008 DISS	2.00	15:32																			X						
K2400648-009 DISS	2.00	15:34																			X						
CCV2	1.00	15:36																			X						
CCB2	1.00	15:38																			X						
ZZZZZZ	2.00	15:40																									
ZZZZZZ	200.00	15:42																									
ZZZZZZ	200.00	15:44																									
ZZZZZZ	200.00	15:46																									
ZZZZZZ	200.00	15:48																									
CCV3	1.00	15:50																			X						
CCB3	1.00	15:52																			X						

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Form XIV - IN

General Chemistry – Raw Data

Work Request #: Original (0842) 0848 0836 0818 0862 0859 0841 0878 0882 0883 0886

Tier: IIA V I V I I I I I I I

Date Analyzed: 2/6/04

Analyst: MF/SH/cld

Analysis: pH-150.1

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

2. 0842-1, 0841

Final Approved by: _____ Date: 2/10/04

DQREPORT

Analytical Batch
KA0325805

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request: 0842 0648 0836 0818 0862 0859 0841 0878 0882 0883 0886

Analysis For: Method: 50.1 / 9040B

Sample #	pH	Time Analyzed
pH 12.63 Buffer	12.64	
pH 10.00 Buffer	10.00	
pH 7.00 Buffer	7.00	
pH 4.00 Buffer	4.00	
Buffer Check	4.00	
LCS	7.38	11:28
* 0842-1	7.53	11:29
~~-2/1d~~	11.33	11:31
-2d	11.33	11:32
-3	11.35	11:32
-4	12.06	11:33
Buffer ✓	12.65	
0648-1	(A) ~~7.6~~ 7.73	1431
-2	7.46	1434
-4	7.93	1437
-5	8.09	1439
~~-MB~~		
0836-1	7.69	1458
0818-1	8.07	1500
0862-1	7.02	1533
0859-1	6.65	1535

0648-6, -7, -8, -9 (A)

E.F.

Sample #	pH	Time Analyzed
0859-1d	6.65	1536
0859-2	8.05	1537
Buffer ✓	4.00	
0859-3	7.24	1538
0859-4	6.49	1540
* 0841-1	13.01	1542
* -2	12.91	1543
* -3	9.41	1544
* -4	7.50	1545
* -5	8.25	1546
Buffer ✓	12.61	1547
	6.61	1558
LCS-2	7.36	
0878-1	6.75	1620
-2	6.85	1631
-3	8.26	1640
-4	7.64	1646
-1d	6.75	1626
0883-1	9.06	1704
0886-1	7.52	1719
Buffer ✓	3.98	

LCS = APG 4063 Lot# 33999 ID# = Cond/1-53-T T.V. = 7.44 % REC = 99.99

Comments:

0842-2/2d $\bar{x}$ = 11.33 RPD = <1
0859-1/1d $\bar{x}$ = 6.65 % RPD < 1
0878-1/1d $\bar{x}$ = 6.75 RPD = <1

* Sample rec'd past hold

M.P. 2/6/04

Analyzed By:	[illegible] /dd /[illegible]	Date:	2/6/04
Reviewed By:		Date:	2/10/04

(A) dd 2/6/04

TI.BCH

Work Request #: Original (0576) 06048

Tier: III V

Date Analyzed: 2/11/04

Analyst: SP

Analysis: TOC/DOC Ext. Rxn

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
d.	Are results for methods blanks all ND?	yes/no/NA
e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?	yes/no/NA
7.	Are all samples labelled correctly?	yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.	Are detection limits and units reported correctly?	yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 2/12/04

DQREPORT

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Batch
KA0325788

Service Request #:
Matrix: Water
Analysis For: Total Organic Carbon
Method:Oxidation EPA 415.1/9060
Instrument: A B

Printout SPL#	CBA	2	3	4	5
Sample Number	RB	ICV	ICB	CCV-1	CCB-1
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L	0.02300	21.99400	0.20300	25.54200	0.15800
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	-0.18450	21.78650	-0.00450	25.33450	-0.04950
TOC mg/L	**<0.5**	**21.8**	**<0.5**	**25.3**	**<0.5**
		%REC=109 ✓		%REC=101 ✓	

Printout SPL#	6	7	8	9	10
Sample Number	MB-1	LCS-1	LCS-D	0648 FB	0648-6
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L	0.11600	31.67200	30.08700	0.97600	10.26600
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	-0.09150	31.46450	29.87950	0.76850	10.05850
TOC mg/L	**<0.5**	**31.5**	**29.9**	**0.8**	**10.1**
		~~X=30.7 RPD=5~~ (1)	%REC=101 ✓		

Printout SPL#	11	12	13	14	15
Sample Number	0648-7	0648-8	0648-9	0576-2 (30)	RB
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L	13.21900	7.17400	4.75100	9.72200	0.28300
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	13.01150	6.96650	4.54350	9.51450	0.07550
TOC mg/L	**13.0**	**7.0**	**4.5**	**9.5**	**<0.5**
				X=9.6 RPD=1 ✓	

ICV = 20.0 (Ref.#TOC1-55-G)
LCS =29.5 ppm APG 4013 Lot #32448 (REF#TOC1-04-CC)
CCV = 25.0 (Ref.#TOC1-45-Q)
Spike: 0.05 ml if 5000 ppm stock ---> 10.0 mls solution =25.0 x Dilution Factor (Ref.# TOC1-21-G)

Comments: (1) PN 2/12/04 LCS-1 %Rec = 107

0648 porewaters filtered by metals.

Analyst SP	Date Analyzed 2/11/04
Approved by	Date 2/12/04
	Date 2/12/04

2-12-04.xls

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request #: Matrix: Water

Analysis For: Total Organic Carbon Method:Oxidation EPA 415.1

Instrument: A B

Printout SPL#	16	17	18	19	20
Sample Number	CCV-2	CCB-2	0576-2D(30)	0576-2MS(30)	RB
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L	25.66000	0.24300	9.76000	33.63400	0.38000
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	25.45250	0.03550	9.55250	33.42650	0.17250
TOC mg/L	**25.5**	**<0.5**	**9.6**	**33.4**	**<0.5**

%REC=102 %REC=96

Printout SPL#	21	22	23	24	25
Sample Number	RB	0576-3(30)	0576-4(30)	0576-5(30)	0576-6(30)
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L	-0.52900	8.63400	14.84500	7.45100	9.49700
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	-0.73650	8.42650	14.63750	7.24350	9.28950
TOC mg/L	**<0.5**	**8.4**	**14.6**	**7.2**	**9.3**

Printout SPL#	26	27	28	29	30
Sample Number	0576-7(30)	RB	CCV-3	CCB-3	
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L	15.95700	0.22600	25.79400	0.27800	
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	15.74950	0.01850	25.58650	0.07050	-0.20750
TOC mg/L	**15.7**	**<0.5**	**25.6**	**<0.5**	**<0.5**

%REC=102

Printout SPL#	31	32	33	34	35
Sample Number					
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L					
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	-0.20750	-0.20750	-0.20750	-0.20750	-0.20750
TOC mg/L	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Printout SPL#	36	37	38	39	40
Sample Number				RB	CCV-4
Dilution Factor	1	1	1	1	1
Solution Conc., mg/L					
Blank Correction, mg/L	0.20750	0.20750	0.20750	0.20750	0.20750
Net mg/L	-0.20750	-0.20750	-0.20750	-0.20750	-0.20750
TOC mg/L	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Comments:

Analyst SP	Date Analyzed 2/11/04
Approved by	Date 2/12/04
	Date 2/12/04

2-12-04.xls

Pos/ Vial	Run Type	Rep #	Run Date	Run Time	Data Filename	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)	TC Area (cts)	TC Mass (ugC)	TC Conc (ppm)
1	Spl	1	11Feb2004	14:17	21104000 B	-	-	-	240	0.047	0.023	-	-	-
2	Spl	1	11Feb2004	14:34	21104001 ICV-	-	-	-	31207	43.769	21.994	-	-	-
3	Spl	1	11Feb2004	14:51	21104002 ICB	-	-	-	493	0.404	0.203	-	-	-
4	Chk1	1	11Feb2004	15:07	21104003 CCV-1	-	-	-	37335	50.829	25.542	-	-	-
5	Spl	1	11Feb2004	15:24	21104004 CCB-1	-	-	-	430	0.315	0.158	-	-	-
6	Spl	1	11Feb2004	15:41	21104005 MB-	-	-	-	370	0.230	0.116	-	-	-
7	Spl	1	11Feb2004	15:57	21104006 LCS	-	-	-	44847	63.027	31.672	-	-	-
8	Spl	1	11Feb2004	16:14	21104007 LCS-D	-	-	-	42613	59.873	30.087	-	-	-
9	Spl	1	11Feb2004	16:31	21104008 0648-FB	-	-	-	1583	1.943	0.976	-	-	-
10	Spl	1	11Feb2004	16:48	21104009 0648-6-	-	-	-	14676	20.429	10.266	-	-	-
11	Spl	1	11Feb2004	17:04	21104010 0648-7	-	-	-	18838	26.305	13.219	-	-	-
12	Spl	1	11Feb2004	17:21	21104011 0648-8	-	-	-	10319	14.277	7.174	-	-	-
13	Spl	1	11Feb2004	17:38	21104012 0648-9	-	-	-	6903	9.454	4.751	-	-	-
14	Spl	1	11Feb2004	17:55	21104013 0576-2	-	-	-	13909	19.346	9.722	-	-	-
15	Spl	1	11Feb2004	18:11	21104014 B	-	-	-	606	0.563	0.283	-	-	-
16	Chk1	1	11Feb2004	18:28	21104015 CCV-2	-	-	-	37501	51.064	25.660	-	-	-
17	Spl	1	11Feb2004	18:45	21104016 CCB-2	-	-	-	550	0.484	0.243	-	-	-
18	Spl	1	11Feb2004	19:01	21104017 0576-2D	-	-	-	13963	19.422	9.760	-	-	-
19	Spl	1	11Feb2004	19:18	21104018 0576-2MS	-	-	-	47613	66.933	33.634	-	-	-
20	Spl	1	11Feb2004	19:35	21104019 B	-	-	-	742	0.755	0.380	-	-	-
21	Chk1	1	11Feb2004	19:51	21104020 B	-	-	-	589	-1.053	-0.529	-	-	-
22	Spl	1	11Feb2004	20:08	21104021 0576-3	-	-	-	12376	17.181	8.634	-	-	-
23	Spl	1	11Feb2004	20:25	21104022 0576-4	-	-	-	21131	29.543	14.845	-	-	-
24	Spl	1	11Feb2004	20:42	21104023 0576-5	-	-	-	10709	14.828	7.451	-	-	-
25	Spl	1	11Feb2004	20:58	21104024 0576-6	-	-	-	13593	18.900	9.497	-	-	-
26	Spl	1	11Feb2004	21:15	21104025 0576-7	-	-	-	22698	31.755	15.957	-	-	-
27	Spl	1	11Feb2004	21:32	21104026 B	-	-	-	526	0.450	0.226	-	-	-
28	Chk1	1	11Feb2004	21:48	21104027 CCV-3	-	-	-	37690	51.330	25.794	-	-	-
29	Spl	1	11Feb2004	22:05	21104028 CCB-3	-	-	-	599	0.553	0.278	-	-	-

		1st	2nd	3rd		
1	0.02300	0.02300			OBSERVATIONS	11
2	0.20300	0.20300	0.20300	0.20300	STD Deviatio	0.34920
3	0.15800	0.15800	0.15800	0.15800	AVERAGE	0.21427
4	0.11600	0.11600	0.11600		ULC	0.56348
5	0.97600				LCL	-0.13493
6	0.28300	0.28300	0.28300			
7	0.24300	0.24300	0.24300	0.24300		
8	0.38000	0.38000			OBSERVATIONS	9
9	-0.52900				STD Deviatio	0.10411
10	0.22600	0.22600	0.22600	0.22600	AVERAGE	0.21222
11	0.27800	0.27800	0.27800		ULC	0.31633
12					LCL	0.10811
13						
14						
15					OBSERVATIONS	7
16					STD Deviatio	0.06150
17					AVERAGE	0.21529
18					ULC	0.27678
19					LCL	0.15379
20						
21						
22					OBSERVATIONS	4
23					STD Deviatio	0.03685
24					AVERAGE	0.20750
25						
26						
27						
28						
29						
30						
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*********************************************************************
**                          CONFIGURATION                          **
*********************************************************************
```

Analysis Mode: TOC Spl Intro: Autosampler 88
Remote Start : OFF

Loop Size: 1 mL

Actual Volume	1mL	5mL	10mL	25mL
Loop A (uL):	990	4950	10060	24700
Loop B (uL):	1000	4970	10050	24600

Tray Type:	88 Vial	Vial Option:	Neither
Needle Depth:	95 %	Preacid Volume (uL):	100
Wash Needle Depth:	94 %	Preacid Purge Time (min:sec):	0:30

	TIC	TOC	TC
Blank	----	----	----
Average:	44	207	158

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1:2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	11.0	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** SEQUENCE **
****

E.R. RUN Wed Feb 11 13:59:44 2004

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
1	B	EXT.REACTION	Sample	1	2.000	0	1.00	No	
2	ICV	EXT.REACTION	Sample	1	2.000	0	1.00	No	
3	ICB	EXT.REACTION	Sample	1	2.000	0	1.00	No	
4	CCV-1	EXT.REACTION	Chk. 1	1	2.000	0	1.00	No	
5	CCB-1	EXT.REACTION	Sample	1	2.000	0	1.00	No	
6	MB	EXT.REACTION	Sample	1	2.000	0	1.00	No	
7	LCS	EXT.REACTION	Sample	1	2.000	0	1.00	No	
8	LCS-D	EXT.REACTION	Sample	1	2.000	0	1.00	No	
9	0648* FB	EXT.REACTION	Sample	1	2.000	0	1.00	No	
10	0648-6*	EXT.REACTION	Sample	1	2.000	0	1.00	No	
11	0648-7*	EXT.REACTION	Sample	1	2.000	0	1.00	No	
12	0648-8*	EXT.REACTION	Sample	1	2.000	0	1.00	No	
13	0648-9*	EXT.REACTION	Sample	1	2.000	0	1.00	No	
14	0576-2	EXT.REACTION	Sample	1	2.000	0	1.00	No	
15	RB	EXT.REACTION	Sample	1	2.000	0	1.00	No	
16	CCV-2	EXT.REACTION	Chk. 1	1	2.000	0	1.00	No	
17	CCB-2	EXT.REACTION	Sample	1	2.000	0	1.00	No	
18	0576-2D	EXT.REACTION	Sample	1	2.000	0	1.00	No	
19	0576-2MS	EXT.REACTION	Sample	1	2.000	0	1.00	No	
20	RB	EXT.REACTION	Sample	1	2.000	0	1.00	No	
21	RB	EXT.REACTION	Chk. 1	1	2.000	0	1.00	No	
22	0576-3	EXT.REACTION	Sample	1	2.000	0	1.00	No	
23	0576-4	EXT.REACTION	Sample	1	2.000	0	1.00	No	
24	0576-5	EXT.REACTION	Sample	1	2.000	0	1.00	No	
25	0576-6	EXT.REACTION	Sample	1	2.000	0	1.00	No	
26	0576-7	EXT.REACTION	Sample	1	2.000	0	1.00	No	
27	RB	EXT.REACTION	Sample	1	2.000	0	1.00	No	
28	CCV-3	EXT.REACTION	Chk. 1	1	2.000	0	1.00	No	
29	CCB-3	EXT.REACTION	Sample	1	2.000	0	1.00	No	

```
*********************************************************************
**                          CALIBRATION                            **
*********************************************************************
```

10/2003 ER Mon Oct 20 20:56:40 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	0.000	2.000
2	Yes	0.500	2.000
3	Yes	5.000	2.000
4	Yes	25.000	2.000
5	Yes	50.000	2.000

RF (ugC/k-cts):	1.412
R-Squared:	0.9989
Offset (cts):	1334
Offset (ugC):	-1.884
Calibration Mode:	TOC
Allow Editing:	No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	774	1338	9004	38080	70937
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

Work Request #: Original (514) 648

Tier: _____

Date Analyzed: 2-17-04

Analyst: A Cheatley

Analysis: TOC/SO4

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

12) due 2-16-04 on bench

Final Approved by: [signature] Date: 2/18/04

DQREPORT

Columbia Analytical Services, Inc.

Analytical Batch
KA0324067

Service Request #: _____ Method: ASTM D4129-82 (Combustion/Coulometric)

Analysis For: Total Organic Carbon (TOC) Matrix: Soil / Dry Weight Basis

Sample Number	mg Sample Injected	Sample Reading, µg C	Baseline Reading, µg C	Net µg C	% Carbon
CCV-1	10.4	1892.0	13.4	1878.6	18.1
CCB-1	50.0	16.5	13.4	3.1	< 0.05
LCS-1	50.6	325.3	13.4	311.9	0.62
MB-1	50.0	12.6	13.4	-0.8	< 0.05
514-1	51.4	1486.6	13.4	1473.2	2.87
514-1d	49.8	1562.2	13.4	1548.8	3.11
514-1ms	27.0	3552.7	13.4	3539.3	13.1
514-2	48.1	677.7	13.4	664.3	1.38
514-3	50.9	763.5	13.4	750.1	1.47
514-4	49.5	1280.1	13.4	1266.7	2.56
514-5	42.7	795.6	13.4	782.2	1.83
514-6	46.1	1661.4	13.4	1648.0	3.57
CCV-2	10.8	2107.2	13.4	2093.8	19.4
CCB-2	50.0	16.2	13.4	2.8	< 0.05
514-7	39.1	536.4	13.4	523.0	1.34
648-1	38.1	567.9	13.4	554.5	1.46
648-2	38.2	406.4	13.4	393.0	1.03
648-4	41.3	331.4	13.4	318.0	0.77
648-4d	43.7	315.6	13.4	302.2	0.69
648-4ms	26.0	930.8	13.4	917.4	3.53
648-5	① ~~50.0~~ 50.4	121.6	13.4	108.2	① ~~0.22~~ 0.21
CCV-3	10.5	1935.5	13.4	1922.1	18.3
CCB-3	50.0	21.3	13.4	7.9	< 0.05

Acid Purge Time: 1 minute **Reading Time:** 5 minutes **TOC % =** $\frac{\text{(Net Reading)(µg 0.1)}}{\text{mg Sample Injected}}$

CCV : Urea ID#: TOCS/1-10- TV = 20.0%C

CCV 1 =91 CCV 2 =97 CCV 3 =92

LCS: ERA **Cat#:** 542 **Lot#:** 1109 **ID#:** TOCS/1-10- **TV** = 0.57%C REC%=109

Comments :

514-1ms=15.6 mg x 20/27.0=11.6 X=2.99 RPD=8 %REC=88

648-4ms=4.3 mg x 20/26.0=3.31 X=0.73 RPD=11 %REC=83

① M.F 2/18/04

Analyzed By: [illegible]	Date: 2-17-04 1110
Reveiwed By: [illegible]	Date: 2/18/04

TOC.XLT

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	10.4	1892.0		11.3
CCB-1	50.0	16.5		12.0
LCS-1	50.6	325.3		16.9
MB-1	50.0	12.6		AVG.
514-1	51.4	1486.6	1/28/04 70*c 1110	13.4
514-1d	49.8	1562.2	1/28/04 70*c 1110	
514-1ms	27.0	3552.7	1/28/04 70*c 1110	
514-2	48.1	677.7	1/28/04 70*c 1110	
514-3	50.9	763.5	1/28/04 70*c 1110	
514-4	49.5	1280.1	1/28/04 70*c 1110	
514-5	42.7	795.6	1/28/04 70*c 1110	
514-6	46.1	1661.4	1/28/04 70*c 1110	
CCV-2	10.8	2107.2		
CCB-2	50.0	16.2		
514-7	39.1	536.4	1/28/04 70*c 1110	
648-1	38.1	567.9	2/2/04 70*c 1200	
648-2	38.2	406.4	2/2/04 70*c 1200	
648-4	41.3	331.4	2/2/04 70*c 1200	
648-4d	43.7	315.6	2/2/04 70*c 1200	
648-4ms	26.0	930.8	2/2/04 70*c 1200	
648-5	⓪ ~~50.0~~ 50.4	121.6	2/2/04 70*c 1200	
CCV-3	10.5	1935.5		
CCB-3	50.0	21.3		

⓪ 211.8
2/15/04

A Cheating 2-17-04 NB

TOC Soil Benchsheet

Sample #	mg Sample	Reading	Date Baked	Baseline
CCV-1	10.4	1892.0		11.3
CCB-1	50.0	16.5		12.0
LCS	50.6	325.3		16.9
MB	50.0	12.6		13.4 Avg
514-1	51.4 (2.87)	1486.6	1-28-04 TOC 1110	
-1d	49.8 (3.11)	1562.2		
-1ms	27.0	3552.7		
-2	48.1	677.7		
-3	50.9	763.5		
-4	49.5	1280.1		
-5	42.7	795.6		
-6	46.1	1661.4		
CCV-2	10.8	2107.2		
CCB-2	50.0	16.2		
-7	39.1	534.4		
648-1	38.1	567.9	2-2-04 TOC 1200	
-2	38.2	406.4		
-4	41.3 .77	331.4		
-4d	43.7	315.6		
-4ms	26.0	930.8		
-5	50.4	121.6		
CCV-3	10.5	1935.5		
CCB-3	50.0	21.3		
CCV-3				
CCB-3				
CCV-4				
CCB-4				
CCV-5				
CCB-5				

CCV-1 = 90
CCB-1 = <0.05
LCS-1 = ~~108~~ 109 ①
MB-1 = <0.05
514-1ms - 15.6 mg x 20 / 27.0 = 11.6
x = 2.99
RPD = 8
% REC = 88

CCV-2 = 97
CCB-2 = <0.05
648-4MS = 43 mg x 20/26.0 = 3.3
x = 0.73
RPD = 11
% REC = 83

CCV-3 = 92
CCB-3 = <0.05

M.P.
2/18/04

Acheatley 2-17-04 1110

① AL 2-17-04

Work Request #: (Original C1048)

Tier: III

Date Analyzed: 2/13/04

Analyst: EW

Analysis: AVS

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:
Reanalyzed w/in hold. due 2/14

Final Approved by: [signature] Date: 2/17/04

DQREPORT

Analytical Batch
KA0325908

Work Order #.:
Analysis: Analysis for Acid Volatile Sulfide
Method: AVS

	STD1	STD 2	STD 3	STD 4	STD 5	STD 6						
											(R) =	0.9985
Conc. (mg/L)	0.000	0.315	0.630	0.945	1.260	1.575					Slope =	0.8052
Absorbance	0.000	0.313	0.567	0.823	1.040	1.288					Y Int. =	0.0378

Date Prep'd	Sample #	Dil. Factor	Absorb. @ 670 nm	Conc. from Curve (mg/L)	Actual Conc. (mg/L)	Initial Wt./Vol. (g) / (ml)	Final Vol. (ml)	A Tower mg/L (solution)	B Tower mg/L (solution)	A & B mg/L - mg/kg as rec'd	% Solid	mg/kg Dry Wt.
2/13/04	IICV	1	1.183	1.4224	1.4224	50	50	1.42		1.42		
2/13/04	ICB	1	0.010	-0.0345	-0.0345	50	50	-0.03		<0.5		
2/13/04	CCV1	1	1.047	1.2534	1.2534	50	50	1.25		1.25		
2/13/04	CCB1	1	0.011	-0.0332	-0.0332	50	50	-0.03		<0.5		
2/13/04	MB	1	0.027	-0.0134	-0.0134	50	50	-0.01	-0.04	<0.5		
2/13/04	LCS	1	0.852	1.0113	1.0113	10.050	50	5.03	-0.06	5.03		
2/13/04	0648-1	200	1.075	1.2882	257.6445	9.530	50	1351.75	0.03	1351.75	51.8	2610
2/13/04	0648-2	100	0.516	0.5940	59.3959	10.028	50	296.15	-0.04	296.15	52.6	563
2/13/04	0648-2D	100	0.594	0.6908	69.0833	9.869	50	350.00	0.07	350.00	52.6	665
2/13/04	0648-2MS	200	0.508	0.5840	116.8047	10.600	50	550.97	-0.06	550.97	52.6	1050
2/13/04	0648-2MSD	200	0.553	0.6399	127.9824	9.962	50	642.35	0.29	642.64	52.6	1220
2/13/04	0648-4	50	0.452	0.5145	25.7236	5.520	50	233.00	-0.24	233.00	71.3	327
2/13/04	0648-5	10	0.603	0.7020	7.0201	5.078	50	69.12	-0.46	69.12	72.0	96.0
2/13/04	CCV2	1	0.580	0.6734	0.6734	50	50	0.67		0.67		
2/13/04	CCB2	1	0.013	-0.0308	-0.0308	50.000	50	-0.03		<0.5		
2/13/04	CCV3	1	1.042	1.2472	1.2472	50.000	50	1.25		1.25		
2/13/04	CCB3	1	0.000	-0.0469	-0.0469	50.000	50	-0.05		<0.5		
2/13/04	IDL-1	1	0.688	0.8076	0.8076	50.000	50	0.81		0.8076		
2/13/04	2	1	0.674	0.7902	0.7902	50.000	50	0.79		0.7902		
2/13/04	3	1	0.676	0.7927	0.7927	50.000	50	0.79		0.7927		
2/13/04	4	1	0.675	0.7914	0.7914	50.000	50	0.79		0.7914		
2/13/04	5	1	0.680	0.7976	0.7976	50.000	50	0.80		0.7976		
2/13/04	6	1	0.678	0.7952	0.7952	50.000	50	0.80		0.7952		
2/13/04	7	1	0.675	0.7914	0.7914	50.000	50	0.79		0.7914		
2/13/04	CCV4	1	1.037	1.2410	1.2410	50	50	1.24		1.24		

ICV =2.25ml*31.5mg/L/50ml = 1.42mg/L %REC = 100

CCV1,3,4 =2ml*31.5mg/L/50ml = 1.26mg/L %REC = 99, 99, 98 CCV2 =1.0ml*31.5mg/L/50ml = 0.63mg/L %REC =106

LCS =2ml*31.5mg/L/10.050 = 6.27mg/Kg %REC = 80

0648-2MS =(1ml*3150mg/L)/(10.600g*0.526g) = 565mg/Kg %REC = 86 ~~0449-1/1D~~ 0648-1/1d X = 614mg/Kg RPD = 17

0648-2MSD =(1ml*3150mg/L)/(9.962g*0.526g) = 601mg/Kg %REC = 109

STD ID# S2/1-19-E CONC. = 3180mg/L (1-7)SPIKE = 1.25mL*31.5ppm/50mL = 0.7875ppm

Distilled by:	EM	Date Distilled:	2/13/04 1145
Analyzed By:	EM	Date Analyzed:	2/13/04
Reviewed By:	[signature]	Date Reviewed:	2/17/04

① PW 2/18/04

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.:

Analysis: Analysis for Acid Volatile Sulfide

Method: AVS

	STD1	STD 2	STD 3	STD 4	STD 5	STD 6						
											(R) =	0.9985
Conc. (mg/L)	0.000	0.315	0.630	0.945	1.260	1.575					Slope =	0.8052
Absorbance	0.000	0.313	0.567	0.823	1.040	1.288					Y Int. =	0.0378

Date Prep'd	Sample #	Dil. Factor	Absorb. @ 670 nm	Conc. from Curve (mg/L)	Actual Conc. (mg/L)	Initial Wt./Vol. (g) / (ml)	Final Vol. (ml)	A Tower mg/L (solution)	B Tower mg/L (solution)	A & B mg/L - mg/kg as rec'd	% Solid	mg/kg Dry Wt.
2/13/04	CCB4	1	0.001	-0.046	-0.0457	50	50	-0.05		<0.5		
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Distilled by:	EM	Date Distilled:	2/13/04
Analyzed By:	EM	Date Analyzed:	2/13/04
Reviewed By:		Date Reviewed:	3/17/04

Work Order # :

Method: AVS

Analysis: Analysis for Acid Volatile Sulfide

Prep Date : 2/13/04

	STD1	STD 2	STD 3	STD 4	STD 5	STD 6						
Conc. (mg/L)	0.000	0.315	0.630	0.945	1.260	1.575						
Absorbance	0.000	0.313	0.567	0.823	1.040	1.288						

Sample Name Lab Code	Initial Wt./Vol. (g) or (ml)	Dilution Factor	Abs of A tower @ 670 nm	Abs of B tower @ 670 nm	% Solids
HCV	50	1	1.183		
ICB	50	1	0.010		
CCV1	50	1	1.047		
CCB1	50	1	0.011		
MB	50	1	0.027	0.006	
LCS	10.050	1	0.852	0.028	
0648-1	9.530	200	1.075	0.042	51.8
0648-2	10.028	100	0.516	0.032	52.6
0648-2D	9.869	100	0.594	0.049	52.6
0648-2MS	10.600	200	0.508	0.027	52.6
0648-2MSD	9.962	200	0.553	0.084	52.6
0648-4	5.520	50	0.452	0.016	71.3
0648-5	5.078	10	0.603	0.000	72.0
CCV2	50	1	0.580		
CCB2	50	1	0.013		
CCV3	50	1	1.042		
CCB3	50	1	0.000		
1	50	1	0.688		
2	50	1	0.674		
3	50	1	0.676		
4	50	1	0.675		
5	50	1	0.680		
6	50	1	0.678		
7	50	1	0.675		
CCV4	50	1	1.037		
CCB4	50	1	0.001		
ICVB	80	1	0.130		
		1			
		1			
		1			
		1			
		1			
		1			
		1			
		1			
		1			
		1			
		1			

Sample Name Lab Code	Initial Wt./Vol. (g) or (ml)	Dilution Factor	Abs of A tower @ 670 nm	Abs of B tower @ 670 nm	% Solids
		1			
		1			
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Em 2/13/04

AW 2/17/04

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Draft, Aug. 1991

Work Order #.: _____ Method: Methylene Blue Colorimetric

Analysis: AVS/SEM

Date Prepared	Sample Name Lab Code	Initial Wt./Vol. (g) or (ml)	AVS - Final Volume (mL)	mLs 50% HCl added	SEM - Final Volume (mL)	Sample description:
2/13/04	MB	50	50			
	LCS	10.050				
	0648-1	① ~~10~~ 9.530				
	-2	10.028				
	-2d	9.869				
	-2ms	10.000				
	-2msd	9.962				
	-4 ①	~~5.345~~	5.520			
	-5	5.078				

LCS 1 = % REC =

LCS 2 = % REC =

Spike = % REC =

Spike Dup.= % REC =

x =

STD ID# = RPD =

Prepared By:	EM	Date Prepared:	2/13/04 1145
Analyzes By:		Date Analyzed:	
Reviewed By:	[signature]	Date Reviewed:	2/17/04

① EM 2/13/04

Page of

COLUMBIA ANALY .L SERVICES, INC.

Work Ord.. #.: 0648

Analysis: Analysis for Total Sulfide

Prep Date : 2/13/04

Method: 376.2 / S2-Diss

0.998

	STD1	STD 2	STD 3	STD 4	STD 5	STD 6			
Conc. (mg/L)	0.000	0.315	0.630	0.945	1.260	1.575			
Absorbance	0.000	0.313	0.567	0.823	1.040	1.288			

Abs@670nm

Sample Name Lab Code	~~Initial Wt./Vol. (g) or (ml)~~ 1	Dilution Factor	Abs @ 670 nm	~~% Solids~~ 1
ICV	1.183	1		
ICB	0.010	1		
CCV1	1.047	1		
CCB1	0.011	1		
MB	0.027	1		
LCS	0.852	1		
0648-1	1.075	1 X 200		
-2	0.516	1 X 100		
-2d	0.594	1 X 100		
-2ms	0.508	1 X 200		
-2msd	0.553	1 X 200		
-4	0.452	1 X 50		
-5	0.603	1 X 10		
MB	0.006	1		
CCV2	0.580	1		
CCB2	0.013	1		
LCS	0.028	1		
0648-1	0.042	1		
-2	0.032	1		
-2d	0.049	1		
-2ms	0.027	1		
-2msd	0.084	1		
-4	0.016	1		
-5	-0.000	1		

sheet A

sheet B

Abs@670nm

Sample Name Lab Code	~~Initial Wt./Vol. (g) or (ml)~~ 1	Dilution Factor	Abs @ 670 nm
CCV3	1.042	1	
CCB3	0.000	1	
		1	
		1	
		1	
1	0.688	1	
2	0.674	1	
3	0.676	1	
4	0.675	1	
5	0.680	1	
6	0.678	1	
7	0.675	1	
		1	
CCV	1.037	1	
CCB	0.001	1	
		1	
		1	
		1	
		1	
		1	
		1	
		1	
		1	
		1	

5 Em 2/13/04

1.25 x 31.8 ppm / 50mL

1 Em 2/13/04 PW 2/17/04

178

Metals – Raw Data

Service Request # K0776,K0648,K0781,K0676,K0905,K0896
MS/MSD with # K0776,K0905

1631 Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. 3 Bubbler Blanks ran	X		
7. Mean of Bubbler Blanks less than 25 pg	X		
8. OPR, QCS in control (77-123%)	X		
9. MS/MSD recovery 71-125%	X		
10. Spike RPD within 24%	X		
11. All samples within the linear range	X		
12. All corresponding charts included	X		
13. Dilution factors calculated	X		
14. Bench sheet signed	X		
15. Reagent Blank below 25 pg	X		
16. Reagent Blank current for the month	X		

Comments

Primary Reviewed by JBB Date 2/11/04

Secondary Reviewed by [illegible] Date 2/12/04

13-Nov-03 Calibration Curve **Gold Sand Traps**

Blanks:	***Bottle***	***Reagent***		***Water***	Run
	Raw counts	*Raw counts*		*Raw counts*	No.
	23-Dec-03	*13-Jan-04*		[redacted]	34
	133,735	296,467			35
		188,674			
		187,764			
	average	224,302	***19 pg***	218,923	***19 pg***
	S.D.	62,498.67		763.0	
	R.S.D., %	27.86		0.3	

JB 2/11/04

Analytical Batch
KA0323325

8.52E-07 Calibration Factor

11-Feb-04 *1631E Hg Analysis data sheet*

Quality Control Level (OPR/QCS) *77-123%*
Quality Control Level (MS/MSD) *71-125%* *+/-24%*

Sample Analyte	Run No.	Raw Area	Initial Vol.	Related Blank	Corrected Area	Sample ng/L	Percent recovery	RPD	pg extracted	
OPR 1	37	[redacted]	100	218,923	5,268,501	**4.49**	90			
Bubbler Blank 1	45	[redacted]	100		43,966				4	*(QC <50 pg)*
Bubbler Blank 2	46	[redacted]	100		0				0	*(QC <50 pg)*
Bubbler Blank 3		[redacted]	100		0				0	*(QC <50 pg)*
Method Blank 1	36	[redacted]	100	218,923	-2,012	**0.00**	(QC < 1.0)	*B.B. Ave=*	1	*(QC <25 pg)*
QCS	38	[redacted]	100	218,923	5,617,795	**4.79**	96	*B.B. S.D.=*	2	*(QC <10)*
K0776-01	39	[redacted]	100	224,302	852,181	**0.73**				
K0776-01MS	40	[redacted]	100	224,302	6,537,447	**5.57**	97	-0.38		
K0776-01DMS	41	[redacted]	100	224,302	6,512,900	**5.55**	96			
K0776-02	42	[redacted]	100	224,302	4,612,239	**3.93**				
K0776-03	43	[redacted]	100	224,302	1,617,166	**1.38**				
K0776-04	44	[redacted]	100	224,302	9,677,866	**8.24**				
K0648-06	47	[redacted]	50	221,612	6,059,733	**10.32**				
K0648-07	48	[redacted]	50	221,612	772,408	**1.32**				
K0648-08	49	[redacted]	50	221,612	9,549,199	**16.27**		*Spike Value= 5ng/L*		
K0648-09	50	[redacted]	50	221,612	1,116,516	**1.90**				
K0781-01	51	[redacted]	100	224,302	44,669,515	**38.05**				
K676-01	52	[redacted]	100	224,302	8,423,050	**7.17**				
K0905-01	53	[redacted]	100	224,302	564,474	**0.48**				
K0905-02	54	[redacted]	100	224,302	3,820,118	**3.25**				
K0905-02MS	55	[redacted]	100	224,302	9,187,072	**7.83**	91	0.80		
K0905-02DMS	56	[redacted]	100	224,302	9,261,182	**7.89**	93			
K0905-03	57	[redacted]	100	224,302	262,701	**0.22**				
K0896-03	58	[redacted]	20	219,998	38,712,668	**164.88**				
K0896-07	59	[redacted]	20	219,998	2,279,546	**9.71**				
K0896-09	60	[redacted]	100	224,302	487,441	**0.42**		*Spike Value= 5ng/L*		
K0896-10	61	[redacted]	100	224,302	606,285	**0.52**				
K0896-11	62	[redacted]	100	224,302	618,710	**0.53**				
OPR	63	[redacted]	100	218,923	5,579,075	**4.75**	95			

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315807

Service Request Number(s) :

Method : CLP(ILM04.0) 3010A
3020A 3050B **1631E**

Analysis for : ICP/Water ICP/Soil ICP/TCLP
GFAA/Water GFAA/Soil Other: _____ **CVAFS**

Sample		Total / Dissolved	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
OPR 1			wet	100	100	0.5% BrCl
Water Blank 1			wet	100	100	0.5% BrCl
Water Blank 2			wet	100	100	0.5% BrCl
Method Blank			wet	100	100	0.5% BrCl
QCS			wet	100	100	0.5% BrCl
K0776-01			wet	100	100	0.5% BrCl
K0776-01MS			wet	100	100	0.5% BrCl
K0776-01DMS			wet	100	100	0.5% BrCl
K0776-02			wet	100	100	0.5% BrCl
K0776-03			wet	100	100	0.5% BrCl
K0776-04			wet	100	100	0.5% BrCl
K0648-06			wet	50	100	0.5% BrCl
K0648-07			wet	50	100	0.5% BrCl
K0648-08			wet	50	100	0.5% BrCl
K0648-09			wet	50	100	0.5% BrCl
K0781-01			wet	100	100	0.5% BrCl
K0676-01			wet	100	100	0.5% BrCl
K0905-01			wet	100	100	0.5% BrCl
K0905-02			wet	100	100	0.5% BrCl
K0905-02MS			wet	100	100	0.5% BrCl
K0905-02DMS			wet	100	100	0.5% BrCl
K0905-03			wet	100	100	0.5% BrCl
K0896-03			wet	20	100	0.5% BrCl
K0896-07			wet	20	100	0.5% BrCl
K0896-09			wet	100	100	0.5% BrCl
K0896-10			wet	100	100	0.5% BrCl
K0896-11			wet	100	100	0.5% BrCl
			wet		100	0.5% BrCl
			wet		100	0.5% BrCl
OPR-2			wet	100	100	0.5% BrCl

AF1 - 10 -K **BrCl**

AF1 - 11 - ~~B~~ G *(10 ng/mL)* ------ **QCS:** 50uL

SB 2/11/04
AF1 - 11 - ~~A~~ H *(10 ng/mL)* ------ **OPR:** 50uL

1st MS / DMS: 0.05ml
2nd MS / DMS: 0.05ml

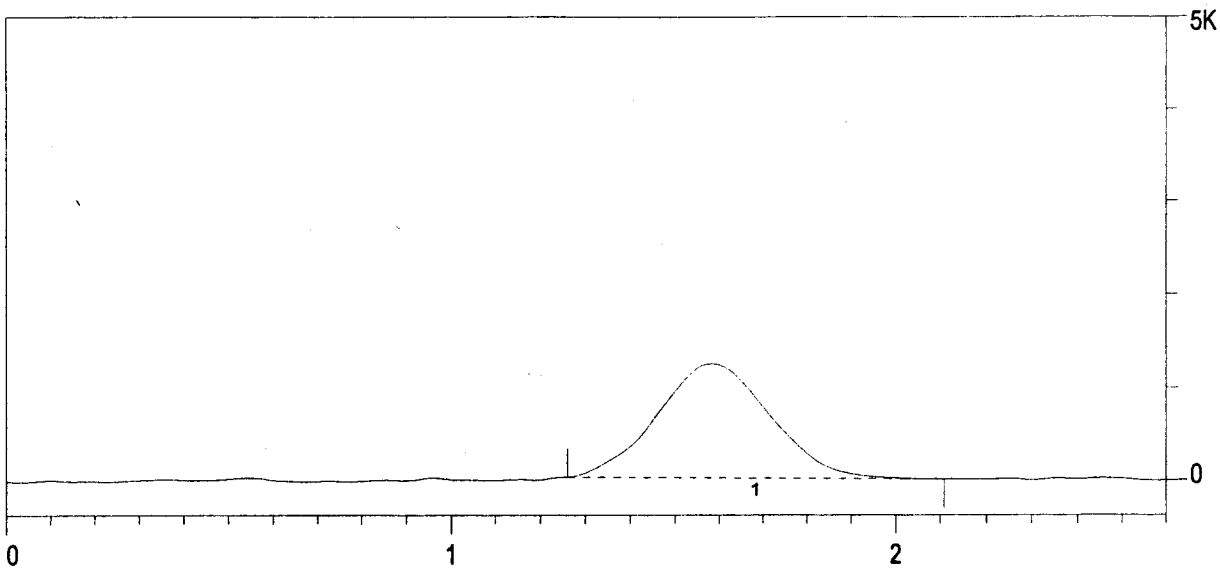
Comments: _____

Time Digestion Started: _____

Analyst [signature] **Date** 2/10/04

1631Dig.XLS
1/13/2004

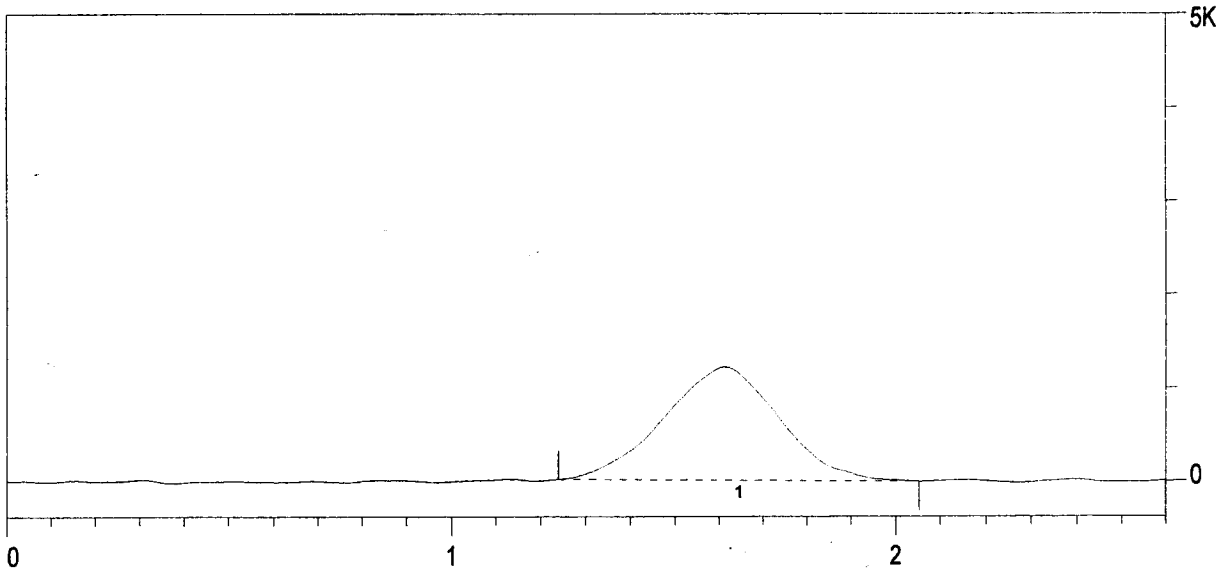
JB 2/11/04



Feb 11 2004
07:18 PM

	rt	AREA
1	1.58	218 383

Run	034
Analyst	JosH
Tracking	WB-3
Notes: Trap H	



Feb 11 2004
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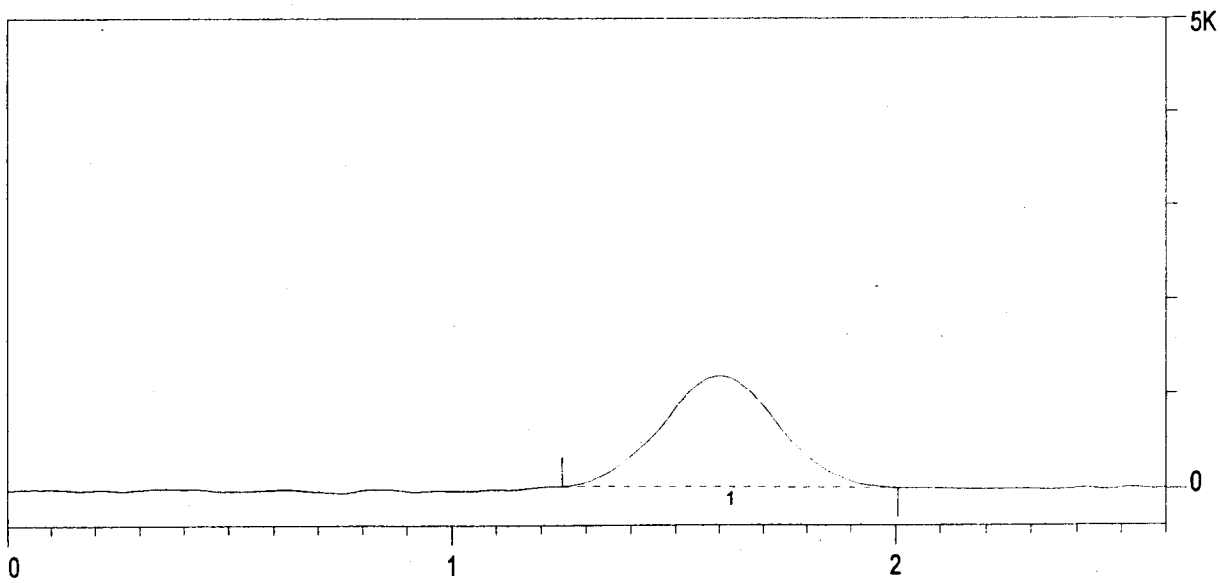
	rt	AREA
1	1.61	219 462

Run	035
Analyst	JosH
Tracking	WB-4
Notes: Trap I	



Feb 11 2004
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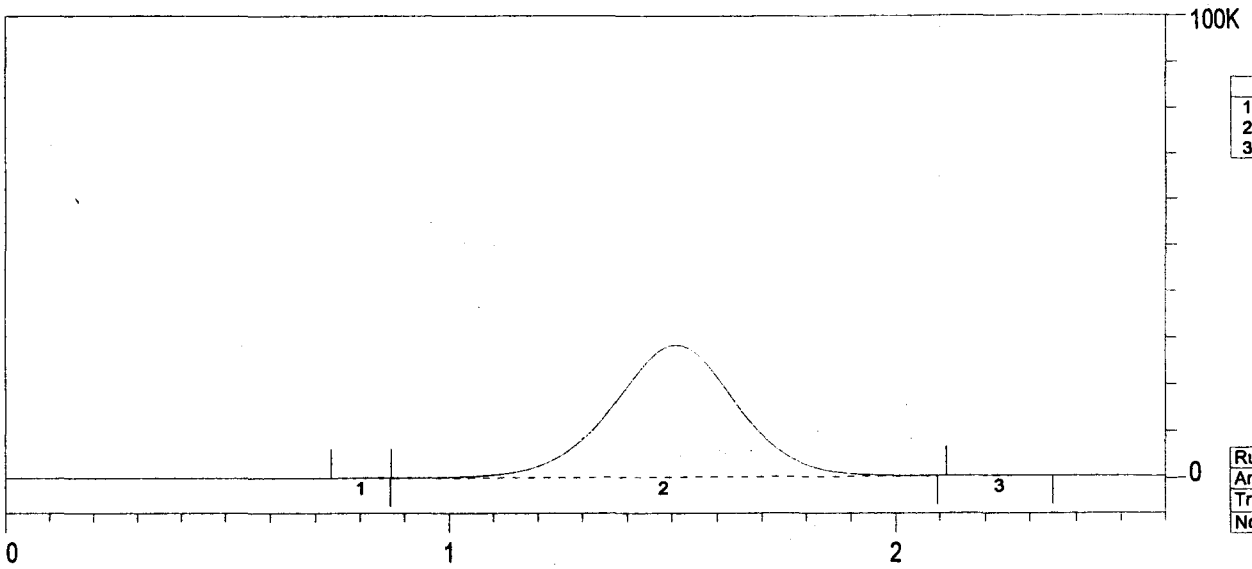
	rt	AREA
1	1.60	216 911

Run	036
Analyst	JosH
Tracking	MB-2
Notes: Trap J	

JD 2/11/04



Feb 11 2004
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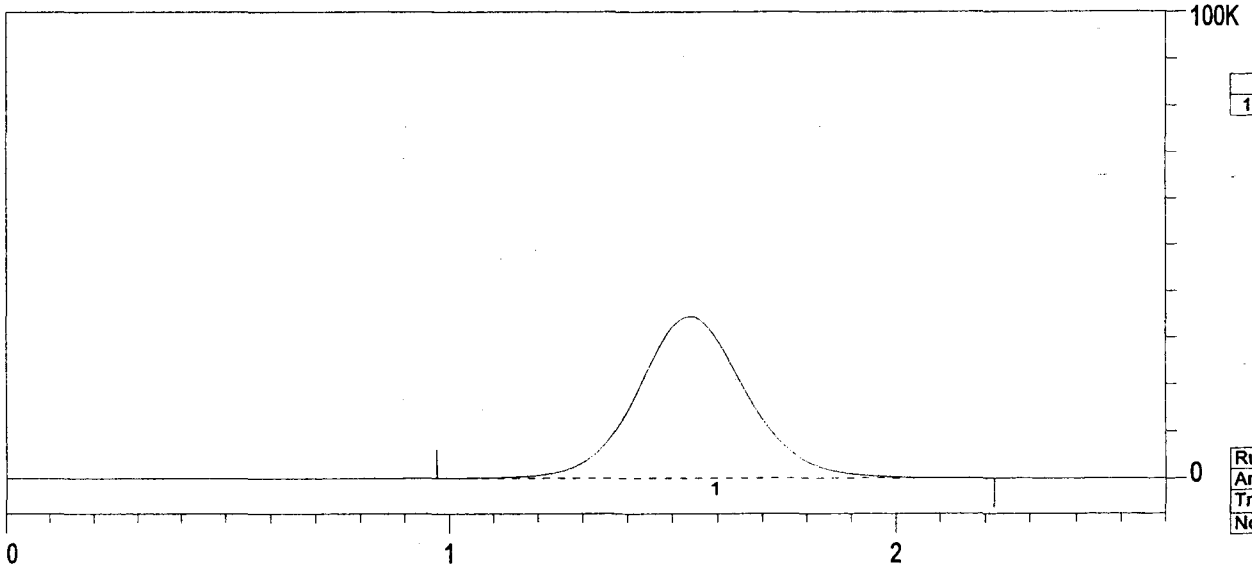
	rt	AREA
1	0.83	1 576
2	1.50	5 480 662
3	2.24	5 185

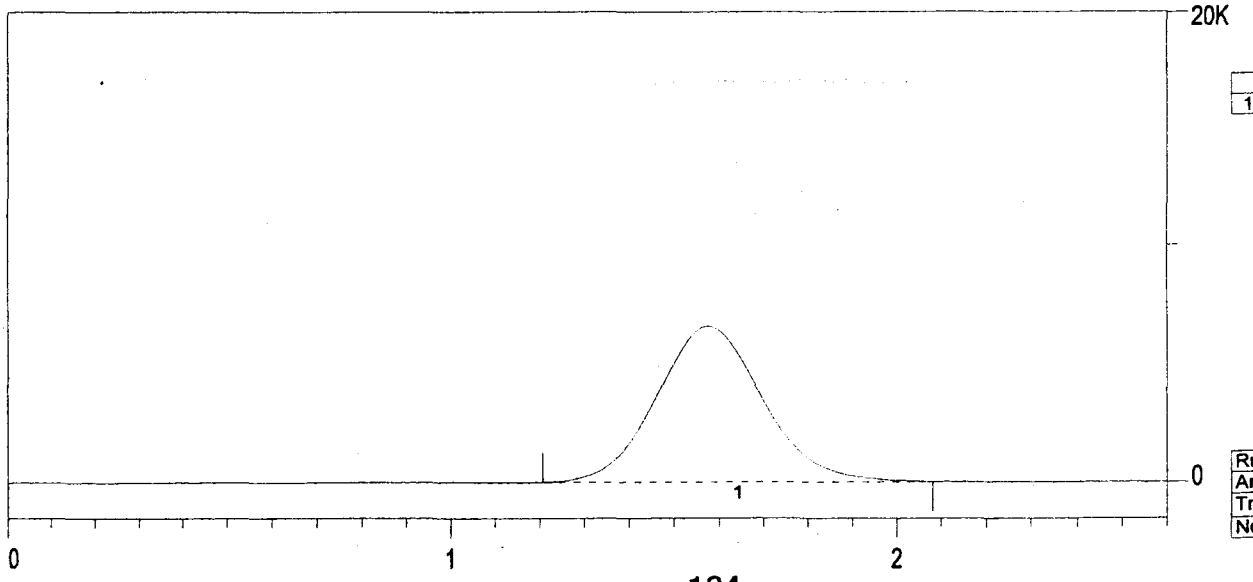
Run	037
Analyst	JosH
Tracking	OPR-3
Notes: Trap K	



Feb 11 2004
08:12 PM

	rt	AREA
1	1.53	5 836 717

Run	038
Analyst	JosH
Tracking	QCS-2
Notes: Trap L	



Feb 11 2004
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	rt	AREA
1	1.57	1 076 483

Run	039
Analyst	JosH
Tracking	K0776-01
Notes: Trap M	

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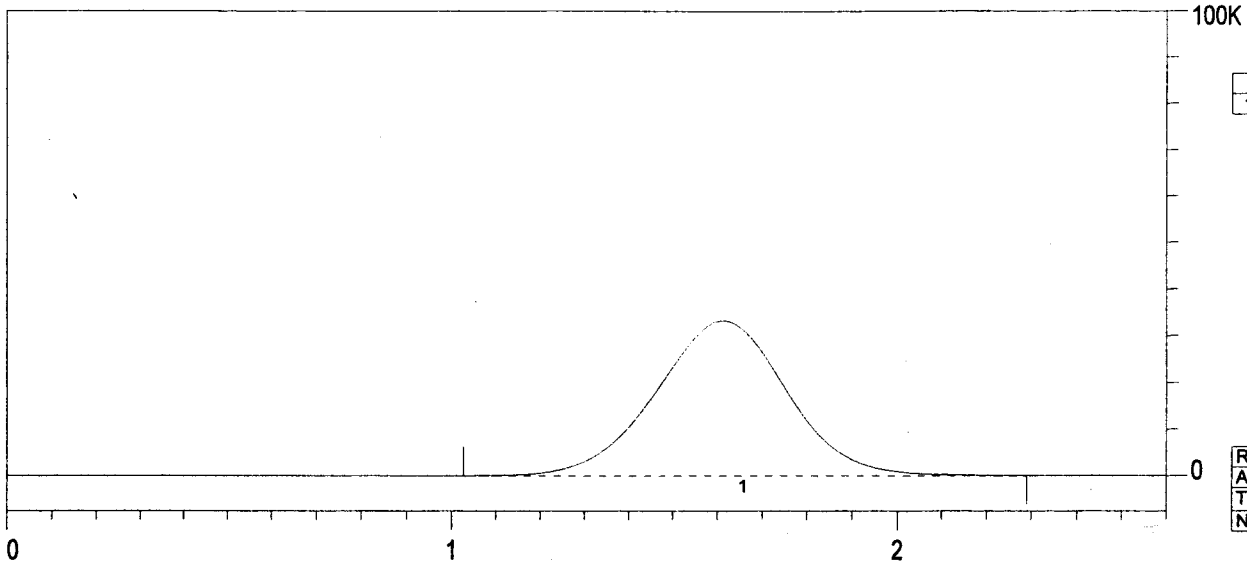
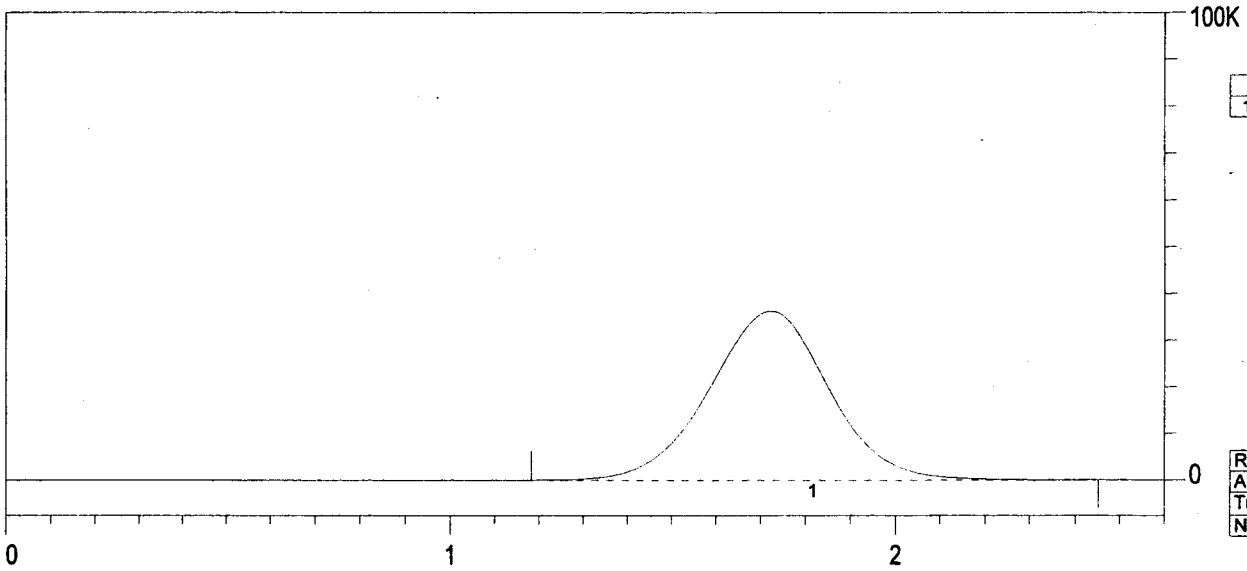
JB 2/11/04



Feb 11 2004
08:24 PM

	rt	AREA
1	1.61	6 761 749

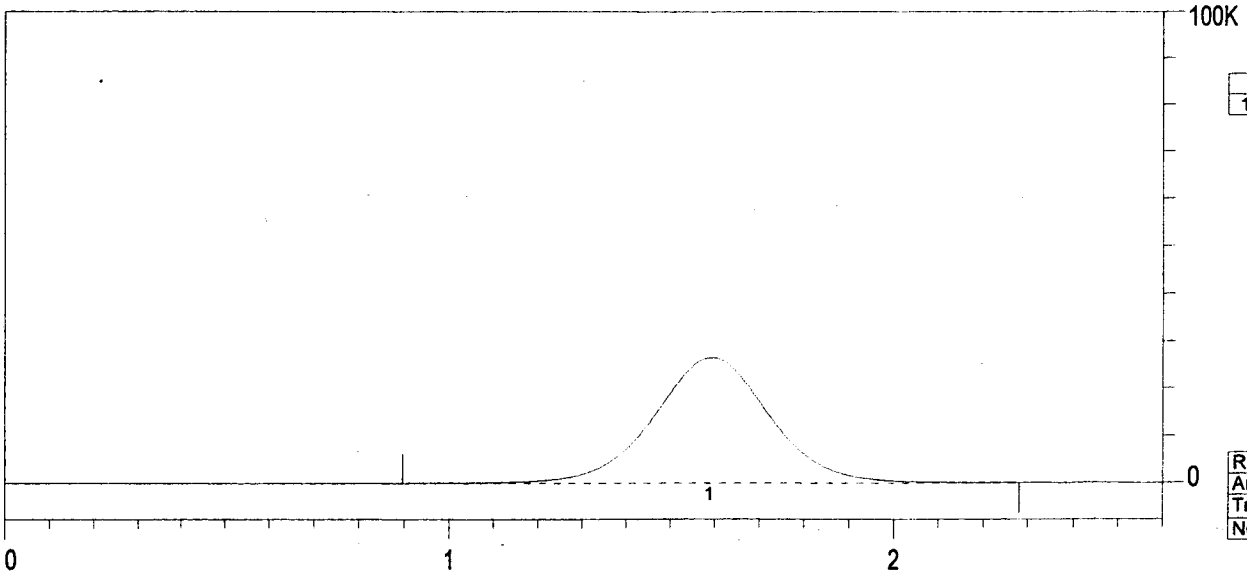
Run	040
Analyst	JosH
Tracking	K0776-01MS
Notes: Trap N	



Feb 11 2004
08:28 PM

	rt	AREA
1	1.72	6 737 202

Run	041
Analyst	JosH
Tracking	K0776-01DMS
Notes: Trap O	

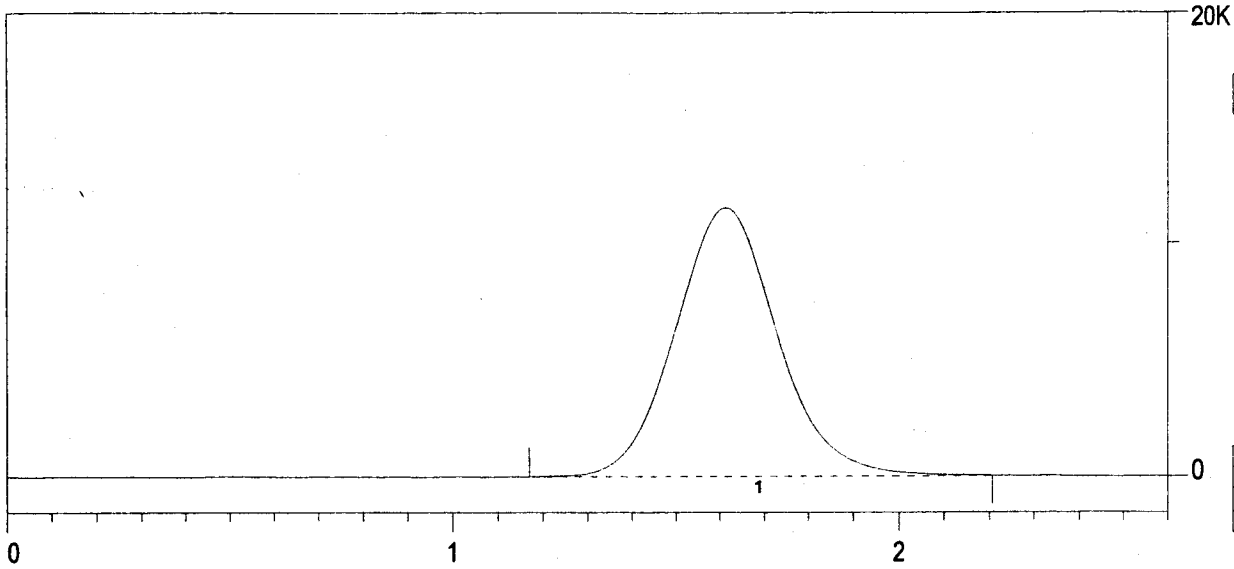


Feb 11 2004
08:32 PM

	rt	AREA
1	1.59	4 836 541

Run	042
Analyst	JosH
Tracking	K0776-02
Notes: Trap P	

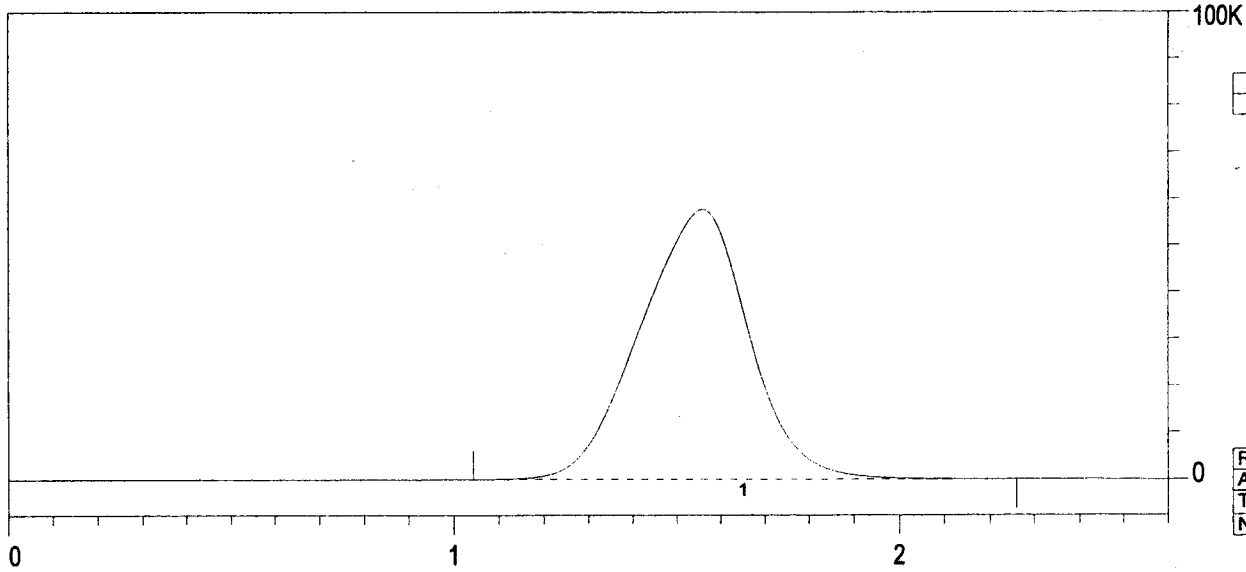
JB 2/11/04



Feb 11 2004
08:36 PM

	rt	AREA
1	1.61	1 841 468

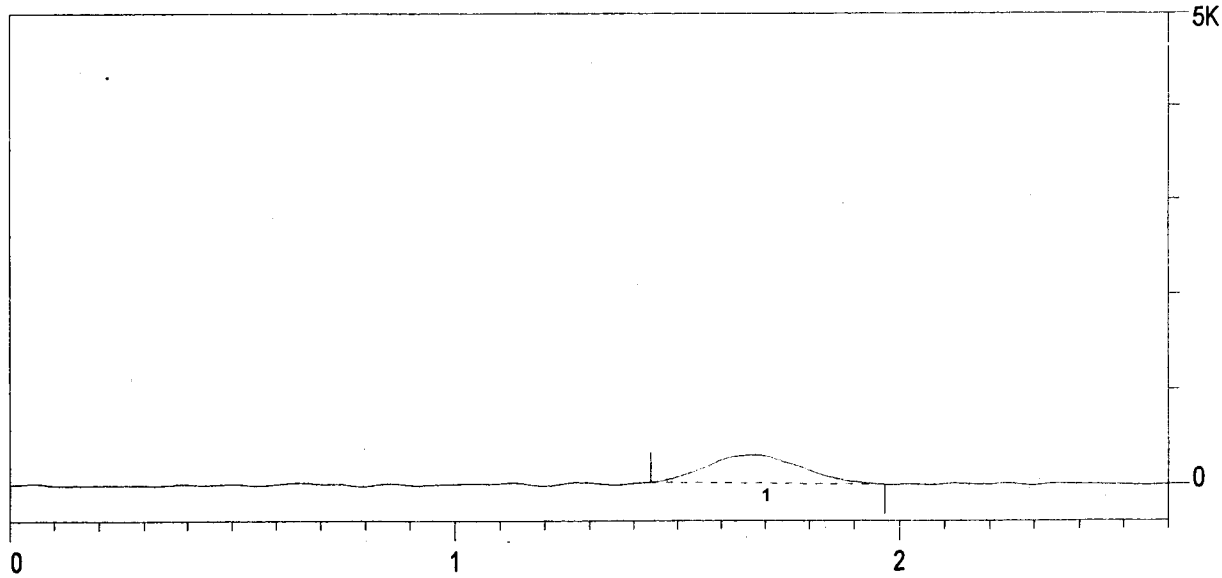
Run	043
Analyst	JosH
Tracking	K0776-03
Notes: Trap 51	



Feb 11 2004
08:40 PM

	rt	AREA
1	1.55	9 902 168

Run	044
Analyst	JosH
Tracking	K0776-04
Notes: Trap 57	

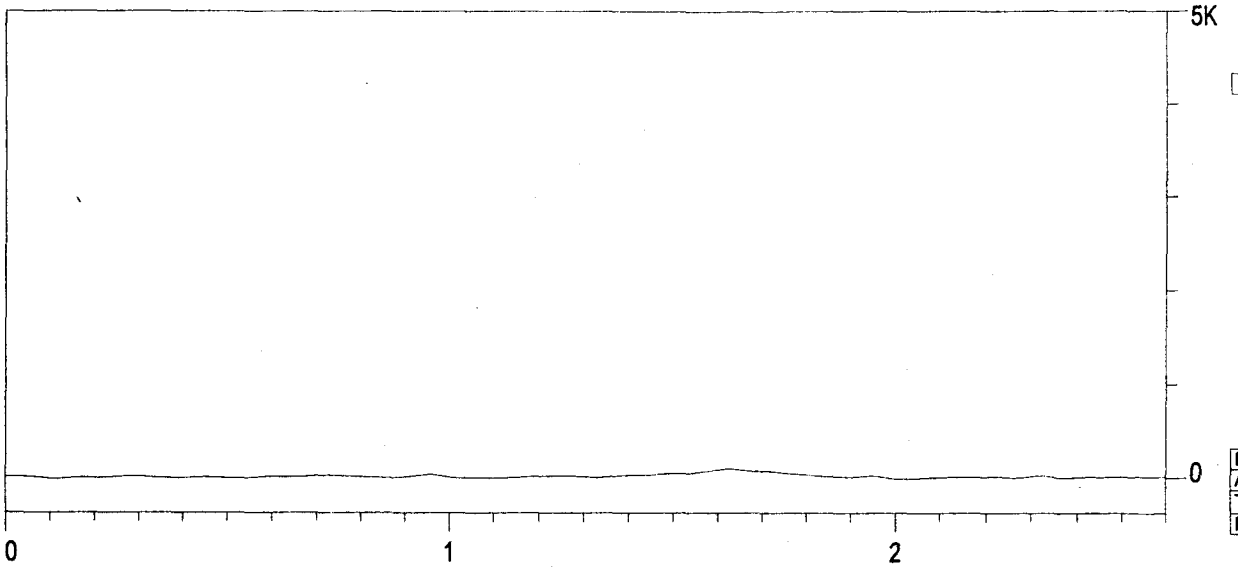


Feb 11 2004
08:43 PM

	rt	AREA
1	1.67	43 966

Run	045
Analyst	JosH
Tracking	BB (OPR)
Notes: Trap 62	

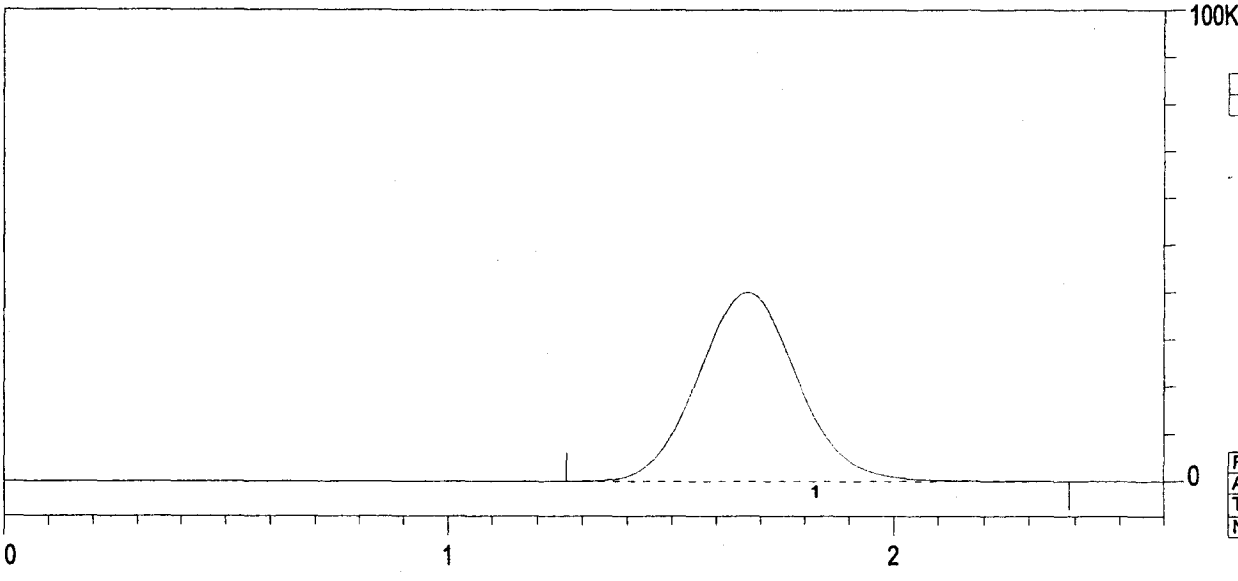
JB 2/11/04



Feb 11 2004
08:46 PM

	rt	AREA

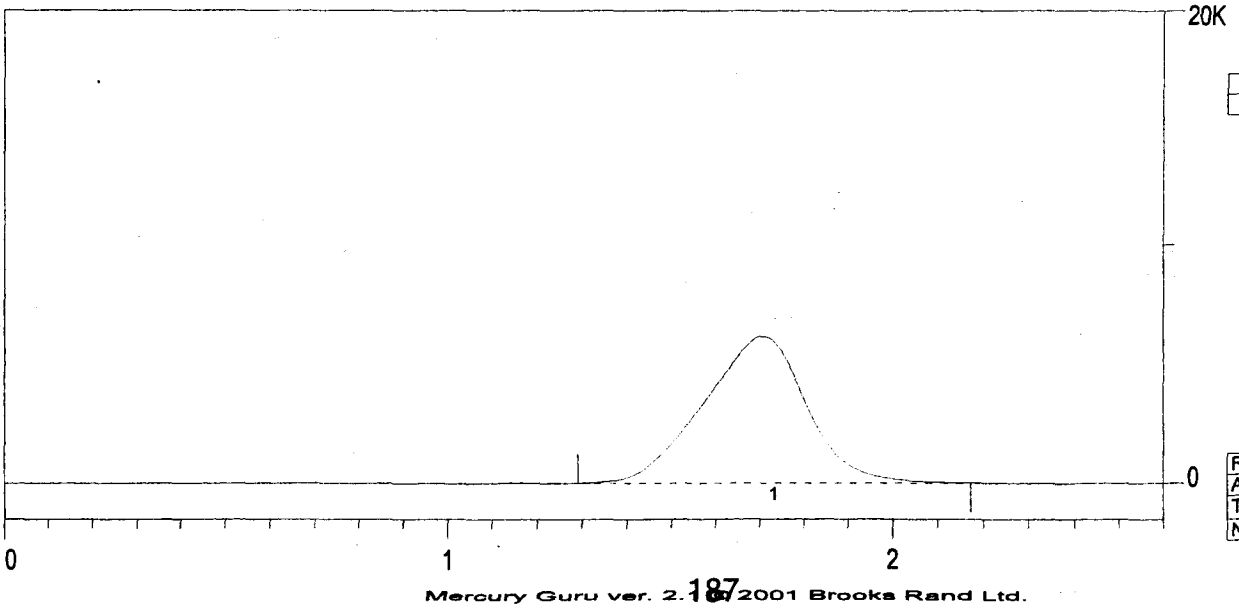
Run	046
Analyst	JosH
Tracking	BB (QCS)
Notes: Trap 65	



Feb 11 2004
08:50 PM

	rt	AREA
1	1.67	6 281 345

Run	047
Analyst	JosH
Tracking	K0648-06
Notes: Trap 66	



Feb 11 2004
08:53 PM

	rt	AREA
1	1.70	994 020

Run	048
Analyst	JosH
Tracking	K0648-07
Notes: Trap 68	

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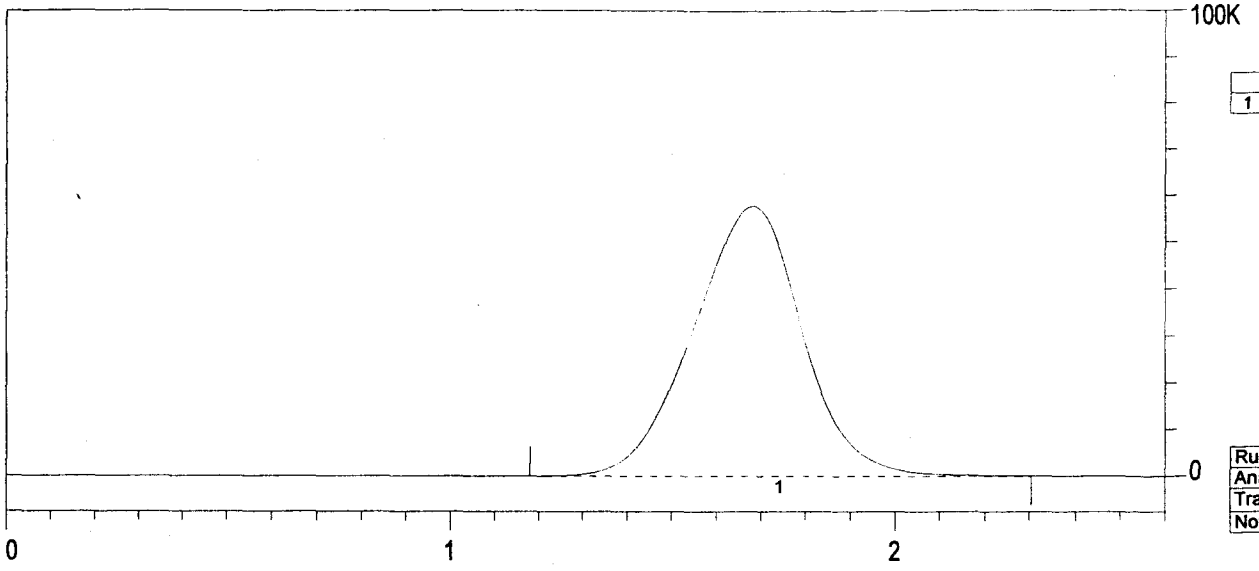
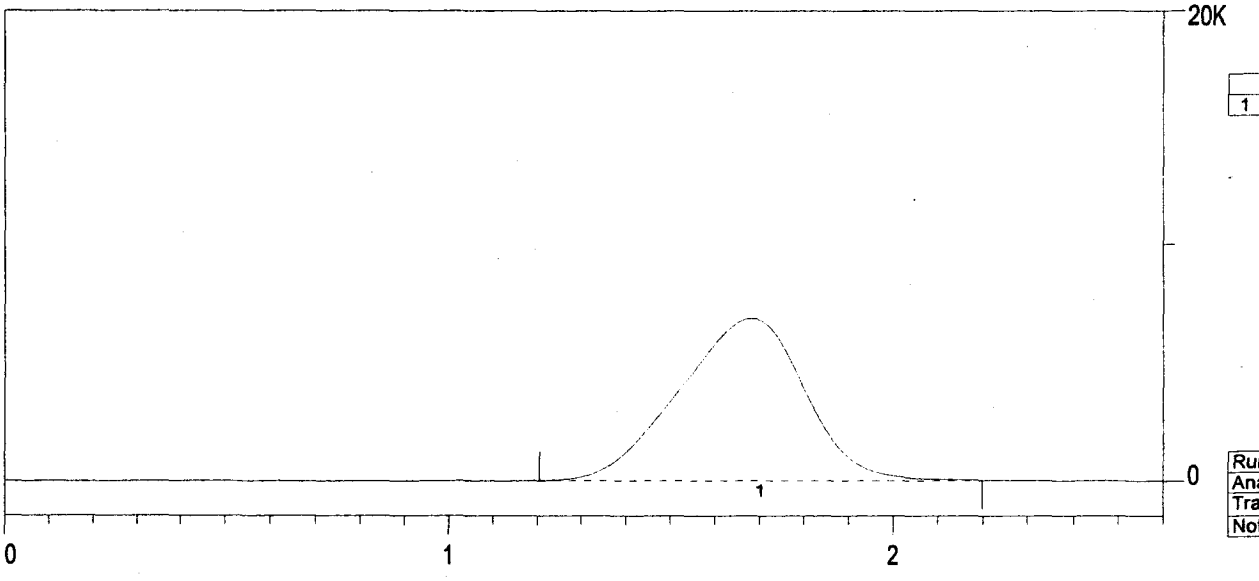
JB 2/11/04



Feb 11 2004
08:57 PM

	rt	AREA
1	1.68	9 770 811

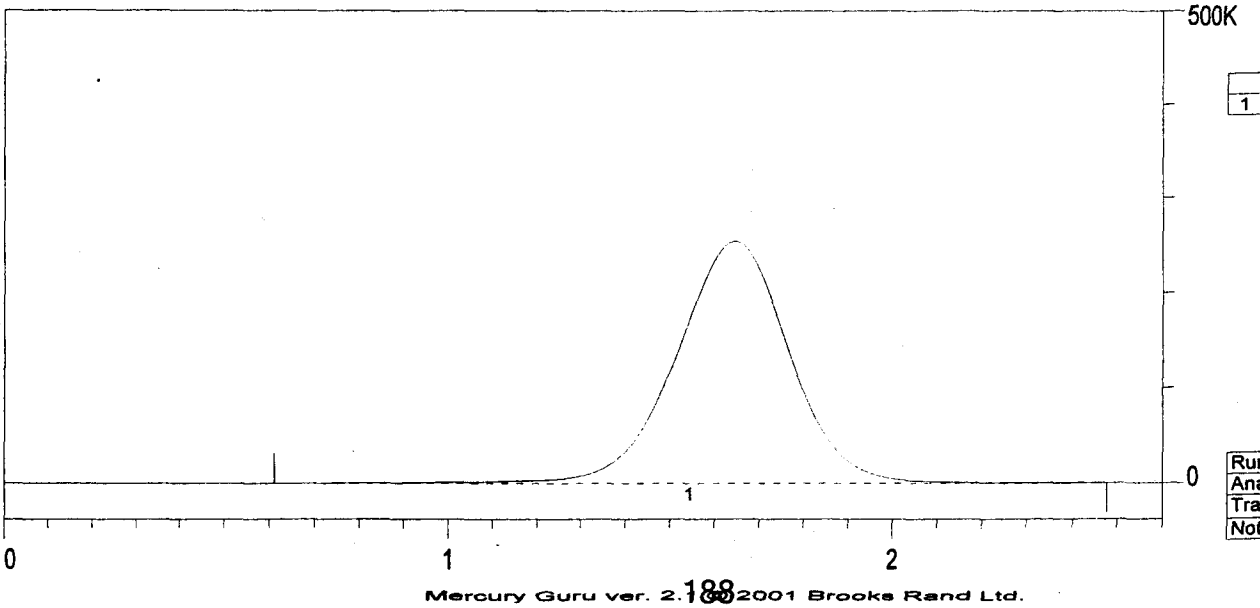
Run	049
Analyst	JosH
Tracking	K0648-08
Notes: Trap 70	



Feb 11 2004
09:00 PM

	rt	AREA
1	1.68	1 338 128

Run	050
Analyst	JosH
Tracking	K0648-09
Notes: Trap C	



Feb 11 2004
09:03 PM

	rt	AREA
1	1.64	44 893 817

Run	051
Analyst	JosH
Tracking	K0781-01
Notes: Trap E	

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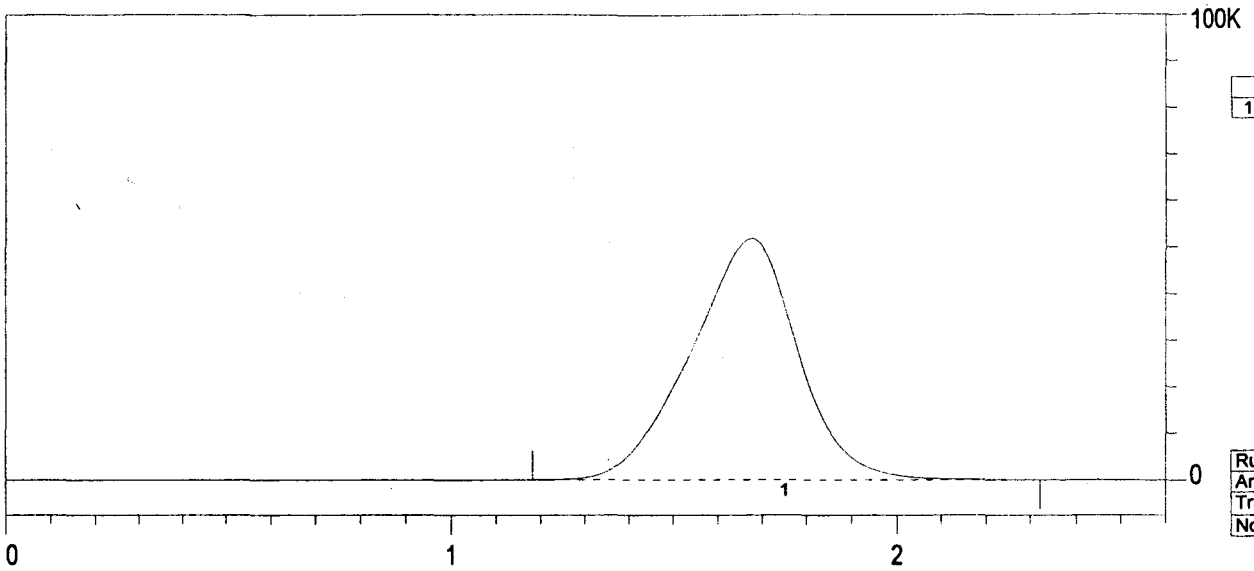
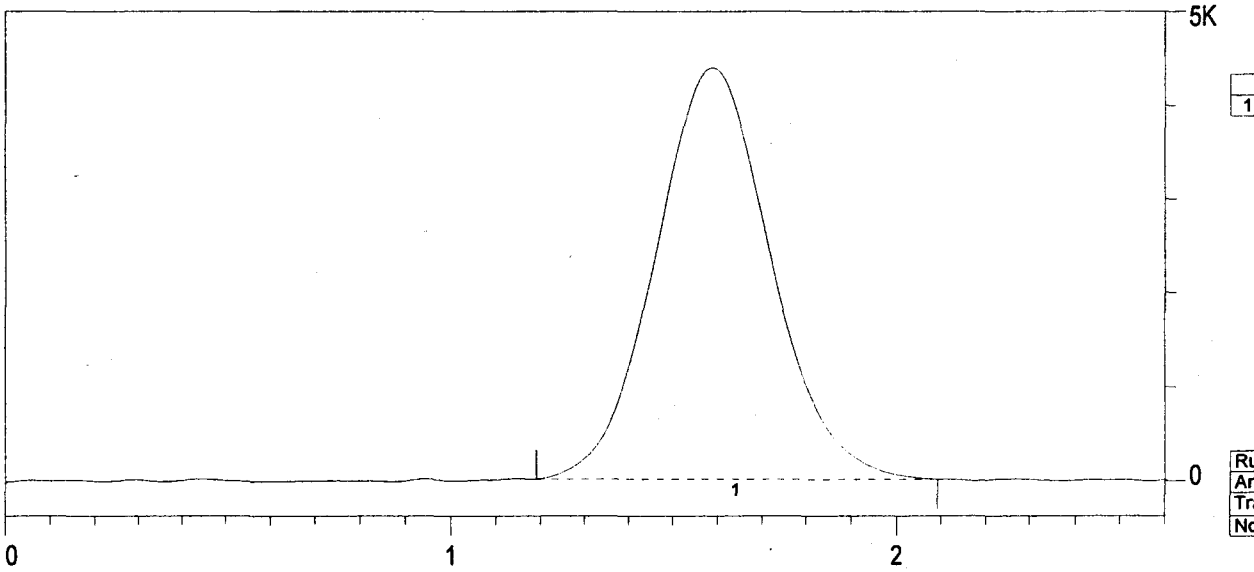
JB 2/11/04



Feb 11 2004
09:06 PM

	rt	AREA
1	1.67	8 647 352

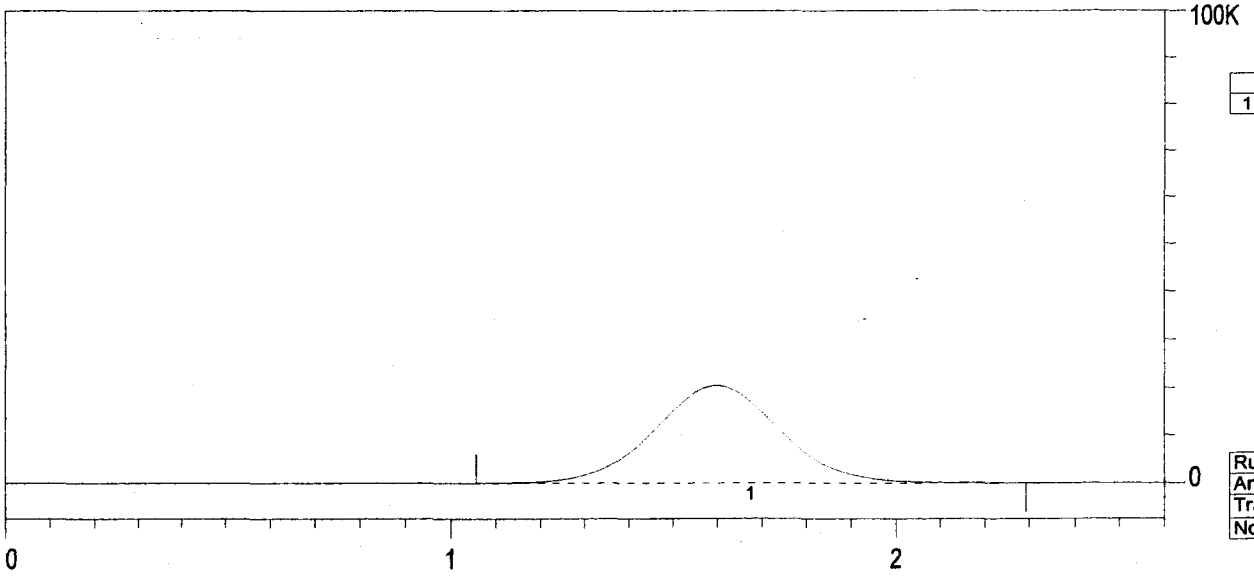
Run	052
Analyst	JosH
Tracking	K0676-01
Notes: Trap F	



Feb 11 2004
09:10 PM

	rt	AREA
1	1.59	788 776

Run	053
Analyst	JosH
Tracking	K0905-01
Notes: Trap G	

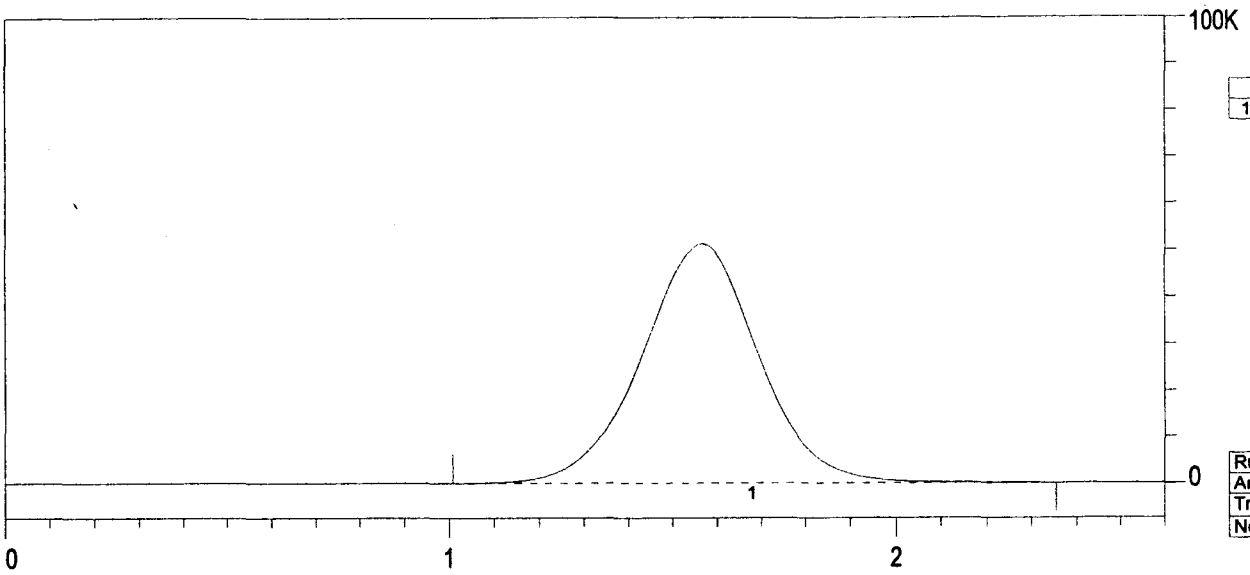


Feb 11 2004
09:13 PM

	rt .	AREA
1	1.59	4 044 420

Run	054
Analyst	JosH
Tracking	K0905-02
Notes: Trap H	

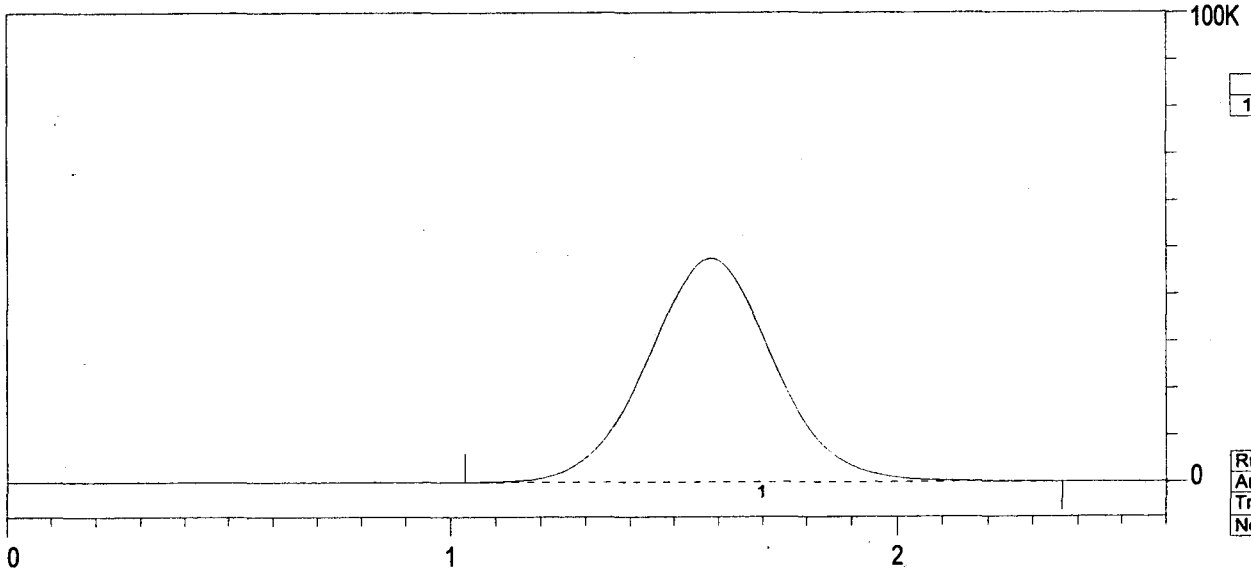
JB 2/11/04



Feb 11 2004
09:16 PM

	rt	AREA
1	1.56	9 411 374

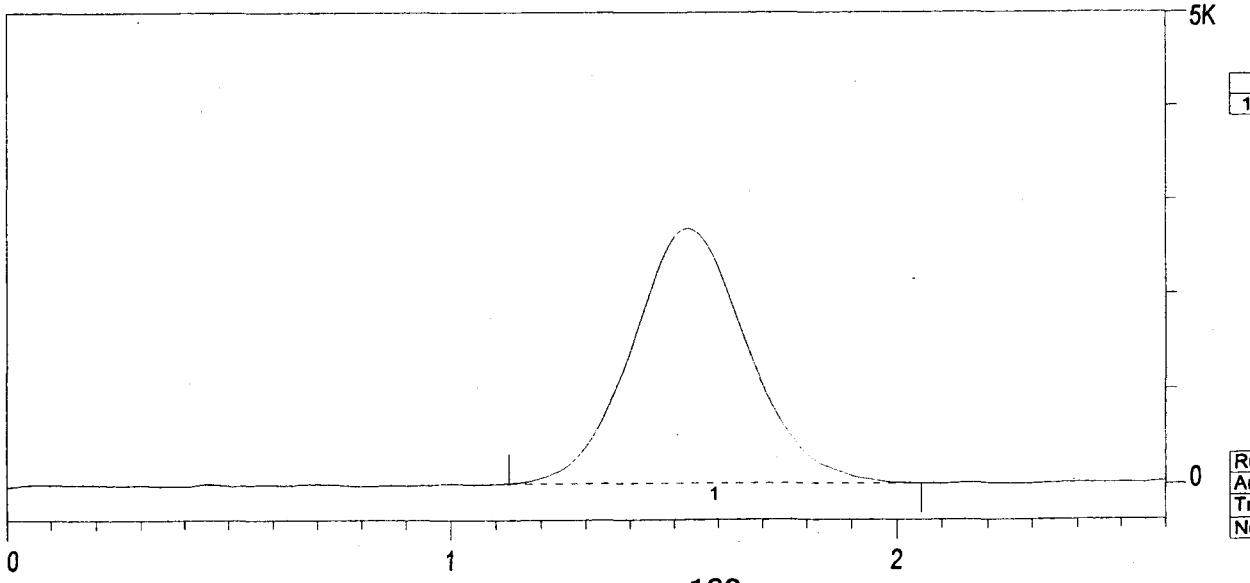
Run	055
Analyst	JosH
Tracking	K0905-02MS
Notes: Trap I	



Feb 11 2004
09:21 PM

	rt	AREA
1	1.58	9 485 484

Run	056
Analyst	JosH
Tracking	K0905-02DMS
Notes: Trap J	



Feb 11 2004
09:24 PM

	rt.	AREA
1	1.53	487 003

Run	057
Analyst	JosH
Tracking	K0905-03
Notes: Trap K	

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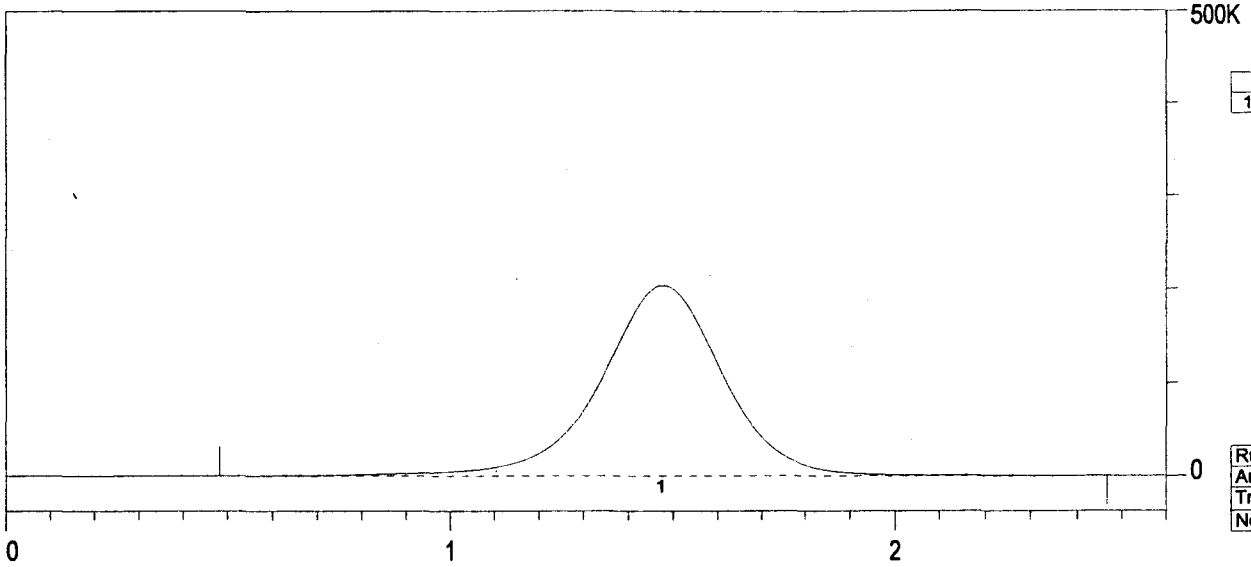
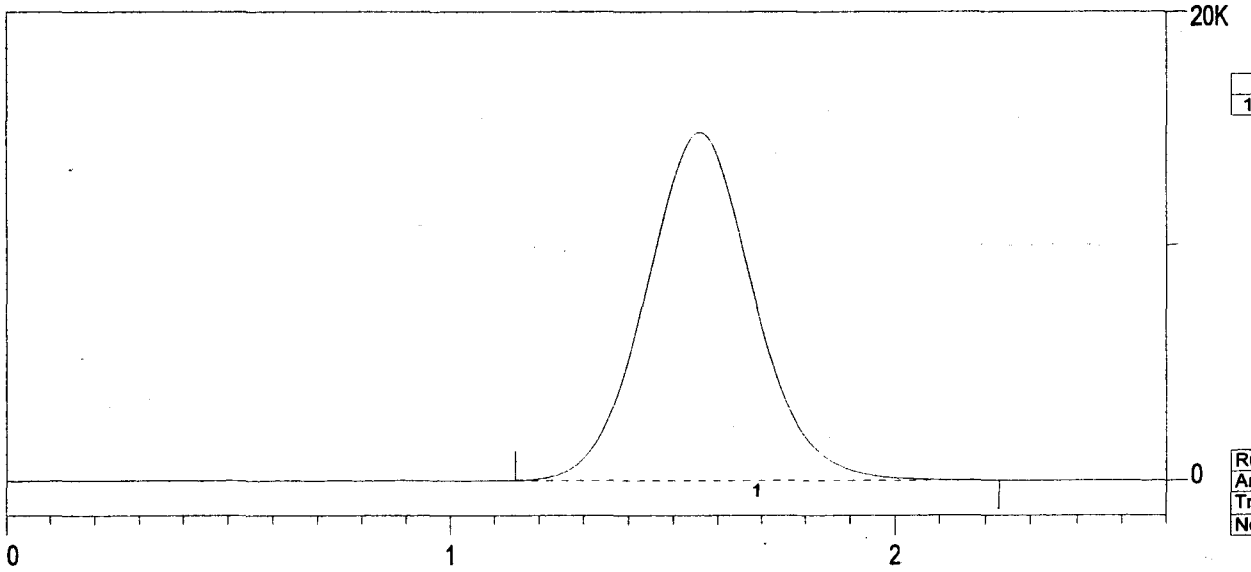
JB 2/11/04



Feb 11 2004
09:28 PM

	rt	AREA
1	1.47	38 932 666

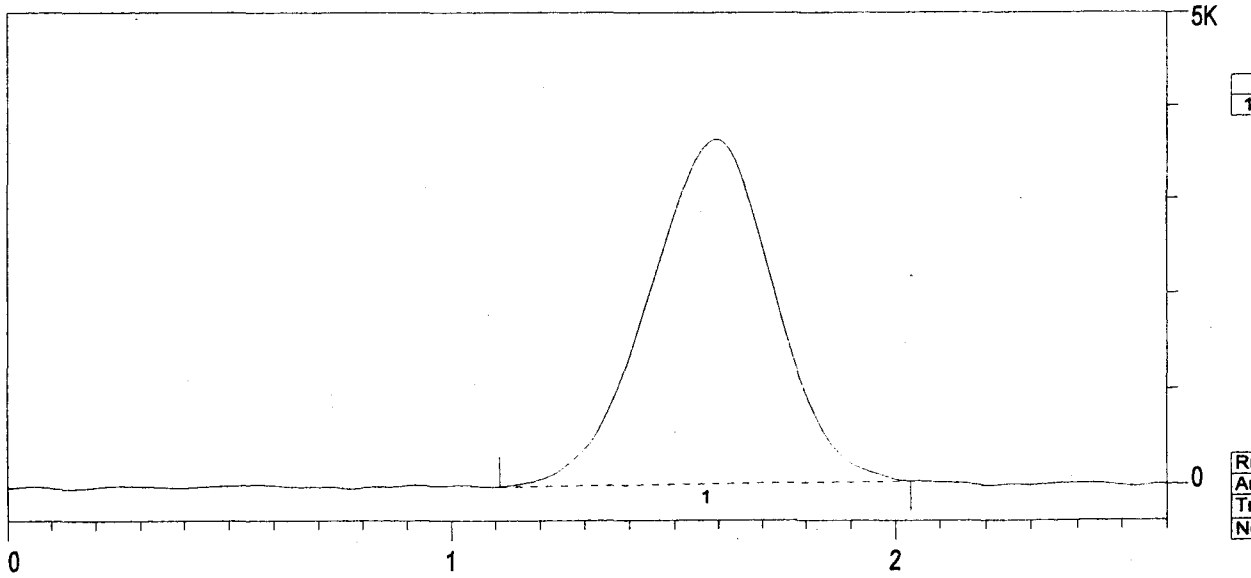
Run	058
Analyst	JosH
Tracking	K0896-03
Notes: Trap L	



Feb 11 2004
09:31 PM

	rt	AREA
1	1.56	2 499 544

Run	059
Analyst	JosH
Tracking	K0896-07
Notes: Trap M	



Feb 11 2004
09:34 PM

	rt	AREA
1	1.59	711 743

Run	060
Analyst	JosH
Tracking	K0896-09
Notes: Trap N	

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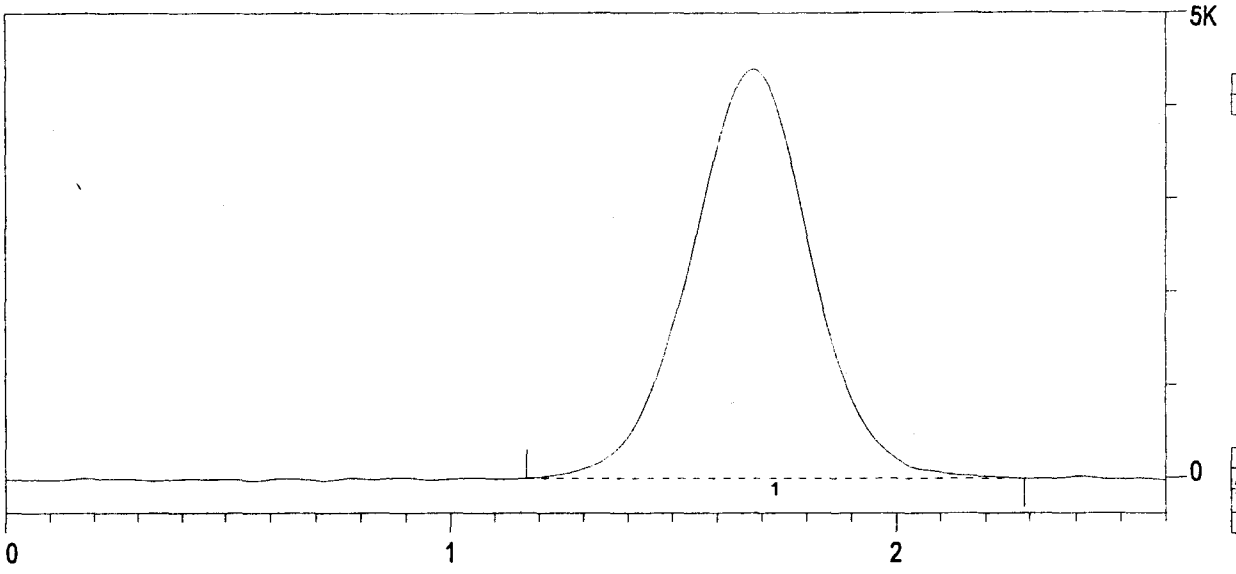
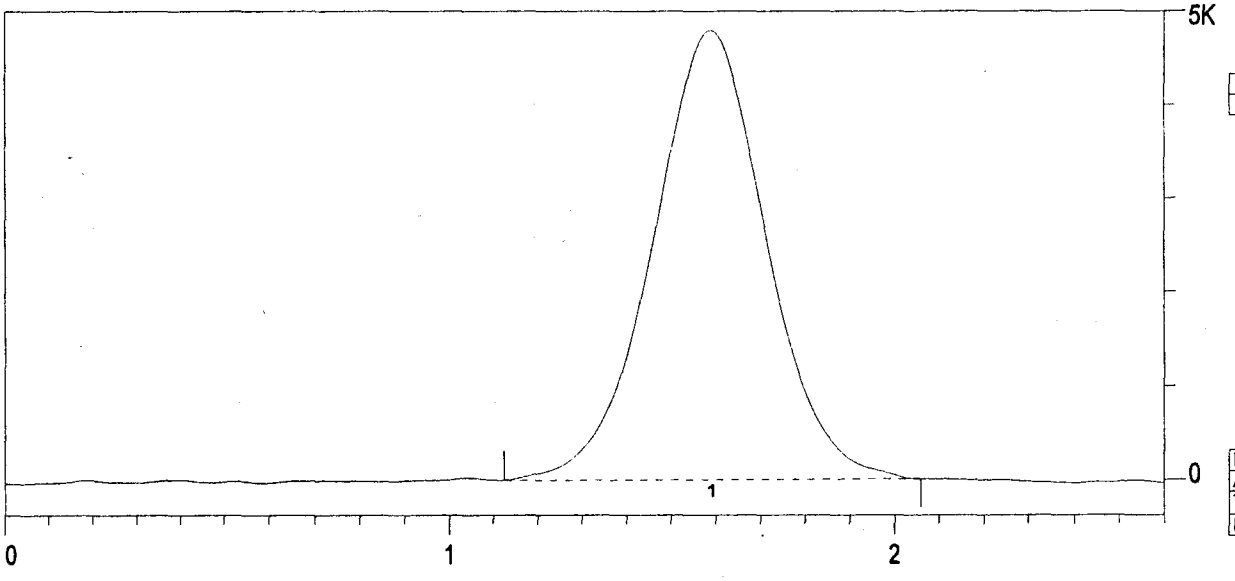
JB 2/11/04



Feb 11 2004
09:38 PM

	rt	AREA
1	1.68	830 587

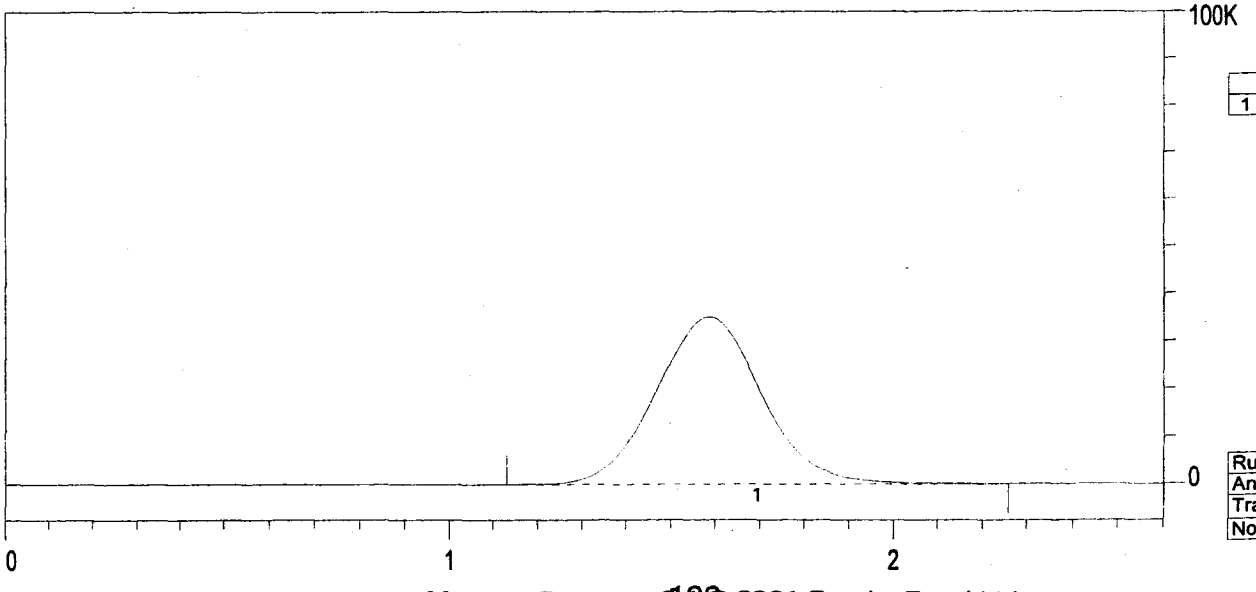
Run	061
Analyst	JosH
Tracking	K0896-10
Notes: Trap O	



Feb 11 2004
09:41 PM

	rt	AREA
1	1.58	843 012

Run	062
Analyst	JosH
Tracking	K0896-11
Notes: Trap P	

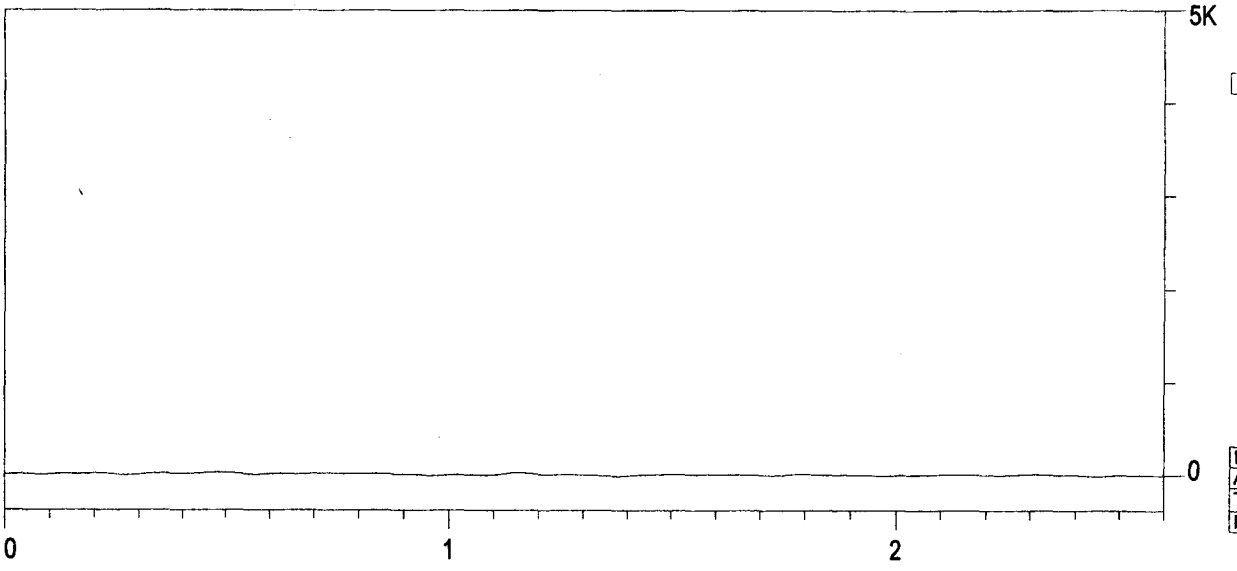


Feb 11 2004
09:45 PM

	rt'	AREA
1	1.58	5 797 997

Run	063
Analyst	JosH
Tracking	OPR-4
Notes: Trap 51	

JB 2/11/04



Feb 11 2004
09:48 PM

	rt	AREA

Run	064
Analyst	JosH
Tracking	BB (OPR)
Notes: Trap 57	

Calibration Curve *Analyst:* *JDB*

ng/L	Date	Raw Area	Blank	Corrected Area	Calibration Factor	Recovery (ng/L)	Percent Recovery	
0.1			271	117,864	8.484E-07	0.1	100.4	
0.2			271	249,648	8.011E-07	0.21	106.3	*(QC: 75-125%)*
0.5			271	584,342	8.557E-07	0.50	99.5	
2			271	2,400,531	8.331E-07	2.04	102.2	
5			271	6,025,157	8.299E-07	5.13	102.6	
20			271	22,926,026	8.724E-07	19.53	97.6	
50			271	57,327,474	8.722E-07	48.83	97.7	
200			271	221,799,425	9.017E-07	188.93	94.5	

8.5181E-07 ***Average calibration Factor***

slope	1108336.685	3.35E-08	Std Dev	
Corr Coef	0.99997	3.9348	**RSD**	*(QC: ≤ 15%)*
intercept	503929.3504			

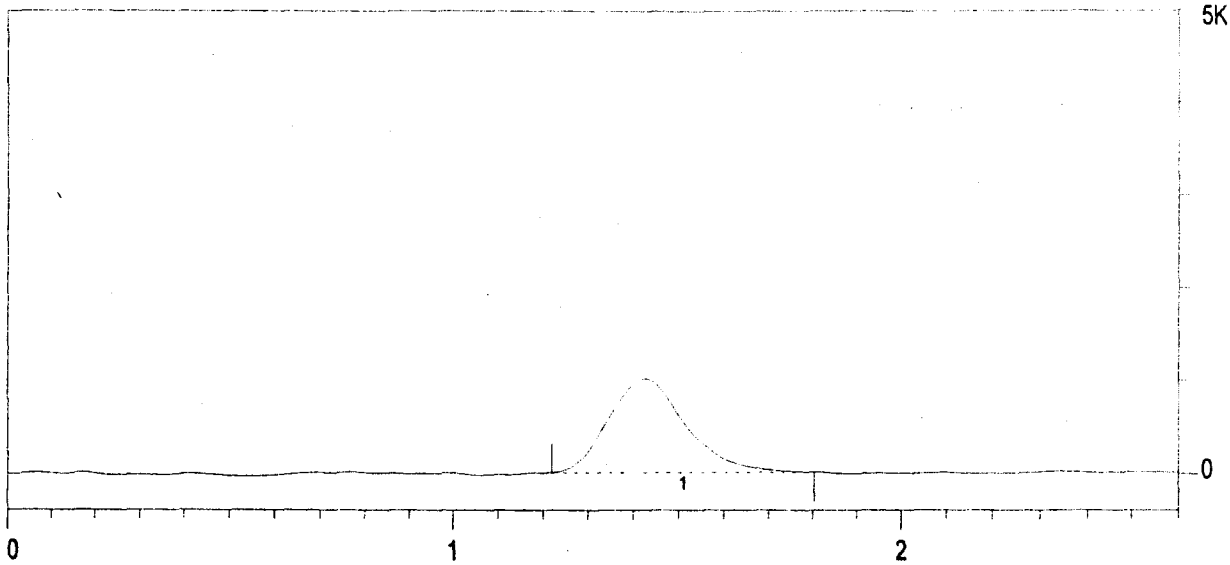
Bubbler Blanks:

			0.00
			0.00
Average		**271**	0.00
S. D.		383.251875	0.00
R.S.D.		141.421356	1.41

JB 11/13/03

ck: JC 11/14/03

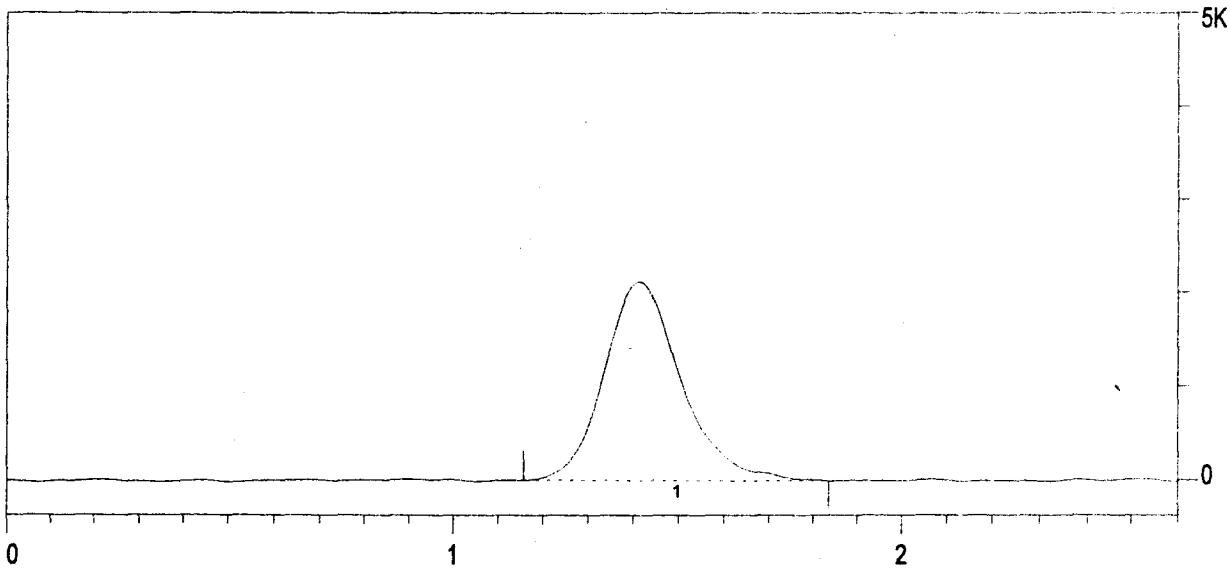
JB 11/13/03



Nov 13 2003
06:51 PM

	rt	AREA
1	1.42	118 135

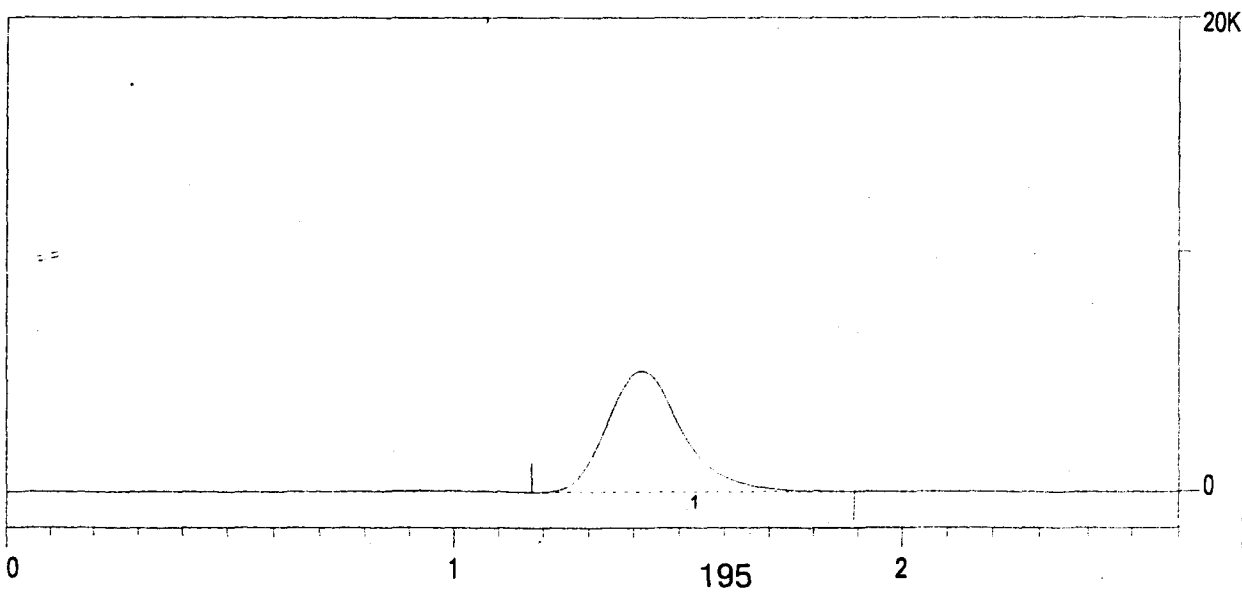
Run	001
Analyst	Josh
Tracking	0.1ng/L
Notes: Trap 51	



Nov 13 2003
07:00 PM

	rt	AREA
1	1.41	249 919

Run	002
Analyst	Josh
Tracking	0.2ng/L
Notes: Trap 57	



Nov 13 2003
07:04 PM

	rt	AREA
1	1.41	584 613

Run	003
Analyst	Josh
Tracking	0.5ng/L
Notes: Trap 62	

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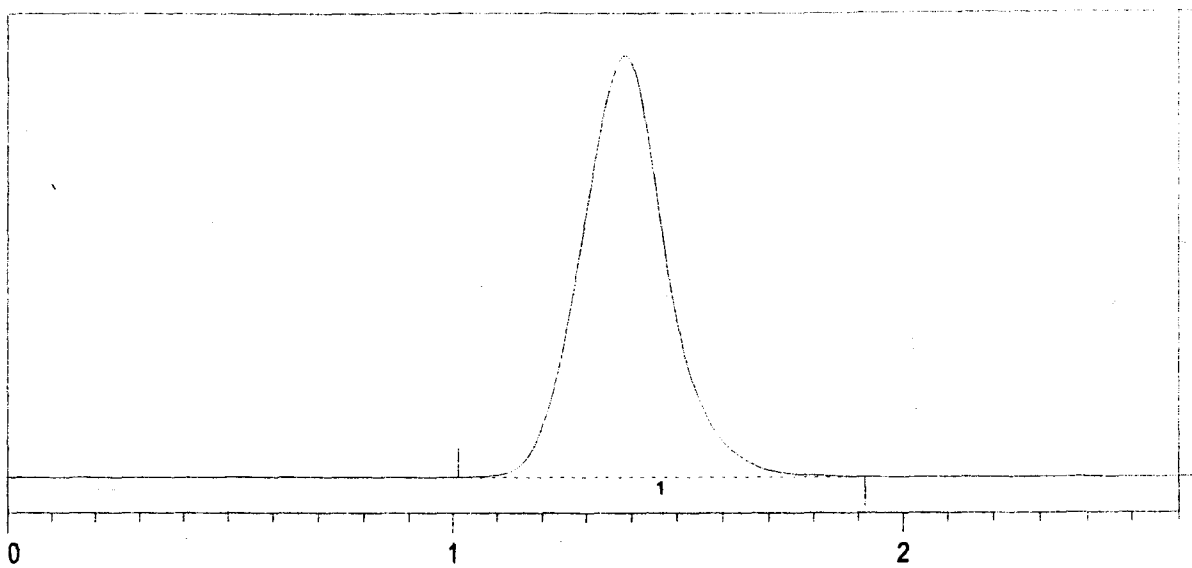
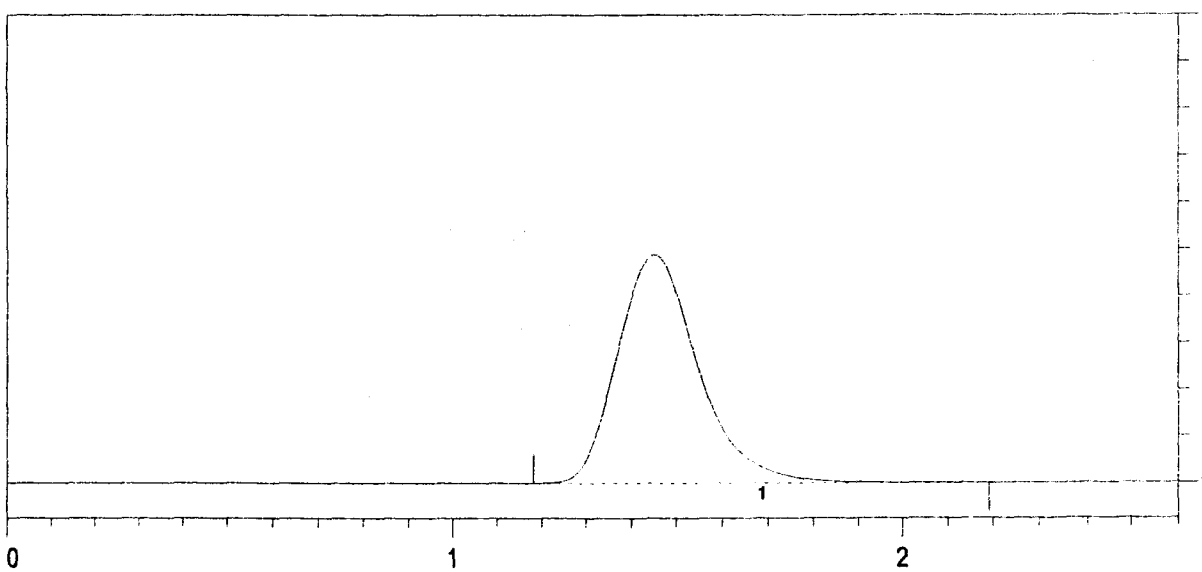
JB 11/13/03



Nov 13 200
07:07 PM

	rt	AREA
1	1.38	2 400 80

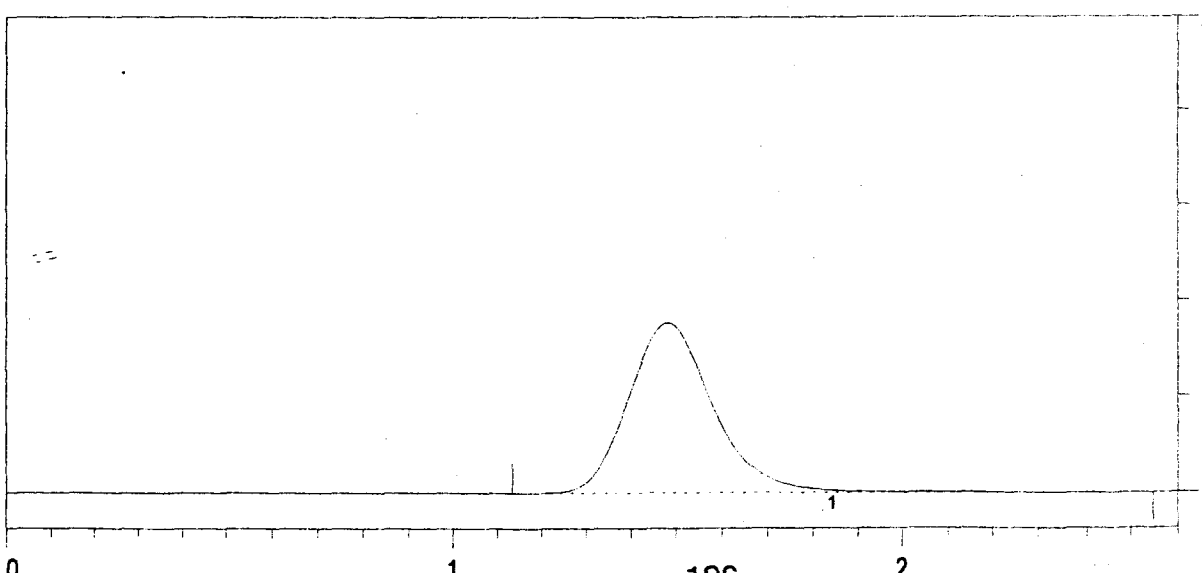
Run	00
Analyst	Jost
Tracking	2.0ng/L
Notes: Trap 65	



Nov 13 2003
07:11 PM

	rt	AREA
1	1.45	6 025 428

Run	005
Analyst	Josh
Tracking	5.0ng/L
Notes: Trap 66	

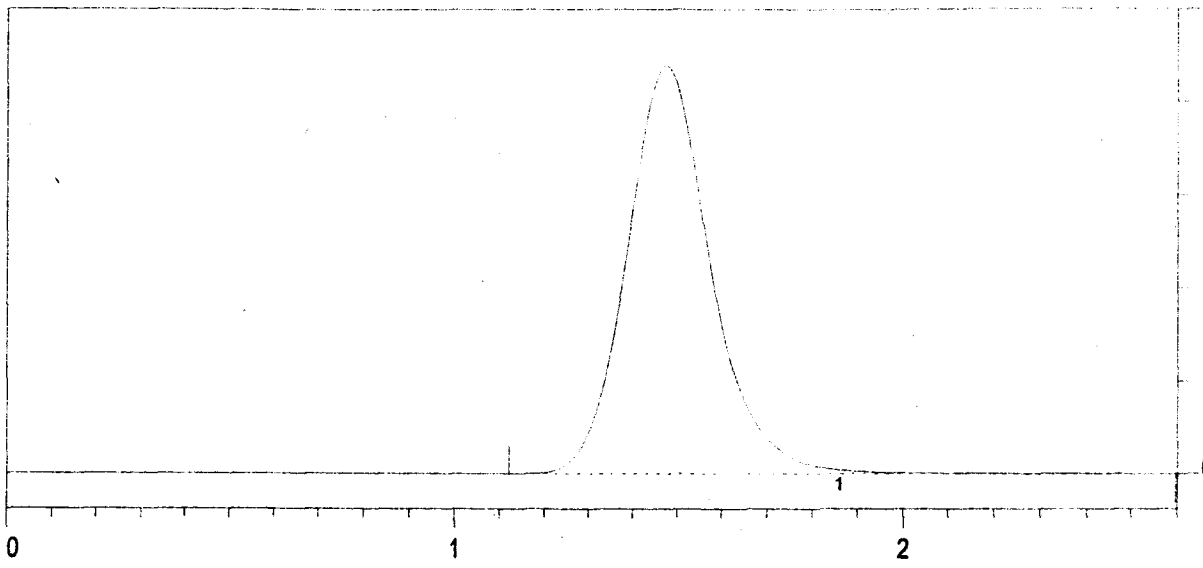


Nov 13 2003
07:14 PM

	rt	AREA
1	1.48	22 926 297

Run	006
Analyst	Josh
Tracking	20.0ng/L
Notes: Trap 68	

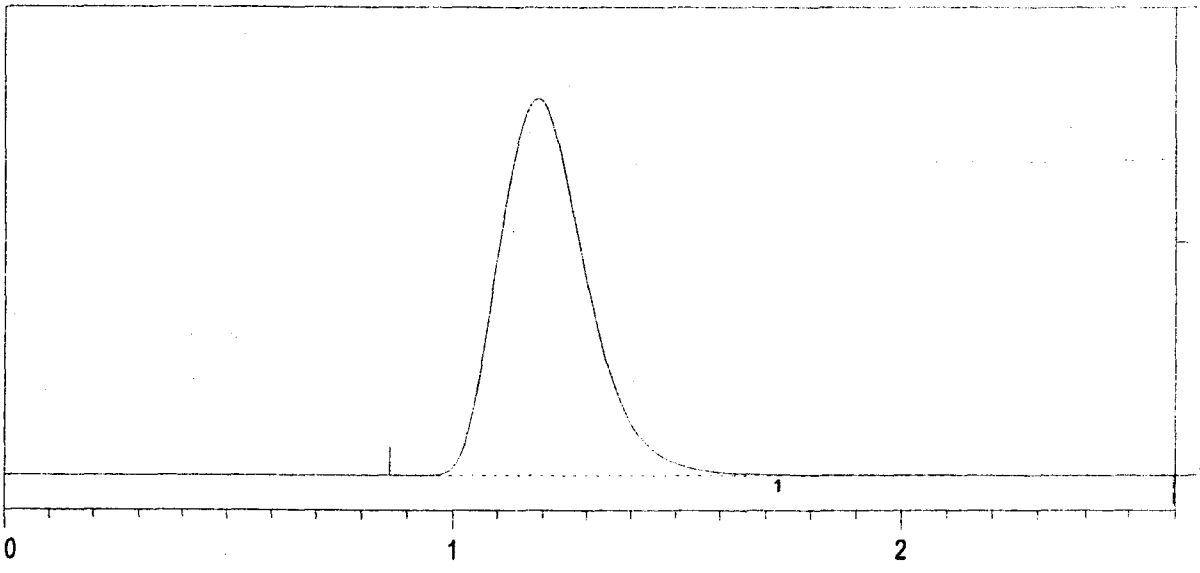
JB 11/13/03



Nov 13 200
07:18 PM

	rt	AREA
1	1.47	57 327 74

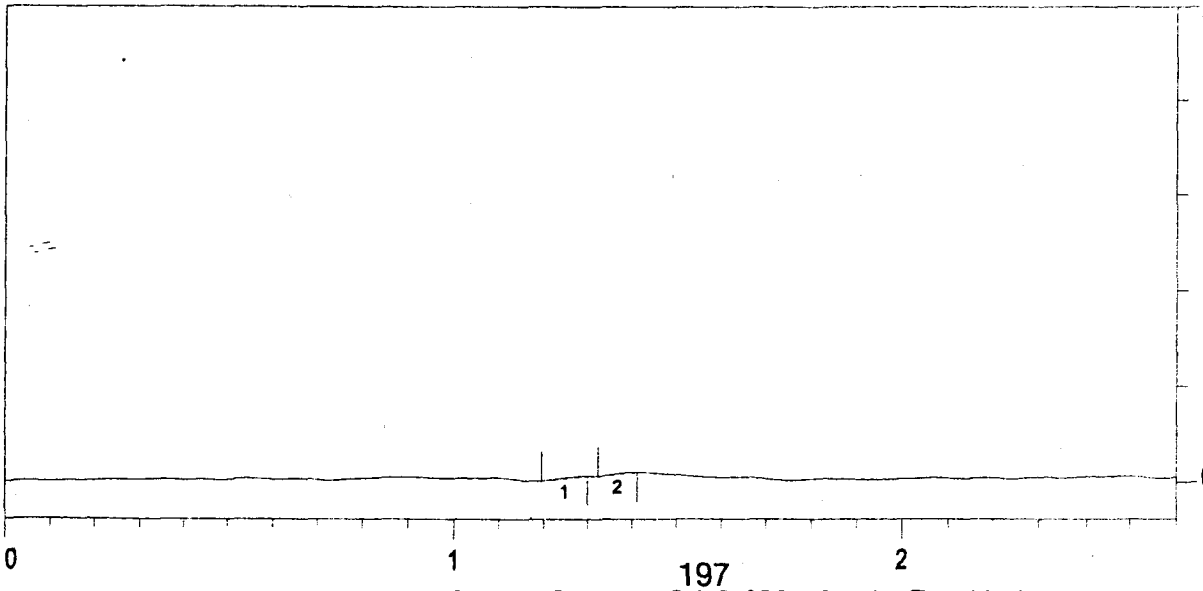
Run	007
Analyst	Josh
Tracking	50.0ng/L
Notes: Trap 70	



Nov 13 2003
07:22 PM

	rt	AREA
1	1.19	221 799 696

Run	008
Analyst	Josh
Tracking	200.0ng/L
Notes: Trap C	



Nov 13 2003
07:26 PM

	rt	AREA
1	1.29	286
2	1.40	256

Run	009
Analyst	Josh
Tracking	BB (2.0)
Notes: Trap E	

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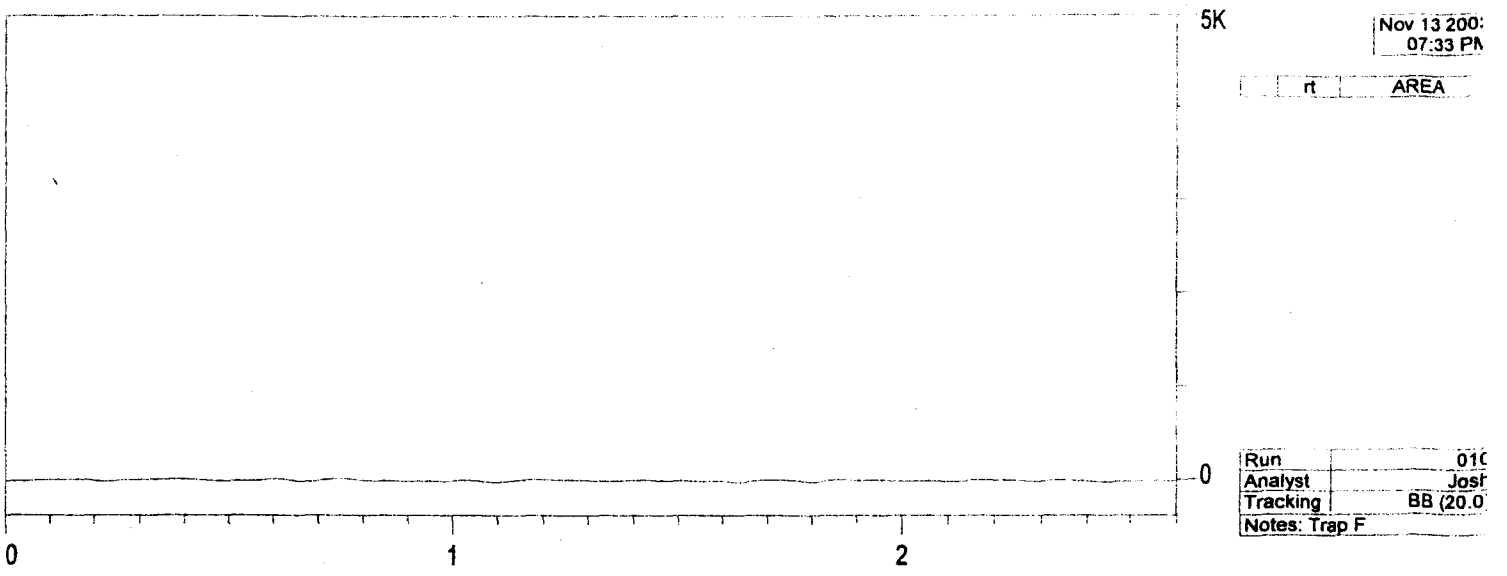
JB 11/13/03


5K
0
0
1
2
Nov 13 200:
07:33 PM
rt
AREA
Run
010
Analyst
Josh
Tracking
BB (20.0
Notes: Trap F

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315809

Service Request Number(s) : K2400648

Method : **RPTM**

Analysis for: **ICP-MS**

Sample			Initial Volume(ml)	Final Volume (ml)	Matrix
PBW			100	100	2.5% HNO3 / 0.4%HCl
LCSW			400	100	2.5% HNO3 / 0.4%HCl
DLCSW			400	100	2.5% HNO3 / 0.4%HCl
K0648-06			260	100	2.5% HNO3 / 0.4%HCl
K0648-07			255	100	2.5% HNO3 / 0.4%HCl
K0648-08			400	100	2.5% HNO3 / 0.4%HCl
K0648-09			320	100	2.5% HNO3 / 0.4%HCl

JB 2/11/04

FePd Prep # **AF1- 10-B**

Lot # Acids Used: HNO3 **MS3-81-E** **HCl** **MS3- 36-C**

LCSW and Spikes: *2.0 mL of 200-8 Intermediate ICP-MS Stock Silver Solution* **MS3-90-C**
2.0 mL of 200-8 Intermediate ICP-MS Stock Solution **MS4-16-B**

Additional spikes:

Comments: All samples were spiked with 4 mls of ^{61}Ni @ 1mg/L

Analyst Julius D Bailey **Date** 2/11/04

Reviewer [signature] **Date** 2/13/04

rptmdig.xls
7/17/2003

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0316059

Service Request Number(s) : K2400648 Pore Water

Method : CLP 3010A 3020A 3005A 3050B Other- _____

Analysis for : ICP ICP-MS GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K00648 - BLANK			X	50	50	5% HCL, 1% HNO3
- LCSW				50	50	
- LCSW				50	50	
- 6 DI SS			Pore water	40	40	5% HCL, 1% HNO3
- 7				40	40	
- 8				40	40	
- 9				40	40	
					~~40~~ 2/11/04	

2/11/04

Time Digestion Started: _____

Lot # Acids Used: HNO3 42007 HCl 41310 H2O2 _____

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other: _____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-25-L, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-25-P, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO
SS1-MET1-28-C, 0.5 mls added SS4-MET1-27-B, _____ mls added
SS5-MET1-28-B, 0.5 mls added
SS6-MET1-28-A, 0.5 mls added

TCLP Spike/LCSE
SS1 _____ mls. added
SS2 _____ mls. added

Additional spikes: 1.0ml 10ppm Sn MS4-4-D Expires ~~4/5~~ 1/1/05

Comments: Samples filtered with 0.45 um syringe filter. 2/11/04

Analyst [signature] Date 2/10/04

Reviewer _____ Date _____

metdig.xls
9/5/02

METALS SPIKE FORM

Service Request # K2400648
Q.C. Sample # K2400648-LCSW Initials /Date: 2 /11/04

Circle type of digest: GFAA (ICP) FAA (ICP-MS) Other:_____
Circle type of sample: Soil Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of 1000ppm Std.	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-28-C	HNO3	50.0	1000ml	JT BAKER	Y23049	-	-	0.5	Expires: 7/1/04
	Al	*100	1000ml	MET1-26-P	-	9/1/2004	200		
	Ag	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Ba	*100	1000ml	MET1-26-P	-	9/1/2004	200		
	Be	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Cd	*100	1000ml	MET1-26-P	-	9/1/2004	5		
	Co	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Cr	*100	1000ml	MET1-26-P	-	9/1/2004	20		
	Cu	*100	1000ml	MET1-26-P	-	9/1/2004	25		
	Fe	*100	1000ml	MET1-26-P	-	9/1/2004	100		
	Pb	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Mn	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Ni	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Sb	50	1000ml	MET1-22-G	-	7/1/2004	50		
	V	*100	1000ml	MET1-26-P	-	9/1/2004	50		
	Zn	*100	1000ml	MET1-26-P	-	9/1/2004	50		
SS4-MET1-27-B	HNO3	25.0	500ml	JT BAKER	X40023	-	-		Expires: 3/1/04
	As	2.0	500ml	MET1-21-I	-	1/1/2005	4		
	Cd	2.0	500ml	MET1-17-D	-	9/30/2004	4		
	Pb	2.0	500ml	MET1-10-H	-	4/1/2004	4		
	Se	2.0	500ml	MET1-19-C	-	10/31/2004	4		
	Tl	2.0	500ml	MET1-19-F	-	10/1/2004	4		
	Cu	2.0	500ml	MET1-17-E	-	3/1/2004	4		
SS5-MET1-28-B	HNO3	25.0	500ml	JT BAKER	Y23049	-	-	0.5	Expires:8/1/04
	As	50.0	500ml	MET1-21-I	-	1/31/2005	100		
	Se	50.0	500ml	MET1-24-G	-	8/1/2004	100		
	Tl	50.0	500ml	MET1-19-F	-	10/30/2004	100		
SS6-MET1-30-C	HNO3	25	500ml	JT BAKER	X08024	-	-	0.5	Expires: 09/04/04
	B	50	500ml	MET1-17-A	-	9/30/2004	100		
	Mo	50	500ml	MET1-19-A	-	10/31/2004	100		

GFLCSW (MET1-25-Q)	HNO3	2.0	200ml	JT BAKER	Y08024	-	-		Expires: 03/01/04
	As, Pb, Se, Tl	1.0	200ml	QCP-CICV-3	W-MEB119145	8/1/2004	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		
	Cu	0.5	200ml	MET1-17-E	-	3/1/2004	2.5		
QCP-CICV-1 (MET1-25-L)	Ca, Mg, Na, K	no dilution	-	IV	T-MEB119069	8/1/2004	2500		Expires: 08/01/04
	Al, Ba	no dilution	-	IV	T-MEB119069	8/1/2004	1000		
	Fe	no dilution	-	IV	T-MEB119069	8/1/2004	500		
	Co, Mn, Ni, V, Zn	no dilution	-	IV	T-MEB119069	8/1/2004	250		
	Cu, Ag	no dilution	-	IV	T-MEB119069	8/1/2004	125		
	Cr	no dilution	-	IV	T-MEB119069	8/1/2004	100		
	Be	no dilution	-	IV	T-MEB119069	8/1/2004	25		
QCP-CICV-2 (MET1-12-K)	Sb	no dilution	-	IV	T-MEB119095	8/1/2004	500		Expires: 8/01/04
QCP-CICV-3 (MET1-25-P)	As, Pb, Se, Tl	no dilution	-	IV	W-MEB119145	8/1/2004	500		Expires: 08/01/04
	Cd	no dilution	-	IV	W-MEB119145	8/1/2004	250		

* Denotes Custom Mix CAS-CAL-14

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date
Sn	1.0	10		MS4-4-D	1/1/05

2-10-04

Atomic Absorption Data Review Form

Element Se AA # 1

Analytical Batch
KA0323269

Analysis Lot # _____

Cal Std/CCV Source AAI-4-I

Service Request Numbers:

K0648, 0372, 0710

	Yes	No	NA
1) Appropriate Standardization Completed	X		
2) ICV within 10% of true value.	X		
3) CCVs in Control	X		
4) CCB's and/or ICB's below MRL	X		
5) All reported results within calibration range	X		
6) Calculations Correct	X		

Comments :

Reviewed By: JPB Date: 2/12/04

C: Varian 7 forms

9984

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH:_____

Method: SM3114B/7742	Service Request # : K0648, 0372, 0710
Analysis For: Se by Hydride	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(ug/L) Measured	Sample Actual (mg/kg)	Sample Actual (ug/L)
1	ICV	—	—	—	5.00		100%
2	ICB	—	—	—	0.09		<0.5
3	CCV1	—	—	—	9.86		99%
4	CCB1	—	—	—	0.16		<0.5
5	CRA	—	—	—	0.61	AB 2/12/04	0.61
6	PBW	50mls	50mls	1/2	0.08	<1	<1
7	LCSW1	↓	↓	↓ + 1/100	5.27		1054/105%
8	LCSW2	↓	↓	+ 1/100	5.60		1120/112%
9	K0648-06	40mls	40mls		5.30		10.6
10	↓ -07	↓	↓	↓	0.94		1.88
11	↓ -08	↓	↓	↓	4.60		9.20
12	↓ -09	↓	↓	↓	5.18		10.36
13	CCV2	—	—	—	9.65		97%
14	CCB2	—	—	—	0.25		<0.5
15	PB			1/2	0.15		<1
16	K0710-02	See prep data		↓ + 1/100	3.79		758
17	↓ -02D			↓ + 1/100	3.63		726
18	K0372-16			↓ + 1/100	3.27		654
19	↓ -16D			↓ + 1/100	3.26		652
20	CCV3	—	—	—	9.81		98%
21	CCB3	—	—	—	0.30		<0.5
22							
23			AB 2/12/04				
24							
25							

Comments:

TIME STARTED: 1500

Analyst	Date:	Page Number:
Angela Baird	2/12/04	1

[Aa.xlw] Se Hydride1

Varian SpectrAA 10/20 System Report

Columbia Analytical Services
1317 South 13th Street P.O. Box 479
Kelso, WA 98626 (206) 577-7222

OPERATOR ABaird 2/12/04
DATE 02 12 04
BATCH NO.

PROGRAM 30 Fe

SAMPLE	CONC	%RSD	MEAN ABS	READINGS		
BLANK	0.00		0.001	0.002	0.001	0.001
STANDARD 1	0.50	3.4	0.014	0.014	0.015	0.014
STANDARD 2	1.00	2.1	0.028	0.028	0.028	0.029
STANDARD 3	5.00	1.2	0.140	0.142	0.140	0.139
STANDARD 4	10.00	0.9	0.277	0.275	0.275	0.280
STANDARD 5	15.00	0.2	0.384	0.384	0.383	0.384
SAMPLE 1	5.00	1.3	0.140	0.139	0.142	0.141
SAMPLE 2	0.09	32.4	0.002	0.003	0.002	0.002
SAMPLE 3	9.86	1.7	0.273	0.278	0.271	0.270
SAMPLE 4	0.16	16.1	0.005	0.005	0.004	0.005
SAMPLE 5	0.61	4.1	0.017	0.017	0.018	0.017
SAMPLE 6	0.08	23.6	0.002	0.003	0.002	0.002
SAMPLE 7	5.27	2.1	0.148	0.147	0.145	0.151
SAMPLE 8	5.60	1.4	0.157	0.155	0.159	0.158
SAMPLE 9	5.30	1.6	0.149	0.146	0.149	0.151
SAMPLE 10	0.94	3.8	0.027	0.027	0.025	0.027
SAMPLE 11	4.60	2.7	0.129	0.126	0.128	0.133
SAMPLE 12	5.18	2.2	0.145	0.145	0.142	0.148
SAMPLE 13	9.65	2.7	0.267	0.263	0.276	0.263
SAMPLE 14	0.25	16.6	0.007	0.008	0.007	0.006
SAMPLE 15	0.15	17.9	0.004	0.005	0.004	0.004
SAMPLE 16	3.79	1.2	0.107	0.105	0.107	0.108
SAMPLE 17	3.63	3.9	0.102	0.098	0.106	0.103
SAMPLE 18	3.27	2.6	0.092	0.090	0.094	0.093
SAMPLE 19	3.26	2.2	0.092	0.090	0.094	0.092
SAMPLE 20	9.81	1.2	0.272	0.271	0.268	0.275
SAMPLE 21	0.30	7.8	0.009	0.009	0.008	0.008

R=0.9984

Service Request # K0648 (pore water)

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments

Primary Review by [illegible] Date 2/13/04

Secondary Review by [illegible] Date 2/13/04

Method: 2004A Sample Name: Blank Operator:
Comment:
Run Time: 02/13/04 09:36 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}	313.042 {107}
Avg	.1730	.0194	-.0083	-.0665	-.1024
Stddev	.0410	.0039	.0117	.0078	.0196
%RSD	23.72	20.16	141.4	11.74	19.15
#1	.2021	.0221	-.0166	-.0720	-.0885
#2	.1440	.0166	.0000	-.0609	-.1163

Elem	B_2497	Cd2265	Ca3179	Ca3181	Cr2677
Line	249.773 {134}	226.502 {148}	317.933 {105}	318.128 {105}	267.716 {125}
Avg	.1398	.0630	.0858	.0083	-.0879
Stddev	.0412	.0460	.0196	.0352	.0009
%RSD	29.44	73.01	22.85	423.9	1.072
#1	.1107	.0955	.0719	-.0166	-.0886
#2	.1690	.0305	.0997	.0332	-.0872

Elem	Co2286	Cu3247	Fe2599	Fe2714	Pb2203
Line	228.616 {147}	324.754 {103}	259.940 {129}	271.441 {124}	220.353 {152}
Avg	-.0374	-.1287	.2229	.2665	.1052
Stddev	.0255	.0020	.0410	.0383	.0469
%RSD	68.12	1.563	18.40	14.37	44.62
#1	-.0194	-.1273	.2519	.2395	.1384
#2	-.0554	-.1301	.1939	.2936	.0720

Elem	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316
Line	202.582 {166}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	.1551	.0374	.3060	.0526	-.0339
Stddev	.0040	.0137	.0175	.0000	.0029
%RSD	2.568	36.70	5.717	.0420	8.617
#1	.1522	.0277	.3183	.0526	-.0360
#2	.1579	.0471	.2936	.0526	-.0319

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899
Line	766.490 { 44}	196.090 {171}	328.068 {102}	589.592 { 57}	189.989 {176}
Avg	-1.926	-.0152	-.0443	2.612	.0720
Stddev	.211	.0059	.0118	.032	.0058
%RSD	10.93	38.53	26.56	1.239	8.117
#1	-2.075	-.0194	-.0360	2.589	.0761
#2	-1.778	-.0111	-.0526	2.635	.0679

Elem	V_3102	Zn2062	P_1782	Si2516	Ti3234
Line	310.230 {108}	206.200 {163}	178.287 {188}	251.612 {134}	323.452 {104}
Avg	.7582	.1627	.1253	.2741	.5839
Stddev	.0075	.0010	.0128	.0119	.0746
%RSD	.9907	.6442	10.20	4.328	12.78
#1	.7636	.1619	.1163	.2657	.5312
#2	.7529	.1634	.1343	.2825	.6367

Elem	Tl1908	Li6707	Sr3464
Line	190.864 {176}	670.784 { 50}	346.446 { 97}
Avg	-.0277	.8052	-.0318
Stddev	.0235	.2814	.0294
%RSD	84.88	34.95	92.25
#1	-.0111	1.004	-.0111
#2	-.0443	.6062	-.0526

2/13/04

Method: 2004A Sample Name: STDA Operator:
Comment: ICP2-24-B
Run Time: 02/13/04 09:39 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	Be3130	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	313.042 {107}	249.773 {134}	226.502 {148}
Avg	3.019	2.800	972.3	53.45	75.04
Stddev	.014	.044	.3	.14	.46
%RSD	.4543	1.575	.0344	.2639	.6176
#1	3.029	2.831	972.5	53.35	74.71
#2	3.010	2.769	972.0	53.55	75.36

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}	259.940 {129}
Avg	7.836	31.40	46.34	11.92	106.0
Stddev	.148	.03	.09	.01	.2
%RSD	1.896	.1029	.1861	.0663	.1682
#1	7.731	31.38	46.28	11.93	105.9
#2	7.941	31.42	46.40	11.92	106.1

Elem	Pb2203	Mg2852	Mn2576	Mo2020	Ni2316
Line	220.353 {152}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	4.925	32.59	372.0	16.92	44.13
Stddev	.027	.07	.5	.07	.08
%RSD	.5571	.2213	.1262	.4284	.1909
#1	4.944	32.54	372.3	16.87	44.07
#2	4.905	32.64	371.6	16.97	44.19

Elem	Se1960	Ag3280	Sn1899	V_3102	Zn2062
Line	196.090 {171}	328.068 {102}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	2.497	14.06	5.015	24.44	49.75
Stddev	.098	.07	.008	.09	.22
%RSD	3.924	.4721	.1563	.3833	.4471
#1	2.428	14.01	5.020	24.37	49.59
#2	2.566	14.11	5.009	24.50	49.90

Elem	Si2516	Ti3234	Tl1908
Line	251.612 {134}	323.452 {104}	190.864 {176}
Avg	12.15	25.74	1.991
Stddev	.04	.04	.018
%RSD	.3065	.1512	.8857
#1	12.12	25.71	2.004
#2	12.17	25.76	1.979

Method: 2004A Sample Name: STDB Operator:
Comment: ICP2-17-G
Run Time: 02/13/04 09:41 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Ca3181	Fe2714	Mg2025
Line	237.312 {141}	233.527 {144}	318.128 {105}	271.441 {124}	202.582 {166}
Avg	19.97	664.5	44.68	248.8	55.85
Stddev	.13	.8	.21	2.2	.27
%RSD	.6376	.1210	.4801	.8685	.4876
#1	19.88	663.9	44.53	247.3	55.66
#2	20.06	665.0	44.84	250.4	56.04

Elem	K_7664	Na5895	P_1782	Li6707	Sr3464
Line	766.490 { 44}	589.592 { 57}	178.287 {188}	670.784 { 50}	346.446 { 97}
Avg	413.1	1424.	11.79	792.4	53.26
Stddev	5.2	11.	.12	5.5	.13
%RSD	1.260	.7409	1.005	.6960	.2419
#1	409.5	1416.	11.71	788.5	53.17
#2	416.8	1431.	11.88	796.3	53.35

Method: 2004A Sample Name: ICV Operator: WM
Comment: KA0323411 ICP2-25-B
Run Time: 02/13/04 09:45 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.050	2.587	2.549	5.357	.1157	-.0003	1.244
Stddev	.015	.025	.016	.056	.0002	.0001	.012
%RSD	.2981	.9530	.6197	1.042	.1421	46.03	.9324
#1	5.039	2.569	2.538	5.317	.1158	-.0004	1.236
#2	5.061	2.604	2.560	5.396	.1156	-.0002	1.253
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	5.000	2.500	2.500	5.000	.1250		1.250
Range	10.00%	10.00%	10.00%	10.00%	10.00%		10.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.93	.5092	1.261	.6259	2.569	2.472	12.44
Stddev	.03	.0028	.006	.0032	.002	.008	.03
%RSD	.2035	.5475	.4861	.5187	.0749	.3176	.2413
#1	12.95	.5072	1.257	.6282	2.567	2.466	12.46
#2	12.91	.5112	1.266	.6236	2.570	2.477	12.42
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.50	.5000	1.250	.6250	2.500	2.500	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.256	2.015	1.265	13.25	2.494	.6288	13.16
Stddev	.003	.021	.005	.09	.024	.0057	.06
%RSD	.2243	1.053	.4267	.6859	.9734	.8991	.4694
#1	1.254	2.000	1.261	13.31	2.476	.6248	13.21
#2	1.258	2.030	1.268	13.19	2.511	.6328	13.12
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	2.000	1.250	12.50	2.500	.6250	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	1.291	1.248	.0752	.0231	2.009	2.536
Stddev	.0026	.002	.011	.0042	.0041	.005	.058
%RSD	52.28	.1278	.8629	5.580	17.82	.2318	2.303
#1	.0068	1.292	1.241	.0781	.0202	2.012	2.495
#2	.0031	1.289	1.256	.0722	.0260	2.006	2.577
Check ?	None	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value		1.250	1.250			2.000	2.500
Range		10.00%	10.00%			10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0003	-.0095
Stddev	.0003	.0095
%RSD	103.7	100.6
#1	-.0001	-.0027
#2	-.0005	-.0162
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICV2 Operator: WM
Comment: KA0323411 ICP2-17-F
Run Time: 02/13/04 09:48 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	.0111	-.0064	.0001	.0000	.0005	.0008
Stddev	.0437	.0012	.0042	.0002	.0001	.0001	.0003
%RSD	368.5	11.26	65.50	252.9	152.9	12.50	39.80
#1	.0428	.0102	-.0034	.0003	.0001	.0005	.0005
#2	-.0191	.0119	-.0093	-.0001	.0000	.0006	.0010
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.087	.0008	.0011	.0094	25.16	-.0258	24.60
Stddev	.023	.0005	.0005	.0021	.14	.0171	.00
%RSD	.4462	59.61	44.01	22.46	.5569	66.11	.0001
#1	5.071	.0005	.0007	.0109	25.06	-.0378	24.60
#2	5.103	.0012	.0014	.0079	25.26	-.0137	24.60
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	5.000				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0007	-.0007	-.0089	-.0055	-.0039	.0150
Stddev	.0002	.0020	.0011	.0012	.0008	.0022	.0004
%RSD	17.65	265.5	156.7	13.50	14.11	56.11	2.764
#1	.0010	.0021	.0001	-.0098	-.0061	-.0055	.0147
#2	.0008	-.0007	-.0014	-.0081	-.0050	-.0024	.0153
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154	-.0002	.0009	.0025	-.0077	.0003	-.0213
Stddev	.0004	.0010	.0006	.0029	.0009	.0050	.0010
%RSD	2.478	440.6	62.37	119.9	11.73	1473.	4.601
#1	.0151	.0005	.0013	.0045	-.0071	.0038	-.0207
#2	.0157	-.0009	.0005	.0004	-.0084	-.0032	-.0220
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0002	-.0048
Stddev	.0004	.0007
%RSD	212.8	15.36
#1	.0004	-.0043
#2	-.0001	-.0053
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICV3 Operator: WM
Comment: KA0323411 ICP2-20-H
Run Time: 02/13/04 09:51 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0069	-.0102	-.0044	.0001	.0000	10.14	.0004
Stddev	.0149	.0091	.0021	.0002	.000	.01	.0004
%RSD	216.9	89.69	47.01	230.8	189.9	.0879	97.52
#1	.0037	-.0037	-.0030	-.0001	.0000	10.14	.0007
#2	-.0174	-.0167	-.0059	.0002	-.0001	10.15	.0001
Check ?	None	None	None	None	None	QC Pass	None
Value						10.00	
Range						10.00%	

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0003	.0000	.0099	.0037	.0015	-.0066
Stddev	.0088	.0006	.0005	.0063	.0004	.0045	.0042
%RSD	4985.	186.4	3349.	64.16	10.01	304.8	63.89
#1	.0061	-.0008	-.0004	.0143	.0040	-.0017	-.0036
#2	-.0064	.0001	.0004	.0054	.0035	.0046	-.0096
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0034	-.0001	-.0005	-.0088	-.0029	.0013
Stddev	.0001	.0006	.0016	.0075	.0101	.0047	.0019
%RSD	40.24	17.27	1251.	1605.	114.7	159.7	140.8
#1	.0001	-.0030	.0010	.0048	-.0017	.0004	.0000
#2	.0003	-.0038	-.0012	-.0057	-.0160	-.0063	.0027
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.908	-.0019	-.0002	4.814	4.717	-.0012	.0144
Stddev	.002	.0000	.0001	.027	.005	.0028	.0088
%RSD	.0495	.0550	27.60	.5684	.1027	231.8	60.72
#1	4.906	-.0019	-.0002	4.795	4.714	-.0032	.0082
#2	4.909	-.0019	-.0003	4.834	4.721	.0008	.0206
Check ?	QC Pass	None	None	QC Pass	QC Pass	None	None
Value	5.000			5.000	5.000		
Range	10.00%			10.00%	10.00%		

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	4.981	2.047
Stddev	.049	.016
%RSD	.9817	.7837
#1	5.016	2.036
#2	4.947	2.059
Check ?	QC Pass	QC Pass
Value	5.000	2.000
Range	10.00%	10.00%

Method: 2004A Sample Name: ICB Operator: WM
Comment: KA0323411
Run Time: 02/13/04 09:53 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	-.0001	.0044	-.0003	.0000	.0095	.0002
Stddev	.0089	.0131	.0174	.0004	.0000	.0023	.0003
%RSD	313.8	15300.	392.8	131.2	57.32	23.99	162.0
#1	-.0035	.0091	-.0079	.0000	.0000	.0111	.0004
#2	.0092	-.0093	.0168	-.0006	.0000	.0079	.0000
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0136	L -.1084	.0009	.0013	.0033	.0001	-.0032
Stddev	.0081	.0525	.0001	.0005	.0003	.0007	.0138
%RSD	59.52	48.45	10.63	34.67	9.831	686.5	431.2
#1	-.0193	-.0712	.0009	.0017	.0031	.0006	.0066
#2	-.0079	-.1455	.0008	.0010	.0036	-.0004	-.0130
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	-.0113	-.0032	.0001	-.0028	-.0010	.0023
Stddev	.0004	.0157	.0072	.0001	.0019	.0007	.0198
%RSD	7.489	139.3	226.1	147.6	66.58	67.32	857.9
#1	.0057	-.0002	.0019	.0002	-.0015	-.0005	.0163
#2	.0052	-.0224	-.0083	.0000	-.0041	-.0015	-.0117
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0116	-.0063	-.0008	.0068	-.0002	-.0004	.0068
Stddev	.0171	.0011	.0045	.0037	.0010	.0008	.0067
%RSD	148.1	17.60	558.1	54.71	399.1	224.6	97.92
#1	-.0237	-.0055	.0024	.0095	-.0009	-.0009	.0116
#2	.0005	-.0070	-.0040	.0042	.0005	.0002	.0021
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0031	-.0012	.0021	-.0007	-.0134
Stddev	.0011	.0012	.0165	.0006	.0077
%RSD	34.56	101.8	805.6	81.35	57.69
#1	.0038	-.0021	.0137	-.0003	-.0188
#2	.0023	-.0003	-.0096	-.0011	-.0079
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: CCVA1 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4933	.4905	.4668	.4822	.4828	.4920	.4887
Stddev	.0116	.0140	.0024	.0027	.0009	.0003	.0029
%RSD	2.352	2.863	.5044	.5664	.1857	.0606	.5890
#1	.4761	.4980	.4695	.4782	.4815	.4921	.4850
#2	.4972	.4770	.4646	.4824	.4833	.4916	.4884
#3	.4985	.4806	.4650	.4837	.4834	.4923	.4919
#4	.5014	.5065	.4680	.4843	.4830	.4921	.4897
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4801	.4918	.4929	.4803	.4962	.4925	2.413
Stddev	.0050	.0034	.0013	.0064	.0023	.0059	.006
%RSD	1.039	.6915	.2562	1.336	.4722	1.201	.2603
#1	.4736	.4867	.4910	.4826	.4933	.4911	2.419
#2	.4791	.4938	.4937	.4708	.4953	.4855	2.418
#3	.4852	.4928	.4936	.4852	.4981	.4998	2.407
#4	.4824	.4938	.4933	.4825	.4980	.4935	2.409
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4855	.4908	.4926	5.109	.4834	.4858	.5118
Stddev	.0044	.0056	.0030	.040	.0094	.0066	.0041
%RSD	.9114	1.143	.6093	.7768	1.946	1.350	.7978
#1	.4804	.4830	.4885	5.167	.4696	.4789	.5178
#2	.4888	.4947	.4934	5.088	.4873	.4947	.5103
#3	.4896	.4906	.4957	5.099	.4862	.4840	.5087
#4	.4831	.4950	.4928	5.081	.4906	.4854	.5104
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4817	.4919	.4926	.0017	.2515	.4819	.4672
Stddev	.0048	.0047	.0025	.0046	.0033	.0039	.0211
%RSD	.9894	.9511	.5141	267.1	1.308	.8038	4.521
#1	.4796	.4897	.4889	.0069	.2530	.4833	.4448
#2	.4760	.4955	.4936	.0039	.2521	.4805	.4793
#3	.4844	.4960	.4940	-.0008	.2468	.4864	.4902
#4	.4866	.4864	.4941	-.0032	.2542	.4774	.4545
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA1 Run Time: 02/13/04 09:56

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0004	-.0069
Stddev	.0002	.0031
%RSD	60.21	44.93
#1	-.0002	-.0098
#2	-.0008	-.0038
#3	-.0003	-.0093
#4	-.0004	-.0046
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB1 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 10:01 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.989	.0236	-.0001	2.464	.0013	.0032	.0025
Stddev	.036	.0136	.0039	.011	.0001	.0013	.0004
%RSD	.7190	57.66	4488.	.4448	5.138	39.89	15.37
#1	4.941	.0340	-.0015	2.458	.0012	.0048	.0029
#2	5.002	.0276	-.0044	2.458	.0013	.0038	.0027
#3	5.026	.0036	.0050	2.480	.0014	.0023	.0020
#4	4.988	.0294	.0005	2.460	.0013	.0021	.0026
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.17	.0025	.0017	.0051	25.01	-.0081	25.15
Stddev	.10	.0019	.0009	.0030	.10	.0073	.04
%RSD	.4061	77.51	52.15	58.94	.4149	90.01	.1487
#1	25.14	.0026	.0016	.0029	24.85	-.0165	25.11
#2	25.10	.0052	.0030	.0095	25.04	-.0085	25.20
#3	25.32	.0013	.0009	.0045	25.07	-.0085	25.13
#4	25.12	.0009	.0015	.0036	25.07	.0012	25.15
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0007	.0019	10.45	-.0066	.0005	10.31
Stddev	.0001	.0021	.0009	.04	.0064	.0044	.04
%RSD	3.943	326.0	46.88	.3580	96.63	876.3	.3797
#1	.0022	-.0020	.0022	10.41	-.0050	-.0019	10.29
#2	.0024	.0021	.0022	10.45	-.0127	.0024	10.36
#3	.0023	-.0026	.0006	10.45	.0016	.0057	10.27
#4	.0025	-.0002	.0025	10.50	-.0105	-.0041	10.34
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120	.0037	.0039	2.560	.0032	.0015	-.0134
Stddev	.0051	.0027	.0000	.027	.0032	.0008	.0073
%RSD	42.62	71.79	1.237	1.046	98.58	53.78	54.42
#1	.0174	.0023	.0039	2.528	.0027	.0021	-.0165
#2	.0129	.0056	.0039	2.566	-.0009	.0003	-.0096
#3	.0050	.0007	.0040	2.553	.0045	.0018	-.0220
#4	.0126	.0063	.0038	2.592	.0065	.0016	-.0055
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Sample Name: CCVB1 Run Time: 02/13/04 10:01

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5183	2.527
Stddev	.0031	.018
%RSD	.5890	.7083
#1	.5179	2.504
#2	.5214	2.521
#3	.5143	2.540
#4	.5197	2.541
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB1 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 10:06 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	.0009	.0096	.0005	.0000	-.0001	-.0002
Stddev	.0228	.0053	.0024	.0003	.000	.0013	.0005
%RSD	324.6	602.0	25.35	72.29	16.95	1605.	283.6
#1	.0231	.0046	.0079	.0007	.0000	.0008	.0002
#2	-.0091	-.0028	.0113	.0002	-.0001	-.0010	-.0006
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0082	L -.0589	-.0001	.0009	.0069	.0010	-.0053
Stddev	.0010	.0701	.0026	.0003	.0005	.0007	.0032
%RSD	12.28	119.1	2343.	36.17	7.139	64.57	59.79
#1	-.0089	-.0093	-.0020	.0012	.0065	.0015	-.0031
#2	-.0075	-.1084	.0017	.0007	.0072	.0006	-.0076
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	L -.0262	.0000	.0001	-.0021	.0004	.0067
Stddev	.0004	.0053	.0015	.0001	.0001	.0012	.0190
%RSD	5.151	20.19	135600.	190.5	5.685	319.7	285.3
#1	.0075	-.0225	.0011	.0000	-.0020	.0012	.0201
#2	.0080	-.0299	-.0011	.0001	-.0021	-.0005	-.0068
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0023	.0003	.0095	-.0015	-.0004	.0059
Stddev	.0140	.0007	.0033	.0020	.0011	.0005	.0088
%RSD	2536.	30.65	1110.	20.63	75.20	118.5	147.8
#1	.0105	-.0018	.0026	.0081	-.0023	-.0001	-.0003
#2	-.0094	-.0027	-.0020	.0109	-.0007	-.0008	.0122
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0013	.0048	-.0004	-.0043
Stddev	.0037	.0014	.0146	.0003	.0011
%RSD	276.5	107.0	303.0	78.26	25.59
#1	.0040	-.0003	.0151	-.0002	-.0035
#2	-.0013	-.0023	-.0055	-.0005	-.0051
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: CRI Operator: WM
Comment: KA0323411 ICPL-24-A
Run Time: 02/13/04 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0399	.0401	.0893	.0050	.0044	-.0011	.0050
Stddev	.0277	.0071	.0181	.0006	.0000	.0001	.0003
%RSD	69.41	17.81	20.31	12.61	.1493	6.813	5.804
#1	.0595	.0452	.1021	.0045	.0044	-.0011	.0048
#2	.0203	.0351	.0765	.0054	.0044	-.0010	.0052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	.0500	.0500	.1000	.0050	.0050		.0050
Range	50.00%	50.00%	50.00%	50.00%	50.00%		50.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0378	.0054	.0110	.0132	.0215	.0562	.0117
Stddev	.0000	.0015	.0011	.0026	.0005	.0057	.0072
%RSD	.0262	27.69	10.36	19.60	2.158	10.12	61.64
#1	.0379	.0064	.0102	.0150	.0212	.0522	.0066
#2	.0378	.0043	.0118	.0114	.0219	.0602	.0168
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0050	.0100	.0100	.0200	.0500	.0200
Range	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.0086	.0195	1.970	.0799	.0084	.1032
Stddev	.0001	.0008	.0004	.003	.0094	.0003	.0007
%RSD	1.194	9.413	1.941	.1388	11.71	3.419	.6678
#1	.0048	.0092	.0192	1.968	.0733	.0082	.1037
#2	.0048	.0080	.0198	1.972	.0865	.0086	.1028
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0100	.0200	2.000	.1000	.0100	.1000
Range	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.0102	.0108	.0060	.0033	.0001	.0041
Stddev	.0041	.0035	.0001	.0080	.0012	.0037	.0058
%RSD	128.5	34.06	1.095	134.1	35.25	3169.	142.8
#1	.0061	.0077	.0109	.0003	.0025	-.0025	.0000
#2	.0003	.0126	.0107	.0116	.0041	.0028	.0082
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.0100	.0100				
Range		50.00%	50.00%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0004	-.0018
Stddev	.0005	.0057
%RSD	128.6	310.7
#1	-.0007	-.0059
#2	.0000	.0022
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICSA Operator: WM
Comment: KA0323411 ICP2-17-B
Run Time: 02/13/04 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	488.2	.0606	-.0415	-.0028	.0002	-.0181	.0072
Stddev	3.9	.0156	.0052	.0000	.0001	.0009	.0012
%RSD	.7898	25.73	12.49	.8193	34.61	4.748	16.13
#1	490.9	.0496	-.0379	-.0028	.0003	-.0175	.0064
#2	485.5	.0717	-.0452	-.0028	.0002	-.0187	.0080
Check ?	QC Pass	None	None	None	None	None	None
Value	500.0						
Range	20.00%						

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	510.6	-.0008	.0018	-.0002	186.6	-.0160	509.5
Stddev	.2	.0011	.0012	.0057	.4	.0101	.9
%RSD	.0422	135.0	68.39	2527.	.2155	62.98	.1717
#1	510.7	-.0015	.0009	.0038	186.3	-.0089	508.9
#2	510.4	.0000	.0027	-.0042	186.9	-.0231	510.2
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	500.0				200.0		500.0
Range	20.00%				20.00%		20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	-.0047	-.0033	-.0114	-.0193	.0025	.0799
Stddev	.0001	.0003	.0028	.0085	.0031	.0018	.0005
%RSD	.5952	7.447	84.85	74.14	16.15	72.94	.6427
#1	.0088	-.0049	-.0053	-.0054	-.0171	.0012	.0795
#2	.0089	-.0044	-.0013	-.0174	-.0215	.0037	.0803
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0264	-.0031	.0136	.0378	-.0176	.0110	-.1162
Stddev	.0053	.0033	.0003	.0101	.0004	.0014	.0010
%RSD	20.25	107.7	2.465	26.69	2.338	12.76	.8403
#1	-.0302	-.0054	.0138	.0306	-.0179	.0100	-.1155
#2	-.0226	-.0007	.0133	.0449	-.0173	.0119	-.1169
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0235	-.0034
Stddev	.0005	.0061
%RSD	2.177	179.7
#1	.0231	-.0076
#2	.0239	.0009
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICSAB Operator: WM
Comment: KA0323411 ICP2-18-A
Run Time: 02/13/04 10:20 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	487.8	.9664	-.0432	.4319	.4485	-.0075	.8581
Stddev	.6	.0077	.0003	.0014	.0004	.0019	.0026
%RSD	.1295	.8018	.6669	.3330	.0840	25.38	.2987
#1	488.2	.9719	-.0434	.4309	.4487	-.0088	.8563
#2	487.3	.9609	-.0430	.4329	.4482	-.0062	.8600
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	None	QC Pass
Value	500.0	1.000		.5000	.5000		1.000
Range	20.00%	20.00%		20.00%	20.00%		20.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	503.7	.4358	.4241	.4485	185.1	.8527	507.3
Stddev	1.3	.0018	.0014	.0004	.5	.0258	1.5
%RSD	.2581	.4189	.3201	.0806	.2613	3.026	.2966
#1	502.8	.4371	.4231	.4488	185.4	.8345	506.2
#2	504.6	.4345	.4251	.4483	184.7	.8710	508.3
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	.5000	.5000	.5000	200.0	1.000	500.0
Range	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4385	-.0056	.8362	-.0167	-.0063	.9359	.0128
Stddev	.0005	.0012	.0050	.0008	.0366	.0013	.0028
%RSD	.1184	20.81	.5949	4.960	583.0	.1420	21.70
#1	.4381	-.0048	.8327	-.0173	-.0322	.9369	.0108
#2	.4389	-.0064	.8398	-.0161	.0196	.9350	.0147
Check ?	QC Pass	None	QC Pass	None	None	QC Pass	None
Value	.5000		1.000			1.000	
Range	20.00%		20.00%			20.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0185	.4389	.8401	.0511	-.0153	.0133	-.1005
Stddev	.0093	.0005	.0049	.0004	.0023	.0012	.0000
%RSD	50.13	.1034	.5785	.8321	15.01	9.386	.0123
#1	-.0120	.4386	.8366	.0508	-.0170	.0141	-.1005
#2	-.0251	.4392	.8435	.0514	-.0137	.0124	-.1005
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.5000	1.000				
Range		20.00%	20.00%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0181	-.0036
Stddev	.0003	.0055
%RSD	1.803	152.2
#1	.0179	.0003
#2	.0184	-.0075
Check ?	None	None
Value		
Range		

Analysis Report 02/13/04 10:53:30 page 1

Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323411 K0651 REDIGEST
Run Time: 02/13/04 10:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0266	.0133	.0104	.0001	.0000	.0031	.0004
#1	.0244	.0054	.0074	-.0002	.0000	.0040	.0005
#2	.0287	.0211	.0133	.0005	.0000	.0022	.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	-.0007	.0013	.0105	.0058	.0109	-.0021
#1	.0061	-.0002	.0005	.0113	.0064	.0143	-.0049
#2	.0096	-.0011	.0021	.0097	.0053	.0074	.0006

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0034	-.0007	-.0066	.0005	-.0018	.0222
#1	.0003	-.0030	-.0009	-.0054	.0006	-.0006	.0227
#2	.0004	-.0038	-.0005	-.0078	.0005	-.0029	.0216

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0002	.0035	.0119	.0662	.0003	.0034
#1	.0064	-.0024	.0036	.0116	.0680	.0016	.0014
#2	.0062	.0028	.0033	.0122	.0644	-.0010	.0055

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0002	-.0022
#1	-.0002	.0017
#2	-.0002	-.0061

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Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323411 RE-RUN K0651 REDIGEST
Run Time: 02/13/04 10:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	-.0070	-.0020	.0000	.0000	.0032	-.0003
#1	.0134	-.0046	.0049	.0000	.0000	.0038	-.0008
#2	-.0063	-.0093	-.0089	.0000	.0000	.0027	.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	.0012	.0002	.0023	.0038	.0032	.0009
#1	.0064	.0007	-.0007	.0038	.0037	-.0074	-.0002
#2	.0071	.0016	.0012	.0008	.0039	.0138	.0019

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0019	.0002	.0062	-.0165	.0026	.0335
#1	.0001	-.0005	.0001	.0155	-.0028	.0031	.0329
#2	.0002	-.0033	.0002	-.0030	-.0303	.0021	.0342

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0012	.0024	.0066	.0640	-.0007	-.0076
#1	.0050	.0035	.0024	.0098	.0638	-.0005	-.0165
#2	.0008	-.0012	.0024	.0033	.0641	-.0008	.0014

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	-.0057
#1	-.0001	-.0048
#2	.0001	-.0066

Method: 2004A Sample Name: LCSW Operator: WM
Comment: KA0323411 K0651 REDIGEST
Run Time: 02/13/04 11:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.962	2.556	2.567	5.270	.1145	.9968	1.228
#1	4.957	2.544	2.554	5.257	.1144	.9935	1.222
#2	4.967	2.569	2.580	5.283	.1146	1.000	1.233

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.85	.4989	1.245	.6067	2.542	2.469	12.17
#1	12.81	.4972	1.239	.6059	2.549	2.454	12.15
#2	12.89	.5006	1.252	.6075	2.536	2.483	12.20

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.230	.9826	1.248	12.95	2.519	.6184	12.78
#1	1.219	.9812	1.243	12.85	2.513	.6207	12.71
#2	1.241	.9840	1.252	13.04	2.525	.6162	12.84

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	1.268	1.240	.0660	.0713	.0012	2.534
#1	.0034	1.269	1.236	.0669	.0707	-.0006	2.555
#2	.0129	1.268	1.244	.0651	.0719	.0031	2.514

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0002	-.0020
#1	-.0003	.0019
#2	-.0001	-.0059

Analysis Report 02/13/04 11:08:38 page 1

Method: 2004A Sample Name: K0651-~~01~~ 21 2/13/04 Operator: WM
Comment: KA0323411 REDIGEST
Run Time: 02/13/04 11:06 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4686	.0135	.0127	.0348	.0001	.3846	-.0001
#1	.4665	.0140	.0090	.0350	.0000	.3846	.0001
#2	.4707	.0131	.0164	.0347	.0002	.3847	-.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.361	.0008	.0019	.0142	.5888	.0059	1.004
#1	9.346	.0012	.0015	.0163	.5883	.0217	.9993
#2	9.375	.0005	.0023	.0122	.5892	-.0099	1.009

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	.0083	.0009	12.20	-.0022	-.0013	41.47
#1	.0222	.0077	.0013	12.20	.0050	-.0010	41.40
#2	.0224	.0089	.0006	12.20	-.0094	-.0016	41.54

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0692	.0144	.1097	14.10	.0264	-.0117
#1	.0032	.0698	.0151	.1215	14.12	.0248	-.0179
#2	.0012	.0686	.0137	.0978	14.07	.0281	-.0055

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0030	.0755
#1	.0018	.0712
#2	.0042	.0798

Method: 2004A Sample Name: K0651-21D Operator: WM
Comment: KA0323411 REDIGEST
Run Time: 02/13/04 11:09 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4931	.0107	.0151	.0350	.0000	.3912	-.0001
#1	.4890	.0056	.0149	.0351	.0001	.3917	.0003
#2	.4971	.0159	.0154	.0348	-.0001	.3907	-.0006

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.497	.0012	.0014	.0101	.6150	.0030	1.025
#1	9.487	.0004	.0011	.0124	.6150	.0102	1.033
#2	9.508	.0020	.0017	.0078	.6150	-.0041	1.017

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0228	.0072	.0019	12.56	.0160	-.0029	42.72
#1	.0228	.0038	.0012	12.68	.0215	-.0014	43.07
#2	.0228	.0105	.0026	12.44	.0105	-.0044	42.37

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0698	.0182	.1346	14.34	.0266	-.0062
#1	.0051	.0707	.0183	.1359	14.32	.0261	-.0124
#2	-.0013	.0689	.0181	.1334	14.36	.0272	.0000

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0030	.0772
#1	.0035	.0782
#2	.0026	.0762

Method: 2004A Sample Name: K0651-21S Operator: WM
Comment: KA0323411 REDIGEST
Run Time: 02/13/04 11:11 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.355	.5268	1.014	2.062	.0459	1.395	.0490
#1	2.362	.5431	1.009	2.065	.0459	1.394	.0489
#2	2.348	.5104	1.019	2.058	.0459	1.395	.0492

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.350	.2014	.4956	.2512	1.545	.5104	1.003
#1	9.340	.2020	.4946	.2553	1.543	.4984	.9935
#2	9.360	.2008	.4966	.2472	1.547	.5225	1.012

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5205	.9972	.4943	12.57	1.021	.0465	42.83
#1	.5189	.9883	.4928	12.52	1.025	.0465	42.60
#2	.5221	1.006	.4957	12.63	1.016	.0465	43.05

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.5604	.5145	.2082	14.42	.0246	1.009
#1	.0127	.5568	.5147	.1999	14.36	.0255	.9939
#2	.0062	.5640	.5143	.2165	14.47	.0237	1.024

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0036	.0748
#1	.0037	.0696
#2	.0035	.0800

Method: 2004A Sample Name: K0651-21L Operator: WM
Comment: KA0323411 1/5 DILUTION REDIGEST
Run Time: 02/13/04 11:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0832	.0152	.0072	.0068	.0000	.0738	.0001
#1	.0930	.0119	.0035	.0064	.0000	.0750	-.0003
#2	.0734	.0185	.0109	.0073	.0000	.0727	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.824	.0002	.0011	.0079	.1141	.0026	.1663
#1	1.825	.0014	.0014	.0072	.1133	.0057	.1640
#2	1.823	-.0011	.0007	.0086	.1149	-.0006	.1686

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0002	.0002	2.396	-.0039	-.0020	8.176
#1	.0043	-.0011	.0007	2.407	.0061	-.0010	8.223
#2	.0046	.0016	-.0002	2.386	-.0138	-.0031	8.129

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	.0124	.0026	.0232	2.642	.0028	.0069
#1	.0020	.0138	.0021	.0211	2.633	.0030	.0110
#2	.0104	.0110	.0031	.0252	2.652	.0025	.0027

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	.0081
#1	.0006	.0152
#2	.0001	.0009

Method: 2004A Sample Name: CCVA2 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 11:22 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4776	.4824	.4854	.4822	.4825	.4904	.4874
Stddev	.0216	.0066	.0041	.0020	.0015	.0021	.0044
%RSD	4.528	1.378	.8351	.4145	.3021	.4337	.9115
#1	.4929	.4777	.4882	.4808	.4815	.4889	.4843
#2	.4623	.4871	.4825	.4836	.4836	.4919	.4906
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4861	.4945	.4971	.4869	.4977	.5039	2.428
Stddev	.0062	.0015	.0007	.0001	.0036	.0058	.009
%RSD	1.285	.3056	.1474	.0236	.7287	1.159	.3829
#1	.4906	.4935	.4966	.4870	.4951	.4997	2.422
#2	.4817	.4956	.4977	.4869	.5002	.5080	2.435
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4878	.4884	.4973	5.150	.4917	.4897	.5137
Stddev	.0006	.0012	.0013	.028	.0064	.0002	.0004
%RSD	.1161	.2431	.2520	.5482	1.298	.0404	.0716
#1	.4882	.4876	.4964	5.170	.4872	.4895	.5134
#2	.4874	.4893	.4981	5.130	.4963	.4898	.5139
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4845	.4927	.4917	-.0065	.2468	.4841	.4862
Stddev	.0042	.0044	.0021	.0054	.0004	.0019	.0138
%RSD	.8676	.8925	.4309	84.37	.1628	.3965	2.831
#1	.4874	.4958	.4902	-.0026	.2465	.4827	.4764
#2	.4815	.4896	.4932	-.0103	.2471	.4854	.4959
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	-.0080
Stddev	.0006	.0051
%RSD	3084.	64.49
#1	.0005	-.0043
#2	-.0004	-.0116
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB2 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 11:25 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.983	-.0079	-.0012	2.456	.0013	.0010	.0029
Stddev	.005	.0149	.0011	.010	.0001	.0004	.0004
%RSD	.0942	189.7	89.95	.3925	7.878	39.07	13.24
#1	4.980	.0027	-.0019	2.449	.0013	.0013	.0026
#2	4.986	-.0184	-.0004	2.462	.0014	.0007	.0032
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.41	.0015	.0023	.0062	25.18	-.0102	25.15
Stddev	.04	.0018	.0009	.0002	.10	.0081	.04
%RSD	.1420	116.5	38.79	2.598	.4099	79.31	.1586
#1	25.44	.0028	.0029	.0061	25.11	-.0045	25.13
#2	25.39	.0003	.0016	.0063	25.25	-.0160	25.18
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	-.0006	.0017	10.29	-.0050	.0010	10.15
Stddev	.0003	.0006	.0001	.06	.0016	.0011	.05
%RSD	11.02	101.5	7.162	.6037	31.38	112.8	.4711
#1	.0022	-.0010	.0016	10.24	-.0039	.0002	10.12
#2	.0026	-.0002	.0018	10.33	-.0061	.0018	10.19
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.0027	.0037	2.588	.0006	.0027	-.0145
Stddev	.0069	.0005	.0002	.018	.0015	.0043	.0088
%RSD	100.9	18.70	6.462	.6788	248.2	159.4	60.63
#1	.0020	.0030	.0039	2.575	-.0005	-.0003	-.0206
#2	.0118	.0023	.0035	2.600	.0016	.0058	-.0083
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5126	2.544
Stddev	.0051	.003
%RSD	1.003	.1037
#1	.5090	2.542
#2	.5163	2.545
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB2 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 11:29 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	-.0037	.0069	.0003	.0000	-.0020	-.0006
Stddev	.0109	.0078	.0091	.0006	.000	.0012	.0001
%RSD	155.8	207.6	131.3	185.6	116.3	62.42	10.73
#1	.0147	-.0092	.0005	.0008	.0000	-.0011	-.0006
#2	-.0007	.0018	.0133	-.0001	.0000	-.0029	-.0007
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0062	L -.0651	.0011	.0003	.0080	.0017	.0004
Stddev	.0013	.0350	.0003	.0016	.0028	.0002	.0098
%RSD	20.23	53.83	26.40	568.7	34.29	14.45	2302.
#1	-.0071	-.0403	.0013	-.0009	.0100	.0018	-.0065
#2	-.0054	-.0899	.0009	.0014	.0061	.0015	.0073
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.0074	-.0094	.0002	-.0019	-.0001	-.0028
Stddev	.0012	.0108	.0045	.0001	.0010	.0002	.0106
%RSD	12.77	145.4	48.23	31.85	55.37	317.9	374.0
#1	.0086	.0151	-.0062	.0002	-.0011	-.0002	.0047
#2	.0103	-.0002	-.0125	.0002	-.0026	.0001	-.0103
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055	-.0048	-.0053	.0059	.0030	-.0001	.0053
Stddev	.0023	.0021	.0080	.0059	.0020	.0003	.0012
%RSD	42.44	43.16	148.7	101.1	65.38	184.4	23.21
#1	.0039	-.0033	.0003	.0017	.0016	-.0003	.0045
#2	.0072	-.0063	-.0110	.0101	.0045	.0000	.0062
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0011	.0048	-.0006	-.0079
Stddev	.0029	.0023	.0321	.0002	.0022
%RSD	260.1	214.7	666.4	27.51	27.79
#1	-.0009	-.0027	.0275	-.0005	-.0095
#2	.0031	.0006	-.0179	-.0008	-.0064
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Analysis Report 02/13/04 11:33:39 page 1

Method: 2004A Sample Name: K0651-22 Operator: WM
Comment: KA0323411 REDIGEST
Run Time: 02/13/04 11:31 Type: Unk 2/13/04 Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0245	.0000	.0136	.0007	.0000	.0145	.0002
#1	.0525	-.0148	.0138	.0007	-.0001	.0141	.0001
#2	-.0035	.0147	.0133	.0007	.0000	.0149	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0493	.0001	.0015	.0104	.0288	.0155	.0053
#1	.0467	.0009	.0011	.0093	.0288	.0143	.0070
#2	.0518	-.0007	.0019	.0116	.0287	.0166	.0036

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0021	-.0001	.0154	-.0083	-.0034	.0895
#1	.0004	-.0041	.0000	.0062	-.0193	-.0033	.0892
#2	.0004	.0000	-.0002	.0247	.0028	-.0035	.0898

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	-.0001	.0010	.0125	.1550	-.0021	.0014
#1	.0045	.0011	.0009	.0164	.1532	-.0030	.0124
#2	.0145	-.0014	.0011	.0086	.1568	-.0012	-.0096

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0004	-.0083
#1	-.0002	-.0144
#2	-.0005	-.0022

Method: 2004A Sample Name: K0651-23 Operator: WM
Comment: KA0323411 REDIGEST
Run Time: 02/13/04 11:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0512	.0057	.0188	.0284	.0000	.4130	-.0003
#1	.0400	.0093	.0173	.0282	.0000	.4125	-.0002
#2	.0624	.0020	.0202	.0286	.0000	.4135	-.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.148	.0015	.0014	.0078	.0177	-.0005	.7016
#1	9.145	.0010	.0007	.0055	.0179	.0035	.6992
#2	9.150	.0020	.0022	.0101	.0175	-.0046	.7039

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.0072	.0000	12.94	-.0017	-.0022	43.94
#1	.0095	.0061	.0000	12.95	-.0006	-.0056	44.11
#2	.0094	.0082	.0000	12.94	-.0028	.0012	43.77

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	.0756	.0021	.1168	13.69	-.0016	.0013
#1	.0112	.0759	.0021	.1138	13.68	-.0023	.0096
#2	-.0014	.0754	.0022	.1198	13.69	-.0009	-.0070

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0029	.0729
#1	.0030	.0712
#2	.0028	.0746

Method: 2004A Sample Name: K0651-24 Operator: WM
Comment: KA0323411 REDIGEST
Run Time: 02/13/04 11:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0393	-.0052	.0061	.0170	.0000	1.057	.0003
#1	.0443	-.0194	.0069	.0171	.0000	1.053	.0001
#2	.0344	.0090	.0054	.0170	.0000	1.062	.0005

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.45	.0017	.0004	.0075	.0097	.0040	14.12
#1	14.46	.0019	.0011	.0057	.0098	.0020	14.13
#2	14.43	.0016	-.0003	.0094	.0096	.0060	14.12

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0321	.1064	.0000	10.76	-.0066	-.0011	>162.0
#1	.0322	.1092	-.0008	10.72	-.0050	.0020	>162.0
#2	.0320	.1037	.0008	10.79	-.0083	-.0042	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	.0475	.0026	.1471	13.37	-.0017	-.0097
#1	.0023	.0486	.0029	.1353	13.33	-.0029	-.0083
#2	.0023	.0465	.0022	.1589	13.41	-.0005	-.0110

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0037	.1688
#1	.0040	.1763
#2	.0035	.1613

Analysis Report 02/13/04 11:42:00 page 1

Method: 2004A Sample Name: K0651-24 Operator: WM
Comment: KA0323411 1/5 DILUTION REDIGEST
Run Time: 02/13/04 11:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0182	.0014	.0064	.0036	.0000	.2123	.0001
#1	.0189	-.0031	.0029	.0037	.0000	.2127	.0007
#2	.0175	.0060	.0099	.0034	.0001	.2120	-.0005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.999	.0010	.0011	.0128	.0036	.0058	2.829
#1	2.993	.0004	.0024	.0118	.0038	.0092	2.820
#2	3.005	.0016	-.0003	.0139	.0033	.0023	2.838

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0203	.0002	2.310	.0022	-.0001	103.0
#1	.0063	.0220	.0006	2.328	-.0061	.0033	103.3
#2	.0063	.0186	-.0002	2.292	.0105	-.0035	102.7

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0093	.0003	.0258	2.555	-.0015	.0096
#1	.0064	.0098	-.0006	.0312	2.551	.0008	.0234
#2	.0003	.0089	.0012	.0205	2.559	-.0039	-.0041

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0005	.0248
1	.0000	.0230
#2	.0011	.0266

Method: 2004A Sample Name: PBS Operator: WM
Comment: KA0323411 5/10 DILUTION K0651 # 11
Run Time: 02/13/04 11:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	-.0001	.0101	-.0002	.0000	-.0007	-.0003
#1	-.0132	.0054	.0212	-.0005	.0000	-.0011	-.0002
#2	.0301	-.0056	-.0010	.0001	.0000	-.0003	-.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.0004	.0000	.0087	.0037	-.0003	-.0040
#1	-.0025	-.0001	.0001	.0079	.0045	.0069	-.0096
#2	-.0025	.0008	-.0002	.0095	.0029	-.0075	.0015

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0027	-.0003	.0243	.0044	-.0020	.0154
#1	.0004	-.0034	-.0009	.0404	-.0006	-.0025	.0126
#2	-.0002	-.0020	.0004	.0083	.0094	-.0014	.0183

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257	-.0006	.0000	.0205	.0411	.0011	-.0083
#1	.0218	-.0011	.0005	.0205	.0424	.0010	-.0124
#2	.0296	.0000	-.0005	.0205	.0399	.0012	-.0041

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0006	-.0095
#1	-.0007	-.0077
#2	-.0004	-.0113

Method: 2004A Sample Name: LCSS Operator: WM
Comment: KA0323411 5/10 DILUTION K0651 # 11
Run Time: 02/13/04 11:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	45.69	.1460	1.032	.9598	.2300	.2913	.3631
#1	46.39	.1308	1.052	.9722	.2339	.2960	.3672
#2	45.00	.1612	1.012	.9474	.2261	.2866	.3590

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.40	.8090	1.210	.4927	68.56	.6343	15.19
#1	58.23	.8190	1.224	.5001	69.45	.6466	15.48
#2	56.57	.7989	1.197	.4854	67.66	.6220	14.90

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.138	.2691	.4220	19.86	.8874	.4960	5.454
#1	2.157	.2733	.4264	20.35	.9140	.5065	5.607
#2	2.119	.2650	.4175	19.37	.8608	.4856	5.302

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4600	.9435	1.485	5.058	5.779	1.255	.4182
#1	.4560	.9608	1.503	5.130	5.856	1.272	.4240
#2	.4639	.9261	1.466	4.987	5.702	1.237	.4124

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0369	.6632
1	.0379	.6683
#2	.0360	.6581

Analysis Report 02/13/04 11:55:20 page 1

Method: 2004A Sample Name: K0651-11 Operator: WM
Comment: KA0323411 5/10 DILUTION
Run Time: 02/13/04 11:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.41	.0437	.1102	.2781	.0007	.0097	.0229
#1	24.70	.0465	.1204	.2803	.0007	.0122	.0230
#2	24.13	.0409	.0999	.2760	.0007	.0072	.0228

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.72	.4076	.0561	10.89	558.5	1.610	7.184
#1	19.81	.4108	.0560	11.03	564.0	1.627	7.269
#2	19.62	.4045	.0561	10.75	553.0	1.594	7.099

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.647	.0922	.4746	6.246	.0046	.0010	.7628
#1	4.682	.0954	.4800	6.298	-.0037	.0005	.7760
#2	4.612	.0889	.4693	6.194	.0129	.0014	.7495

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9278	.1636	11.19	2.108	3.768	1.544	-.0852
#1	.9367	.1661	11.31	2.150	3.819	1.563	-.0975
#2	.9190	.1611	11.07	2.066	3.718	1.524	-.0729

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0155	.1087
#1	.0156	.1091
#2	.0153	.1083

Method: 2004A Sample Name: K0651-11D Operator: WM
Comment: KA0323411 5/10 DILUTION
Run Time: 02/13/04 11:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.97	.0518	.1078	.3160	.0008	.0379	.0229
#1	36.97	.0643	.1064	.3160	.0009	.0390	.0220
#2	36.97	.0393	.1092	.3160	.0007	.0367	.0239

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.17	.4071	.0565	10.23	526.8	1.495	9.401
#1	18.28	.4074	.0573	10.31	529.5	1.483	9.481
#2	18.06	.4068	.0557	10.16	524.1	1.506	9.321

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.369	.0816	.4260	8.740	-.0031	.0002	.8374
#1	4.377	.0841	.4273	8.837	-.0004	.0058	.8444
#2	4.361	.0792	.4247	8.642	-.0059	-.0054	.8303

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9703	.1850	10.39	2.021	4.327	2.117	-.0637
#1	.9696	.1880	10.36	2.022	4.342	2.131	-.0747
#2	.9709	.1820	10.43	2.021	4.313	2.104	-.0528

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0232	.1130
#1	.0235	.1134
#2	.0229	.1127

Method: 2004A Sample Name: K0651-11S Operator: WM
Comment: KA0323411 5/10 DILUTION
Run Time: 02/13/04 12:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	30.66	.2739	.6183	2.327	.0461	.5190	.0735
#1	31.03	.2564	.6286	2.352	.0465	.5249	.0748
#2	30.29	.2915	.6079	2.302	.0456	.5131	.0721

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.36	.6274	.5625	11.25	563.7	2.075	8.458
#1	18.68	.6348	.5678	11.39	572.2	2.084	8.548
#2	18.04	.6201	.5572	11.11	555.3	2.065	8.369

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.325	.5889	.9704	7.670	.5021	.0467	.7817
#1	5.383	.5924	.9789	7.765	.5192	.0481	.7880
#2	5.267	.5855	.9619	7.575	.4850	.0454	.7754

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9965	.6760	12.01	2.160	5.678	1.857	.4087
#1	1.002	.6850	12.06	2.173	5.744	1.881	.4266
#2	.9912	.6671	11.96	2.147	5.612	1.834	.3908

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0178	.1088
#1	.0180	.1144
#2	.0176	.1032

Method: 2004A Sample Name: K0651-11L Operator: WM
Comment: KA0323411 1/5 X 5/10 DILUTION
Run Time: 02/13/04 12:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.721	.0318	.0089	.0546	.0001	.0077	.0043
#1	4.743	.0152	.0099	.0541	.0001	.0071	.0046
#2	4.698	.0484	.0079	.0551	.0001	.0083	.0039

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.824	.0779	.0118	2.146	107.2	.3056	1.364
#1	3.810	.0776	.0121	2.143	107.6	.3065	1.370
#2	3.838	.0782	.0116	2.149	106.8	.3048	1.358

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8780	.0178	.0893	1.306	-.0066	.0014	.1432
#1	.8755	.0164	.0884	1.305	-.0226	.0014	.1416
#2	.8805	.0192	.0902	1.307	.0094	.0014	.1448

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1784	.0307	2.079	.4668	.7320	.2978	-.0336
#1	.1770	.0290	2.075	.4540	.7339	.2983	-.0405
#2	.1798	.0323	2.083	.4796	.7302	.2973	-.0267

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0027	.0112
#1	.0029	.0180
#2	.0025	.0045

Method: 2004A Sample Name: CCVA3 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:06 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4875	.4890	.4800	.4847	.4844	.4900	.4901
Stddev	.0137	.0092	.0092	.0013	.0002	.0002	.0046
%RSD	2.814	1.890	1.920	.2755	.0379	.0475	.9388
#1	.4778	.4956	.4865	.4837	.4843	.4899	.4868
#2	.4972	.4825	.4735	.4856	.4846	.4902	.4933
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4855	.4952	.4957	.4848	.5008	.4954	2.429
Stddev	.0039	.0035	.0023	.0095	.0010	.0074	.004
%RSD	.8078	.7145	.4636	1.964	.2061	1.502	.1804
#1	.4883	.4927	.4941	.4916	.5001	.5006	2.426
#2	.4827	.4977	.4973	.4781	.5016	.4901	2.432
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4889	.4926	.4949	5.156	.4664	.4874	.5097
Stddev	.0041	.0032	.0014	.030	.0064	.0024	.0046
%RSD	.8372	.6568	.2777	.5813	1.365	.4973	.9103
#1	.4860	.4903	.4939	5.135	.4709	.4857	.5064
#2	.4918	.4949	.4958	5.177	.4619	.4892	.5129
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4902	.4961	.4944	.0132	.2575	.4876	.4801
Stddev	.0038	.0010	.0032	.0021	.0005	.0009	.0047
%RSD	.7796	.1961	.6446	15.82	.1984	.1843	.9859
#1	.4875	.4954	.4921	.0117	.2571	.4869	.4767
#2	.4929	.4967	.4966	.0146	.2578	.4882	.4834
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0005	-.0049
Stddev	.0000	.0015
%RSD	1.761	30.40
#1	-.0005	-.0059
#2	-.0005	-.0038
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB3 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.957	-.0046	.0097	2.470	.0014	.0024	.0024
Stddev	.070	.0026	.0087	.004	.0000	.0003	.0003
%RSD	1.418	55.93	89.93	.1564	.5651	14.29	10.99
#1	4.907	-.0065	.0159	2.473	.0014	.0026	.0023
#2	5.006	-.0028	.0035	2.468	.0014	.0021	.0026
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.46	.0022	.0022	-.0002	25.26	-.0085	25.10
Stddev	.00	.0011	.0008	.0031	.08	.0105	.03
%RSD	.0182	48.79	36.54	1448.	.3194	123.8	.1032
#1	25.46	.0029	.0016	-.0024	25.20	-.0159	25.12
#2	25.46	.0014	.0028	.0020	25.32	-.0011	25.08
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0000	.0014	10.16	.0066	.0049	9.971
Stddev	.0002	.0012	.0006	.02	.0023	.0005	.057
%RSD	7.541	42920.	46.84	.2350	35.38	11.16	.5686
#1	.0025	.0008	.0018	10.14	.0050	.0045	9.931
#2	.0027	-.0008	.0009	10.18	.0083	.0053	10.01
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060	.0035	.0046	2.597	.0039	.0026	-.0103
Stddev	.0077	.0003	.0005	.012	.0013	.0020	.0243
%RSD	127.7	9.495	10.75	.4550	34.17	77.13	235.4
#1	.0006	.0037	.0042	2.589	.0029	.0040	.0069
#2	.0115	.0032	.0049	2.606	.0048	.0012	-.0275
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5023	2.559
Stddev	.0011	.000
%RSD	.2252	.0011
#1	.5015	2.559
#2	.5031	2.559
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB3 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:12 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0161	-.0065	-.0027	.0004	.0000	-.0026	.0003
Stddev	.0020	.0026	.0031	.0005	.000	.0018	.0006
%RSD	12.39	39.93	115.6	115.3	247.1	70.01	188.3
#1	.0176	-.0046	-.0049	.0001	.0000	-.0013	.0007
#2	.0147	-.0083	-.0005	.0007	.0000	-.0039	-.0001
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0096	L -.1301	-.0004	.0010	.0057	.0025	-.0066
Stddev	.0030	.0483	.0033	.0003	.0047	.0005	.0042
%RSD	31.43	37.09	753.5	31.96	81.96	18.63	64.18
#1	-.0075	-.1642	-.0028	.0008	.0024	.0028	-.0096
#2	-.0118	-.0960	.0019	.0013	.0091	.0022	-.0036
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129	-.0088	-.0047	.0000	-.0014	.0007	.0061
Stddev	.0053	.0087	.0015	.0000	.0036	.0000	.0045
%RSD	40.84	99.54	32.16	.5003	258.1	6.600	73.63
#1	.0092	-.0149	-.0036	.0000	-.0039	.0007	.0029
#2	.0166	-.0026	-.0057	.0000	.0012	.0006	.0092
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0009	-.0065	.0035	.0009	-.0001	.0066
Stddev	.0055	.0021	.0027	.0010	.0017	.0002	.0054
%RSD	82.55	237.7	41.51	28.25	178.7	166.7	82.93
#1	.0028	-.0006	-.0084	.0042	.0021	-.0002	.0027
#2	.0105	.0023	-.0046	.0028	-.0002	.0000	.0104
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0019	.0124	-.0008	.0000
Stddev	.0023	.0019	.0039	.0004	.002
%RSD	178.8	99.13	31.49	46.57	1703000.
#1	-.0003	-.0032	.0096	-.0006	-.0017
#2	.0029	-.0006	.0151	-.0011	.0017
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323411 K0677
Run Time: 02/13/04 12:17 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0140	-.0143	.0059	.0004	.0000	.0038	.0006
#1	.0231	-.0211	.0054	.0005	.0000	.0034	.0007
#2	.0050	-.0074	.0064	.0004	.0000	.0042	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0007	.0012	.0078	.0029	.0192	.0023
#1	.0096	.0004	.0005	.0093	.0041	.0155	.0006
#2	-.0043	.0011	.0019	.0063	.0017	.0229	.0040

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0006	-.0003	.0105	-.0105	-.0068	.0061
#1	.0002	.0026	.0000	-.0012	-.0138	-.0051	.0076
#2	.0002	-.0015	-.0006	.0221	-.0072	-.0084	.0046

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	.0004	.0019	.0262	.0499	-.0037	-.0083
#1	.0070	.0002	.0020	.0312	.0508	-.0069	-.0165
#2	.0064	.0005	.0017	.0211	.0489	-.0005	.0000

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0003	-.0060
#1	-.0002	-.0022
#2	-.0003	-.0097

Good re-run

Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323411 K0677
Run Time: 02/13/04 12:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0055	.0116	-.0004	.0000	.0034	.0001
#1	.0175	.0120	.0079	-.0002	.0000	.0035	.0002
#2	-.0161	-.0011	.0153	-.0005	.0000	.0033	.0000

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.0005	.0006	.0039	.0030	-.0046	-.0019
#1	.0061	-.0007	.0013	.0022	.0035	.0057	-.0028
#2	.0036	.0017	-.0001	.0056	.0025	-.0149	-.0011

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0015	-.0004	-.0078	-.0011	-.0033	.0097
#1	.0001	.0013	.0005	-.0056	-.0028	-.0031	.0112
#2	.0001	-.0043	-.0013	-.0100	.0006	-.0035	.0083

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	-.0036	.0016	.0071	.0534	.0008	.0103
#1	.0112	-.0047	.0011	.0033	.0531	.0008	.0247
#2	.0064	-.0026	.0021	.0110	.0538	.0008	-.0041

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0005	-.0031
#1	-.0003	-.0053
#2	-.0006	-.0009

Analysis Report 02/13/04 12:25:48 page 1

Method: 2004A Sample Name: LCSW Operator: WM
Comment: KA0323411 K0677
Run Time: 02/13/04 12:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0119	.0027	.0001	.0000	.0043	.0001
#1	.0078	-.0028	-.0015	-.0003	.0000	.0044	-.0003
#2	.0035	-.0211	.0069	.0004	.0000	.0042	.0005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0036	.0001	.0010	.0055	.0032	.0083	.0026
#1	-.0039	-.0015	.0012	.0070	.0029	.0063	-.0019
#2	-.0032	.0018	.0008	.0040	.0035	.0103	.0070

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0007	.0008	-.0102	.0022	-.0030	.0084
#1	.0003	-.0015	.0005	-.0108	.0050	-.0035	.0078
#2	.0004	.0028	.0012	-.0096	-.0005	-.0026	.0090

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.0012	.0015	.0077	.0519	-.0015	.0069
#1	.0095	.0026	.0021	.0003	.0529	.0008	.0151
#2	.0022	-.0002	.0009	.0151	.0510	-.0038	-.0014

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0003	-.0073
#1	-.0004	-.0056
#2	-.0003	-.0090

Bee re-run tube in sample

[illegible] WM 2/13/04

Method: 2004A Sample Name: LCSW Operator: WM
Comment: KA0323411 K0677
Run Time: 02/13/04 12:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.995	2.570	2.553	5.261	.1140	.9932	1.243
#1	5.006	2.563	2.548	5.248	.1141	.9937	1.239
#2	4.984	2.577	2.559	5.275	.1139	.9928	1.247

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.78	.5078	1.252	.6274	2.552	2.471	12.32
#1	12.84	.5070	1.248	.6292	2.547	2.459	12.35
#2	12.72	.5086	1.256	.6256	2.557	2.483	12.29

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.250	.9894	1.257	13.13	2.505	.6224	13.12
#1	1.250	.9840	1.254	13.20	2.494	.6226	13.20
#2	1.251	.9948	1.260	13.06	2.515	.6221	13.05

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	1.262	1.246	.0740	.0501	.0012	2.545
#1	.0050	1.260	1.242	.0775	.0512	.0018	2.520
#2	.0078	1.264	1.250	.0704	.0489	.0007	2.570

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0001	.0008
#1	.0000	.0011
#2	.0001	.0004

Method: 2004A Sample Name: K0677-07 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0162	.0152	-.0005	.0003	.0000	.0006	-.0001
#1	.0246	.0166	.0064	.0004	.0001	.0013	-.0006
#2	.0078	.0137	-.0074	.0002	.0000	-.0001	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055	.0006	.0004	.0083	.0060	.0169	-.0019
#1	.0007	.0002	.0009	.0049	.0056	.0121	-.0062
#2	.0104	.0010	-.0001	.0116	.0065	.0218	.0023

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0010	.0003	.0008	.0011	-.0021	.0059
#1	.0004	.0008	.0003	-.0077	.0005	.0008	.0092
#2	.0001	-.0028	.0003	.0094	.0016	-.0049	.0025

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0032	.0033	.0104	.0240	-.0013	.0034
#1	.0101	.0037	.0034	.0027	.0234	-.0003	.0151
#2	-.0033	.0026	.0032	.0181	.0246	-.0023	-.0083

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0006	-.0056
#1	-.0008	-.0082
#2	-.0003	-.0030

Method: 2004A Sample Name: K0677-14 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0231	.0040	.0086	.0016	-.0001	.0080	.0005
#1	.0161	.0017	.0123	.0017	-.0001	.0077	.0006
#2	.0301	.0063	.0049	.0016	-.0001	.0084	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0659	.0024	.0017	.0107	.0539	.0166	.0068
#1	.0643	.0022	.0017	.0111	.0538	.0115	.0058
#2	.0675	.0026	.0017	.0102	.0539	.0218	.0079

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0025	.0021	.0044	-.0121	-.0053	.0306
#1	.0011	-.0033	.0019	.0047	-.0105	-.0064	.0293
#2	.0012	-.0018	.0022	.0042	-.0138	-.0041	.0320

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	.0014	.0026	.0000	.0701	.0019	-.0028
#1	.0073	.0047	.0024	-.0009	.0696	-.0014	-.0096
#2	.0056	-.0019	.0028	.0009	.0705	.0052	.0041

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0001	-.0009
#1	-.0004	.0043
#2	.0002	-.0061

Method: 2004A Sample Name: K0677-14D Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	-.0101	.0025	.0018	-.0001	.0029	.0003
#1	.0160	-.0111	-.0059	.0015	.0000	.0023	.0000
#2	.0371	-.0092	.0109	.0021	-.0002	.0034	.0006

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0571	.0016	.0012	.0077	.0520	.0103	.0047
#1	.0585	.0013	.0012	.0068	.0513	.0040	.0053
#2	.0557	.0019	.0012	.0086	.0527	.0166	.0041

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0008	.0011	-.0014	-.0160	.0003	.0133
#1	.0012	-.0002	.0021	.0001	-.0193	.0020	.0127
#2	.0010	.0018	.0002	-.0028	-.0127	-.0014	.0140

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	.0017	.0027	.0139	.0677	.0000	-.0096
#1	.0039	.0005	.0027	.0086	.0704	-.0003	-.0137
#2	.0089	.0030	.0027	.0193	.0651	.0003	-.0055

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0009	-.0067
#1	-.0010	-.0118
#2	-.0008	-.0017

Method: 2004A Sample Name: K0677-14S Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.995	.5118	1.001	2.056	.0455	1.006	.0504
#1	2.014	.5085	1.003	2.042	.0454	1.004	.0501
#2	1.977	.5151	.9992	2.071	.0456	1.008	.0508

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0536	.2066	.5094	.2535	1.071	.5117	-.0029
#1	.0593	.2049	.5080	.2536	1.069	.5025	-.0056
#2	.0478	.2083	.5108	.2534	1.073	.5209	-.0001

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5017	1.011	.5094	-.0016	1.019	.0467	.0225
#1	.5034	1.006	.5077	.0145	.9987	.0458	.0214
#2	.5001	1.016	.5110	-.0177	1.039	.0475	.0235

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	.4985	.5085	.0784	.0503	-.0015	1.015
#1	.0092	.4990	.5083	.0674	.0503	-.0014	.9938
#2	.0090	.4980	.5087	.0894	.0502	-.0016	1.036

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0007	-.0011
#1	-.0007	-.0028
#2	-.0006	.0006

Method: 2004A Sample Name: K0677-14L Operator: WM
Comment: KA0323411 1/5 DILUTION
Run Time: 02/13/04 12:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	-.0028	.0072	.0003	.0000	.0005	.0003
#1	.0119	.0018	.0049	.0005	.0000	-.0001	-.0003
#2	.0063	-.0074	.0094	.0001	.0001	.0011	.0009

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0007	.0020	.0077	.0094	.0034	-.0057
#1	.0011	.0015	.0021	.0104	.0103	.0051	-.0015
#2	-.0004	-.0001	.0019	.0049	.0085	.0017	-.0100

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0015	.0006	-.0051	.0050	-.0023	.0087
#1	.0002	-.0018	.0005	-.0029	-.0017	-.0020	.0073
#2	.0001	-.0011	.0006	-.0072	.0116	-.0027	.0101

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0005	.0006	.0053	.0126	-.0011	-.0034
#1	.0025	.0000	.0007	.0050	.0132	-.0017	-.0220
#2	.0003	-.0009	.0005	.0056	.0120	-.0006	.0151

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	-.0045
#1	.0002	-.0040
#2	.0004	-.0051

Method: 2004A Sample Name: CCVA4 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:45 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5140	.5143	.4725	.4839	.4839	.4900	.4923
Stddev	.0198	.0058	.0014	.0019	.0014	.0015	.0014
%RSD	3.859	1.120	.2894	.3854	.2971	.3090	.2780
#1	.5281	.5102	.4716	.4825	.4829	.4889	.4913
#2	.5000	.5183	.4735	.4852	.4849	.4910	.4932
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4932	.4949	.4987	.4806	.5005	.4987	2.427
Stddev	.0165	.0047	.0060	.0074	.0019	.0138	.000
%RSD	3.345	.9566	1.206	1.538	.3865	2.762	.0076
#1	.4815	.4915	.4945	.4858	.4991	.4890	2.427
#2	.5048	.4982	.5030	.4754	.5018	.5085	2.427
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4898	.4915	.4967	5.093	.4851	.4783	.5059
Stddev	.0031	.0014	.0017	.040	.0047	.0032	.0135
%RSD	.6424	.2775	.3467	.7751	.9590	.6688	2.669
#1	.4875	.4905	.4955	5.121	.4819	.4760	.5155
#2	.4920	.4925	.4979	5.065	.4884	.4806	.4964
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4851	.4946	.4960	.0013	.2515	.4860	.4800
Stddev	.0032	.0042	.0041	.0071	.0016	.0068	.0126
%RSD	.6549	.8590	.8270	562.6	.6503	1.402	2.627
#1	.4873	.4916	.4931	.0063	.2503	.4812	.4711
#2	.4828	.4976	.4989	-.0038	.2526	.4908	.4889
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0005	-.0049
Stddev	.0002	.0096
%RSD	44.12	196.3
#1	-.0003	.0019
#2	-.0006	-.0116
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB4 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 12:47 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.996	.0174	.0035	2.472	.0013	.0014	.0027
Stddev	.016	.0026	.0119	.007	.0000	.0004	.0006
%RSD	.3116	15.17	337.7	.2882	1.542	25.24	22.71
#1	4.985	.0193	-.0049	2.477	.0013	.0012	.0032
#2	5.007	.0155	.0119	2.467	.0013	.0017	.0023
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.46	.0038	.0013	.0002	25.23	-.0065	25.05
Stddev	.11	.0017	.0002	.0086	.07	.0037	.02
%RSD	.4283	44.36	14.52	3519.	.2721	56.20	.0601
#1	25.38	.0026	.0012	-.0058	25.18	-.0039	25.06
#2	25.54	.0050	.0014	.0063	25.27	-.0091	25.04
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-.0007	.0006	10.19	-.0033	.0008	10.03
Stddev	.0000	.0000	.0007	.10	.0023	.0011	.10
%RSD	.4038	.0122	122.0	.9621	70.59	138.7	.9894
#1	.0027	-.0007	.0001	10.12	-.0017	.0016	9.960
#2	.0026	-.0007	.0011	10.26	-.0050	.0000	10.10
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0028	.0043	2.608	.0029	.0023	.0110
Stddev	.0043	.0017	.0009	.010	.0002	.0012	.0194
%RSD	44.33	59.50	20.73	.3825	5.646	54.36	177.0
#1	.0129	.0016	.0049	2.601	.0030	.0014	-.0028
#2	.0067	.0039	.0037	2.616	.0028	.0032	.0247
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5054	2.562
Stddev	.0071	.004
%RSD	1.400	.1632
#1	.5004	2.559
#2	.5104	2.565
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB4 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:13 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0147	.0050	.0064	.0002	.0000	-.0027	.0001
Stddev	.0020	.0033	.0133	.0004	.000	.0009	.0001
%RSD	13.48	65.69	206.7	241.0	1.599	32.35	50.22
#1	-.0161	.0074	.0158	-.0001	.0000	-.0034	.0001
#2	-.0133	.0027	-.0030	.0005	.0000	-.0021	.0002
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0089	L -.0837	-.0013	.0005	.0036	.0001	-.0076
Stddev	.0061	.1052	.0016	.0016	.0023	.0007	.0012
%RSD	67.90	125.8	119.8	329.1	64.06	650.5	16.18
#1	-.0046	-.1580	-.0024	-.0007	.0019	.0006	-.0067
#2	-.0132	-.0093	-.0002	.0016	.0052	-.0004	-.0085
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0025	-.0045	.0001	-.0017	-.0005	.0072
Stddev	.0028	.0068	.0024	.0003	.0010	.0006	.0090
%RSD	1030.	273.0	53.90	506.2	60.66	111.3	125.9
#1	.0017	-.0073	-.0028	-.0001	-.0010	-.0009	.0136
#2	-.0023	.0023	-.0062	.0003	-.0025	-.0001	.0008
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	.0001	-.0030	.0103	-.0005	-.0003	.0071
Stddev	.0148	.0026	.0025	.0004	.0020	.0000	.0004
%RSD	192.0	2742.	83.39	3.884	428.9	6.621	5.789
#1	-.0028	-.0018	-.0012	.0101	-.0019	-.0003	.0068
#2	.0182	.0020	-.0048	.0106	.0009	-.0003	.0074
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0000	.0014	-.0004	-.0022
Stddev	.0002	.0033	.0039	.0001	.0022
%RSD	46.73	102500.	283.6	23.01	99.87
#1	.0005	-.0023	.0041	-.0003	-.0038
#2	.0002	.0023	-.0014	-.0005	-.0006
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323411 K0648
Run Time: 02/13/04 13:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	-.0006	.0049	.0000	-.0001	-.0030	-.0001
#1	-.0007	.0091	.0084	.0000	-.0001	-.0034	-.0005
#2	.0161	-.0102	.0015	.0000	-.0001	-.0027	.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0139	-.0003	.0008	.0131	-.0029	.0097	.0040
#1	-.0129	-.0014	.0019	.0130	-.0030	.0132	.0006
#2	-.0150	.0008	-.0003	.0132	-.0028	.0063	.0074

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0044	-.0008	-.0245	.0005	.0000	-.0077
#1	.0000	-.0049	-.0008	-.0295	-.0039	.0016	-.0070
#2	.0000	-.0039	-.0008	-.0195	.0050	-.0016	-.0084

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0012	-.0002	-.0050	.0463	.0003	.0192
#1	.0034	.0026	-.0001	-.0074	.0452	.0019	.0192
#2	-.0003	-.0002	-.0002	-.0027	.0474	-.0012	.0192

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0001	-.0122
#1	.0002	-.0079
#2	-.0003	-.0165

Method: 2004A Sample Name: LCSW1 Operator: WM
Comment: KA0323411 K0648
Run Time: 02/13/04 13:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.946	.5169	.9958	2.052	.0451	1.009	.0497
#1	1.958	.5021	.9879	2.047	.0449	1.007	.0488
#2	1.933	.5316	1.004	2.056	.0453	1.010	.0507

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0146	.2021	.5024	.2539	1.009	.4885	.0101
#1	-.0211	.2016	.5004	.2537	1.008	.4831	.0075
#2	-.0082	.2025	.5044	.2541	1.011	.4940	.0126

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4933	1.006	.5057	-.0084	1.007	.0441	-.0025
#1	.4925	1.005	.5041	-.0045	1.010	.0473	.0002
#2	.4941	1.006	.5074	-.0122	1.004	.0409	-.0053

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2010	.4920	.4975	.0900	.0627	-.0023	1.015
#1	.1977	.4901	.4960	.0906	.0625	.0004	1.017
#2	.2044	.4939	.4990	.0894	.0629	-.0049	1.013

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0003	-.0097
#1	-.0002	-.0041
#2	-.0004	-.0153

Method: 2004A Sample Name: LCSW2 Operator: WM
Comment: KA0323411 K0648
Run Time: 02/13/04 13:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.941	.5107	.9970	2.022	.0448	.9713	.0493
#1	1.932	.5158	.9968	2.029	.0447	.9728	.0494
#2	1.950	.5056	.9973	2.015	.0448	.9699	.0492

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0155	.2006	.4985	.2538	.9974	.5136	.0084
#1	-.0132	.1991	.4974	.2549	.9981	.5168	.0050
#2	-.0179	.2021	.4996	.2528	.9967	.5105	.0118

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4901	.9610	.4967	-.0160	.9871	.0419	-.0040
#1	.4879	.9628	.4928	-.0016	.9854	.0409	-.0074
#2	.4923	.9592	.5006	-.0304	.9888	.0429	-.0006

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1967	.4876	.4912	.0820	.0662	-.0005	.9938
#1	.1979	.4871	.4892	.0811	.0625	-.0005	1.005
#2	.1954	.4880	.4932	.0829	.0699	-.0005	.9829

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0003	-.0114
#1	.0001	-.0103
#2	-.0007	-.0124

Method: 2004A Sample Name: K0648-06 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0581	.0473	-.0242	.0556	.0000	1.644	.0005
#1	.0791	.0408	-.0163	.0559	.0000	1.651	.0003
#2	.0371	.0538	-.0321	.0553	.0000	1.638	.0008

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	285.8	-.0009	.0006	.0072	.0243	.0005	>900.0
#1	285.4	.0007	-.0003	.0088	.0243	-.0067	>900.0
#2	286.3	-.0025	.0015	.0056	.0243	.0077	>900.0

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3905	.0878	.0002	>225.0	.0380	-.0023	^ *****
#1	.3886	.0861	-.0006	>225.0	.0369	-.0013	^ -----
#2	.3924	.0895	.0011	>225.0	.0391	-.0033	^ -----

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0151	-.0011	.0226	.2996	5.711	.0011	-.0734
#1	-.0181	-.0005	.0224	.3044	5.730	.0029	-.0714
#2	-.0120	-.0017	.0228	.2949	5.693	-.0008	-.0755

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1133	5.156
#1	.1128	5.147
#2	.1138	5.164

* SO2 dilution

2/13/04

Analysis Report 02/13/04 13:31:22 page 1

Method: 2004A Sample Name: K0648-07 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0190	k .0273	k -.0363	.0332	-.0001	5.522	k .0025
#1	k .0400	.0249	-.0415	.0326	-.0001	5.440	k .0026
#2	k -.0020	k .0297	k -.0311	.0339	-.0001	5.605	k .0023

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	893.0	k .0142	.0209	.0114	k .0244	k .0003	>900.0
#1	890.7	k .0144	.0216	.0109	k .0242	k .0006	>900.0
#2	895.3	k .0141	.0203	.0120	k .0246	k .0000	>900.0

Elem	Mn2576 *	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	.0114	k .0402	k>225.0	k .0309	k .0020	^ *****
#1	^ -----	.0120	k .0396	k>225.0	k .0215	k .0002	^ -----
#2	^ -----	.0108	k .0407	k>225.0	k .0402	k .0039	^ -----

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0263	-.0050	k 1.225	.0924	k 11.19	-.0019	k -.0998
#1	-.0285	-.0026	k 1.215	.0870	k 10.99	-.0030	k -.0867
#2	-.0240	-.0075	k 1.235	.0977	k 11.39	-.0008	k -.1128

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5551	k 9.795
#1	.5652	k 9.792
#2	.5451	k 9.799

* 50 dilution
WM
2/13/04

Method: 2004A Sample Name: K0648-08 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0273	.0819	-.0025	.0398	.0000	5.471	.0115
#1	.0315	.0870	-.0025	.0399	.0000	5.453	.0117
#2	.0231	.0768	-.0025	.0397	-.0001	5.488	.0113

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	568.9	-.0013	.0035	.0078	.0257	.0008	>900.0
#1	568.5	-.0017	.0035	.0127	.0246	.0014	>900.0
#2	569.4	-.0009	.0036	.0029	.0267	.0002	>900.0

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.527	.0898	.0105	>225.0	.0314	-.0045	^ *****
#1	1.527	.0902	.0102	>225.0	.0292	-.0068	^ -----
#2	1.526	.0894	.0107	>225.0	.0336	-.0021	^ -----

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0061	.0009	.3652	.3106	6.008	-.0013	-.0750
#1	-.0056	.0011	.3667	.3056	5.994	-.0012	-.0544
#2	-.0067	.0007	.3638	.3157	6.021	-.0014	-.0957

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.4205	9.606
#1	.4219	9.601
#2	.4192	9.611

* solution
2/13/04

Method: 2004A Sample Name: K0648-09 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0225	.3628	-.0102	.0602	-.0001	1.833	.1102
#1	.0190	.3580	-.0025	.0603	-.0001	1.835	.1098
#2	.0261	.3675	-.0178	.0601	-.0001	1.831	.1107

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	298.0	-.0017	.0082	.0075	.0206	.1812	>900.0
#1	296.3	-.0023	.0077	.0070	.0208	.1866	>900.0
#2	299.7	-.0011	.0087	.0081	.0203	.1759	>900.0

Elem	Mn2576 *	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1218	.0715	.0052	>225.0	.0408	-.0002	^ *****
#1	.1214	.0698	.0056	>225.0	.0480	-.0002	^ -----
#2	.1221	.0732	.0049	>225.0	.0337	-.0002	^ -----

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0089	-.0021	.5205	.0221	1.131	.0003	-.0502
#1	-.0109	.0000	.5180	.0188	1.137	-.0004	-.0578
#2	-.0070	-.0042	.5230	.0254	1.125	.0010	-.0427

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1521	14.79
#1	.1529	14.69
#2	.1513	14.89

* See dilution
2/13/04

Method: 2004A Sample Name: K0648-08L Operator: WM
Comment: KA0323411 1/5 DILUTION
Run Time: 02/13/04 13:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0274	.0179	-.0237	.0086	.0000	1.154	.0032
#1	.0064	.0152	-.0158	.0086	.0000	1.152	.0038
#2	.0484	.0207	-.0316	.0087	.0000	1.156	.0026

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	128.5	-.0005	.0004	.0041	.0182	-.0008	247.7
#1	128.6	-.0015	.0004	.0029	.0183	.0001	247.4
#2	128.3	.0006	.0003	.0054	.0181	-.0017	248.0

Elem	Mn2576 *	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3361	.0162	.0022	57.31	.0088	-.0001	>162.0
#1	.3354	.0153	.0020	57.51	.0083	-.0025	>162.0
#2	.3369	.0171	.0024	57.11	.0094	.0023	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	.0002	.0903	.0322	1.199	-.0028	-.0226
#1	-.0061	.0007	.0900	.0336	1.196	-.0019	-.0081
#2	-.0025	-.0003	.0905	.0307	1.201	-.0036	-.0370

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0887	2.332
#1	.0891	2.343
#2	.0883	2.320

* 500 dilution
2/13/04

Method: 2004A Sample Name: K0648-06 Operator: WM
Comment: KA0323411 1/10 DILUTION
Run Time: 02/13/04 13:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0149	-.0079	.0065	-.0001	.1885	.0005
#1	.0315	.0213	-.0178	.0066	-.0001	.1879	.0005
#2	-.0119	.0084	.0020	.0064	.0000	.1890	.0005

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.07	.0014	.0006	.0059	.0140	-.0071	105.8
#1	35.03	.0017	.0007	.0123	.0139	-.0034	106.4
#2	35.10	.0011	.0005	-.0006	.0141	-.0109	105.2

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0476	.0081	-.0012	28.85	-.0039	-.0010	>162.0
#1	.0479	.0084	-.0005	28.94	-.0072	-.0008	>162.0
#2	.0474	.0079	-.0019	28.76	-.0006	-.0012	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0055	.0028	.0024	.0119	.5942	-.0020	-.0130
#1	-.0084	.0014	.0022	.0110	.5969	-.0025	-.0082
#2	-.0025	.0042	.0025	.0127	.5915	-.0014	-.0178

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0132	.6538
#1	.0133	.6596
#2	.0131	.6481

Method: 2004A Sample Name: K0648-07 Operator: WM
Comment: KA0323411 1/10 DILUTION
Run Time: 02/13/04 13:48 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0246	.0097	-.0136	.0038	.0000	.6174	.0005
#1	.0093	.0120	-.0114	.0040	.0000	.6218	.0000
#2	.0400	.0074	-.0158	.0035	.0000	.6130	.0010

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	106.6	-.0005	.0018	.0060	.0144	.0017	124.9
#1	107.7	-.0003	.0020	.0033	.0142	.0012	126.4
#2	105.6	-.0007	.0015	.0086	.0145	.0023	123.5

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.118	.0005	.0051	30.29	.0044	.0017	>162.0
#1	3.143	-.0015	.0048	30.40	.0094	-.0004	>162.0
#2	3.093	.0025	.0054	30.17	-.0006	.0037	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	-.0004	.1691	-.0065	1.138	-.0016	-.0249
#1	-.0045	.0018	.1703	-.0139	1.148	-.0006	-.0318
#2	-.0011	-.0026	.1680	.0009	1.128	-.0025	-.0180

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0596	1.260
#1	.0595	1.271
#2	.0596	1.248

Method: 2004A Sample Name: CCVA5 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:51 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5044	.5099	.4823	.4854	.4897	.5013	.4873
Stddev	.0237	.0083	.0011	.0038	.0002	.0021	.0039
%RSD	4.691	1.620	.2360	.7873	.0478	.4286	.8088
#1	.5211	.5158	.4815	.4827	.4899	.5028	.4845
#2	.4877	.5041	.4831	.4881	.4896	.4998	.4901
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4922	.4947	.4972	.4925	.5041	.4940	2.488
Stddev	.0086	.0023	.0017	.0026	.0015	.0003	.000
%RSD	1.755	.4722	.3511	.5183	.3067	.0571	.0063
#1	.4861	.4931	.4959	.4943	.5030	.4942	2.488
#2	.4983	.4964	.4984	.4907	.5052	.4938	2.488
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4936	.4953	.4961	5.363	.4836	.4962	.6833
Stddev	.0030	.0063	.0042	.017	.0243	.0056	.0268
%RSD	.6154	1.264	.8431	.3178	5.022	1.137	3.918
#1	.4914	.4909	.4931	5.375	.4664	.4922	.7022
#2	.4957	.4998	.4991	5.351	.5008	.5001	.6644
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4864	.4969	.4901	.0069	.2558	.4812	.4829
Stddev	.0025	.0035	.0056	.0017	.0006	.0019	.0089
%RSD	.5078	.6955	1.137	24.42	.2156	.3890	1.833
#1	.4882	.4993	.4862	.0057	.2555	.4799	.4766
#2	.4847	.4945	.4941	.0081	.2562	.4825	.4891
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0004	-.0107
Stddev	.0003	.0031
%RSD	66.64	29.09
#1	-.0006	-.0085
#2	-.0002	-.0129
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB5 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:53 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.086	.0096	-.0073	2.483	.0013	.0041	.0024
Stddev	.034	.0006	.0007	.000	.0001	.0002	.0000
%RSD	.6582	5.950	9.828	.0104	4.306	5.983	.4781
#1	5.062	.0092	-.0078	2.483	.0013	.0042	.0024
#2	5.110	.0100	-.0068	2.484	.0014	.0039	.0024
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.38	.0043	.0012	.0076	25.41	-.0292	25.79
Stddev	.03	.0003	.0021	.0040	.17	.0146	.01
%RSD	.1304	6.657	173.9	53.41	.6525	49.97	.0554
#1	25.40	.0041	-.0003	.0047	25.29	-.0395	25.80
#2	25.36	.0045	.0027	.0104	25.53	-.0189	25.78
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0012	.0017	10.75	.0033	.0005	10.64
Stddev	.0002	.0029	.0001	.06	.0055	.0015	.11
%RSD	8.128	235.2	4.700	.5454	165.3	302.3	1.035
#1	.0023	.0033	.0016	10.79	-.0006	-.0006	10.72
#2	.0026	-.0008	.0017	10.71	.0072	.0016	10.56
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.0051	.0041	2.646	.0030	.0018	-.0090
Stddev	.0008	.0013	.0004	.017	.0021	.0009	.0087
%RSD	13.38	25.93	10.02	.6350	68.98	50.57	97.68
#1	.0053	.0060	.0038	2.634	.0015	.0025	-.0151
#2	.0064	.0042	.0044	2.658	.0044	.0012	-.0028
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5413	2.580
Stddev	.0035	.007
%RSD	.6393	.2869
#1	.5438	2.585
#2	.5389	2.575
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB5 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 13:56 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169	-.0088	.0079	.0004	.0000	.0000	.0003
Stddev	.0030	.0007	.0105	.0004	.0001	.0014	.0005
%RSD	17.55	7.627	132.6	99.16	172.2	5166.	180.9
#1	.0189	-.0092	.0153	.0007	.0001	.0010	-.0001
#2	.0148	-.0083	.0005	.0001	.0000	-.0010	.0007
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0071	L -.0713	.0005	.0008	.0049	.0006	.0029
Stddev	.0025	.0175	.0001	.0008	.0016	.0002	.0115
%RSD	35.35	24.51	17.76	108.0	32.92	36.10	404.3
#1	-.0054	-.0836	.0005	.0014	.0038	.0005	.0110
#2	-.0089	-.0589	.0006	.0002	.0061	.0008	-.0053
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0012	-.0047	-.0001	-.0008	-.0002	.0119
Stddev	.0073	.0230	.0003	.0000	.0007	.0014	.0066
%RSD	1293.	1863.	6.422	38.21	85.09	634.8	55.52
#1	-.0057	-.0150	-.0045	-.0001	-.0013	-.0012	.0072
#2	.0046	.0175	-.0049	-.0001	-.0003	.0008	.0165
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0121	-.0044	.0714	.0031	-.0002	.0002	.0024
Stddev	.0023	.0004	.0023	.0012	.0013	.0006	.0063
%RSD	19.27	9.643	3.283	38.23	581.5	289.3	261.8
#1	-.0138	-.0041	.0731	.0022	-.0012	-.0002	-.0020
#2	-.0105	-.0047	.0697	.0039	.0007	.0006	.0069
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0008	.0021	-.0006	-.0040
Stddev	.0010	.0034	.0146	.0002	.0026
%RSD	277.1	445.0	711.0	42.33	63.93
#1	.0011	.0016	.0124	-.0008	-.0022
#2	-.0003	-.0032	-.0083	-.0004	-.0058
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: K0648-08 Operator: WM
Comment: KA0323411 1/10 DILUTION
Run Time: 02/13/04 13:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078	.0155	-.0052	.0040	.0000	.6037	.0021
#1	-.0006	.0169	-.0059	.0042	.0000	.6147	.0019
#2	.0163	.0141	-.0045	.0039	.0000	.5927	.0024

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	67.43	.0004	.0002	.0026	.0141	.0035	120.3
#1	68.04	.0000	.0000	.0031	.0142	.0133	122.6
#2	66.82	.0007	.0003	.0022	.0139	-.0063	118.0

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1788	.0112	.0011	29.56	.0050	-.0022	>162.0
#1	.1830	.0117	.0000	29.80	.0149	.0012	>162.0
#2	.1746	.0107	.0022	29.32	-.0050	-.0057	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	-.0005	.0487	.0135	.6206	-.0009	-.0123
#1	-.0061	-.0007	.0496	.0105	.6339	-.0008	-.0082
#2	.0011	-.0003	.0478	.0164	.6072	-.0010	-.0165

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0468	1.213
#1	.0473	1.229
#2	.0463	1.197

Method: 2004A Sample Name: K0648-09 Operator: WM
Comment: KA0323411 1/10 DILUTION
Run Time: 02/13/04 14:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0568	-.0119	.0068	.0000	.2112	.0149
#1	.0064	.0572	-.0168	.0066	.0000	.2109	.0147
#2	.0078	.0564	-.0069	.0069	.0000	.2115	.0150

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.28	-.0019	.0012	.0022	.0128	.0224	112.9
#1	37.33	-.0007	.0013	.0042	.0128	.0305	112.8
#2	37.22	-.0031	.0010	.0001	.0127	.0144	113.1

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154	.0053	-.0005	28.18	-.0006	-.0006	>162.0
#1	.0153	.0041	.0000	28.22	-.0105	.0010	>162.0
#2	.0155	.0066	-.0010	28.14	.0094	-.0021	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0001	.0706	.0004	.1166	-.0002	-.0076
#1	.0011	-.0003	.0707	-.0026	.1170	-.0004	-.0152
#2	-.0019	.0004	.0706	.0033	.1162	-.0001	.0000

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0170	1.863
#1	.0169	1.867
#2	.0172	1.859

Method: 2004A Sample Name: K0648-08L Operator: WM
Comment: KA0323411 1/5 X 1/10 DILUTION
Run Time: 02/13/04 14:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0028	.0044	.0007	.0000	.1197	.0006
#1	.0021	.0000	.0010	.0011	.0000	.1193	.0008
#2	-.0007	.0055	.0079	.0003	.0000	.1201	.0003

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.34	-.0005	.0002	.0083	.0065	.0066	23.87
#1	13.34	-.0004	.0009	.0065	.0071	.0178	23.86
#2	13.35	-.0006	-.0005	.0100	.0059	-.0046	23.88

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0364	.0001	.0012	6.201	-.0171	-.0016	>162.0
#1	.0363	.0013	.0011	6.240	-.0050	-.0043	>162.0
#2	.0365	-.0011	.0013	6.163	-.0292	.0012	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0000	.0096	.0039	.1181	-.0010	-.0048
#1	.0000	.0007	.0093	.0062	.1192	-.0034	-.0041
#2	.0000	-.0007	.0098	.0015	.1170	.0014	-.0055

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0101	.2279
#1	.0101	.2242
#2	.0100	.2315

Method: 2004A Sample Name: CCVA6 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 14:06 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5041	.5050	.4828	.4900	.4925	.5041	.4942
Stddev	.0021	.0121	.0085	.0019	.0005	.0034	.0015
%RSD	.4241	2.405	1.765	.3945	.0982	.6717	.2942
#1	.5057	.4964	.4889	.4887	.4922	.5017	.4932
#2	.5026	.5136	.4768	.4914	.4929	.5065	.4953
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4867	.4997	.5033	.5096	.5062	.4955	2.508
Stddev	.0145	.0065	.0003	.0021	.0029	.0035	.014
%RSD	2.982	1.305	.0685	.4158	.5680	.7086	.5554
#1	.4765	.4951	.5030	.5081	.5042	.4930	2.498
#2	.4970	.5043	.5035	.5111	.5082	.4980	2.518
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4992	.4975	.5033	5.425	.4961	.5030	.6406
Stddev	.0003	.0019	.0008	.045	.0233	.0003	.0109
%RSD	.0644	.3917	.1656	.8309	4.689	.0659	1.695
#1	.4990	.4961	.5027	5.457	.4797	.5028	.6483
#2	.4995	.4989	.5039	5.393	.5126	.5032	.6329
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4865	.5020	.4951	-.0062	.2571	.4921	.4868
Stddev	.0043	.0008	.0028	.0143	.0004	.0008	.0086
%RSD	.8834	.1685	.5750	232.0	.1624	.1651	1.771
#1	.4896	.5026	.4931	.0039	.2568	.4927	.4807
#2	.4835	.5014	.4971	-.0163	.2574	.4915	.4929
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0002	-.0021
Stddev	.0003	.0020
%RSD	174.2	94.20
#1	.0000	-.0007
#2	-.0004	-.0036
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB6 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 14:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.063	.0211	.0008	2.496	.0013	.0025	.0034
Stddev	.002	.0052	.0143	.002	.0000	.0003	.0000
%RSD	.0318	24.75	1721.	.0876	2.408	10.16	.5000
#1	5.062	.0248	-.0093	2.497	.0013	.0027	.0034
#2	5.064	.0174	.0110	2.494	.0013	.0024	.0034
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.65	.0030	.0024	.0061	25.49	-.0171	25.63
Stddev	.18	.0002	.0006	.0042	.13	.0057	.12
%RSD	.7147	6.415	26.29	69.05	.4960	33.16	.4832
#1	25.52	.0028	.0029	.0091	25.40	-.0131	25.54
#2	25.78	.0031	.0020	.0031	25.58	-.0211	25.72
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0011	.0016	10.59	.0044	-.0020	10.45
Stddev	.0001	.0008	.0020	.04	.0023	.0001	.01
%RSD	2.519	75.97	125.8	.3483	53.08	6.717	.0924
#1	.0026	.0016	.0031	10.62	.0028	-.0019	10.46
#2	.0025	.0005	.0002	10.56	.0061	-.0021	10.45
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134	.0071	.0037	2.629	.0007	.0040	-.0090
Stddev	.0075	.0012	.0009	.004	.0011	.0003	.0087
%RSD	55.88	16.29	23.63	.1323	161.4	7.692	97.72
#1	.0188	.0063	.0043	2.631	-.0001	.0038	-.0028
#2	.0081	.0079	.0031	2.626	.0015	.0043	-.0151
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5309	2.580
Stddev	.0000	.005
%RSD	.0018	.1794
#1	.5309	2.583
#2	.5309	2.577
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB6 Operator: WM
Comment: KA0323411
Run Time: 02/13/04 14:11 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0105	.0009	.0002	-.0002	-.0001	-.0018	-.0003
Stddev	.0138	.0025	.0073	.0000	.0000	.0010	.0003
%RSD	131.8	292.6	2943.	13.20	57.78	56.07	126.8
#1	-.0202	-.0009	.0054	-.0001	.0000	-.0025	-.0005
#2	-.0007	.0026	-.0049	-.0002	-.0001	-.0011	.0000
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0073	-.0496	.0006	.0011	.0068	.0026	-.0084
Stddev	.0003	.0131	.0015	.0002	.0010	.0004	.0033
%RSD	3.481	26.44	234.7	15.59	14.45	16.14	39.39
#1	-.0075	-.0589	-.0004	.0010	.0075	.0023	-.0107
#2	-.0071	-.0403	.0017	.0012	.0061	.0029	-.0061
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	-.0138	-.0045	.0001	-.0021	.0007	.0050
Stddev	.0044	.0159	.0024	.0001	.0022	.0010	.0110
%RSD	61.81	115.6	53.91	106.4	107.6	158.2	219.2
#1	.0040	-.0025	-.0062	.0002	-.0005	.0014	-.0028
#2	.0103	-.0250	-.0028	.0000	-.0036	-.0001	.0128
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0050	-.0032	.0578	.0081	-.0007	.0000	.0021
Stddev	.0093	.0021	.0025	.0071	.0013	.001	.0100
%RSD	188.5	64.22	4.247	87.99	185.2	6154.	481.4
#1	.0016	-.0018	.0561	.0131	.0002	-.0006	-.0050
#2	-.0116	-.0047	.0595	.0031	-.0016	.0005	.0092
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	-.0035	-.0096	-.0005	-.0099
Stddev	.0008	.0002	.0117	.0002	.0024
%RSD	54.07	4.732	121.2	52.53	24.12
#1	-.0021	-.0036	-.0179	-.0003	-.0115
#2	-.0009	-.0034	-.0014	-.0006	-.0082
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Service Request # K2400648 (Sn, Sb)
Calibration 02-13-04B
QC in calibration 02-13-04B
QC Service Request # K2400648

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control			✓
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL			✓
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			✓

Comments:

Primary Review by JC Date 2/13/04
Secondary Review by [illegible] Date 2/13/04
R:\icp\misc\data review forms\PQ ExCell review form

ExCell Mass Calibration **Date: 2/13/04**

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1596	0.716	0.092	TRUE
23.985	5949	0.613	-0.045	FALSE
26.982	6709	0.664	-0.034	FALSE
43.956	11027	0.715	-0.02	TRUE
45.953	11534	0.715	-0.013	TRUE
50.944	12808	0.715	-0.024	TRUE
51.94	13055	0.715	0.002	TRUE
52.941	13315	0.715	-0.018	TRUE
53.949	13575	0.715	-0.03	TRUE
55.935	14082	0.715	-0.035	TRUE
56.935	14335	0.664	-0.028	TRUE
57.934	14589	0.715	-0.026	TRUE
58.933	14836	0.715	0.004	TRUE
75.92	19165	0.714	0.003	TRUE
114.904	29098	0.764	0.035	TRUE
136.906	34714	0.764	0.033	TRUE
137.906	34974	0.764	0.015	TRUE
139.905	35481	0.764	0.028	TRUE
141.908	35995	0.713	0.018	TRUE
202.972	51608	0.712	-0.015	TRUE
204.972	52115	0.712	0.002	TRUE
205.974	52375	0.711	-0.012	TRUE
206.976	52628	0.762	0	TRUE
207.977	52882	0.711	0.008	TRUE
208.98	53142	0.711	-0.005	TRUE
238.051	60584	0.66	-0.016	TRUE

Excluded In Calib | Excluded In Results | [redacted] | Multi Element | [redacted] | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	[redacted]	7Li	9Be	59Co	115In	208Pb
1	Stability 2/13/04	2/13/04 7:39:46 AM	(P)0.167	(P)6774.940	(P)3669.972	(P)30980.907	(P)51675.632	(P)25767.218
2	Stability 2/13/04	2/13/04 7:40:49 AM	(P)0.000	(P)7081.588	(P)3421.743	(P)28625.822	(P)49969.417	(P)24829.560
3	Stability 2/13/04	2/13/04 7:41:51 AM	(P)0.167	(P)7179.137	(P)3348.059	(P)27919.257	(P)49629.566	(P)24275.776
4	Stability 2/13/04	2/13/04 7:42:54 AM	(P)0.000	(P)7475.289	(P)3351.727	(P)28100.447	(P)49487.739	(P)24417.016
5	Stability 2/13/04	2/13/04 7:43:56 AM	(P)0.333	(P)7574.508	(P)3385.568	(P)29508.288	(P)51028.141	(P)25299.383
	Mean of Stability 2/1	2/13/04 7:39:10 AM	(P)0.133	(P)7217.092	(P)3435.414	(P)29026.944	(P)50358.099	(P)24917.791
	SD of Stability 2/13/04		(P)0.139	(P)320.044	(P)134.465	(P)1254.585	(P)951.868	(P)620.057
	%RSD of Stability 2/		(P)104.583	(P)4.435	(P)3.914	(P)4.322	(P)1.890	(P)2.488

Run	Label	TimeStamp	209Bi	[redacted]	238U
1	Stability 2/13/04	2/13/04 7:39:46 AM	(P)41764.796	(P)0.333	(P)40598.793
2	Stability 2/13/04	2/13/04 7:40:49 AM	(P)39794.014	(P)0.000	(P)38366.965
3	Stability 2/13/04	2/13/04 7:41:51 AM	(P)39015.038	(P)0.167	(P)37519.543
4	Stability 2/13/04	2/13/04 7:42:54 AM	(P)39005.679	(P)0.000	(P)37681.635
5	Stability 2/13/04	2/13/04 7:43:56 AM	(P)40587.242	(P)0.000	(P)39030.590
	Mean of Stability 2/1	2/13/04 7:39:10 AM	(P)40033.354	(P)0.100	(P)38639.505
	SD of Stability 2/13/04		(P)1167.803	(P)0.149	(P)1248.786
	%RSD of Stability 2/		(P)2.917	(P)149.071	(P)3.232

Sample List

Num	Label	Type	Weight	Volume	Dilution
1	Calibration Blank	Blank	0 kg	0 ml	1.00
2	25 ppb Std. MS4-62-B	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS4-57-D	Unknown	0 kg	0 ml	1.00
4	CCV1 MS4-62-B	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA WATER MS4-58-B	Unknown	0 kg	0 ml	1.00
8	PBW K0648 1/20	Unknown	0 kg	0 ml	1.00
9	LCSW1 K0648 1/20	Unknown	0 kg	0 ml	1.00
10	LCSW2 K0648 1/20	Unknown	0 kg	0 ml	1.00
11	K0648-06 1/20	Unknown	0 kg	0 ml	1.00
12	K0648-07 1/20	Unknown	0 kg	0 ml	1.00
13	K0648-08 1/20	Unknown	0 kg	0 ml	1.00
14	K0648-09 1/20	Unknown	0 kg	0 ml	1.00
15	CCV2 MS4-62-B	Unknown	0 kg	0 ml	1.00
16	CCB2	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	jchan	7:20:46 2/13/04

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:20:46 2/13/04
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-605.00
Lens1	4.00
Lens2	-115.20
Lens3	-179.80
Pole Bias	1.00
Sampling Depth	400.00
Horizontal	57.00
Vertical	108.00
Cool	13.00
Auxiliary	0.73
Nebuliser	0.85
Forward power	1,350.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-32.00
Focus	23.10

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Analytical Batch KA0323474

Sample Name: TimeStamp		Calibration Blank 2/13/04 12:15			Mean	SD	%RSD
Antimony	121	-0.0001	0	0.0001	**0**	0.0001	0
Antimony	123	-0.0002	0.0001	0.0001	**0**	0.0002	0
Tin	118	-0.0004	0.0014	-0.0009	**0**	0.0012	0
Tin	120	0.0001	-0.0006	0.0005	**0**	0.0006	0

2/13/04

Internal Standard Factors:

Indium	115	1.004	0.992	1.005	**1.004**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		25 ppb Std. MS4-62-B			Mean	SD	%RSD
TimeStamp		2/13/04 12:17					
Antimony	121	25.06	25.17	24.77	**25**	0.2023	0.8093
Antimony	123	24.94	24.51	25.56	**25**	0.5292	2.117
Tin	118	25.08	25.62	24.31	**25**	0.6595	2.638
Tin	120	24.89	25.61	24.51	**25**	0.558	2.232

Internal Standard Factors:

Indium	115	0.968	0.973	0.957	**0.968**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		**ICV MS4-57-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 12:18**					
Antimony	121	23.68	23.34	24.88	**23.97**	0.8089	3.375
Antimony	123	24.05	23.83	24.67	**24.18**	0.432	1.786
Tin	118	24.77	25	25.16	**24.98**	0.1955	0.7828
Tin	120	24.04	24.06	24.83	**24.31**	0.4494	1.849

Internal Standard Factors:

Indium	115	0.938	0.94	0.938	**0.938**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		CCV1 MS4-62-B			Mean	SD	%RSD
TimeStamp		2/13/04 12:20					
Antimony	121	26.51	25.31	23.19	**25**	1.678	6.711
Antimony	123	25.96	23.8	24.65	**24.8**	1.09	4.396
Tin	118	25.69	25.56	24.87	**25.37**	0.445	1.754
Tin	120	26.25	25.91	23.86	**25.34**	1.292	5.099

Internal Standard Factors:

Indium	115	1.011	0.979	0.947	**1.011**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		ICB			Mean	SD	%RSD
TimeStamp		2/13/04 12:21					
Antimony	121	0.0105	0.0097	0.0076	**0.0093**	0.0015	15.9
Antimony	123	0.0101	0.0096	0.0085	**0.0094**	0.0008	8.884
Tin	118	0.0305	0.0293	0.0208	**0.0269**	0.0053	19.73
Tin	120	0.0298	0.0261	0.0197	**0.0252**	0.0051	20.3

Internal Standard Factors:

Indium	115	0.973	0.95	0.956	**0.973**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		2/13/04 12:22					
Antimony	121	0.0077	0.0067	0.007	**0.0071**	0.0005	6.857
Antimony	123	0.0055	0.0063	0.0054	**0.0058**	0.0005	8.278
Tin	118	0.0166	0.0179	0.0163	**0.0169**	0.0008	5.01
Tin	120	0.0163	0.0166	0.0156	**0.0161**	0.0005	3.285

Internal Standard Factors:

Indium	115	0.967	1.004	0.974	**0.967**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323474**

Sample Name:		**CRA WATER MS4-58-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 12:24**					
Antimony	121	0.0539	0.0561	0.0545	**0.0549**	0.0012	2.101
Antimony	123	0.0515	0.0589	0.0519	**0.0541**	0.0042	7.682
Tin	118	0.1143	0.1085	0.1135	**0.1121**	0.0032	2.811
Tin	120	0.1169	0.1093	0.1217	**0.116**	0.0063	5.411

Internal Standard Factors:

Indium	115	1.002	0.993	1.009	**1.002**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		**PBW K0648 1/20**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 12:26**					
Antimony	121	0.0289	0.0284	0.0337	**0.0303**	0.0029	9.584
Antimony	123	0.0335	0.0321	0.034	**0.0332**	0.001	2.891
Tin	118	0.0037	0.0042	0.0031	**0.0037**	0.0005	14.71
Tin	120	0.0035	0.0042	0.0037	**0.0038**	0.0004	9.573

Internal Standard Factors:

Indium	115	0.958	0.907	0.938	**0.958**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		LCSW1 K0648 1/20			Mean	SD	%RSD
TimeStamp		2/13/04 12:27					
Antimony	121	23.28	26.08	26	**25.12**	1.59	6.33
Antimony	123	24.52	26.8	25.65	**25.66**	1.143	4.456
Tin	118	9.663	9.326	9.915	**9.635**	0.2952	3.064
Tin	120	9.149	9.495	9.93	**9.525**	0.3917	4.112

Internal Standard Factors:

Indium	115	0.929	0.967	0.959	**0.929**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		LCSW2 K0648 1/20			Mean	SD	%RSD
TimeStamp		2/13/04 12:28					
Antimony	121	25.4	23.61	26	**25**	1.241	4.962
Antimony	123	24.01	25.33	25.92	**25.09**	0.9771	3.895
Tin	118	10.1	9.447	10.05	**9.866**	0.3637	3.687
Tin	120	10.16	8.962	9.928	**9.683**	0.636	6.568

Internal Standard Factors:

Indium	115	0.968	0.911	0.954	**0.968**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04B | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323474**

Sample Name:		**K0648-06 1/20**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 12:34**					
Antimony	121	1.093	1.089	1.036	**1.073**	0.0316	2.948
Antimony	123	1.121	1.037	1.058	**1.072**	0.0437	4.081
Tin	118	0.0052	0.0062	0.0052	**0.0055**	0.0006	10.28
Tin	120	0.0055	0.0062	0.0046	**0.0054**	0.0008	15.13

Internal Standard Factors:

Indium	115	1.165	1.15	1.089	**1.165**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		K0648-07 1/20			Mean	SD	%RSD
TimeStamp		2/13/04 12:35					
Antimony	121	0.1335	0.1363	0.1208	**0.1302**	0.0083	6.354
Antimony	123	0.1306	0.1344	0.1228	**0.1293**	0.0059	4.567
Tin	118	0.017	0.0187	0.0182	**0.018**	0.0009	4.843
Tin	120	0.0193	0.0199	0.0166	**0.0186**	0.0018	9.411

Internal Standard Factors:

Indium	115	1.123	1.135	1.086	**1.123**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		K0648-08 1/20			Mean	SD	%RSD
TimeStamp		2/13/04 12:36					
Antimony	121	2.797	3.084	2.901	**2.927**	0.1457	4.979
Antimony	123	2.841	2.979	2.943	**2.921**	0.0716	2.45
Tin	118	0.0026	0.0039	0.0023	**0.0029**	0.0009	30.06
Tin	120	0.002	0.0029	0.0031	**0.0027**	0.0006	21.98

Internal Standard Factors:

Indium	115	1.113	1.131	1.097	**1.113**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		K0648-09 1/20			Mean	SD	%RSD
TimeStamp		2/13/04 12:38					
Antimony	121	17.21	18.79	17.58	**17.86**	0.8261	4.625
Antimony	123	17	18.44	18	**17.81**	0.7369	4.137
Tin	118	0.0017	0.002	0.0017	**0.0018**	0.0002	9.452
Tin	120	0.0027	0.0037	0.0015	**0.0026**	0.0011	40.69

Internal Standard Factors:

Indium	115	1.102	1.134	1.08	**1.102**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		**CCV2 MS4-62-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 12:43**					
Antimony	121	25.2	23.79	26.13	**25.04**	1.179	4.711
Antimony	123	24.86	24.27	25.57	**24.9**	0.6507	2.613
Tin	118	25.66	24.59	25.87	**25.37**	0.6882	2.712
Tin	120	25.77	23.82	26.22	**25.27**	1.275	5.047

Internal Standard Factors:

Indium	115	0.987	0.947	1.003	**0.987**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04B
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323474

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		2/13/04 12:45					
Antimony	121	0.0045	0.0037	0.003	**0.0037**	0.0007	19.93
Antimony	123	0.0055	0.0038	0.0028	**0.004**	0.0014	34.8
Tin	118	0.0257	0.0212	0.0166	**0.0212**	0.0046	21.54
Tin	120	0.0248	0.0198	0.0149	**0.0199**	0.0049	24.93

Internal Standard Factors:

Indium	115	0.984	1.021	0.971	**0.984**	n/a	n/a

Service Request # K2400648 (Red. ppt)
Calibration 02-13-04C
QC in calibration 02-13-04C
QC Service Request # K2400648

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control			✓
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL	✓		
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			

Comments:

Primary Review by JC Date 2/13/04
Secondary Review by [illegible] Date 2/13/04
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution
	Calibration Blank	Blank	0 kg	0 ml	1.00
_	25 ppb Std. MS4-62-D	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS4-42-E	Unknown	0 kg	0 ml	1.00
4	CCV1 MS4-62-D	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA MS4-63-A	Unknown	0 kg	0 ml	1.00
8	PBW K0648	Unknown	0 kg	0 ml	1.00
9	LCSW K0648	Unknown	0 kg	0 ml	1.00
10	LCSWD K0648	Unknown	0 kg	0 ml	1.00
11	K0648-06	Unknown	0 kg	0 ml	1.00
12	K0648-07	Unknown	0 kg	0 ml	1.00
13	K0648-08	Unknown	0 kg	0 ml	1.00
14	K0648-09	Unknown	0 kg	0 ml	1.00
15	CCV2 MS4-62-D	Unknown	0 kg	0 ml	1.00
16	CCB2	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
Samples	jchan	7:20:46 2/13/04

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:20:46 2/13/04
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-605.00
Lens1	4.00
Lens2	-115.20
Lens3	-179.80
Pole Bias	1.00
Sampling Depth	400.00
Horizontal	57.00
Vertical	108.00
Cool	13.00
Auxiliary	0.73
Nebuliser	0.85
Forward power	1,350.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-32.00
Focus	23.10

ExCell Mass Calibration **Date: 2/13/04**

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1596	0.716	0.092	TRUE
23.985	5949	0.613	-0.045	FALSE
26.982	6709	0.664	-0.034	FALSE
43.956	11027	0.715	-0.02	TRUE
45.953	11534	0.715	-0.013	TRUE
50.944	12808	0.715	-0.024	TRUE
51.94	13055	0.715	0.002	TRUE
52.941	13315	0.715	-0.018	TRUE
53.949	13575	0.715	-0.03	TRUE
55.935	14082	0.715	-0.035	TRUE
56.935	14335	0.664	-0.028	TRUE
57.934	14589	0.715	-0.026	TRUE
58.933	14836	0.715	0.004	TRUE
75.92	19165	0.714	0.003	TRUE
114.904	29098	0.764	0.035	TRUE
136.906	34714	0.764	0.033	TRUE
137.906	34974	0.764	0.015	TRUE
139.905	35481	0.764	0.028	TRUE
141.908	35995	0.713	0.018	TRUE
202.972	51608	0.712	-0.015	TRUE
204.972	52115	0.712	0.002	TRUE
205.974	52375	0.711	-0.012	TRUE
206.976	52628	0.762	0	TRUE
207.977	52882	0.711	0.008	TRUE
208.98	53142	0.711	-0.005	TRUE
238.051	60584	0.66	-0.016	TRUE

Excluded In Calib | Excluded In Results | [redacted] | Multi Element | [redacted] | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	[redacted]	7Li	9Be	59Co	115In	208Pb
1	Stability 2/13/04	2/13/04 7:39:46 AM	(P)0.167	(P)6774.940	(P)3669.972	(P)30980.907	(P)51675.632	(P)25767.218
2	Stability 2/13/04	2/13/04 7:40:49 AM	(P)0.000	(P)7081.588	(P)3421.743	(P)28625.822	(P)49969.417	(P)24829.560
3	Stability 2/13/04	2/13/04 7:41:51 AM	(P)0.167	(P)7179.137	(P)3348.059	(P)27919.257	(P)49629.566	(P)24275.776
4	Stability 2/13/04	2/13/04 7:42:54 AM	(P)0.000	(P)7475.289	(P)3351.727	(P)28100.447	(P)49487.739	(P)24417.016
5	Stability 2/13/04	2/13/04 7:43:56 AM	(P)0.333	(P)7574.508	(P)3385.568	(P)29508.288	(P)51028.141	(P)25299.383
	Mean of Stability 2/1	2/13/04 7:39:10 AM	(P)0.133	(P)7217.092	(P)3435.414	(P)29026.944	(P)50358.099	(P)24917.791
	SD of Stability 2/13/04		(P)0.139	(P)320.044	(P)134.465	(P)1254.585	(P)951.868	(P)620.057
	%RSD of Stability 2/		(P)104.583	(P)4.435	(P)3.914	(P)4.322	(P)1.890	(P)2.488

Run	Label	TimeStamp	209Bi	[redacted]	238U
1	Stability 2/13/04	2/13/04 7:39:46 AM	(P)41764.796	(P)0.333	(P)40598.793
2	Stability 2/13/04	2/13/04 7:40:49 AM	(P)39794.014	(P)0.000	(P)38366.965
3	Stability 2/13/04	2/13/04 7:41:51 AM	(P)39015.038	(P)0.167	(P)37519.543
4	Stability 2/13/04	2/13/04 7:42:54 AM	(P)39005.679	(P)0.000	(P)37681.635
5	Stability 2/13/04	2/13/04 7:43:56 AM	(P)40587.242	(P)0.000	(P)39030.590
	Mean of Stability 2/1	2/13/04 7:39:10 AM	(P)40033.354	(P)0.100	(P)38639.505
	SD of Stability 2/13/04		(P)1167.803	(P)0.149	(P)1248.786
	%RSD of Stability 2/		(P)2.917	(P)149.071	(P)3.232

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Analytical Batch KA0323475

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		**Calibration Blank**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:33**					
Arsenic	75	-0.0152	0.0513	-0.0361	**0**	0.0456	0
Selenium	77	-0.1805	-0.081	0.2614	**0**	0.2318	0
Selenium	78	0.0881	-0.1088	0.0207	**0**	0.1001	0
Selenium	82	-0.0129	0.0245	-0.0116	**0**	0.0213	0
Thallium	203	0.0007	-0.0003	-0.0004	**0**	0.0006	0
Thallium	205	0	-0.0003	0.0003	**0**	0.0003	0

2/13/04

Internal Standard Factors:

Gallium	71	0.99	0.996	1.014	**0.99**	n/a	n/a
Lutetium	175	1.009	0.999	0.992	**1.009**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04C | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323475**

Sample Name:		**25 ppb Std. MS4-62-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:35**					
Arsenic	75	24.4	25.04	25.56	**25**	0.5781	2.312
Selenium	77	25.05	25.7	24.25	**25**	0.7274	2.91
Selenium	78	24.13	25.72	25.14	**25**	0.8047	3.219
Selenium	82	24.6	25.62	24.78	**25**	0.5466	2.187
Thallium	203	25.15	25.01	24.84	**25**	0.1551	0.6202
Thallium	205	25.28	25.19	24.53	**25**	0.4108	1.643

Internal Standard Factors:

Gallium	71	0.98	1.011	1.004	**0.98**	n/a	n/a
Lutetium	175	1.012	0.995	0.984	**1.012**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		ICV MS4-42-E			Mean	SD	%RSD
TimeStamp		2/13/04 15:36					
Arsenic	75	25.86	25.99	25.95	**25.93**	0.0685	0.264
Selenium	77	25.8	25.71	25.76	**25.76**	0.0443	0.172
Selenium	78	25.5	25.2	25.69	**25.47**	0.2495	0.9796
Selenium	82	25.18	25.3	25.98	**25.48**	0.4317	1.694
Thallium	203	26.31	26.25	26.45	**26.34**	0.1033	0.3921
Thallium	205	27.01	26.02	26.6	**26.54**	0.502	1.891

Internal Standard Factors:

Gallium	71	0.998	1.009	1.034	**0.998**	n/a	n/a
Lutetium	175	1.029	1.018	1.022	**1.029**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		**CCV1 MS4-62-D**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:38**					
Arsenic	75	24.64	25.12	24.7	**24.82**	0.2641	1.064
Selenium	77	25.33	24.95	24.34	**24.87**	0.5013	2.015
Selenium	78	25.05	24.23	23.71	**24.33**	0.6729	2.766
Selenium	82	24.39	24.27	24.12	**24.26**	0.1363	0.5618
Thallium	203	25.19	24.99	25	**25.06**	0.1113	0.4439
Thallium	205	25.12	25.04	25.24	**25.13**	0.1008	0.4012

Internal Standard Factors:

Gallium	71	1.017	0.992	0.962	**1.017**	n/a	n/a
Lutetium	175	1.012	0.982	0.965	**1.012**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04C | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323475**

Sample Name:		**ICB**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:40**					
Arsenic	75	0.001	0.0106	-0.1235	**-0.0373**	0.0748	200.5
Selenium	77	0.3909	0.6808	0.8386	**0.6368**	0.2271	35.67
Selenium	78	-0.093	-0.0826	0.2577	**0.0274**	0.1995	729.1
Selenium	82	-0.0535	-0.0742	-0.0688	**-0.0655**	0.0107	16.35
Thallium	203	0.0206	0.014	0.0098	**0.0148**	0.0054	36.61
Thallium	205	0.0215	0.0139	0.0106	**0.0153**	0.0056	36.68

Internal Standard Factors:

Gallium	71	1.005	1.011	1.01	**1.005**	n/a	n/a
Lutetium	175	0.994	1.003	1.001	**0.994**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		2/13/04 15:41					
Arsenic	75	-0.0657	0.003	0.014	**-0.0162**	0.0432	266
Selenium	77	0.6189	0.2744	0.5414	**0.4782**	0.1807	37.79
Selenium	78	0.2444	-0.1365	0.0029	**0.0369**	0.1927	521.8
Selenium	82	0.1076	-0.118	0.0457	**0.0118**	0.1165	989.2
Thallium	203	0.0078	0.0055	0.0049	**0.0061**	0.0015	25.1
Thallium	205	0.0072	0.0071	0.0053	**0.0065**	0.001	16.09

Internal Standard Factors:

Gallium	71	1.005	1.004	1.011	**1.005**	n/a	n/a
Lutetium	175	1.001	1.009	1.008	**1.001**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		**CRA MS4-63-A**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:44**					
Arsenic	75	5.229	4.999	4.968	**5.065**	0.1425	2.813
Selenium	77	10.75	11.02	11.04	**10.94**	0.1636	1.496
Selenium	78	10.3	10.35	9.845	**10.17**	0.2776	2.731
Selenium	82	10.1	9.97	10.04	**10.04**	0.0628	0.6255
Thallium	203	0.2172	0.2182	0.2216	**0.219**	0.0023	1.04
Thallium	205	0.2117	0.2235	0.2195	**0.2182**	0.006	2.747

Internal Standard Factors:

Gallium	71	0.999	0.993	1.011	**0.999**	n/a	n/a
Lutetium	175	0.989	1.013	1.002	**0.989**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		PBW K0648			Mean	SD	%RSD
TimeStamp		2/13/04 15:45					
Arsenic	75	0.0239	0.029	0.0142	**0.0224**	0.0075	33.59
Selenium	77	-1.915	-2.337	-2.544	**-2.265**	0.3203	14.14
Selenium	78	0.2296	0.0524	0.0988	**0.1269**	0.0919	72.4
Selenium	82	-0.0016	-0.0776	0.0318	**-0.0158**	0.056	354
Thallium	203	0.0043	0.0029	0.0048	**0.004**	0.001	24.11
Thallium	205	0.0049	0.0048	0.0055	**0.0051**	0.0003	6.815

Internal Standard Factors:

Gallium	71	1.119	1.109	1.095	**1.119**	n/a	n/a
Lutetium	175	1.062	1.053	1.07	**1.062**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		**LCSW K0648**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:47**					
Arsenic	75	17.38	17.88	17.7	**17.66**	0.2537	1.437
Selenium	77	18.29	17.69	17.74	**17.91**	0.3318	1.853
Selenium	78	19.26	19.21	19.71	**19.39**	0.2766	1.426
Selenium	82	18.96	19.73	19.79	**19.49**	0.4601	2.361
Thallium	203	19.33	19.68	19.8	**19.6**	0.2455	1.252
Thallium	205	19.38	20.05	20.11	**19.84**	0.4037	2.034

Internal Standard Factors:

Gallium	71	1.003	1.009	1.014	**1.003**	n/a	n/a
Lutetium	175	1.003	1.02	1.02	**1.003**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		**LCSWD K0648**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 15:49**					
Arsenic	75	16.82	17.04	17.55	**17.14**	0.3782	2.207
Selenium	77	18.84	19.1	20.35	**19.43**	0.8054	4.146
Selenium	78	19.88	19.49	20.27	**19.88**	0.3888	1.956
Selenium	82	20.06	20.3	20.65	**20.34**	0.2935	1.443
Thallium	203	19.94	20.14	19.94	**20.01**	0.1148	0.5741
Thallium	205	20.39	20.13	20.35	**20.29**	0.1371	0.6755

Internal Standard Factors:

Gallium	71	1.027	1.04	1.086	**1.027** n/a		n/a
Lutetium	175	1.069	1.062	1.044	**1.069** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		K0648-06			Mean	SD	%RSD
TimeStamp		2/13/04 15:50					
Arsenic	75	45.98	47.03	45.85	**46.28**	0.6468	1.398
Selenium	77	23.72	23.3	22.78	**23.27**	0.467	2.007
Selenium	78	24.05	25.13	23.98	**24.39**	0.6436	2.639
Selenium	82	26.64	27.91	27.27	**27.27**	0.6379	2.339
Thallium	203	0.1819	0.1536	0.1381	**0.1579**	0.0222	14.06
Thallium	205	0.1861	0.1545	0.1358	**0.1588**	0.0254	16.01

Internal Standard Factors:

Gallium	71	1.157	1.171	1.171	**1.157**	n/a	n/a
Lutetium	175	1.04	1.049	1.058	**1.04**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		K0648-07			Mean	SD	%RSD
TimeStamp		2/13/04 15:52					
Arsenic	75	29.42	29.66	29.65	**29.57**	0.1382	0.4672
Selenium	77	6.401	5.797	7.045	**6.414**	0.6241	9.73
Selenium	78	2.183	1.637	1.475	**1.765**	0.3706	21
Selenium	82	5.358	5.062	5.322	**5.248**	0.1613	3.073
Thallium	203	0.0733	0.0705	0.0627	**0.0688**	0.0055	7.979
Thallium	205	0.0729	0.07	0.0603	**0.0677**	0.0066	9.772

Internal Standard Factors:

Gallium	71	1.048	1.035	1.075	**1.048**	n/a	n/a
Lutetium	175	1.172	1.182	1.167	**1.172**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		K0648-08			Mean	SD	%RSD
TimeStamp		2/13/04 15:54					
Arsènic	75	111.6	112.6	110.4	**111.5**	1.086	0.9742
Selenium	77	34.88	36.69	34.67	**35.42**	1.109	3.131
Selenium	78	26.58	26.76	26.86	**26.73**	0.1401	0.5241
Selenium	82	29.48	29.32	28.97	**29.26**	0.2594	0.8864
Thallium	203	0.3739	0.3888	0.3818	**0.3815**	0.0075	1.953
Thallium	205	0.3643	0.3628	0.3743	**0.3672**	0.0063	1.702

Internal Standard Factors:

Gallium	71	1.316	1.339	1.337	**1.316**	n/a	n/a
Lutetium	175	1.162	1.16	1.163	**1.162**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		K0648-09			Mean	SD	%RSD
TimeStamp		2/13/04 15:57					
Arsenic	75	36.37	36.17	37.36	**36.63**	0.6372	1.739
Selenium	77	29.19	26.39	28.22	**27.94**	1.423	5.093
Selenium	78	28.29	27.73	28.32	**28.11**	0.3323	1.182
Selenium	82	31.15	31.11	32.05	**31.44**	0.5303	1.687
Thallium	203	0.8921	0.8833	0.8961	**0.8905**	0.0065	0.7337
Thallium	205	0.8945	0.8942	0.9139	**0.9009**	0.0113	1.255

Internal Standard Factors:

Gallium	71	1.349	1.317	1.369	**1.349**	n/a	n/a
Lutetium	175	1.141	1.137	1.166	**1.141**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		CCV2 MS4-62-D			Mean	SD	%RSD
TimeStamp		2/13/04 15:59					
Arsenic	75	25.19	24.62	24.8	**24.87**	0.2929	1.178
Selenium	77	23.06	22.49	22.37	**22.64**	0.3672	1.622
Selenium	78	24.87	25.12	24.69	**24.89**	0.2172	0.8725
Selenium	82	25.52	25.18	25.53	**25.41**	0.2016	0.7932
Thallium	203	25.14	25.22	25.5	**25.29**	0.1901	0.7519
Thallium	205	25.73	25.44	25.48	**25.55**	0.157	0.6144

Internal Standard Factors:

Gallium	71	1.095	1.09	1.099	**1.095**	n/a	n/a
Lutetium	175	1.059	1.041	1.052	**1.059**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04C
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323475

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		2/13/04 16:01					
Arsenic	75	0.0608	-0.0061	-0.0467	**0.0026**	0.0543	2051
Selenium	77	-2.018	-1.513	-1.384	**-1.638**	0.3352	20.46
Selenium	78	-0.0136	0.002	0.0019	**-0.0032**	0.009	276.9
Selenium	82	-0.0783	-0.1075	-0.1002	**-0.0953**	0.0152	15.97
Thallium	203	0.0128	0.0109	0.0103	**0.0113**	0.0013	11.47
Thallium	205	0.0123	0.0119	0.0108	**0.0117**	0.0008	6.613

Internal Standard Factors:

Gallium	71	1.109	1.121	1.119	**1.109**	n/a	n/a
Lutetium	175	1.051	1.058	1.059	**1.051**	n/a	n/a

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315967

Service Request Number(s) : K2400648

Method : CLP 3010A 3020A 3005A 3050B Other- _____

Analysis for : ICP ICP-MS GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBS			X		100	10% HNO3
LCSS	100					
K0648-1	1.80					
-1d	1.80					
-1s	1.80					
-2	1.81					
-4	1.20					
-5	1.21					
						RW 2-6-04

Time Digestion Started: 9:22 Am

Lot # Acids Used: HNO3 Y31024 HCl _____ H2O2 ~~423~~ 43209339 RW 2-6-04

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other: _____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-25-L, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-25-P, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO

SS1-MET1-28-C, 2.0 mls added SS4-MET1-27-B, _____ mls added

SS5-MET1-28-B, 1.0 mls added

SS6-MET1-28-A, 1.0 mls added

TCLP Spike/LCSE

SS1 _____ mls. added

SS2 _____ mls. added

Additional spikes: _____

Comments: _____

Analyst [signature] Date 2-6-04

Reviewer [signature] Date ~~2/24~~ 2/09/04 2/9/04

metdig.xls
9/5/02

METALS SPIKE FORM

Service Request # K2400648
Q.C. Sample # K0648-1

Initials /Date: RW / 12-6-04

Circle type of digest: GFAA ICP FAA (ICP-MS) Other:_____
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of 1000ppm Std.	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-28-C	HNO3	50.0	1000ml	JT BAKER	Y23049	-	-		Expires: 7/1/04
	Al	*100	1000ml	MET1-26-P	-	9/1/04	200		
	Ag	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Ba	*100	1000ml	MET1-26-P	-	9/1/04	200		
	Be	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Cd	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Co	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Cr	*100	1000ml	MET1-26-P	-	9/1/04	20		
	Cu	*100	1000ml	MET1-26-P	-	9/1/04	25		
	Fe	*100	1000ml	MET1-26-P	-	9/1/04	100		
	Pb	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Mn	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Ni	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Sb	50	1000ml	MET1-22-G	-	7/1/04	50		
	V	*100	1000ml	MET1-26-P	-	9/1/04	50	2.0	
	Zn	*100	1000ml	MET1-26-P	-	9/1/04	50		
SS4-MET1-27-B	HNO3	25.0	500ml	JT BAKER	X40023	-	-		Expires: 3/1/04
	As	2.0	500ml	MET1-21-I	-	1/1/05	4		
	Cd	2.0	500ml	MET1-17-D	-	9/30/04	4		
	Pb	2.0	500ml	MET1-10-H	-	4/1/04	4		
	Se	2.0	500ml	MET1-19-C	-	10/31/04	4		
	Tl	2.0	500ml	MET1-19-F	-	10/1/04	4		
	Cu	2.0	500ml	MET1-17-E	-	3/1/04	4		
SS5-MET1-28-B	HNO3	25.0	500ml	JT BAKER	Y23049	-	-		Expires:8/1/04
	As	50.0	500ml	MET1-21-I	-	1/31/05	100		
	Se	50.0	500ml	MET1-24-G	-	8/1/04	100	1.0	
	Tl	50.0	500ml	MET1-19-F	-	10/30/04	100		
SS6-MET1-28-A	HNO3	25	500ml	JT BAKER	X40023	-	-		Expires: 09/30/04
	B	50	500ml	MET1-17-A	-	9/30/04	100		
	Mo	50	500ml	MET1-19-A	-	10/31/04	100	1.0	
GFLCSW (MET1-29-A)	HNO3	2.0	200ml	JT BAKER	Y08024	-	-		Expires: 03/01/04
	As. Pb. Se. Tl	1.0	200ml	QCP-CICV-3	W-MEB119145	8/1/04	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		
	Cu	0.5	200ml	MET1-17-E	-	3/1/04	2.5		
QCP-CICV-1 (MET1-25-L)	Ca. Mg. Na. K	no dilution	-	IV	T-MEB119069	8/1/04	2500		Expires: 08/01/04
	Al. Ba	no dilution	-	IV	T-MEB119069	8/1/04	1000		
	Fe	no dilution	-	IV	T-MEB119069	8/1/04	500		
	Co. Mn. Ni. V. Zn	no dilution	-	IV	T-MEB119069	8/1/04	250		
	Cu. Ag	no dilution	-	IV	T-MEB119069	8/1/04	125		
	Cr	no dilution	-	IV	T-MEB119069	8/1/04	100		
	Be	no dilution	-	IV	T-MEB119069	8/1/04	25		
QCP-CICV-2 (MET1-12-M)	Sb	no dilution	-	IV	T-MEB119095	8/1/04	500		Expires: 8/01/04
QCP-CICV-3 (MET1-25-P)	As. Pb. Se. Tl	no dilution	-	IV	W-MEB119145	8/1/04	500		Expires: 08/01/04
	Cd	no dilution	-	IV	W-MEB119145	8/1/04	250		

* Denotes Custom Mix CAS-CAL-14

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315977

Service Request Number(s) : K2400648

Method : CLP 3010A 3020A 3005A 3050B Other- _____

Analysis for : ICP Redigest ICP-MS GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBS			X		100	10% HNO3/5% HCl
LCSS	1.00					
K0648-1	1.80					
-1d	1.80					
-1s	1.80					
-2	1.80					
-4	1.21					
-5	1.21					
						RN
						2-9-04

Time Digestion Started: 9:16 Am

Lot # Acids Used: HNO3 131024 HCl 42167 H2O2 43209539

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other: _____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added
ICP LCSW = QCP CICV-1, MET1-25-L, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-25-P, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO
SS1-MET1-28-C, 2.0 mls added SS4-MET1-27-B, _____ mls added
SS5-MET1-28-B, 1.0 mls added
SS6-MET1-28-A, 1.0 mls added

TCLP Spike/LCSE
SS1 _____ mls. added
SS2 _____ mls. added

Additional spikes: Sn: 0.5ml of 1000 ppm added to spike.

Comments: _____

Analyst [signature] Date 2-9-04
Reviewer [signature] Date 2/10/04

metdig.xls
9/5/02

METALS SPIKE FORM

Service Request # K2400648
Q.C. Sample # K0648 - 1

Initials /Date: KN / 2-9-04

Circle type of digest: GFAA (ICP) FAA ICP-MS Other:_____
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of 1000ppm Std.	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
SS1-MET1-28-C	HNO3	50.0	1000ml	JT BAKER	Y23049	-	-		Expires: 7/1/04
	Al	*100	1000ml	MET1-26-P	-	9/1/04	200		
	Ag	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Ba	*100	1000ml	MET1-26-P	-	9/1/04	200		
	Be	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Cd	*100	1000ml	MET1-26-P	-	9/1/04	5		
	Co	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Cr	*100	1000ml	MET1-26-P	-	9/1/04	20		
	Cu	*100	1000ml	MET1-26-P	-	9/1/04	25		
	Fe	*100	1000ml	MET1-26-P	-	9/1/04	100		
	Pb	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Mn	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Ni	*100	1000ml	MET1-26-P	-	9/1/04	50		
	Sb	50	1000ml	MET1-22-G	-	7/1/04	50		
	V	*100	1000ml	MET1-26-P	-	9/1/04	50	2.0	
	Zn	*100	1000ml	MET1-26-P	-	9/1/04	50		
SS4-MET1-27-B	HNO3	25.0	500ml	JT BAKER	X40023	-	-		Expires: 3/1/04
	As	2.0	500ml	MET1-21-I	-	1/1/05	4		
	Cd	2.0	500ml	MET1-17-D	-	9/30/04	4		
	Pb	2.0	500ml	MET1-10-H	-	4/1/04	4		
	Se	2.0	500ml	MET1-19-C	-	10/31/04	4		
	Tl	2.0	500ml	MET1-19-F	-	10/1/04	4		
	Cu	2.0	500ml	MET1-17-E	-	3/1/04	4		
SS5-MET1-28-B	HNO3	25.0	500ml	JT BAKER	Y23049	-	-		Expires:8/1/04
	As	50.0	500ml	MET1-21-I	-	1/31/05	100		
	Se	50.0	500ml	MET1-24-G	-	8/1/04	100	1.0	
	Tl	50.0	500ml	MET1-19-F	-	10/30/04	100		
SS6-MET1-28-A	HNO3	25	500ml	JT BAKER	X40023	-	-		Expires: 09/30/04
	B	50	500ml	MET1-17-A	-	9/30/04	100	1.0	
	Mo	50	500ml	MET1-19-A	-	10/31/04	100		
GFLCSW (MET1-29-A)	HNO3	2.0	200ml	JT BAKER	Y08024	-	-		Expires: 03/01/04
	As. Pb. Se. Tl	1.0	200ml	QCP-CICV-3	W-MEB119145	8/1/04	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		
	Cu	0.5	200ml	MET1-17-E	-	3/1/04	2.5		
QCP-CICV-1 (MET1-23-L)	Ca. Mg. Na. K	no dilution	-	IV	T-MEB119069	8/1/04	2500		Expires: 08/01/04
	Al. Ba	no dilution	-	IV	T-MEB119069	8/1/04	1000		
	Fe	no dilution	-	IV	T-MEB119069	8/1/04	500		
	Co. Mn. Ni. V. Zn	no dilution	-	IV	T-MEB119069	8/1/04	250		
	Cu. Ag	no dilution	-	IV	T-MEB119069	8/1/04	125		
	Cr	no dilution	-	IV	T-MEB119069	8/1/04	100		
	Be	no dilution	-	IV	T-MEB119069	8/1/04	25		
QCP-CICV-2 (MET1-12-M)	Sb	no dilution	-	IV	T-MEB119095	8/1/04	500		Expires: 8/01/04
QCP-CICV-3 (MET1-25-P)	As. Pb. Se. Tl	no dilution	-	IV	W-MEB119145	8/1/04	500		Expires: 08/01/04
	Cd	no dilution	-	IV	W-MEB119145	8/1/04	250		

* Denotes Custom Mix CAS-CAL-14

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date
Sn	0.5	1000		met1-27-D	1-31-05

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0315965

Service Request Number(s) : K2400648

Method : (CLP) 3010A 3020A 3005A 3050B Other- _____

Analysis for : ICP (ICP-MS) GFAA Flame AA Other _____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PBW			X	50	50	1% HNO_3
LCSW						
K0648-3						
-3d						
-3s						
						RW 2-6-04

Time Digestion Started: 1130 pm

Lot # Acids Used: HNO3 MS3-81-E HCl _____ H2O2 _____

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other: _____

GFAA LCSW = GFLCSW, MET1-25-Q, _____ mls. added

ICP LCSW = QCP CICV-1, MET1-25-L, _____ mls. added
QCP CICV-2, MET1-25-M, _____ mls. added
QCP CICV-3, MET1-25-P, _____ mls. added
SS6, MET1-28-A, _____ mls. added

SPIKE INFO

SS1-MET1-28-C, _____ mls added SS4-MET1-27-B, _____ mls added

SS5-MET1-28-B, _____ mls added

SS6-MET1-28-A, _____ mls added

TCLP Spike/LCSE

SS1 _____ mls. added

SS2 _____ mls. added

Additional spikes: 10 ml 2008 stock soln MS4-16-B & Ag soln MS4-27-C

Comments: + Sn 100 ml of 10 ppm MS4-4-E exp 8-1-04

Analyst [signature] Date 2-6-04

Reviewer [signature] Date 2/9/04

metdig.xls
9/5/02

Atomic Absorption Data Review Form

Element Hg ~~AA #~~ AB 2/10/04

Analytical Batch
KA0323264

Analysis Lot # _____

Cal Std/CCV Source Hg1-25-2

Service Request Numbers:

K0736, 0815, 0644, 0641, 0779, 0710, 0727, 0648

	Yes	No	NA
1) Appropriate Standardization Completed	✓		
2) ICV within 10% of true value.	✓		
3) CCVs in Control	✓		
4) CCB's and/or ICB's below MRL	✓		
5) All reported results within calibration range	✓		
6) Calculations Correct	✓		

Comments :

Reviewed By: [illegible] Date: 2/10/04

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # : K0736, 0815, 0644, 0641, 0779, 0710, 0727, 0648
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	4.82		96%
2	ICB	—	—	—	-0.04		<0.2
3	CCV1	—	—	—	5.10		102%
4	CCB1	—	—	—	-0.06		<0.2
5	CRA	—	—	—	0.17		<0.2
6	PBS(KP0315503)	—	100mls	—	-0.02	<0.02	
7	LCSS ↓	0.512		—	7.18	1.40/94%	
8	K0736-01	1.050		—	0.13	<0.02	
9	-02	1.110		—	0.13	<0.02	
10	-03	1.049		—	0.15	<0.02	
11	↓ -04	1.045		—	0.16 AB 2/10/04	<0.02	
12	K0815-01	1.005		—			
13	-01D	1.058		—			
14	↓ -01S	1.027	↓	—			
15	CCV2	—	—	—	5.11		102%
16	CCB2	—	—	—	-0.05		<0.2
17	K0815-02	4.73	100mls	—	4.29	0.09	
18	↓ -03	1.015		—			
19	K0644-08	1.015		—	0.60	0.06	
20	K0641-08	1.120		—	0.74	0.07	
21	K0779-01 AB 2/10/04			—	-0.04	<0.02	
22	K0710-07	0.988		—			
23	↓ -07D	0.974		—			
24	K0727-03	1.019		—	0.10	<0.02	
25	K0648-01	1.051	↓	—			

AB 2/10/04

AB 2/10/04

Comments: Reporting Levels:

Waters - 0.2 µg/L TIME STARTED:

Soil - 0.02 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	2/10/04	1 of 3

[HGFORM.XLW] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
~~26~~	~~K0648-01D~~	~~1.053~~	~~100mLS~~	—			
27	CCV3	—	—	—	5.18		104%
28	CCB3	—	—	—	-0.04		<0.2
~~29~~	~~K0648-01S~~	~~1.105~~	~~100mLS~~	—			
30	- 02	1.087		—	472	0.43	
~~31~~	~~- 04~~	~~1.612~~		—			
32	- 05	1.022		—	1.66	0.16	
33	CCV4	—	—	—	5.23		105%
34	CCB4	—	—	—	-0.03		<0.2
35	K0815-01	1.005	100mLS	1/5	3.50	1.74	
36	- 01D	1.058		1/5	2.92	1.38	
37	- 01S	1.027		1/5	4.34	2.11/76%	
38	- 03	1.015		1/5	8.29	4.08	
39	K0710-07	0.988		1/10	6.08	6.15	
40	- 07D	0.974		1/10	5.99	6.15	
~~41~~	~~K0648-01~~	~~1.051~~		~~1/10~~			
~~42~~	~~- 01D~~	~~1.053~~		~~1/10~~			
~~43~~	~~- 01S~~	~~1.105~~		~~1/10~~			
44	- 04	1.612		1/10	3.56	2.21	
45	CCV5	—	—	—	5.28		106%
46	CCB5	—	—	—	-0.02		<0.2
~~47~~	~~K0648-01~~	~~1.051~~	~~100mLS~~	~~1/20~~			
48	- 01D	1.053		1/20	4.34	8.24	
49	- 01S	1.105		1/20	5.70	10.32	
50	CCV6	—	—	—	5.27		105%

AB 2/10/04

AB 2/10/04

AB 2/10/04

Comments: Reporting Levels:
Waters - 0.2 µg/L K0815-01S @ 0.49 mg/kg
Soil - 0.02 mg/kg
TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	2/10/04	2 of 3

[Hgform.xlw] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	CCB6	—	—	—	-0.04		<0.2
52	1C0648-01	1.051	100mS	X40	5.11	19.4	
53	CCV7	—	—	—	5.26		105%
54	CCB7	—	—	—	-0.04		<0.2
55							
56							
57							
58							
59							
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71							
72							
73							
74							
75							

LAB 2/10/04

Comments: Reporting Levels:
Waters - 0.2 µg/L
Soil - 0.02 mg/kg
TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	2/10/04	3 of 3

[HGFORM.XLW] HG3.XLS

CETAC Hg Analysis Report - 04021001.DB - Tuesday, February 10, 2004, 3:26:19 PM

Analyst ANGELA BAIRD
Date Started Tuesday, February 10, 2004, 13:14:58
Worksheet Hg 2/10/04 RUN2
Comment KA0323264
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	10-Feb-2004, 13:14	0.00	17.10	1.00	-40	-36	-33	-49	
Standard #1	10-Feb-2004, 13:16	0.20	1.90	1.00	776	800	809	783	
Standard #2	10-Feb-2004, 13:18	0.50	1.74	1.00	2059	2131	2126	2073	
Standard #3	10-Feb-2004, 13:19	1.00	2.65	1.00	4020	4191	4274	4226	
Standard #4	10-Feb-2004, 13:21	5.00	1.37	1.00	20616	21107	21284	20893	
Standard #5	10-Feb-2004, 13:23	10.00	2.38	1.00	39072	40460	41301	40858	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	10-Feb-2004, 13:24	4.82	1.40	1.00	19306	19796	19945	19666	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	10-Feb-2004, 13:26	-0.04	4.17	1.00	-83	-83	-76	-67	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	10-Feb-2004, 13:27	5.10	2.21	1.00	20193	20827	21249	21052	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	10-Feb-2004, 13:29	-0.06	9.54	1.00	-108	-121	-146	-157	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	10-Feb-2004, 13:31	0.17	1.26	1.00	780	787	800	785	
PBS(KP0315503)	10-Feb-2004, 13:32	-0.02	13.80	1.00	24	1	5	-8	
LCSS(KP0315503)	10-Feb-2004, 13:34	7.18	1.61	1.00	28642	29389	29769	29298	
K0736-01	10-Feb-2004, 13:35	0.13	6.26	1.00	585	632	658	653	
K0736-02	10-Feb-2004, 13:37	0.13	3.27	1.00	605	631	640	644	
K0736-03	10-Feb-2004, 13:39	0.15	6.83	1.00	662	693	721	760	
K0736-04	10-Feb-2004, 13:40	0.16	9.63	1.00	674	733	793	812	
K0815-01	10-Feb-2004, 13:42	10.90	2.14	1.00	43078	44495	45246	44869	O
K0815-01D	10-Feb-2004, 13:45	11.10	1.69	1.00	44083	45023	45686	45687	O
K0815-01S	10-Feb-2004, 13:48	13.30	2.45	1.00	52148	53815	54788	55073	O

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	10-Feb-2004, 13:51	5.11	2.00	1.00	20251	21000	21212	20926	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	10-Feb-2004, 13:52	-0.05	4.92	1.00	-100	-83	-80	-96	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0815-02	10-Feb-2004, 13:54	4.29	1.22	1.00	17229	17609	17717	17458	
K0815-03	10-Feb-2004, 13:56	Sat'd.	0.00	1.00	57439	57439	57439	57439	SO
K0644-08	10-Feb-2004, 13:59	0.60	3.38	1.00	2421	2544	2582	2606	
K0641-08	10-Feb-2004, 14:01	0.74	3.42	1.00	2949	3111	3173	3156	
K0779-01	10-Feb-2004, 14:03	-0.04	3.95	1.00	-52	-58	-65	-65	
K0710-07	10-Feb-2004, 14:04	Sat'd.	0.00	1.00	57832	57832	57832	57832	SO
K0710-07D	10-Feb-2004, 14:08	Sat'd.	0.00	1.00	57714	57714	57714	57714	SO
K0727-03	10-Feb-2004, 14:11	0.10	4.19	1.00	497	520	538	528	
K0648-01	10-Feb-2004, 14:13	Sat'd.	0.00	1.00	57846	57846	57846	57846	SO
K0648-01D	10-Feb-2004, 14:18	Sat'd.	0.00	1.00	58067	58067	58067	58067	SO

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	10-Feb-2004, 14:22	5.18	2.81	1.00	20311	21133	21654	21458	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	10-Feb-2004, 14:24	-0.04	2.55	1.00	-40	-44	-42	-35	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0648-01S	10-Feb-2004, 14:26	Sat'd.	0.00	1.00	58342	58342	58342	58342	SO
K0648-02	10-Feb-2004, 14:31	4.72	1.96	1.00	18748	19331	19648	19344	
K0648-04	10-Feb-2004, 14:33	Sat'd.	0.00	1.00	58458	58458	58458	58458	SO
K0648-05	10-Feb-2004, 14:36	1.66	2.41	1.00	6699	6937	6990	6672	

CETAC Hg Analysis Report - 04021001.DB - Tuesday, February 10, 2004, 3:26:20 PM

Analyst ANGELA BAIRD
Date Started Tuesday, February 10, 2004, 14:38:28
Worksheet Hg 2/10/04 RUN2
Comment KA0323264
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV4	10-Feb-2004, 14:38	5.23	2.20	1.00	20673	21348	21736	21574	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB4	10-Feb-2004, 14:40	-0.03	5.82	1.00	-9	-16	-14	-25	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0815-01 1/5	10-Feb-2004, 14:45	3.50	1.59	1.00	14016	14391	14551	14374	
K0815-01D 1/5	10-Feb-2004, 14:47	2.92	2.20	1.00	11968	12148	12121	11582	
K0815-01S 1/5	10-Feb-2004, 14:49	4.34	2.31	1.00	17631	18017	18049	17180	
K0815-03 1/5	10-Feb-2004, 14:50	8.29	2.35	1.00	33468	34276	34514	32783	
K0710-07 1/10	10-Feb-2004, 14:53	6.08	1.50	1.00	24263	24847	25151	24846	
K0710-07D 1/10	10-Feb-2004, 14:54	5.99	1.81	1.00	23806	24470	24852	24552	
K0648-01 1/10	10-Feb-2004, 14:56	Sat'd.	0.00	1.00	55938	55938	55938	55938	SO
K0648-01D 1/10	10-Feb-2004, 14:59	8.81	2.23	1.00	34784	36004	36697	36031	
K0648-01S 1/10	10-Feb-2004, 15:01	11.50	1.85	1.00	45668	47234	47685	46880	O
K0648-04 1/10	10-Feb-2004, 15:04	3.56	2.39	1.00	14074	14644	14897	14593	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV5	10-Feb-2004, 15:06	5.28	1.96	1.00	20962	21589	21919	21770	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB5	10-Feb-2004, 15:07	-0.02	19.80	1.00	43	24	41	55	

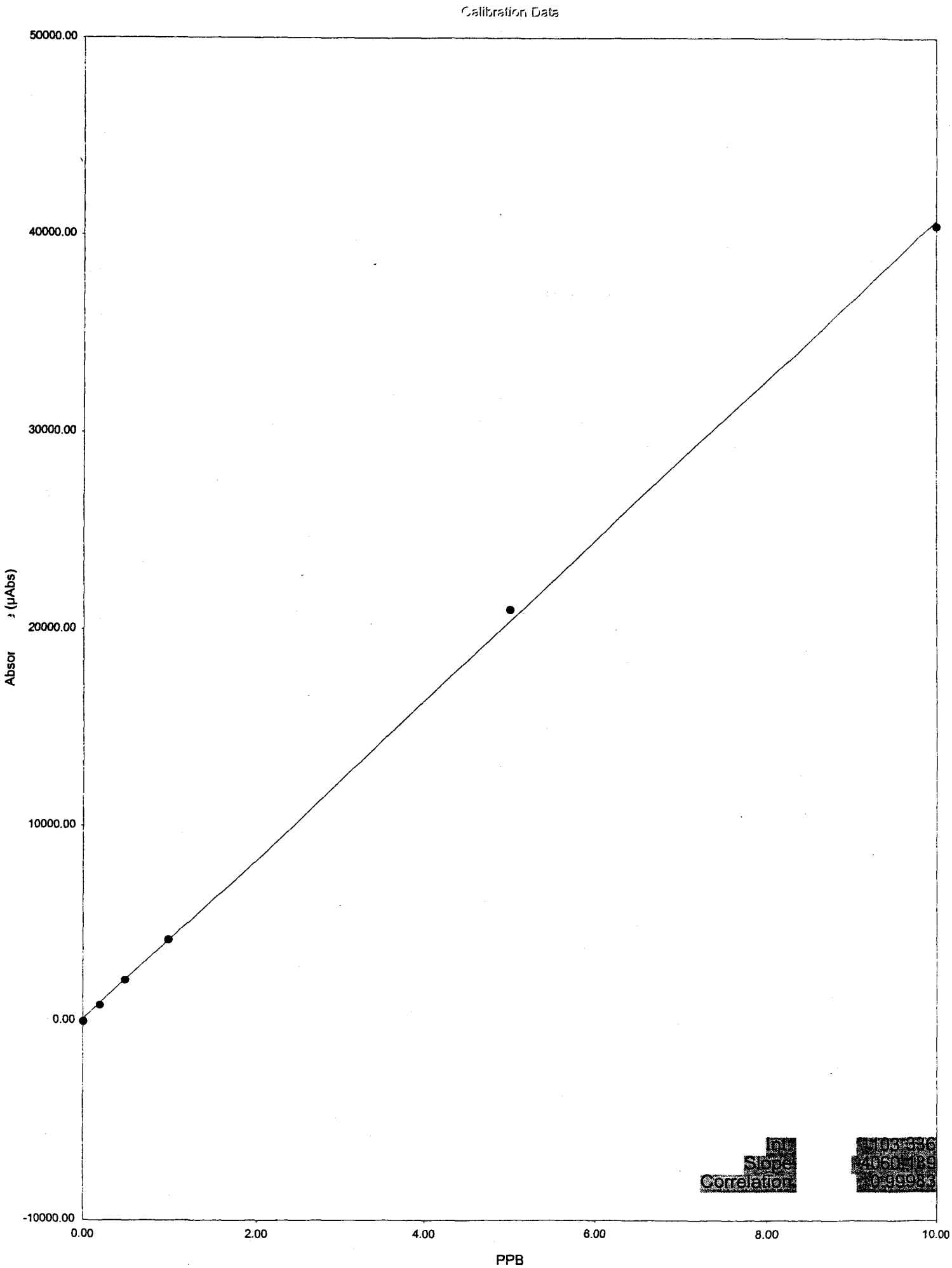
Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0648-01 1/20	10-Feb-2004, 15:10	10.10	2.14	1.00	39904	41219	41926	41528	O
K0648-01D 1/20	10-Feb-2004, 15:14	4.34	1.76	1.00	17293	17778	18036	17785	
K0648-01S 1/20	10-Feb-2004, 15:16	5.70	1.58	1.00	22753	23269	23636	23327	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV6	10-Feb-2004, 15:17	5.27	2.03	1.00	20907	21580	21930	21654	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB6	10-Feb-2004, 15:19	-0.04	11.90	1.00	-106	-71	-54	-77	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0648-01 1/40	10-Feb-2004, 15:21	5.11	1.97	1.00	20271	20922	21243	20914	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV7	10-Feb-2004, 15:23	5.26	1.97	1.00	20867	21472	21810	21702	
CCB7	10-Feb-2004, 15:24	-0.04	6.76	1.00	-68	-62	-90	-70	Q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2.00
4.00
6.00
8.00
10.00
PPB
Int
Slope
Correlation

Extr/Prep Batch
KP0315503

Columbia Analytical Services
EPA METHOD 7471A

Service Request Number(s) : K0736,0815,0644,0641,0779,0710,0727,0648

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
PBS	—	—	—	100mls
LCSS	—	—	0.512	
K0736-01	1.050			
-02	1.110			
-03	1.049			
-04	1.045			
K0815-01	4.371	23.0	1.005	
-01D	4.599		1.058	
-01S*	4.467		1.027	
-02 @	9.587	49.3	4.73	
-03	6.191	16.4	1.015	
K0644-08	1.080	94.0	1.015	
K0641-08	1.191	94.0	1.120	
K0779-01	2.101			
K0710-07	1.019	97.0	0.988	
-07D	1.004		0.974	
K0727-03	3.651	27.9	1.019	
K0648-01	2.028	51.8	1.051	
-01D	2.033		1.053	
-01S*	2.134		1.105	
-02	2.066	52.6	1.087	
-04	2.261	71.3	1.612	
-05	1.419	72.0	1.022	
		AB 2/9/04		
Std. 0.2	0.2 * mL			100
Std. 0.5	0.5 * mL			100
Std. 1.0	1.0 * mL			100
Std. 5.0	5.0 * mL			100
Std. 10.0	10.0 * mL			100
ICV	0.5 ** mL			100

Lot # of Reagents Used:

HNO3:Y31024 **K2S2O8 T44H13** **NaCl :Y07624**
H2SO4: 43212 **KMnO4:V25588** **NH2OH-HCL:Y28599**
HCL: K30655903 221 **SnCl2:Y23648**
LCSS = **ERA CLP Soil Lot # 246** **Other:** Waterbath temp. 95°
LCSW= **ICV Intermediate stock solution.**
*** Source Standard:** Hg1.25.2 100ppb
**** Source Standard: ICV** Hg1.25.1 1000ppb **TIME STARTED:**

Comments: *0.5mls Hg1.25.X 1000ppb
@ weighed 10mls.

Analyst: Angela Baird **Date:** 2/9/04

[HGFORM.XLW] 7471

Atomic Absorption Data Review Form

Element Hg ~~AA #~~ AB 2/9/04

Analytical Batch KA0323262

Analysis Lot # _____

Cal Std/CCV Source Hg 1.25 Y

Service Request Numbers:

K0726, 0746, 0547, 0520, 0648, 0727, 0750

	Yes	No	NA
1) Appropriate Standardization Completed	✓		
2) ICV within 10% of true value.	✓		
3) CCVs in Control	✓		
4) CCB's and/or ICB's below MRL	✓		
5) All reported results within calibration range	✓		
6) Calculations Correct	✓		

Comments :

Reviewed By: Emm Date: 2/9/04

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K0726, 0746, 0547, 0520, 0048, 0727, 0750
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	4.78		96%
2	ICB	—	—	—	-0.05		<0.1
3	CCV1	—	—	—	5.09		102%
4	CCB1	—	—	—	-0.07		<0.1
5	CRA	—	—	—	0.15		0.15
6	PBW(LP0315498)	100mLS	100mLS	—	-0.02		<0.1
7	LCSW ↓	↓		—	4.99		100%
8	K0726-01	50mLS		—	0.06		<0.1
9	K0746-04	100mLS		—	0.06		<0.1
10	↓ -04D	↓	↓	—	0.03		<0.1
11	↓ -04S	↓	↓	—	1.12		1.12/112%
12	PBW(LP0315499)	20mLS	20mLS	—	0.00		<0.1
13	LCSW ↓	↓	↓	—	4.81		96%
14	K0547-01	↓	↓	—	1.25		1.25
15	CCV2	—	—	—	5.24		105%
16	CCB2	—	—	—	-0.06		<0.1
17	K0547-01D	20mLS	20mLS	—	1.28		1.28
18	↓ -01S	↓	↓	—	2.13		2.13/88%
19	K0520-01	↓	↓	—	0.02		<0.1
20	K0678-01						
21	↓ -01D						
22	↓ -01S						
23	K0048-03	↓	↓	—	-0.02		<0.1
24	↓ -03D	↓	↓	—	-0.03		<0.1
25	↓ -03S	↓	↓	—	0.92		0.92/92%

AB 2/9/04

Comments: Reporting Levels:

Waters - 0.2 µg/L TIME STARTED:

Soil - 0.02 mg/kg

TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L

Soil Spike Level : 5.0 µg/L = mg/kg

TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	2/9/04	1 of 2

[HGFORM.XLW] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH:_____

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K0727-01 Total	20mLS	20mLS	—	-0.04		<0.1
27	CCV3	—	—	—	5.15		103%
28	CCB3	—	—	—	-0.04		<0.1
29	K0727-02 Total	20mLS	20mLS	—	-0.03		<0.1
30	K0727-01 DISS	↓	↓	—	-0.02		<0.1
31	↓ -02 ↓			—	-0.03		<0.1
32	K0750-01			—	-0.03		<0.1
33	-03			—	-0.02		<0.1
34	↓ -04	↓	↓	—	-0.04		<0.1
35	CCV4	—	—	—	5.19		104%
36	CCB4	—	—	—	-0.03		<0.1
~~37~~	~~K0778-01~~	~~20mLS~~	~~20mLS~~	~~—~~	~~-0.02~~		
~~38~~	~~-01D~~	~~↓~~	~~↓~~	~~—~~	~~0.26~~		
~~39~~	~~↓ 01S~~	~~↓~~	~~↓~~	~~—~~	~~1.53~~		
40	CCV5	—	—	—	5.16		103%
41	CCB5	—	—	—	-0.04		<0.1
42							
43							
44							
45							
46							
47							
48							
49							
50							

AB 2/9/04

AB 2/9/04

Comments: Reporting Levels:
Waters - 0.2 µg/L
Soil - 0.02 mg/kg
TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	2/9/04	2 of 2

[Hgform.xlw] HG2.XLS

CETAC Hg Analysis Report - 04020900.DB - Monday, February 09, 2004, 10:25:40 AM

Analyst ANGELA BAIRD
Date Started Monday, February 09, 2004, 09:00:37
Worksheet Hg 2/9/04 RUN1
Comment KA0323262
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	09-Feb-2004, 09:00	0.00	19.30	1.00	110	137	140	176	
Standard #1	09-Feb-2004, 09:02	0.20	3.06	1.00	829	843	816	784	
Standard #2	09-Feb-2004, 09:03	0.50	1.77	1.00	2042	2110	2112	2054	
Standard #3	09-Feb-2004, 09:05	1.00	2.54	1.00	3647	3683	3663	3483	
Standard #4	09-Feb-2004, 09:07	5.00	3.34	1.00	19710	20869	21314	20913	
Standard #5	09-Feb-2004, 09:08	10.00	2.14	1.00	38090	39371	39888	38407	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	09-Feb-2004, 09:10	4.78	1.99	1.00	18352	18999	19222	18964	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	09-Feb-2004, 09:11	-0.05	11.10	1.00	-31	-36	-70	-65	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	09-Feb-2004, 09:13	5.09	1.70	1.00	19658	20194	20477	20154	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	09-Feb-2004, 09:15	-0.07	6.78	1.00	-123	-121	-136	-159	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	09-Feb-2004, 09:16	0.15	2.18	1.00	705	713	712	686	
PBW(KP0315498)	09-Feb-2004, 09:18	-0.02	17.20	1.00	44	37	48	68	
LCSW(KP0315498)	09-Feb-2004, 09:19	4.99	1.29	1.00	19411	19834	19991	19628	
K0726-01	09-Feb-2004, 09:21	0.06	2.88	1.00	367	370	363	354	
K0746-04	09-Feb-2004, 09:23	0.06	4.71	1.00	346	361	368	370	
K0746-04D	09-Feb-2004, 09:24	0.03	13.20	1.00	273	280	261	239	
K0746-04S	09-Feb-2004, 09:26	1.12	1.40	1.00	4479	4557	4560	4435	
PBW(KP0315499)	09-Feb-2004, 09:27	0.00	56.60	1.00	145	130	137	139	
LCSW(KP0315499)	09-Feb-2004, 09:29	4.81	0.97	1.00	18801	19115	19190	18894	
K0547-01	09-Feb-2004, 09:31	1.25	1.88	1.00	4886	5060	5095	5023	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	09-Feb-2004, 09:32	5.24	2.08	1.00	20117	20668	21111	20902	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	09-Feb-2004, 09:34	-0.06	9.44	1.00	-98	-115	-121	-154	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0547-01D	09-Feb-2004, 09:35	1.28	2.20	1.00	4993	5191	5252	5144	
K0547-01S	09-Feb-2004, 09:37	2.13	1.84	1.00	8277	8521	8645	8523	
K0520-01	09-Feb-2004, 09:39	0.02	9.78	1.00	211	200	202	193	
K0678-01	09-Feb-2004, 09:40	-0.03	18.40	1.00	36	16	4	-16	
K0678-01D	09-Feb-2004, 09:42	0.27	2.00	1.00	1200	1210	1190	1160	
K0678-01S	09-Feb-2004, 09:44	1.56	4.17	1.00	5914	6248	6475	6435	
K0648-03	09-Feb-2004, 09:45	-0.02	14.60	1.00	19	37	42	50	
K0648-03D	09-Feb-2004, 09:47	-0.03	10.30	1.00	40	33	19	20	
K0648-03S	09-Feb-2004, 09:48	0.92	1.28	1.00	3665	3716	3770	3751	
K0727-01T	09-Feb-2004, 09:50	-0.04	9.77	1.00	1	-20	-21	-34	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	09-Feb-2004, 09:52	5.15	1.92	1.00	19794	20395	20715	20447	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	09-Feb-2004, 09:53	-0.04	5.46	1.00	-30	-12	-27	-27	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0727-02T	09-Feb-2004, 09:55	-0.03	20.80	1.00	11	23	-1	-39	
K0727-01D	09-Feb-2004, 09:56	-0.02	5.23	1.00	28	39	32	36	
K0727-02D	09-Feb-2004, 09:58	-0.03	6.73	1.00	22	14	4	16	
K0750-01	09-Feb-2004, 10:00	-0.03	33.40	1.00	68	25	-2	-12	
K0750-03	09-Feb-2004, 10:01	-0.02	9.84	1.00	15	32	33	36	
K0750-04	09-Feb-2004, 10:03	-0.04	15.00	1.00	5	-7	-20	-46	

CETAC Hg Analysis Report - 04020900.DB - Monday, February 09, 2004, 10:25:40 AM

Analyst ANGELA BAIRD
Date Started Monday, February 09, 2004, 10:05:05
Worksheet Hg 2/9/04 RUN1
Comment KA0323262
* All concentrations are dilution corrected.

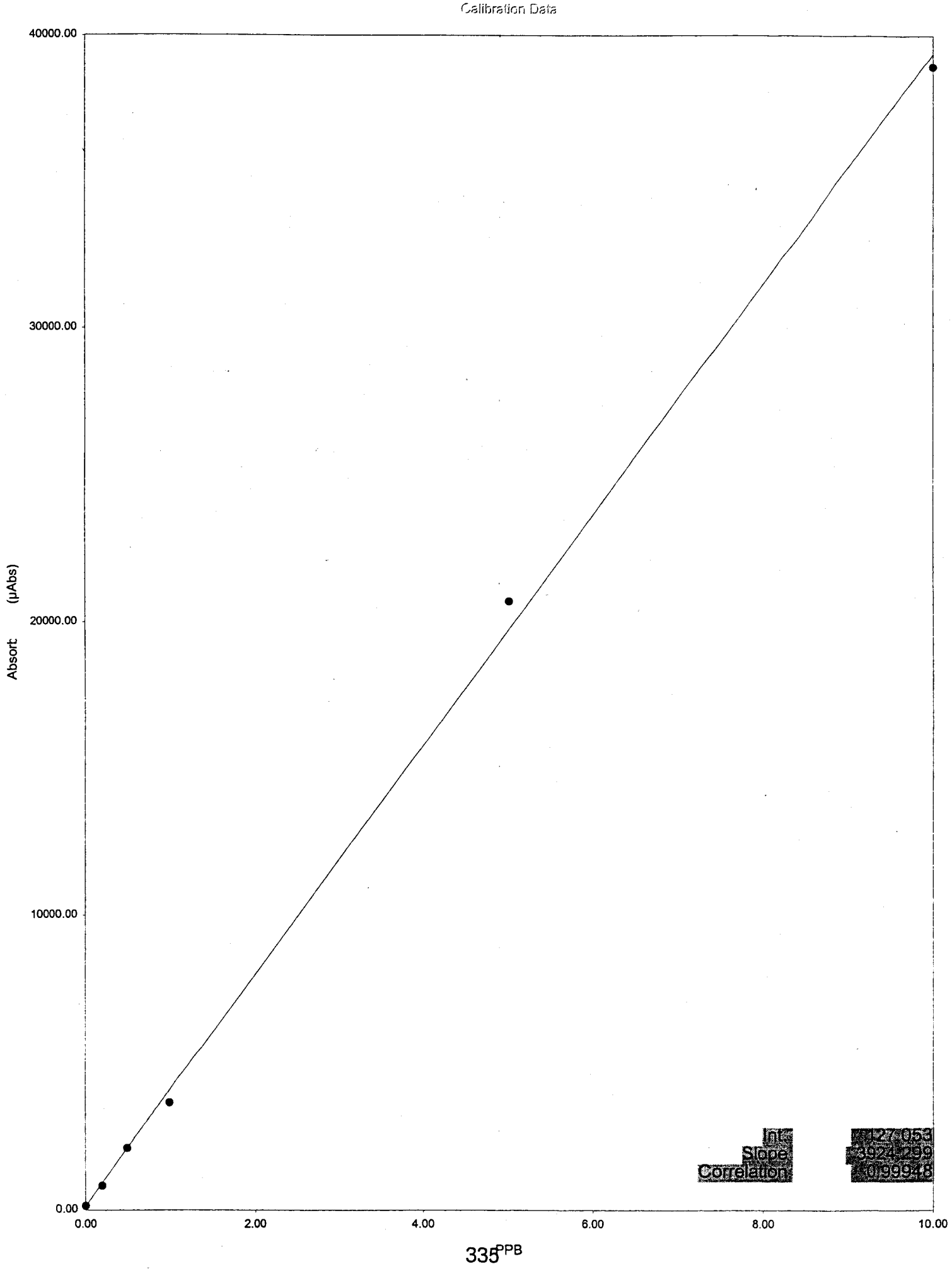
Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV4	09-Feb-2004, 10:05	5.19	2.29	1.00	19836	20553	20942	20625	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB4	09-Feb-2004, 10:06	-0.03	23.00	1.00	50	12	0	-11	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K0678-01	09-Feb-2004, 10:17	-0.02	6.67	1.00	36	38	24	33	
K0678-01D	09-Feb-2004, 10:19	0.26	0.89	1.00	1162	1171	1167	1150	
K0678-01S	09-Feb-2004, 10:20	1.53	1.97	1.00	5970	6138	6244	6188	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV5	09-Feb-2004, 10:22	5.16	1.90	1.00	19841	20401	20740	20536	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB5	09-Feb-2004, 10:23	-0.04	11.60	1.00	-5	-36	-39	-47	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20000.00
10000.00
0.00
Absorb (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
PPB
Int.
Slope
Correlation
127.053
3924.299
0.99948

Columbia Analytical Services
EPA METHOD 245.1

Extr/Prep Batch
KP0315498

Service Request Number(s): K0726, 0746

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PBW	100mLS	100mLS			
LCSW(1)	↓				
K0726-01	50mLS				
K0746-04	100mLS				
↓ -04D					
↓ -04S*	↓	↓			
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

AB 2/5/04

Lot # of Reagents Used:

HNO3:Y31024 **K2S2O8 T44H13** **NaCl :Y07624**
H2SO4: 43212 **KMnO4:V25588** **NH2OH-HCL:Y28599**
HCL: K30655903 221 **SnCl2:Y23648**
LCSS = **ERA CLP Soil Lot # 246** **Other:** Waterbath temp 95°
(1) **LCSW=**0.5mLS **ICV Intermediate stock solution.**
*** Source Standard:** Hg1-25-Y100ppb
**** Source Standard: ICV** Hg1-25-L1 1000ppb **TIME STARTED:**

Comments: *1.0 mL Hg1-25 Y100ppb

Analyst: Angela Baird **Date:** 2/5/04

[HGFORM.XLW] 254.1

Columbia Analytical Services
EPA METHOD 7470A

Extr/Prep Batch
KP0315499

Service Request Number(s) : K0547, 0520, ~~0678~~ AB 2/9/04, 0648, 0727, 0750

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PBW	20mLS.	20mLS			
LCSW (*)	↓	↓			
K0547-01					
↓ -01D					
↓ -01S*					
0520-01					
~~K0678-01~~					
~~-01D~~					
~~↓ -01S*~~					
K0648-03					
↓ -03D					
↓ -03S*					
K0727-01 Total					
↓ -02 ↓					
K0727-01 DISS					
↓ -02 ↓					
K0750-01					
↓ -03					
↓ -04	↓	↓			
	AB 2/5/04				
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

AB 2/9/04 RcdO

Lot # of Reagents Used:

HNO3:Y31024 **K2S2O8 T44H13** **NaCl :Y07624**
H2SO4: 43212 **KMnO4:V25588** **NH2OH-HCL:Y28599**
HCL: K30655903 221 **SnCl2:Y23648**

LCSS = **ERA CLP Soil Lot # 246** **Other:** Water bath temp. 95°
(*) **LCSW=**0.1mLS **ICV Intermediate stock solution.**
*** Source Standard:** Hg1.25-Y 100ppb
**** Source Standard: ICV** Hg1.25-U 1000ppb **TIME STARTED:**

Comments: *0.2mLS Hg1.25-Y 100ppb

Analyst: Angela Baird **Date:** 2/5/04

[HGFORM.XLW] 7470

Columbia Analytical Services
EPA METHOD 7470A

Extr/Prep Batch
KP0315491

Service Request Number(s) : K0612,0547,0520

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PBW	20mls.	20mls			
LCSW(*)					
~~K0612-03~~					
~~-03D~~					
~~-03S*~~					
K0547-01					
-01D					
-01S*					
K0520-01					
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

Container ID: 06

AB 2/2/04

Lot # of Reagents Used:

HNO3:Y31024 **K2S2O8 T44H13** **NaCl :Y07624**
H2SO4: 43212 **KMnO4:V25588** **NH2OH-HCL:Y28599**
HCL: K30655903 221 **SnCl2:Y23648**
LCSS = **ERA CLP Soil Lot # 246** **Other:** Waterbath temp 95
(*) **LCSW=** 0.1mls **ICV Intermediate stock solution.**
*** Source Standard:** HG1-25-T 100ppb
**** Source Standard: ICV** HG1-25-U 1000ppb **TIME STARTED:**

Comments: *0.2mls HG1-25-T 100ppb

Analyst: Angela Baird **Date:** 2/2/04

[HGFORM.XLW] 7470

Redigest

Service Request # K2400648 (HCl Digest)
Calibration 021004B
QC in calibration 021004B
QC Service Request # K2400648
PQS - Sample Position Method Blank #6
PQS – Sample Position LCSW #10

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control	✓		
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL			✓
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			✓

Comments: Report S mg/kg Sn MRL ~~BP~~
Report ^{109}Ag, ^{120}Sn

Primary Review by JC Date 2/10/04
Secondary Review by [illegible] Date 2/10/04
R:\icp\misc\data review forms\PQ-S review form

PLASMAQUAD INSTRUMENT LOG

PQ-S Ser# 971114

Date: 2/10/04 Operator: SC

Pressures

(i) Pumping state Anal(3):

(ii) Operata state

Expn (2): 2.4×10^{0} Inter(1): 1.0×10^{-4} Anal(3): 1.9×10^{-6}

Ion lens settings

EXTR: 1.10 L1: 7.52 L3: 5.85

COLL: 7.53 L2: 3.13 L4: 15.42 Pole Bias: 4.84

SX300 quadrupole

Max mass >280 amu? Y / N

ICP generator parameters at normal forward power (1348 W)

Refl.pwr: 4 watts Plate current: Grid Current:

N.A. PA Voltage:

PA Fillament:

Multiplier high voltage settings

HT1 (ext. dyn. range only): 0.00 HT2: 1.69

Scans on performance monitoring solution

Full range?: Y / N Low mass?: Y / N High mass?: Y / N

Water/Gas

Water Temp: 8°C mini Chiller Water Level: Full

Gas flows

Neb: 0.637 Aux: 1.3 Cool: 14.0 Neb back pressure: 3.9

Other comments: (Changes to instrument/faults noted/service work carried out etc.):

Filename: PLASQUAD.09-18-91

2 SPPB In 9.0×10^{5} CPS

Daily ICP-MS Resolution Check Worksheet

Low Mass Range: Mg^{24}

	Measured Value (cm)
1 amu (atomic mass units)	8.9
Peak Height	150
Peak Width @ 5% of Height	7.1

$$\text{RESOLTION} = \frac{\text{Peak Width @ 5\%}}{\text{1 amu}} = \frac{7.1}{8.9} = 0.80$$

High Mass Range: Pb^{208}

	Measured Value (cm)
1 amu (atomic mass units)	9.1
Peak Height	15.0
Peak Width @ 5% of Height	7.5

$$\text{RESOLTION} = \frac{\text{Peak Width @ 5\%}}{\text{1 amu}} = \frac{7.5}{9.1} = 0.82$$

Analyst: [signature] Date: 2/10/04

RESOLUTN.XLS

MASS CALIBRATION DATA
Tue Feb 10 2004
08:36:03

Actual Mass	Found DAC	Calculated DAC	Calculated Mass
9.01218E+0	1849	1847	9.02184E+0
5.89332E+1	12748	12753	5.89095E+1
1.14904E+2	24988	24984	1.14921E+2
2.07977E+2	45328	45331	2.07963E+2
2.08980E+2	45553	45550	2.08992E+2
2.38051E+2	51907	51907	2.38049E+2

New Mass calibration coeffs
y = a + bx + cx^2 + dx^3
5.57243E-1 4.57803E-3 -5.19602E-11 0.00000E+0
Regression coeff = 1.0000E+0

Multi-Element Calibration Tue Feb 10 2004

Calibration graph coefficients for selected isotopes.

Experiment name : CALIB
User Name : MANAGER
Analysis procedure : SHORT TERM STABILITY PROC
Introduction method : DEFAULT
First sample started at : Tue Feb 10 2004 08:37:46
Last sample started at : **********

Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Element	Symbol	Mass	a0	a1	a2	regression
Beryllium	Be	9	0.0	58631	0.0	1.0000
Magnesium	Mg	24	0.0	69385	0.0	1.0000
Cobalt	Co	59	0.0	51086	0.0	1.0000
Indium	In	115	0.0	40659	0.0	1.0000
Lead	Pb	208	0.0	18945	0.0	1.0000
Bismuth	Bi	209	0.0	30310	0.0	1.0000
Uranium	U	238	0.0	32567	0.0	1.0000

PQ-S #971114 Operator: Jim Chan KA0323534

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : 25 ppb Tuning Standard
First repeat started at : Tue Feb 10 2004 08:37:46
Last repeat started at : Tue Feb 10 2004 08:37:46
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth	Uranium
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Mean	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PQ-S #971114 Operator: Jim Chan KA0323534

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC
Sample name : Short Term Stability
First repeat started at : Tue Feb 10 2004 08:38:27
Last repeat started at : Tue Feb 10 2004 08:40:29
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Beryllium	Magnesium	Cobalt	Indium	Lead	Bismuth	Uranium
Isotope	Be 9	Mg 24	Co 59	In 115	Pb 208	Bi 209	U 238
Detector	PC	PC	PC	PC	PC	PC	PC
Run 1	24.47	24.61	25.03	24.97	24.94	25.15	24.65
Run 2	24.50	24.69	25.03	24.77	25.03	25.07	24.66
Run 3	24.12	24.52	24.93	24.71	25.04	25.09	24.67
Run 4	24.47	24.22	24.74	24.76	25.17	25.08	24.74
Run 5	24.05	24.18	24.81	24.85	24.95	25.09	24.51
Mean	24.32	24.44	24.91	24.81	25.03	25.10	24.65
Std Dev	0.2174	0.2322	0.1285	0.0998	0.0921	0.0330	0.0824
%SD	0.8938	0.9498	0.5159	0.4023	0.3681	0.1315	0.3342

Multi-Element Concentrations Tue Feb 10 2004

Concentration summary for samples.

User Name : MANAGER
Experiment name : CALIB
Analysis procedure : SHORT TERM STABILITY PROC

Introduction method : DEFAULT
First sample started at : Tue Feb 10 2004 08:37:46
Last sample started at : Tue Feb 10 2004 08:38:27
Interference Equations : DEFAULT

Concentration units : ppb

Text

Sample Name	25 ppb Tuning Standard	Short Term Stability
Dilution Factor	1.0000	1.0000

Element	Isotope	Concentration	Concentration
Beryllium	Be 9	25.00	24.32
Magnesium	Mg 24	25.00	24.44
Cobalt	Co 59	25.00	24.91
Indium	In 115	25.00	24.81
Lead	Pb 208	25.00	25.03
Bismuth	Bi 209	25.00	25.10
Uranium	U 238	25.00	24.65

Multi-Element Calibration Tue Feb 10 2004

Calibration graph coefficients for selected isotopes.

Experiment name : 021004B
User Name : MANAGER
Analysis procedure : EPA Method 200.8
Introduction method : EPA 200.8
First sample started at : Tue Feb 10 2004 11:42:29
Last sample started at : **********
Internal standards : In 115 (Interpolating)
Polynomial fit : y = a0 + a1.x + a2.x^2
Units of response : y = counts per second
Units of concentration : x = ppb

Analytical Batch KA0323536

Element	Symbol	Mass	a0	a1	a2	regression
Silver	Ag	107	225.4	14713	0.0	1.0000
Silver	Ag	109	170.8	14121	0.0	1.0000
Tin	Sn	118	113.1	7292	0.0	1.0000
Tin	Sn	120	153.1	9978	0.0	1.0000
Antimony	Sb	121	138.2	7199	0.0	1.0000
Antimony	Sb	123	110.6	5483	0.0	1.0000

2/10/04

PQ-S #971114 Operator: Jim Chan - KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : Calibration Blank
First repeat started at : Tue Feb 10 2004 11:42:29
Last repeat started at : Tue Feb 10 2004 11:42:57
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	-0.0004	-0.0000	-0.0005	0.0003	0.0007	-0.0012
Run 2	-0.0010	0.0014	0.0010	-0.0000	0.0014	0.0026
Run 3	0.0014	-0.0013	-0.0006	-0.0003	-0.0021	-0.0015
Mean	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000
Std Dev	0.0013	0.0013	0.0009	0.0003	0.0019	0.0023
%SD	69882	362990	187050	16074	65207	68177

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	99.92
Run 2	100.3
Run 3	99.74
Mean	100.00
Std Dev	0.3075

MS4-60-C

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : Calibration Standard
First repeat started at : Tue Feb 10 2004 11:43:47
Last repeat started at : Tue Feb 10 2004 11:44:15
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.84	24.75	25.08	25.13	24.99	24.93
Run 2	25.11	25.24	24.99	25.21	25.19	25.12
Run 3	25.05	25.00	24.93	24.66	24.83	24.95
Mean	25.00	25.00	25.00	25.00	25.00	25.00
Std Dev	0.1425	0.2457	0.0766	0.2963	0.1793	0.1027
%SD	0.5699	0.9828	0.3065	1.185	0.7172	0.4109

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	102.0
Run 2	101.9
Run 3	100.6
Mean	101.5
Std Dev	0.8218

ICV
mS4-60-B

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 1
First repeat started at : Tue Feb 10 2004 11:44:48
Last repeat started at : Tue Feb 10 2004 11:45:17
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	12.98	12.95	25.64	25.69	23.22	23.38
Run 2	12.98	12.79	26.06	26.23	25.05	25.08
Run 3	12.86	12.98	25.60	25.60	24.98	24.99
Mean	12.94	12.91	25.77	25.84	24.42	24.49
Std Dev	0.0677	0.1045	0.2561	0.3411	1.036	0.9572
%SD	0.5234	0.8096	0.9937	1.320	4.242	3.909

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	100.7
Run 2	100.1
Run 3	101.9
Mean	100.9
Std Dev	0.9356

CCV1
ms4-60-C

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 2
First repeat started at : Tue Feb 10 2004 11:46:12
Last repeat started at : Tue Feb 10 2004 11:46:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	24.57	24.63	24.81	25.21	25.05	25.10
Run 2	24.56	24.68	24.93	25.11	25.12	25.20
Run 3	25.05	25.16	25.54	25.40	25.65	25.95
Mean	24.72	24.82	25.09	25.24	25.28	25.42
Std Dev	0.2790	0.2950	0.3957	0.1470	0.3294	0.4681
%SD	1.128	1.188	1.577	0.5824	1.303	1.842

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	101.1
Run 2	101.2
Run 3	93.25
Mean	98.51
Std Dev	4.548

ICB

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 3
First repeat started at : Tue Feb 10 2004 11:47:22
Last repeat started at : Tue Feb 10 2004 11:47:51
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0509	0.0498	0.0498	0.0423	0.1088	0.0967
Run 2	0.0342	0.0350	0.0352	0.0284	0.0786	0.0843
Run 3	0.0246	0.0258	0.0260	0.0252	0.0614	0.0702
Mean	0.0366	0.0369	0.0370	0.0320	0.0829	0.0838
Std Dev	0.0133	0.0121	0.0120	0.0091	0.0240	0.0133
%SD	36.35	32.82	32.51	28.40	28.96	15.86

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	101.1
Run 2	100.8
Run 3	101.2
Mean	101.0
Std Dev	0.2094

CCB1

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 4
First repeat started at : Tue Feb 10 2004 11:48:57
Last repeat started at : Tue Feb 10 2004 11:49:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0105	0.0077	0.0116	0.0126	0.0334	0.0349
Run 2	0.0098	0.0073	0.0133	0.0054	0.0269	0.0270
Run 3	0.0101	0.0083	0.0120	0.0076	0.0248	0.0290
Mean	0.0101	0.0078	0.0123	0.0085	0.0284	0.0303
Std Dev	0.0003	0.0005	0.0009	0.0037	0.0045	0.0041
%SD	3.344	6.276	7.533	43.66	15.79	13.50

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	98.92
Run 2	100.3
Run 3	100.0
Mean	99.75
Std Dev	0.7346

CTZA
Soil
m5460-D

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 5
First repeat started at : Tue Feb 10 2004 11:50:50
Last repeat started at : Tue Feb 10 2004 11:51:19
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0437	0.0446	0.2150	0.2143	0.1089	0.1121
Run 2	0.0447	0.0450	0.2112	0.2046	0.1151	0.1106
Run 3	0.0469	0.0424	0.2115	0.2082	0.1064	0.1053
Mean	0.0451	0.0440	0.2126	0.2090	0.1101	0.1093
Std Dev	0.0016	0.0014	0.0021	0.0049	0.0045	0.0036
%SD	3.611	3.214	0.9880	2.345	4.097	3.288

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	101.0
Run 2	100.4
Run 3	100.7
Mean	100.7
Std Dev	0.3148

PQ-S #971114 Operator: Jim Chan KA0323536

0648
TBS
1/5
Redigest

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 6
First repeat started at : Tue Feb 10 2004 12:13:46
Last repeat started at : Tue Feb 10 2004 12:14:15
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0015	-0.0030	5.822	5.888	0.0012	0.0122
Run 2	0.0013	-0.0032	5.872	5.920	0.0040	0.0101
Run 3	0.0029	-0.0018	5.858	5.909	0.0042	0.0060
Mean	0.0019	-0.0027	5.851	5.906	0.0031	0.0094
Std Dev	0.0009	0.0008	0.0256	0.0163	0.0017	0.0032
%SD	47.52	28.45	0.4367	0.2765	54.07	33.35

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	90.67
Run 2	90.61
Run 3	90.70
Mean	90.66
Std Dev	0.0472

PQ-S #971114 Operator: Jim Chan KA0323536

6648-1
1/5
Bedipest

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : Z
First repeat started at : Tue Feb 10 2004 12:15:12
Last repeat started at : Tue Feb 10 2004 12:15:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.874	2.288	12.98	13.06	1.619	1.636
Run 2	2.793	2.249	13.07	13.08	1.575	1.614
Run 3	2.821	2.263	12.93	12.89	1.594	1.628
Mean	2.830	2.267	12.99	13.01	1.596	1.626
Std Dev	0.0409	0.0196	0.0705	0.1059	0.0218	0.0108
%SD	1.447	0.8629	0.5424	0.8141	1.365	0.6656

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	76.94
Run 2	78.01
Run 3	78.10
Mean	77.68
Std Dev	0.6424

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0648-18D up
I/S
Redigest

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 8
First repeat started at : Tue Feb 10 2004 12:16:33
Last repeat started at : Tue Feb 10 2004 12:17:01
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	2.780	2.313	11.95	11.97	1.447	1.506
Run 2	2.761	2.348	12.17	12.10	1.468	1.511
Run 3	2.814	2.359	12.09	12.32	1.510	1.543
Mean	2.785	2.340	12.07	12.13	1.475	1.520
Std Dev	0.0270	0.0239	0.1109	0.1769	0.0319	0.0199
%SD	0.9699	1.023	0.9186	1.458	2.160	1.306

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	80.20
Run 2	79.85
Run 3	79.93
Mean	79.99
Std Dev	0.1855

0648-1 Spike
1/5x 1/5 Dil.
Digest

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 9
First repeat started at : Tue Feb 10 2004 12:20:52
Last repeat started at : Tue Feb 10 2004 12:21:21
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	4.238	4.108	180.7	180.1	10.33	10.50
Run 2	4.281	4.177	182.7	182.4	10.67	10.56
Run 3	4.285	4.206	181.8	182.3	10.63	10.66
Mean	4.268	4.164	181.8	181.6	10.54	10.58
Std Dev	0.0259	0.0506	1.008	1.283	0.1879	0.0794
%SD	0.6060	1.214	0.5544	0.7068	1.782	0.7511

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	90.62
Run 2	89.56
Run 3	90.01
Mean	90.06
Std Dev	0.5342

0648
LCSS
1/20 til
Redigest

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 10
First repeat started at : Tue Feb 10 2004 12:22:55
Last repeat started at : Tue Feb 10 2004 12:23:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	47.42	47.56	46.43	46.64	13.25	13.55
Run 2	48.94	48.89	45.80	46.03	13.94	13.86
Run 3	49.43	49.52	45.86	46.37	14.02	14.03
Mean	48.60	48.66	46.03	46.35	13.74	13.81
Std Dev	1.049	0.9981	0.3506	0.3057	0.4231	0.2416
%SD	2.159	2.051	0.7617	0.6596	3.080	1.749

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	75.45
Run 2	88.99
Run 3	88.14
Mean	84.19
Std Dev	7.582

0648-2
1/5 Dil
Redigest

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 11
First repeat started at : Tue Feb 10 2004 12:24:56
Last repeat started at : Tue Feb 10 2004 12:25:25
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.9527	0.5432	9.443	9.352	0.7164	0.8400
Run 2	0.9271	0.5277	9.379	9.327	0.7328	0.7922
Run 3	0.9256	0.5182	9.305	9.362	0.7168	0.8108
Mean	0.9351	0.5297	9.376	9.347	0.7220	0.8144
Std Dev	0.0152	0.0126	0.0690	0.0181	0.0094	0.0241
%RSD	1.627	2.387	0.7363	0.1936	1.296	2.959

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	72.94
Run 2	74.48
Run 3	73.73
Mean	73.72
Std Dev	0.7683

PQ-S #971114 Operator: Jim Chan KA0323536

0648-4
1:5 Dil.
Redigest

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 12
First repeat started at : Tue Feb 10 2004 12:26:13
Last repeat started at : Tue Feb 10 2004 12:26:41
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.7540	0.5966	10.50	10.40	2.127	2.100
Run 2	0.7495	0.6111	10.33	10.37	2.084	2.120
Run 3	0.7605	0.6081	10.38	10.33	2.094	2.080
Mean	0.7547	0.6053	10.40	10.37	2.101	2.100
Std Dev	0.0055	0.0077	0.0837	0.0321	0.0228	0.0200
%SD	0.7288	1.269	0.8045	0.3092	1.084	0.9509

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	82.13
Run 2	81.86
Run 3	81.21
Mean	81.73
Std Dev	0.4756

0648-5
115 Pt!
Redigest

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 13
First repeat started at : Tue Feb 10 2004 12:27:24
Last repeat started at : Tue Feb 10 2004 12:27:53
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.4063	0.3173	18.40	18.60	2.144	2.110
Run 2	0.3974	0.3336	18.59	18.58	2.101	2.108
Run 3	0.4214	0.3336	18.57	18.58	2.152	2.156
Mean	0.4084	0.3282	18.52	18.59	2.132	2.125
Std Dev	0.0121	0.0094	0.1015	0.0123	0.0276	0.0272
%SD	2.970	2.875	0.5483	0.0663	1.293	1.279

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	85.56
Run 2	84.79
Run 3	84.95
Mean	85.10
Std Dev	0.4065

CCV2
m54-60-C

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 14
First repeat started at : Tue Feb 10 2004 12:29:02
Last repeat started at : Tue Feb 10 2004 12:29:31
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	25.21	25.01	24.63	24.52	23.79	23.95
Run 2	25.37	25.09	24.70	24.93	24.12	24.08
Run 3	25.54	25.36	24.57	24.46	23.74	23.74
Mean	25.37	25.16	24.63	24.64	23.88	23.93
Std Dev	0.1634	0.1833	0.0635	0.2578	0.2036	0.1686
%SD	0.6439	0.7288	0.2577	1.046	0.8524	0.7047

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	91.72
Run 2	92.27
Run 3	91.60
Mean	91.86
Std Dev	0.3595

CCB2

PQ-S #971114 Operator: Jim Chan KA0323536

Multi-Element Concentrations Tue Feb 10 2004

Experiment name : 021004B
Analysis procedure : EPA Method 200.8
Sample name : 15
First repeat started at : Tue Feb 10 2004 12:30:20
Last repeat started at : Tue Feb 10 2004 12:30:49
Interference Equations : DEFAULT
Dilution Factor : 1.0000 Concentration units : ppb

Element	Silver	Silver	Tin	Tin	Antimony	Antimony
Isotope	Ag 107	Ag 109	Sn 118	Sn 120	Sb 121	Sb 123
Detector	PC	PC	PC	PC	PC	PC
Run 1	0.0446	0.0384	0.0456	0.0361	0.0021	0.0049
Run 2	0.0313	0.0351	0.0245	0.0310	0.0028	0.0020
Run 3	0.0245	0.0220	0.0258	0.0217	-0.0006	0.0037
Mean	0.0335	0.0318	0.0320	0.0296	0.0014	0.0035
Std Dev	0.0102	0.0087	0.0118	0.0073	0.0018	0.0014
%SD	30.45	27.35	36.89	24.58	123.7	40.21

Internal Standard Drift; % relative to mean of first sample :

Element	Indium
Isotope	In 115
Detector	PC
Run 1	92.09
Run 2	92.38
Run 3	92.28
Mean	92.25
Std Dev	0.1478

Service Request # K2400648 (water Blank/sediment)
Calibration 02-13-04A
QC in calibration 02-13-04A
QC Service Request # K2400648

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL		✓	
6. LCS in control	✓		
7. Spike and duplicate in control		✓	
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL	✓		
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			—

Comments: 0.1151 ppb mn PBS, samples > 20x
143% spike recovery mn (sample 2x)
213% cd spike recovery sample (4x)

Report Se-78 for sediments

Primary Review by JC Date 2/13/04
Secondary Review by [illegible] Date 2/13/04
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution
1	Calibration Blank	Blank	0 kg	0 ml	1.00
2	25 ppb Std. MS4-62-B	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS4-57-D	Unknown	0 kg	0 ml	1.00
4	CCV1 MS4-62-B	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA WATER MS4-58-B	Unknown	0 kg	0 ml	1.00
8	CRA SOIL MS4-59-B	Unknown	0 kg	0 ml	1.00
9	PBW K0648	Unknown	0 kg	0 ml	1.00
10	CRA WATER MS4-58-B BERLIN	Unknown	0 kg	0 ml	1.00
11	K0648-03	Unknown	0 kg	0 ml	1.00
12	K0648-03D	Unknown	0 kg	0 ml	1.00
13	K0648-03S	Unknown	0 kg	0 ml	1.00
14	LCSW K0648	Unknown	0 kg	0 ml	1.00
15	CCV2 MS4-62-B	Unknown	0 kg	0 ml	1.00
16	CCB2	Unknown	0 kg	0 ml	1.00
17	PBS K0648 1/5	Unknown	0 kg	0 ml	1.00
18	LCSS K0648 1/20	Unknown	0 kg	0 ml	1.00
19	K0648-01 1/5	Unknown	0 kg	0 ml	1.00
20	K0648-01D 1/5	Unknown	0 kg	0 ml	1.00
21	K0648-01S 1/5 X 1/5	Unknown	0 kg	0 ml	1.00
22	K0648-02 1/5	Unknown	0 kg	0 ml	1.00
23	K0648-04 1/5	Unknown	0 kg	0 ml	1.00
24	K0648-05 1/5	Unknown	0 kg	0 ml	1.00
25	K0648-02 1/5 X 1/100	Unknown	0 kg	0 ml	1.00
26	K0648-04 1/5 X 1/100	Unknown	0 kg	0 ml	1.00
27	CCV3 MS4-62-B	Unknown	0 kg	0 ml	1.00
28	CCB3	Unknown	0 kg	0 ml	1.00
29	K0648-01 1/5 X 1/10	Unknown	0 kg	0 ml	1.00
30	K0648-01 1/5 X 1/2	Unknown	0 kg	0 ml	1.00
31	K0648-01D 1/5 X 1/20	Unknown	0 kg	0 ml	1.00
32	K0648-01S 1/5 X 1/20	Unknown	0 kg	0 ml	1.00
33	K0648-05 1/5 X 1/100	Unknown	0 kg	0 ml	1.00
34	CCV4 MS4-62-B	Unknown	0 kg	0 ml	1.00
35	CCB4	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
Samples	jchan	7:20:46 2/13/04

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:20:46 2/13/04
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-605.00
Lens1	4.00
Lens2	-115.20
Lens3	-179.80
Pole Bias	1.00
Sampling Depth	400.00
Horizontal	57.00
Vertical	108.00
Cool	13.00
Auxiliary	0.73
Nebuliser	0.85
Forward power	1,350.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-32.00
Focus	23.10

ExCell Mass Calibration **Date: 2/13/04**

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1596	0.716	0.092	TRUE
23.985	5949	0.613	-0.045	FALSE
26.982	6709	0.664	-0.034	FALSE
43.956	11027	0.715	-0.02	TRUE
45.953	11534	0.715	-0.013	TRUE
50.944	12808	0.715	-0.024	TRUE
51.94	13055	0.715	0.002	TRUE
52.941	13315	0.715	-0.018	TRUE
53.949	13575	0.715	-0.03	TRUE
55.935	14082	0.715	-0.035	TRUE
56.935	14335	0.664	-0.028	TRUE
57.934	14589	0.715	-0.026	TRUE
58.933	14836	0.715	0.004	TRUE
75.92	19165	0.714	0.003	TRUE
114.904	29098	0.764	0.035	TRUE
136.906	34714	0.764	0.033	TRUE
137.906	34974	0.764	0.015	TRUE
139.905	35481	0.764	0.028	TRUE
141.908	35995	0.713	0.018	TRUE
202.972	51608	0.712	-0.015	TRUE
204.972	52115	0.712	0.002	TRUE
205.974	52375	0.711	-0.012	TRUE
206.976	52628	0.762	0	TRUE
207.977	52882	0.711	0.008	TRUE
208.98	53142	0.711	-0.005	TRUE
238.051	60584	0.66	-0.016	TRUE

Excluded In Calib | Excluded In Results | Multi Element | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	[redacted]	7Li	9Be	59Co	115In	208Pb
1	Stability 2/13/04	2/13/04 7:39:46 AM	(P)0.167	(P)6774.940	(P)3669.972	(P)30980.907	(P)51675.632	(P)25767.218
2	Stability 2/13/04	2/13/04 7:40:49 AM	(P)0.000	(P)7081.588	(P)3421.743	(P)28625.822	(P)49969.417	(P)24829.560
3	Stability 2/13/04	2/13/04 7:41:51 AM	(P)0.167	(P)7179.137	(P)3348.059	(P)27919.257	(P)49629.566	(P)24275.776
4	Stability 2/13/04	2/13/04 7:42:54 AM	(P)0.000	(P)7475.289	(P)3351.727	(P)28100.447	(P)49487.739	(P)24417.016
5	Stability 2/13/04	2/13/04 7:43:56 AM	(P)0.333	(P)7574.508	(P)3385.568	(P)29508.288	(P)51028.141	(P)25299.383
	Mean of Stability 2/1	2/13/04 7:39:10 AM	(P)0.133	(P)7217.092	(P)3435.414	(P)29026.944	(P)50358.099	(P)24917.791
	SD of Stability 2/13/04		(P)0.139	(P)320.044	(P)134.465	(P)1254.585	(P)951.868	(P)620.057
	%RSD of Stability 2/		(P)104.583	(P)4.435	(P)3.914	(P)4.322	(P)1.890	(P)2.488

Run	Label	TimeStamp	209Bi	[redacted]	238U
1	Stability 2/13/04	2/13/04 7:39:46 AM	(P)41764.796	(P)0.333	(P)40598.793
2	Stability 2/13/04	2/13/04 7:40:49 AM	(P)39794.014	(P)0.000	(P)38366.965
3	Stability 2/13/04	2/13/04 7:41:51 AM	(P)39015.038	(P)0.167	(P)37519.543
4	Stability 2/13/04	2/13/04 7:42:54 AM	(P)39005.679	(P)0.000	(P)37681.635
5	Stability 2/13/04	2/13/04 7:43:56 AM	(P)40587.242	(P)0.000	(P)39030.590
	Mean of Stability 2/1	2/13/04 7:39:10 AM	(P)40033.354	(P)0.100	(P)38639.505
	SD of Stability 2/13/04		(P)1167.803	(P)0.149	(P)1248.786
	%RSD of Stability 2/		(P)2.917	(P)149.071	(P)3.232

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Analytical Batch KA0323473

Sample Name:		**Calibration Blank**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 8:01**					
Antimony	121	0.0002	0	-0.0001	**0**	0.0002	0
Antimony	123	-0.0004	-0.0001	0.0004	**0**	0.0004	0
Arsenic	75	-0.0102	0.0072	0.003	**0**	0.0091	0
Cadmium	111	0.0002	0.0002	-0.0004	**0**	0.0003	0
Cadmium	114	0.0005	-0.0002	-0.0004	**0**	0.0005	0
Cobalt	59	-0.0006	0.0002	0.0004	**0**	0.0005	0
Copper	63	0.0014	-0.002	0.0006	**0**	0.0018	0
Copper	65	-0.0006	0.0008	-0.0002	**0**	0.0007	0
Lead	206	0.0001	-0.0001	0	**0**	0.0001	0
Lead	207	0.0001	-0.0004	0.0002	**0**	0.0003	0
Lead	208	0.0002	-0.0003	0.0001	**0**	0.0003	0
Manganese	55	-0.0003	0.0003	0	**0**	0.0003	0
Molybdenum	95	0.0002	0.0001	-0.0003	**0**	0.0003	0
Molybdenum	97	-0.0008	0.0013	-0.0005	**0**	0.0011	0
Molybdenum	98	0	-0.0002	0.0002	**0**	0.0002	0
Nickel	60	-0.0138	0.0003	0.0135	**0**	0.0137	0
Nickel	62	0.0017	-0.0018	0.0001	**0**	0.0017	0
Selenium	77	-0.0212	0.0109	0.0103	**0**	0.0183	0
Selenium	78	0.0725	-0.083	0.0105	**0**	0.0783	0
Selenium	82	-0.0555	0.0498	0.0057	**0**	0.0529	0
Silver	107	0	0.0001	-0.0002	**0**	0.0002	0
Silver	109	0	0.0001	-0.0001	**0**	0.0001	0
Thallium	203	-0.0001	0.0002	0	**0**	0.0001	0
Thallium	205	-0.0001	0.0001	0	**0**	0.0001	0
Tin	118	0.0008	-0.0005	-0.0003	**0**	0.0007	0
Tin	120	-0.0002	0	0.0001	**0**	0.0002	0
Zinc	66	0.0011	0.0005	-0.0016	**0**	0.0014	0
Zinc	67	0.0017	0.0164	-0.0182	**0**	0.0174	0
Zinc	68	-0.0015	-0.0009	0.0024	**0**	0.0021	0

2/13/04

Internal Standard Factors:

Scandium	45	0.996	0.992	1.012	**0.996**	n/a	n/a
Indium	115	1.016	0.985	1	**1.016**	n/a	n/a
Lutetium	175	1.005	1.009	0.986	**1.005**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**25 ppb Std. MS4-62-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 8:06**					
Antimony	121	24.72	24.96	25.32	**25**	0.2985	1.194
Antimony	123	24.38	25.45	25.17	**25**	0.5571	2.229
Arsenic	75	24.98	25.43	24.59	**25**	0.4165	1.666
Cadmium	111	24.37	25.09	25.55	**25**	0.5948	2.379
Cadmium	114	24.37	25.08	25.55	**25**	0.5968	2.387
Cobalt	59	24.93	24.94	25.13	**25**	0.1168	0.4673
Copper	63	24.96	25.05	25	**25**	0.0448	0.1791
Copper	65	24.83	25.25	24.92	**25**	0.2228	0.8913
Lead	206	25.07	24.88	25.04	**25**	0.1043	0.4174
Lead	207	25.26	24.95	24.78	**25**	0.2445	0.9781
Lead	208	25.25	24.88	24.87	**25**	0.219	0.8759
Manganese	55	24.64	25.3	25.06	**25**	0.3373	1.349
Molybdenum	95	24.73	25.07	25.2	**25**	0.2405	0.9619
Molybdenum	97	24.56	25.21	25.23	**25**	0.379	1.516
Molybdenum	98	24.63	24.9	25.47	**25**	0.4317	1.727
Nickel	60	24.89	25.07	25.04	**25**	0.1005	0.4019
Nickel	62	25.05	24.88	25.07	**25**	0.1023	0.4092
Selenium	77	24.68	25.21	25.11	**25**	0.281	1.124
Selenium	78	24.96	25.01	25.03	**25**	0.0395	0.1578
Selenium	82	25.03	25.37	24.6	**25**	0.386	1.544
Silver	107	24.69	24.86	25.45	**25**	0.4018	1.607
Silver	109	24.49	25	25.51	**25**	0.5106	2.043
Thallium	203	25.32	24.78	24.9	**25**	0.2867	1.147
Thallium	205	24.96	25.11	24.93	**25**	0.0937	0.3748
Tin	118	24.73	24.9	25.36	**25**	0.3246	1.298
Tin	120	24.87	24.91	25.21	**25**	0.1874	0.7497
Zinc	66	24.78	25.34	24.88	**25**	0.3005	1.202
Zinc	67	25.15	24.81	25.05	**25**	0.1746	0.6983
Zinc	68	24.81	25.1	25.09	**25**	0.1622	0.6486

Internal Standard Factors:

Scandium	45	1.03	1.048	1.038	**1.03**	n/a	n/a
Indium	115	0.999	1.016	1.025	**0.999**	n/a	n/a
Lutetium	175	1.012	1	0.989	**1.012**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		ICV MS4-57-D			Mean	SD	%RSD
TimeStamp		2/13/04 8:18					
Antimony	121	25.49	24.43	25.2	**25.04**	0.5445	2.174
Antimony	123	25.78	24.96	25.04	**25.26**	0.453	1.793
Arsenic	75	26.28	25.54	25.83	**25.88**	0.3721	1.438
Cadmium	111	13.03	12.55	12.82	**12.8**	0.2383	1.861
Cadmium	114	13.2	13.02	12.99	**13.07**	0.1137	0.8694
Cobalt	59	25.73	25.1	24.96	**25.26**	0.4094	1.62
Copper	63	12.93	12.78	12.61	**12.77**	0.1599	1.252
Copper	65	13.01	12.71	12.76	**12.82**	0.1603	1.25
Lead	206	23.81	23.59	23.48	**23.63**	0.1685	0.7132
Lead	207	26.22	26.03	25.34	**25.86**	0.4643	1.796
Lead	208	25.14	25.09	24.51	**24.91**	0.3535	1.419
Manganese	55	25.09	25.12	25.19	**25.13**	0.0514	0.2045
Molybdenum	95	25.33	25.54	25.64	**25.51**	0.1575	0.6176
Molybdenum	97	25.61	25.18	25.58	**25.46**	0.2435	0.9567
Molybdenum	98	25.98	25.56	25.96	**25.83**	0.2354	0.9113
Nickel	60	25.61	25.51	25.47	**25.53**	0.0734	0.2874
Nickel	62	25.5	25.88	25.57	**25.65**	0.2012	0.7842
Selenium	77	26.76	25.84	25.61	**26.07**	0.607	2.328
Selenium	78	26.32	25.44	25.66	**25.81**	0.4592	1.779
Selenium	82	26.24	25.46	25.63	**25.78**	0.4072	1.58
Silver	107	12.52	12.36	12.51	**12.46**	0.0864	0.6937
Silver	109	12.5	12.18	12.35	**12.34**	0.1599	1.296
Thallium	203	25.42	25.38	24.99	**25.26**	0.2394	0.9474
Thallium	205	25.09	25.21	24.9	**25.07**	0.1574	0.6278
Tin	118	24.92	24.19	24.64	**24.58**	0.3687	1.5
Tin	120	25.01	24.46	24.85	**24.77**	0.2805	1.132
Zinc	66	26.05	25.69	25.39	**25.71**	0.3315	1.29
Zinc	67	30.79	30.87	30.59	**30.75**	0.1465	0.4765
Zinc	68	29.62	29.2	29.29	**29.37**	0.2178	0.7417

Internal Standard Factors:

Scandium	45	1.03	1.038	1.025	**1.03**	n/a	n/a
Indium	115	0.979	0.961	0.974	**0.979**	n/a	n/a
Lutetium	175	0.967	0.977	0.964	**0.967**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		CCV1 MS4-62-B			Mean	SD	%RSD
TimeStamp		2/13/04 8:22					
Antimony	121	24.78	25.13	24.84	**24.92**	0.1892	0.7593
Antimony	123	24.86	24.88	24.73	**24.83**	0.0828	0.3335
Arsenic	75	24.89	25.08	25.24	**25.07**	0.1741	0.6946
Cadmium	111	25.09	25.54	25.16	**25.26**	0.2389	0.9456
Cadmium	114	24.6	24.85	24.77	**24.74**	0.1305	0.5277
Cobalt	59	25.05	24.94	24.71	**24.9**	0.1756	0.7053
Copper	63	25.08	24.87	24.76	**24.9**	0.1668	0.6699
Copper	65	25.3	24.98	24.5	**24.93**	0.4011	1.609
Lead	206	25.15	25.52	25.23	**25.3**	0.1971	0.7792
Lead	207	24.47	25.21	25.04	**24.91**	0.3884	1.559
Lead	208	24.89	25.16	25.08	**25.04**	0.1384	0.5528
Manganese	55	25.07	25.24	24.76	**25.02**	0.2402	0.9598
Molybdenum	95	25.18	25.41	25.01	**25.2**	0.2014	0.7992
Molybdenum	97	25.36	24.89	25.23	**25.16**	0.2449	0.9736
Molybdenum	98	25.49	25.7	25.67	**25.62**	0.1133	0.4421
Nickel	60	25.03	25.03	24.77	**24.94**	0.1518	0.6087
Nickel	62	25.5	25.2	25.18	**25.29**	0.1788	0.7071
Selenium	77	24.72	25.05	25.01	**24.93**	0.1783	0.7151
Selenium	78	24.88	25.65	25.1	**25.21**	0.3959	1.57
Selenium	82	24.74	24.93	24.98	**24.88**	0.127	0.5102
Silver	107	25.06	25.14	25.13	**25.11**	0.0403	0.1603
Silver	109	24.82	25.07	24.73	**24.88**	0.1761	0.7078
Thallium	203	24.86	25.17	24.83	**24.95**	0.1878	0.7527
Thallium	205	25.04	25.2	25.02	**25.09**	0.0986	0.3929
Tin	118	24.98	25.13	24.94	**25.02**	0.1011	0.4043
Tin	120	24.92	24.93	24.92	**24.93**	0.0071	0.0286
Zinc	66	24.86	25.06	24.93	**24.95**	0.0988	0.3958
Zinc	67	25.77	25.99	25.8	**25.85**	0.1196	0.4626
Zinc	68	25.39	25.03	25.29	**25.24**	0.1839	0.7285

Internal Standard Factors:

Scandium	45	1.073	1.075	1.062	**1.073**	n/a	n/a
Indium	115	1.014	1.018	1.004	**1.014**	n/a	n/a
Lutetium	175	1.017	1.023	1.012	**1.017**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		ICB			Mean	SD	%RSD
TimeStamp		2/13/04 8:28					
Antimony	121	0.004	0.0029	0.003	**0.0033**	0.0006	17.42
Antimony	123	0.0031	0.0031	0.0035	**0.0032**	0.0002	6.037
Arsenic	75	-0.0222	-0.0091	0.0003	**-0.0103**	0.0113	109.4
Cadmium	111	0.0009	0.0013	0.0011	**0.0011**	0.0002	17.67
Cadmium	114	0.0009	0.0011	0.001	**0.001**	0.0001	14
Cobalt	59	0.0007	0.0015	0.0004	**0.0009**	0.0006	68.05
Copper	63	0.0144	0.0131	0.0147	**0.0141**	0.0009	6.199
Copper	65	0.0081	0.0155	0.0094	**0.011**	0.004	36.08
Lead	206	0.0009	0.0008	0.0012	**0.001**	0.0002	21.68
Lead	207	0.0024	0.0017	0.0012	**0.0018**	0.0006	33.08
Lead	208	0.0015	0.0013	0.0011	**0.0013**	0.0002	14.63
Manganese	55	0.0017	0.0002	0.0017	**0.0012**	0.0008	69.71
Molybdenum	95	0.0108	0.0082	0.005	**0.008**	0.0029	36.81
Molybdenum	97	0.0102	0.0035	0.0032	**0.0056**	0.004	70.51
Molybdenum	98	0.0101	0.0067	0.0061	**0.0076**	0.0021	27.58
Nickel	60	0.0591	0.0539	0.054	**0.0557**	0.003	5.345
Nickel	62	0.126	0.055	0.1458	**0.1089**	0.0477	43.82
Selenium	77	0.0372	-0.0609	-0.0435	**-0.0224**	0.0523	233.8
Selenium	78	0.1659	0.1524	-0.0154	**0.101**	0.101	99.99
Selenium	82	-0.0255	-0.0721	-0.0341	**-0.0439**	0.0248	56.46
Silver	107	0.0057	0.0046	0.0037	**0.0047**	0.001	21.67
Silver	109	0.0052	0.0043	0.0041	**0.0045**	0.0006	13.42
Thallium	203	0.014	0.012	0.0089	**0.0116**	0.0026	22.05
Thallium	205	0.0139	0.0104	0.0094	**0.0113**	0.0024	20.92
Tin	118	0.0148	0.0139	0.0113	**0.0134**	0.0018	13.49
Tin	120	0.0145	0.011	0.0098	**0.0118**	0.0024	20.49
Zinc	66	0.2205	0.2267	0.2144	**0.2205**	0.0061	2.777
Zinc	67	0.1831	0.1773	0.1739	**0.1781**	0.0047	2.622
Zinc	68	0.2426	0.2191	0.222	**0.2279**	0.0128	5.617

Internal Standard Factors:

Scandium	45	1.069	1.057	1.049	**1.069**	n/a	n/a
Indium	115	1.022	1.008	0.997	**1.022**	n/a	n/a
Lutetium	175	1.005	1.007	1	**1.005**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**CCB1**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 8:32**					
Antimony	121	0.0024	0.0024	0.0018	**0.0022**	0.0003	15.64
Antimony	123	0.0021	0.0016	0.0022	**0.002**	0.0003	16.14
Arsenic	75	-0.0299	0.0179	0.0095	**-0.0008**	0.0255	3063
Cadmium	111	0.0006	0.0007	0	**0.0005**	0.0004	80.44
Cadmium	114	0.0002	0.0003	-0.0001	**0.0001**	0.0002	138.3
Cobalt	59	0.0002	0.0003	0.0015	**0.0007**	0.0007	104
Copper	63	0.0165	0.0113	0.0155	**0.0144**	0.0027	19
Copper	65	0.0133	0.0119	0.0083	**0.0112**	0.0026	22.93
Lead	206	0.0018	0.0016	0.0011	**0.0015**	0.0004	26.86
Lead	207	0.0008	0.0015	0.0015	**0.0013**	0.0004	31.09
Lead	208	0.0011	0.0015	0.0012	**0.0013**	0.0002	14.2
Manganese	55	-0.0002	0.0007	-0.0002	**0.0001**	0.0005	567.5
Molybdenum	95	0.0045	0.0036	0.0018	**0.0033**	0.0014	40.88
Molybdenum	97	0.0029	0.0066	0.0022	**0.0039**	0.0023	59.57
Molybdenum	98	0.0037	0.0037	0.0034	**0.0036**	0.0002	5.462
Nickel	60	0.0344	0.0554	0.036	**0.0419**	0.0117	27.87
Nickel	62	0.098	0.1099	0.0694	**0.0924**	0.0208	22.53
Selenium	77	-0.0332	-0.1194	-0.036	**-0.0629**	0.049	77.99
Selenium	78	0.1991	0.2897	0.0514	**0.18**	0.1203	66.8
Selenium	82	-0.1022	-0.0492	0.0488	**-0.0342**	0.0766	224.1
Silver	107	0.0034	0.0029	0.0024	**0.0029**	0.0005	18.2
Silver	109	0.002	0.0023	0.0027	**0.0023**	0.0003	14.4
Thallium	203	0.0059	0.0047	0.0034	**0.0047**	0.0013	27.28
Thallium	205	0.0064	0.0054	0.0048	**0.0055**	0.0008	14.41
Tin	118	0.0089	0.0084	0.0075	**0.0083**	0.0007	8.878
Tin	120	0.008	0.0072	0.0079	**0.0077**	0.0004	5.425
Zinc	66	0.2051	0.2006	0.1981	**0.2013**	0.0035	1.756
Zinc	67	0.144	0.1214	0.0871	**0.1175**	0.0286	24.38
Zinc	68	0.2183	0.2016	0.2035	**0.2078**	0.0092	4.409

Internal Standard Factors:

Scandium	45	1.042	1.047	1.018	**1.042**	n/a	n/a
Indium	115	1.002	0.999	0.991	**1.002**	n/a	n/a
Lutetium	175	1.017	1.019	1.005	**1.017**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**CRA WATER MS4-58-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 8:37**					
Antimony	121	0.0513	0.0536	0.055	**0.0533**	0.0019	3.53
Antimony	123	0.0527	0.0556	0.0545	**0.0543**	0.0014	2.639
Arsenic	75	0.5573	0.5334	0.5111	**0.5339**	0.0231	4.325
Cadmium	111	0.0551	0.0574	0.0515	**0.0547**	0.0029	5.354
Cadmium	114	0.0544	0.0508	0.0536	**0.0529**	0.0019	3.57
Cobalt	59	0.0218	0.0236	0.0201	**0.0218**	0.0017	7.905
Copper	63	0.1255	0.1267	0.1241	**0.1254**	0.0013	1.037
Copper	65	0.1143	0.1224	0.1236	**0.1201**	0.0051	4.223
Lead	206	0.0239	0.0238	0.0249	**0.0242**	0.0006	2.686
Lead	207	0.0219	0.0256	0.0256	**0.0243**	0.0021	8.779
Lead	208	0.0238	0.0243	0.0245	**0.0242**	0.0004	1.523
Manganese	55	0.0537	0.0513	0.0537	**0.0529**	0.0014	2.617
Molybdenum	95	0.0569	0.0528	0.053	**0.0542**	0.0024	4.347
Molybdenum	97	0.0481	0.0503	0.0576	**0.052**	0.005	9.571
Molybdenum	98	0.0536	0.0543	0.0557	**0.0546**	0.0011	1.993
Nickel	60	0.245	0.2536	0.2545	**0.251**	0.0052	2.083
Nickel	62	0.3391	0.35	0.3771	**0.3554**	0.0196	5.515
Selenium	77	0.9346	0.9921	1.051	**0.9924**	0.058	5.843
Selenium	78	1.064	1.01	1.117	**1.064**	0.0535	5.027
Selenium	82	1.041	1.188	1.056	**1.095**	0.0811	7.402
Silver	107	0.0226	0.0223	0.0218	**0.0222**	0.0004	1.723
Silver	109	0.0234	0.0211	0.0229	**0.0225**	0.0012	5.369
Thallium	203	0.0243	0.023	0.0237	**0.0237**	0.0007	2.752
Thallium	205	0.0239	0.0238	0.0252	**0.0243**	0.0008	3.11
Tin	118	0.1136	0.1109	0.1065	**0.1103**	0.0036	3.243
Tin	120	0.1098	0.1099	0.1076	**0.1091**	0.0013	1.207
~~Zinc~~	~~66~~	~~0.9899~~	~~1.018~~	~~1.009~~	~~**1.005**~~	~~0.0142~~	~~1.408~~ X
Zinc	67	0.8392	0.8814	0.8871	**0.8692**	0.0262	3.012
Zinc	68	0.9481	0.9905	0.9824	**0.9737**	0.0225	2.314

X see Rerun JC 2/13/04

Internal Standard Factors:

Scandium	45	1.045	1.04	1.03	**1.045**	n/a	n/a
Indium	115	1.013	1.002	0.999	**1.013**	n/a	n/a
Lutetium	175	1.002	1.001	1.005	**1.002**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		CRA SOIL MS4-59-B			Mean	SD	%RSD
TimeStamp		2/13/04 8:41					
Antimony	121	0.1005	0.1036	0.1021	**0.1021**	0.0016	1.523
Antimony	123	0.1042	0.1055	0.1042	**0.1046**	0.0007	0.6763
Arsenic	75	1.075	1.05	1.001	**1.042**	0.0375	3.6
Cadmium	111	0.1088	0.1056	0.106	**0.1068**	0.0017	1.627
Cadmium	114	0.1085	0.1119	0.1051	**0.1085**	0.0034	3.127
Cobalt	59	0.0414	0.0409	0.043	**0.0418**	0.0011	2.605
Copper	63	0.2387	0.2258	0.2253	**0.23**	0.0076	3.299
Copper	65	0.2152	0.2138	0.2191	**0.2161**	0.0028	1.279
Lead	206	0.0424	0.0437	0.0418	**0.0427**	0.001	2.304
Lead	207	0.0425	0.0444	0.0449	**0.0439**	0.0013	2.909
Lead	208	0.043	0.0438	0.0443	**0.0437**	0.0007	1.563
Manganese	55	0.1053	0.1038	0.1057	**0.1049**	0.001	0.9685
Molybdenum	95	0.1067	0.1062	0.1039	**0.1056**	0.0015	1.423
Molybdenum	97	0.1069	0.1086	0.1025	**0.106**	0.0031	2.959
Molybdenum	98	0.1059	0.108	0.105	**0.1063**	0.0015	1.441
Nickel	60	0.4648	0.4546	0.4378	**0.4524**	0.0136	3.01
Nickel	62	0.4395	0.5312	0.4507	**0.4738**	0.05	10.55
Selenium	77	2.099	2.056	2.102	**2.085**	0.0258	1.238
Selenium	78	2.185	2.084	2.115	**2.128**	0.0519	2.438
Selenium	82	2.261	2.014	1.948	**2.075**	0.1652	7.962
Silver	107	0.041	0.0419	0.0421	**0.0417**	0.0006	1.411
Silver	109	0.0422	0.0425	0.0418	**0.0421**	0.0003	0.798
Thallium	203	0.0437	0.0448	0.043	**0.0438**	0.0009	2.128
Thallium	205	0.0442	0.0439	0.0446	**0.0442**	0.0004	0.8494
Tin	118	0.2091	0.2111	0.2083	**0.2095**	0.0014	0.6903
Tin	120	0.2052	0.207	0.2015	**0.2046**	0.0028	1.362
Zinc	66	1.179	1.22	1.197	**1.199**	0.0208	1.737
Zinc	67	1.094	1.103	1.065	**1.088**	0.0198	1.817
Zinc	68	1.152	1.183	1.145	**1.16**	0.0204	1.763

Internal Standard Factors:

Scandium	45	1.043	1.029	1.019	**1.043**	n/a	n/a
Indium	115	1.009	1.011	0.999	**1.009**	n/a	n/a
Lutetium	175	1.035	1.017	1.019	**1.035**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**PBW K0648**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 8:50**					
Antimony	121	0.0005	0.0006	0.0008	**0.0006**	0.0001	22.77
Antimony	123	0.001	0.001	0.0004	**0.0008**	0.0003	39.94
Arsenic	75	0.0125	0.0055	0.0197	**0.0126**	0.0071	56.62
Cadmium	111	0.0011	0.0007	0.0004	**0.0008**	0.0003	45.52
Cadmium	114	0.0002	0.0015	-0.0002	**0.0005**	0.0009	193.7
Cobalt	59	0.0003	-0.0005	-0.0006	**-0.0002**	0.0005	213.5
Copper	63	0.0138	0.0109	0.0133	**0.0127**	0.0015	12.2
Copper	65	0.0026	0.0077	0.0032	**0.0045**	0.0028	61.89
Lead	206	0.0015	0.0009	0.0011	**0.0012**	0.0003	24.97
Lead	207	0.0014	0.0015	0.0015	**0.0015**	0.0001	4.095
Lead	208	0.0013	0.0012	0.0011	**0.0012**	0.0001	9.533
Manganese	55	0.0003	0.0014	0	**0.0006**	0.0007	124.7
Molybdenum	95	0.0017	0.0017	0.0008	**0.0014**	0.0005	38.78
Molybdenum	97	-0.0015	-0.0018	-0.0012	**-0.0015**	0.0003	19.05
Molybdenum	98	0.001	0.0014	0.0013	**0.0012**	0.0002	17.81
Nickel	60	0.0286	0.0251	0.0061	**0.0199**	0.0121	60.71
Nickel	62	0.0776	0.0028	0.0373	**0.0393**	0.0374	95.37
Selenium	77	-0.061	-0.1246	-0.1394	**-0.1083**	0.0417	38.46
Selenium	78	0.0826	-0.0417	-0.0196	**0.0071**	0.0663	937.3
Selenium	82	0.0602	-0.0182	0.0104	**0.0175**	0.0397	226.7
Silver	107	0.0002	0.0003	0.0002	**0.0002**	0.0001	38.61
Silver	109	0.0005	0.0001	0	**0.0002**	0.0003	119.5
Thallium	203	0.0009	0.0013	0.0007	**0.001**	0.0003	28.12
Thallium	205	0.0011	0.0013	0.001	**0.0011**	0.0002	14.67
Tin	118	0.0031	0.004	0.002	**0.003**	0.001	31.52
Tin	120	0.0027	0.0015	0.0012	**0.0018**	0.0008	45.78
Zinc	66	0.1719	0.1678	0.1684	**0.1694**	0.0022	1.305
Zinc	67	0.0727	0.0058	0.0563	**0.0449**	0.0349	77.67
Zinc	68	0.1843	0.164	0.1736	**0.174**	0.0101	5.831

Internal Standard Factors:

Scandium	45	1.035	1.03	1.024	**1.035**	n/a	n/a
Indium	115	0.994	0.981	0.99	**0.994**	n/a	n/a
Lutetium	175	0.98	0.989	0.999	**0.98**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		**CRA WATER MS4-58-B RERUN**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 8:56**					
Antimony	121	0.051	0.0516	0.0507	**0.0511**	0.0005	0.8925
Antimony	123	0.051	0.0549	0.0542	**0.0533**	0.0021	3.883
Arsenic	75	0.5107	0.5531	0.5211	**0.5283**	0.0221	4.185
Cadmium	111	0.0545	0.0502	0.0476	**0.0508**	0.0035	6.875
Cadmium	114	0.0497	0.0515	0.0531	**0.0515**	0.0017	3.329
Cobalt	59	0.0215	0.019	0.0192	**0.0199**	0.0014	6.789
Copper	63	0.1078	0.1112	0.1104	**0.1098**	0.0018	1.599
Copper	65	0.1059	0.1052	0.0962	**0.1024**	0.0054	5.294
Lead	206	0.0211	0.0208	0.0218	**0.0212**	0.0005	2.434
Lead	207	0.0229	0.0205	0.0211	**0.0215**	0.0013	5.89
Lead	208	0.0205	0.0211	0.0209	**0.0209**	0.0003	1.45
Manganese	55	0.0533	0.0539	0.0535	**0.0536**	0.0003	0.5832
Molybdenum	95	0.0541	0.0499	0.051	**0.0517**	0.0021	4.146
Molybdenum	97	0.0491	0.0409	0.0509	**0.047**	0.0053	11.38
Molybdenum	98	0.0515	0.0527	0.049	**0.0511**	0.0019	3.724
Nickel	60	0.1995	0.1883	0.2029	**0.1969**	0.0076	3.877
Nickel	62	0.1637	0.0938	0.1501	**0.1359**	0.037	27.26
Selenium	77	0.9506	0.802	0.9522	**0.9016**	0.0863	9.571
Selenium	78	0.9037	1.054	0.8065	**0.9213**	0.1245	13.51
Selenium	82	1.081	1.067	1.072	**1.073**	0.0074	0.689
Silver	107	0.021	0.0196	0.0203	**0.0203**	0.0007	3.398
Silver	109	0.022	0.0188	0.0201	**0.0203**	0.0016	7.85
Thallium	203	0.0207	0.0219	0.0222	**0.0216**	0.0008	3.725
Thallium	205	0.022	0.0217	0.0209	**0.0215**	0.0006	2.667
Tin	118	0.1067	0.104	0.1035	**0.1047**	0.0017	1.669
Tin	120	0.1018	0.1019	0.105	**0.1029**	0.0018	1.762
Zinc	66	0.6283	0.6668	0.634	**0.6431**	0.0208	3.235
Zinc	67	0.5231	0.4853	0.4635	**0.4906**	0.0302	6.15
Zinc	68	0.6229	0.6386	0.6244	**0.6286**	0.0087	1.38

Internal Standard Factors:

Scandium	45	1.006	0.973	0.975	**1.006**	n/a	n/a
Indium	115	1.054	1.018	1.005	**1.054**	n/a	n/a
Lutetium	175	1.044	1.006	0.999	**1.044**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-03			Mean	SD	%RSD
TimeStamp		2/13/04 9:00					
Antimony	121	0.0071	0.0082	0.0092	**0.0081**	0.0011	13.22
Antimony	123	0.009	0.0076	0.0092	**0.0086**	0.0009	10.22
Arsenic	75	0.0313	0.0294	-0.0025	**0.0194**	0.019	97.77
Cadmium	111	0.0538	0.0555	0.0504	**0.0532**	0.0026	4.913
Cadmium	114	0.0489	0.0498	0.0482	**0.049**	0.0008	1.549
Cobalt	59	0.0167	0.0158	0.0157	**0.0161**	0.0006	3.47
Copper	63	0.1339	0.1435	0.141	**0.1394**	0.005	3.554
Copper	65	0.1313	0.1337	0.1346	**0.1332**	0.0017	1.293
Lead	206	0.1119	0.1078	0.1115	**0.1104**	0.0022	2.034
Lead	207	0.1238	0.1222	0.1202	**0.1221**	0.0018	1.506
Lead	208	0.1197	0.1159	0.1178	**0.1178**	0.0019	1.639
Manganese	55	1.55	1.572	1.595	**1.572**	0.0227	1.445
Molybdenum	95	0.0074	0.0083	0.0101	**0.0086**	0.0014	15.84
Molybdenum	97	0.0029	0.0014	0.0075	**0.004**	0.0032	80.48
Molybdenum	98	0.0092	0.0061	0.0072	**0.0075**	0.0015	20.56
Nickel	60	0.1098	0.1079	0.1047	**0.1075**	0.0026	2.392
Nickel	62	0.0473	0.0268	0.1492	**0.0744**	0.0655	88.08
Selenium	77	-0.1274	-0.0541	-0.1202	**-0.1006**	0.0404	40.2
Selenium	78	0.0821	-0.1648	-0.2282	**-0.1036**	0.1639	158.2
Selenium	82	0.0678	0.1056	-0.0125	**0.0537**	0.0603	112.5
Silver	107	0.0019	0.002	0.0019	**0.002**	0.0001	3.71
Silver	109	0.0011	0.0014	0.0014	**0.0013**	0.0002	12.12
Thallium	203	0.0014	0.0011	0.0012	**0.0012**	0.0002	12.93
Thallium	205	0.001	0.0008	0.0013	**0.001**	0.0003	24.93
Tin	118	0.0211	0.0201	0.0218	**0.021**	0.0008	3.976
Tin	120	0.0226	0.0209	0.0202	**0.0212**	0.0012	5.647
Zinc	66	4.17	4.218	4.189	**4.192**	0.0241	0.5745
Zinc	67	3.76	3.899	3.858	**3.839**	0.0711	1.852
Zinc	68	4.097	4.173	4.141	**4.137**	0.0386	0.9326

Internal Standard Factors:

Scandium	45	1.006	1.02	0.977	**1.006**	n/a	n/a
Indium	115	1.015	1.013	0.99	**1.015**	n/a	n/a
Lutetium	175	1.007	0.997	0.98	**1.007**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-03D			Mean	SD	%RSD
TimeStamp		2/13/04 9:04					
Antimony	121	0.0096	0.0085	0.0068	**0.0083**	0.0014	17.06
Antimony	123	0.0085	0.008	0.0075	**0.008**	0.0005	6.61
Arsenic	75	0.0385	0.0235	-0.0204	**0.0139**	0.0306	220.9
Cadmium	111	0.0496	0.0529	0.0473	**0.0499**	0.0028	5.568
Cadmium	114	0.0481	0.0483	0.0474	**0.0479**	0.0005	0.9838
Cobalt	59	0.0173	0.0167	0.018	**0.0174**	0.0006	3.723
Copper	63	0.1331	0.1385	0.1344	**0.1353**	0.0028	2.102
Copper	65	0.1221	0.1203	0.1245	**0.1223**	0.0021	1.749
Lead	206	0.1129	0.109	0.1066	**0.1095**	0.0032	2.879
Lead	207	0.124	0.1228	0.1232	**0.1233**	0.0006	0.5095
Lead	208	0.1194	0.1183	0.1181	**0.1186**	0.0007	0.5823
Manganese	55	1.615	1.618	1.602	**1.612**	0.0086	0.5326
Molybdenum	95	0.0097	0.0091	0.0085	**0.0091**	0.0006	6.726
Molybdenum	97	0.0044	0.0017	0.0014	**0.0025**	0.0017	67.72
Molybdenum	98	0.0069	0.0089	0.0085	**0.0081**	0.0011	13.32
Nickel	60	0.134	0.1296	0.1163	**0.1266**	0.0092	7.278
Nickel	62	0.1482	0.1268	0.1875	**0.1541**	0.0308	19.98
Selenium	77	-0.1389	-0.0881	-0.0765	**-0.1012**	0.0332	32.83
Selenium	78	0.1064	-0.0476	-0.083	**-0.0081**	0.1007	1246
Selenium	82	0.0655	0.0329	-0.1038	**-0.0018**	0.0898	4942
Silver	107	0.002	0.0015	0.0011	**0.0015**	0.0005	31.42
Silver	109	0.0016	0.0013	0.0012	**0.0014**	0.0002	15.38
Thallium	203	0.0012	0.0005	0.0009	**0.0009**	0.0003	37.61
Thallium	205	0.0013	0.0009	0.0009	**0.001**	0.0002	22.25
Tin	118	0.0274	0.0286	0.0256	**0.0272**	0.0015	5.416
Tin	120	0.0269	0.0261	0.0256	**0.0262**	0.0006	2.416
Zinc	66	4.312	4.26	4.238	**4.27**	0.038	0.8908
Zinc	67	4.012	4.143	3.906	**4.02**	0.1188	2.955
Zinc	68	4.286	4.268	4.344	**4.299**	0.0394	0.9159

Internal Standard Factors:

Scandium	45	1.011	1.018	1.021	**1.011**	n/a	n/a
Indium	115	1.015	1.006	0.991	**1.015**	n/a	n/a
Lutetium	175	1.002	0.993	0.999	**1.002**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-03S			Mean	SD	%RSD
TimeStamp		2/13/04 9:09					
Antimony	121	19.9	19.55	20.02	**19.82**	0.2425	1.223
Antimony	123	20.04	19.67	20.27	**19.99**	0.2995	1.498
Arsenic	75	19.51	19.24	19.36	**19.37**	0.1346	0.6948
Cadmium	111	20.44	20.07	20.62	**20.38**	0.2785	1.367
Cadmium	114	20.35	19.89	20.04	**20.09**	0.2349	1.169
Cobalt	59	20.47	20.32	20.21	**20.33**	0.1287	0.6331
Copper	63	20.51	20.23	20.26	**20.34**	0.1539	0.7568
Copper	65	20.27	20.5	20.3	**20.36**	0.123	0.6039
Lead	206	19.97	19.53	20.25	**19.92**	0.36	1.807
Lead	207	19.83	20.04	20.43	**20.1**	0.3034	1.51
Lead	208	19.99	19.83	20.36	**20.06**	0.2724	1.358
Manganese	55	21.9	21.87	21.6	**21.79**	0.1639	0.7522
Molybdenum	95	20.28	20.45	20.07	**20.27**	0.1928	0.9513
Molybdenum	97	20.63	20.16	20.26	**20.35**	0.2464	1.211
Molybdenum	98	20.34	20.73	20.63	**20.57**	0.2004	0.9742
Nickel	60	20.03	20.1	20.09	**20.07**	0.0374	0.1864
Nickel	62	20.71	20.43	20.17	**20.44**	0.2723	1.332
Selenium	77	19.6	19.87	19.55	**19.67**	0.1753	0.8911
Selenium	78	19.9	20.11	19.51	**19.84**	0.3041	1.533
Selenium	82	19.52	19.53	19.33	**19.46**	0.111	0.5704
Silver	107	20.02	20.2	20	**20.07**	0.1094	0.5451
Silver	109	19.86	19.89	20.18	**19.98**	0.178	0.8911
Thallium	203	19.75	19.98	20	**19.91**	0.1414	0.7103
Thallium	205	19.54	19.66	19.85	**19.68**	0.1557	0.7911
Tin	118	19.75	19.79	20.12	**19.88**	0.2018	1.015
Tin	120	19.46	19.68	19.78	**19.64**	0.163	0.83
Zinc	66	24	23.93	23.89	**23.94**	0.0555	0.2319
Zinc	67	24.44	24.04	23.8	**24.09**	0.3225	1.339
Zinc	68	24.57	24.02	24.16	**24.25**	0.2837	1.17

Internal Standard Factors:

Scandium	45	1.059	1.064	1.056	**1.059**	n/a	n/a
Indium	115	1.04	1.037	1.047	**1.04**	n/a	n/a
Lutetium	175	1.033	1.033	1.044	**1.033**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		**LCSW K0648**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 9:13**					
Antimony	121	19.94	20.18	19.73	**19.95**	0.2236	1.121
Antimony	123	20.12	20.09	19.86	**20.02**	0.1437	0.7176
Arsenic	75	19.78	19.79	19.7	**19.76**	0.0474	0.2399
Cadmium	111	20.29	20.9	20.27	**20.49**	0.3547	1.732
Cadmium	114	19.89	20.27	20.08	**20.08**	0.1867	0.9298
Cobalt	59	20.23	20.11	20.15	**20.16**	0.0633	0.314
Copper	63	20.25	20.04	20.31	**20.2**	0.1428	0.7069
Copper	65	20.13	20.31	20.14	**20.2**	0.1002	0.4962
Lead	206	20.1	20.11	20.25	**20.15**	0.0856	0.4248
Lead	207	19.94	19.97	20.04	**19.98**	0.0544	0.2724
Lead	208	20.02	20.03	20.21	**20.09**	0.1061	0.5282
Manganese	55	20.05	19.94	20.2	**20.06**	0.1267	0.6312
Molybdenum	95	19.92	19.95	20.04	**19.97**	0.0619	0.3098
Molybdenum	97	20.01	20.22	19.85	**20.03**	0.1831	0.9143
Molybdenum	98	20.4	20.3	20.54	**20.41**	0.1211	0.593
Nickel	60	20.25	20.04	19.78	**20.02**	0.2339	1.168
Nickel	62	20.17	20.33	20.37	**20.29**	0.1044	0.5143
Selenium	77	20.21	20.33	20.17	**20.24**	0.0815	0.4028
Selenium	78	19.98	20.25	20.33	**20.19**	0.1835	0.909
Selenium	82	20.06	20.47	20.02	**20.18**	0.247	1.224
Silver	107	19.81	19.97	19.68	**19.82**	0.143	0.7216
Silver	109	19.51	20.01	19.49	**19.67**	0.2958	1.503
Thallium	203	19.66	19.93	20.04	**19.88**	0.1939	0.9753
Thallium	205	19.7	20.1	20.29	**20.03**	0.3007	1.501
Tin	118	19.83	20.07	20	**19.97**	0.1214	0.608
Tin	120	19.95	20.15	19.92	**20.01**	0.1237	0.6181
Zinc	66	20.5	20.34	20.47	**20.44**	0.0817	0.4
Zinc	67	20.44	20.82	20.87	**20.71**	0.2349	1.135
Zinc	68	20.98	20.73	20.45	**20.72**	0.266	1.284

Internal Standard Factors:

Scandium	45	1.054	1.061	1.064	**1.054**	n/a	n/a
Indium	115	1.031	1.049	1.036	**1.031**	n/a	n/a
Lutetium	175	1.027	1.04	1.047	**1.027**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		CCV2 MS4-62-B			Mean	SD	%RSD
TimeStamp		2/13/04 9:18					
Antimony	121	24.96	24.92	25.05	**24.97**	0.0669	0.268
Antimony	123	24.96	25.32	25.19	**25.16**	0.186	0.7393
Arsenic	75	25.07	24.99	24.84	**24.97**	0.1179	0.4723
Cadmium	111	24.85	25.26	25.16	**25.09**	0.2099	0.8367
Cadmium	114	24.85	25.15	25.08	**25.02**	0.1564	0.6252
Cobalt	59	24.84	25.02	24.71	**24.86**	0.154	0.6197
Copper	63	24.89	25.04	24.68	**24.87**	0.1822	0.7326
Copper	65	24.75	25.14	24.92	**24.93**	0.1971	0.7904
Lead	206	24.69	24.39	25.07	**24.72**	0.3453	1.397
Lead	207	24.38	24.44	24.75	**24.52**	0.1968	0.8025
Lead	208	24.66	24.39	24.89	**24.65**	0.2514	1.02
Manganese	55	25.2	25.28	25.03	**25.17**	0.1299	0.5161
Molybdenum	95	25.45	25.41	25.19	**25.35**	0.1428	0.5632
Molybdenum	97	24.57	25.63	25.27	**25.16**	0.5404	2.148
Molybdenum	98	25.45	25.98	25.43	**25.62**	0.3168	1.237
Nickel	60	24.95	24.97	24.86	**24.93**	0.063	0.253
Nickel	62	25.49	25.17	24.81	**25.16**	0.3408	1.355
Selenium	77	24.9	24.95	25.01	**24.95**	0.0555	0.2223
Selenium	78	24.73	25.04	25.57	**25.11**	0.4291	1.709
Selenium	82	24.6	24.64	24.7	**24.65**	0.0535	0.217
Silver	107	25	25.13	24.83	**24.99**	0.1522	0.6093
Silver	109	24.97	25.19	24.65	**24.93**	0.2722	1.092
Thallium	203	24.7	24.85	25.1	**24.88**	0.2016	0.8102
Thallium	205	24.65	24.11	24.68	**24.48**	0.3207	1.31
Tin	118	24.57	25.74	24.53	**24.94**	0.6864	2.752
Tin	120	24.39	24.9	24.78	**24.69**	0.2663	1.079
Zinc	66	24.98	25.15	25.25	**25.13**	0.1408	0.5605
Zinc	67	25.3	25.36	25.11	**25.26**	0.1297	0.5135
Zinc	68	25.57	25.73	25.41	**25.57**	0.1641	0.6419

Internal Standard Factors:

Scandium	45	1.048	1.064	1.058	**1.048**	n/a	n/a
Indium	115	1.03	1.039	1.025	**1.03**	n/a	n/a
Lutetium	175	1.024	1.017	1.033	**1.024**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		2/13/04 9:22					
Antimony	121	0.0054	0.0042	0.0032	**0.0043**	0.0011	25.83
Antimony	123	0.0048	0.0036	0.0031	**0.0038**	0.0009	23.69
Arsenic	75	0.0379	0.0117	-0.0117	**0.0126**	0.0248	196.9
Cadmium	111	0.0024	0.0018	0.0022	**0.0021**	0.0003	13.15
Cadmium	114	0.0024	0.0013	0.0017	**0.0018**	0.0006	31.51
Cobalt	59	0.0017	0.0016	-0.0004	**0.001**	0.0012	122.1
Copper	63	0.022	0.0203	0.0215	**0.0213**	0.0009	4.182
Copper	65	0.0113	0.0088	0.0151	**0.0117**	0.0031	26.73
Lead	206	0.0022	0.0016	0.0019	**0.0019**	0.0003	16.86
Lead	207	0.0032	0.0019	0.0018	**0.0023**	0.0008	33.19
Lead	208	0.0024	0.0015	0.0016	**0.0018**	0.0005	28.11
Manganese	55	0.0024	0.0013	0.001	**0.0016**	0.0007	46.17
Molybdenum	95	0.0207	0.013	0.0097	**0.0145**	0.0057	39.12
Molybdenum	97	0.0193	0.0045	0.0027	**0.0088**	0.0091	102.8
Molybdenum	98	0.0217	0.014	0.0086	**0.0148**	0.0066	44.42
Nickel	60	0.0573	0.0575	0.0323	**0.049**	0.0145	29.63
Nickel	62	0.1301	0.0919	0.0295	**0.0838**	0.0508	60.62
Selenium	77	-0.101	-0.0748	-0.1748	**-0.1168**	0.0519	44.39
Selenium	78	0.0686	0.3441	-0.108	**0.1016**	0.2279	224.3
Selenium	82	0.0518	0.0032	-0.1252	**-0.0234**	0.0915	390.6
Silver	107	0.0122	0.0069	0.0057	**0.0083**	0.0035	41.83
Silver	109	0.0125	0.0075	0.005	**0.0083**	0.0038	45.83
Thallium	203	0.0192	0.0139	0.0097	**0.0143**	0.0047	33.23
Thallium	205	0.0196	0.0129	0.0097	**0.0141**	0.0051	35.9
Tin	118	0.0252	0.0156	0.0137	**0.0181**	0.0062	34.02
Tin	120	0.0244	0.0173	0.0135	**0.0184**	0.0055	30.19
Zinc	66	0.2203	0.2233	0.212	**0.2185**	0.0059	2.689
Zinc	67	0.1473	0.06	0.0832	**0.0968**	0.0452	46.72
Zinc	68	0.2369	0.218	0.2181	**0.2243**	0.0109	4.859

Internal Standard Factors:

Scandium	45	1.072	1.072	1.042	**1.072**	n/a	n/a
Indium	115	1.043	1.054	1.037	**1.043**	n/a	n/a
Lutetium	175	1.056	1.033	1.024	**1.056**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		PBS K0648 1/5			Mean	SD	%RSD
TimeStamp		2/13/04 9:26					
Antimony	121	0.072	0.0732	0.0715	**0.0722**	0.0009	1.23
Antimony	123	0.0759	0.073	0.0712	**0.0734**	0.0023	3.18
Arsenic	75	0.0195	0.0367	0.0331	**0.0298**	0.0091	30.46
Cadmium	111	0.0061	0.0049	0.0047	**0.0052**	0.0007	14.21
Cadmium	114	0.1883	0.1949	0.1843	**0.1892**	0.0053	2.807
Cobalt	59	0.0021	0.0021	0.0008	**0.0017**	0.0008	45.99
Copper	63	0.0235	0.022	0.0261	**0.0239**	0.0021	8.753
Copper	65	0.0222	0.0158	0.0136	**0.0172**	0.0044	25.85
Lead	206	0.0059	0.0053	0.0055	**0.0056**	0.0003	5.179
Lead	207	0.0067	0.0078	0.0072	**0.0072**	0.0006	7.687
Lead	208	0.0066	0.0061	0.0059	**0.0062**	0.0004	5.986
Manganese	55	0.1141	0.1162	0.115	**0.1151**	0.0011	0.9182
Molybdenum	95	0.0177	0.0175	0.0184	**0.0179**	0.0005	2.788
Molybdenum	97	0.0143	0.013	0.0132	**0.0135**	0.0007	5.045
Molybdenum	98	0.0214	0.0171	0.017	**0.0185**	0.0025	13.53
Nickel	60	0.1021	0.0781	0.08	**0.0867**	0.0133	15.37
Nickel	62	0.1654	0.149	0.1649	**0.1598**	0.0093	5.84
Selenium	77	-0.0602	-0.1386	-0.1731	**-0.124**	0.0579	46.66
Selenium	78	-0.0132	-0.0956	-0.0593	**-0.0561**	0.0413	73.71
Selenium	82	0.1187	0.1023	0.0904	**0.1038**	0.0142	13.65
Silver	107	0.004	0.0038	0.0037	**0.0038**	0.0001	3.114
Silver	109	0.0034	0.003	0.0036	**0.0033**	0.0003	9.229
Thallium	203	0.0067	0.006	0.0049	**0.0059**	0.0009	15.78
Thallium	205	0.0076	0.006	0.0051	**0.0062**	0.0013	20.33
Tin	118	6.544	6.565	6.509	**6.539**	0.0282	0.4309
Tin	120	6.469	6.482	6.413	**6.455**	0.037	0.5729
Zinc	66	0.3755	0.3777	0.3888	**0.3806**	0.0072	1.879
Zinc	67	0.218	0.1867	0.1988	**0.2012**	0.0158	7.862
Zinc	68	0.356	0.3809	0.3485	**0.3618**	0.017	4.69

Internal Standard Factors:

Scandium	45	1.037	1.03	1.033	**1.037**	n/a	n/a
Indium	115	1.02	1.014	1.022	**1.02**	n/a	n/a
Lutetium	175	1.016	1.009	1.002	**1.016**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		**LCSS K0648 1/20**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 9:29**					
Antimony	121	6.196	6.141	6.087	**6.141**	0.0542	0.8829
Antimony	123	6.134	6.083	6.066	**6.095**	0.0352	0.5778
Arsenic	75	101.9	99.71	98.2	**99.95**	1.878	1.879
Cadmium	111	35.63	34.64	34.63	**34.97**	0.5727	1.638
Cadmium	114	34.86	34.26	33.46	**34.19**	0.6984	2.043
Cobalt	59	106.5	104.7	105.6	**105.6**	0.9032	0.8552
Copper	63	47.64	47.13	47.15	**47.31**	0.2904	0.6139
Copper	65	46.94	47.51	46.78	**47.08**	0.3815	0.8103
Lead	206	56.31	55.66	56.3	**56.09**	0.3716	0.6624
Lead	207	63.44	62.69	62.86	**63**	0.3926	0.6231
Lead	208	60.51	60.22	60.4	**60.38**	0.145	0.2402
Manganese	55	177.3	177.6	177.3	**177.4**	0.155	0.0874
Molybdenum	95	24.29	24.26	24.15	**24.23**	0.0767	0.3166
Molybdenum	97	24.62	24.37	23.93	**24.31**	0.3521	1.449
Molybdenum	98	25.13	24.6	23.98	**24.57**	0.5758	2.343
Nickel	60	38.79	38.19	38.67	**38.55**	0.3199	0.8299
Nickel	62	39.61	39.58	40.02	**39.74**	0.2457	0.6182
Selenium	77	92.02	91.06	90.08	**91.06**	0.9714	1.067
Selenium	78	91.78	90.1	90.63	**90.84**	0.8597	0.9464
Selenium	82	90.54	90.66	88.49	**89.9**	1.217	1.354
Silver	107	3.924	3.929	3.907	**3.92**	0.0114	0.2894
Silver	109	3.909	3.864	3.801	**3.858**	0.0543	1.407
Thallium	203	41.94	42.5	41.71	**42.05**	0.4095	0.9738
Thallium	205	41.23	41.75	41.38	**41.45**	0.2699	0.6511
Tin	118	18	18.2	17.68	**17.96**	0.2616	1.457
Tin	120	17.83	17.84	17.42	**17.7**	0.2384	1.347
Zinc	66	155.6	154.7	154.9	**155.1**	0.4742	0.3058
Zinc	67	152.9	151.5	151.5	**152**	0.8283	0.545
Zinc	68	156.7	153.3	154.6	**154.9**	1.743	1.126

Internal Standard Factors:

Scandium	45	1.055	1.065	1.066	**1.055**	n/a	n/a
Indium	115	1.051	1.04	1.033	**1.051**	n/a	n/a
Lutetium	175	1.029	1.038	1.031	**1.029**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-01 1/5			Mean	SD	%RSD	
TimeStamp		2/13/04 9:33						
Antimony	121	0.159	0.1563	0.1513	**0.1555**	0.0039	2.506	
Antimony	123	0.1582	0.1546	0.1532	**0.1553**	0.0026	1.667	
Arsenic	75	23.03	22.74	23.03	**22.94**	0.1694	0.7388	
~~Cadmium~~	~~111~~	~~71.85~~	~~71.65~~	~~72.27~~	~~**71.92**~~	~~0.316~~	~~0.4394~~	X
Cadmium	114	69.02	70.51	69.62	**69.72**	0.7478	1.073	
Cobalt	59	12	11.85	11.89	**11.91**	0.0786	0.6598	
Copper	63	110.7	110.8	110.6	**110.7**	0.0979	0.0885	
~~Copper~~	~~65~~	~~110.9~~	~~111.2~~	~~109.8~~	~~**110.6**~~	~~0.7297~~	~~0.6596~~	X
Lead	206	203.4	204.1	203.5	**203.7**	0.382	0.1876	
Lead	207	227.6	224.2	229.6	**227.1**	2.748	1.21	
Lead	208	215.8	215.2	218.1	**216.4**	1.525	0.7047	
~~Manganese~~	~~55~~	~~462.4~~	~~458.2~~	~~456.6~~	~~**459.1**~~	~~2.993~~	~~0.6521~~	X
Molybdenum	95	1.407	1.386	1.4	**1.398**	0.0103	0.7399	
Molybdenum	97	1.444	1.386	1.387	**1.405**	0.0331	2.352	
Molybdenum	98	1.437	1.387	1.396	**1.406**	0.0268	1.906	
Nickel	60	21.5	21.53	21.37	**21.47**	0.086	0.4004	
Nickel	62	21.68	21.89	21.73	**21.76**	0.1091	0.5011	
Selenium	77	21.1	21.25	20.65	**21**	0.3142	1.496	
Selenium	78	18.69	18.74	18.42	**18.61**	0.1728	0.9283	
Selenium	82	21.35	21.74	21.05	**21.38**	0.3447	1.613	
Silver	107	2.544	2.525	2.535	**2.535**	0.0092	0.3631	
Silver	109	2.461	2.498	2.463	**2.474**	0.0209	0.8449	
Thallium	203	1.236	1.215	1.247	**1.233**	0.0161	1.305	
Thallium	205	1.232	1.218	1.218	**1.222**	0.0078	0.6417	
Tin	118	3.095	3.136	3.13	**3.12**	0.0221	0.7076	
Tin	120	3.088	3.122	3.104	**3.105**	0.017	0.5482	
~~Zinc~~	~~66~~	~~5378~~	~~5278~~	~~5303~~	~~**5320**~~	~~51.76~~	~~0.9729~~	X
Zinc	67	5362	5592	5571	**5508**	127.1	2.307	
Zinc	68	5188	5270	5236	**5231**	41.18	0.7871	

*see Dilution Jc 2/13/04

Internal Standard Factors:

Scandium	45	0.995	0.989	0.991	**0.995**	n/a	n/a
Indium	115	1.056	1.063	1.071	**1.056**	n/a	n/a
Lutetium	175	1.073	1.061	1.073	**1.073**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-01D 1/5			Mean	SD	%RSD
TimeStamp		2/13/04 9:37					
Antimony	121	0.2173	0.2106	0.2244	**0.2175**	0.0069	3.177
Antimony	123	0.2211	0.2148	0.2176	**0.2179**	0.0032	1.447
Arsenic	75	25.02	24.63	24.77	**24.8**	0.1972	0.7949
~~Cadmium~~	~~111~~	~~83.94~~	~~83.05~~	~~84.53~~	~~**83.84**~~	~~0.7465~~	~~0.8904~~ *
Cadmium	114	81.15	80.94	81.37	**81.15**	0.2187	0.2695
Cobalt	59	10.97	11.07	11.09	**11.04**	0.0665	0.6025
Copper	63	130.9	129.7	131.5	**130.7**	0.8958	0.6853
~~Copper~~	~~65~~	~~131.4~~	~~128.8~~	~~131.7~~	~~**130.7**~~	~~1.619~~	~~1.239~~ *
Lead	206	235	238.7	233	**235.5**	2.891	1.227
Lead	207	268.1	267.1	263	**266.1**	2.685	1.009
Lead	208	254	255.4	249.6	**253**	3.008	1.189
~~Manganese~~	~~55~~	~~541.6~~	~~543.6~~	~~549.2~~	~~**544.8**~~	~~3.949~~	~~0.7247~~ *
Molybdenum	95	1.921	1.883	1.937	**1.914**	0.0276	1.443
Molybdenum	97	1.925	1.896	1.92	**1.914**	0.0157	0.8209
Molybdenum	98	1.923	1.898	1.942	**1.921**	0.0223	1.163
Nickel	60	22.94	22.89	22.7	**22.84**	0.128	0.5605
Nickel	62	23.11	22.9	22.81	**22.94**	0.1554	0.6775
Selenium	77	22.24	22.23	21.61	**22.03**	0.3621	1.644
Selenium	78	19.75	19.51	19.64	**19.63**	0.1193	0.6078
Selenium	82	22.47	22.12	22.5	**22.36**	0.2095	0.9368
Silver	107	2.997	2.974	3.062	**3.011**	0.0456	1.513
Silver	109	2.906	2.874	2.876	**2.885**	0.0183	0.6339
Thallium	203	1.058	1.055	1.022	**1.045**	0.0199	1.905
Thallium	205	1.054	1.046	1.02	**1.04**	0.018	1.727
Tin	118	4.749	4.763	4.738	**4.75**	0.0127	0.2671
Tin	120	4.695	4.628	4.723	**4.682**	0.049	1.047
~~Zinc~~	~~66~~	~~6130~~	~~6094~~	~~6094~~	~~**6106**~~	~~20.50~~	~~0.3368~~ *
Zinc	67	5830	5546	6121	**5832**	287.5	4.93
Zinc	68	5957	5971	5896	**5941**	40.28	0.6779

* see Dilution JC 2/13/04

Internal Standard Factors:

Scandium	45	0.992	0.997	0.997	**0.992**	n/a	n/a
Indium	115	1.104	1.113	1.118	**1.104**	n/a	n/a
Lutetium	175	1.112	1.128	1.095	**1.112**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-01S 1/5 X 1/5			Mean	SD	%RSD
TimeStamp		2/13/04 9:49					
Antimony	121	1.85	1.827	1.811	**1.829**	0.0198	1.08
Antimony	123	1.922	1.846	1.848	**1.872**	0.0435	2.321
Arsenic	75	41.62	41.43	41.56	**41.54**	0.0942	0.2269
~~Cadmium~~	~~111~~	~~23.38~~	~~22.92~~	~~23.16~~	~~**23.15**~~	~~0.2344~~	~~1.012~~ X
Cadmium	114	22.68	22.45	22.61	**22.58**	0.1183	0.524
Cobalt	59	38.87	38.91	38.18	**38.65**	0.4101	1.061
Copper	63	49.34	49.25	48.55	**49.04**	0.4342	0.8853
~~Copper~~	~~65~~	~~49.21~~	~~49.08~~	~~48.86~~	~~**49.05**~~	~~0.177~~	~~0.3609~~ X
Lead	206	81.01	82.36	81.97	**81.78**	0.6959	0.851
Lead	207	89.87	92.22	91.24	**91.11**	1.183	1.299
Lead	208	86.19	87.47	87.46	**87.04**	0.7338	0.8431
~~Manganese~~	~~55~~	~~148.4~~	~~149.6~~	~~149.3~~	~~**149.1**~~	~~0.6365~~	~~0.4268~~ X
Molybdenum	95	25.32	25.23	25.02	**25.19**	0.1542	0.6123
Molybdenum	97	25.47	25.46	25.01	**25.32**	0.2612	1.032
Molybdenum	98	25.75	25.7	25.55	**25.67**	0.1066	0.4152
Nickel	60	41.44	41.19	41.07	**41.23**	0.1912	0.4637
Nickel	62	42.03	40.91	41.45	**41.46**	0.5636	1.359
Selenium	77	41.32	41.65	40.86	**41.28**	0.3986	0.9656
Selenium	78	41.15	41.32	41.4	**41.29**	0.1316	0.3187
Selenium	82	41.86	42.05	41.88	**41.93**	0.1014	0.2419
Silver	107	1.549	1.573	1.549	**1.557**	0.0136	0.8744
Silver	109	1.51	1.488	1.5	**1.499**	0.0112	0.7446
Thallium	203	35.99	36.73	36.62	**36.45**	0.4005	1.099
Thallium	205	35.48	36.48	35.74	**35.9**	0.5187	1.445
Tin	118	0.6894	0.6485	0.6621	**0.6667**	0.0208	3.125
Tin	120	0.6499	0.6563	0.6554	**0.6539**	0.0035	0.5283
~~Zinc~~	~~66~~	~~1515~~	~~1528~~	~~1520~~	~~**1521**~~	~~6.544~~	~~0.4302~~ X
Zinc	67	1645	1662	1603	**1637**	30.47	1.862
Zinc	68	1475	1495	1478	**1482**	10.56	0.7124

* See Dilution JC 2/13/04

Internal Standard Factors:

Scandium	45	1.091	1.093	1.075	**1.091**	n/a	n/a
Indium	115	1.078	1.066	1.07	**1.078**	n/a	n/a
Lutetium	175	1.024	1.037	1.035	**1.024**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**K0648-02 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 9:52**					
Antimony	121	0.0501	0.0501	0.0537	**0.0513**	0.0021	4.074
Antimony	123	0.0507	0.0509	0.0568	**0.0528**	0.0034	6.523
Arsenic	75	14.97	14.87	14.81	**14.88**	0.0776	0.5211
Cadmium	111	82.32	82.38	82.01	**82.24**	0.1963	0.2387
Cadmium	114	80.28	79.73	81.58	**80.53**	0.9518	1.182
Cobalt	59	43.38	43.62	43.09	**43.37**	0.2643	0.6096
Copper	63	44.44	44.01	44.51	**44.32**	0.2691	0.6071
Copper	65	51.18	51.46	50.51	**51.05**	0.4883	0.9565
Lead	206	87.3	88.72	88.25	**88.09**	0.7232	0.8209
Lead	207	97.41	99.82	99.66	**98.96**	1.348	1.362
Lead	208	93.28	95.11	94.15	**94.18**	0.9151	0.9717
~~Manganese~~	~~55~~	~~10730~~	~~10890~~	~~10980~~	~~**10870**~~	~~125.4~~	~~1.154~~ *
Molybdenum	95	0.4926	0.4823	0.4694	**0.4814**	0.0116	2.414
Molybdenum	97	0.3235	0.3179	0.2808	**0.3074**	0.0232	7.557
Molybdenum	98	0.3046	0.2949	0.2921	**0.2972**	0.0066	2.212
Nickel	60	80.12	81.5	79.94	**80.52**	0.8557	1.063
Nickel	62	76.67	76.77	75.71	**76.38**	0.5843	0.765
Selenium	77	7.042	6.96	6.99	**6.997**	0.0412	0.5888
Selenium	78	5.165	5.372	5.356	**5.298**	0.1155	2.181
Selenium	82	12.82	12.88	12.85	**12.85**	0.0276	0.2144
Silver	107	0.4514	0.4595	0.4626	**0.4578**	0.0058	1.269
Silver	109	0.3931	0.3947	0.3966	**0.3948**	0.0017	0.4336
Thallium	203	0.4318	0.4341	0.4365	**0.4341**	0.0024	0.5459
Thallium	205	0.425	0.4256	0.4366	**0.4291**	0.0065	1.524
Tin	118	1.448	1.5	1.456	**1.468**	0.0279	1.901
Tin	120	1.471	1.48	1.478	**1.476**	0.0047	0.3167
~~Zinc~~	~~66~~	~~18750~~	~~18950~~	~~19180~~	~~**18940**~~	~~189.1~~	~~0.9983~~ *
Zinc	67	17150	17170	17440	**17250**	158.5	0.9186
Zinc	68	18230	18600	18360	**18400**	190.1	1.033

* see Dilution JC 2/13/04

Internal Standard Factors:

Scandium	45	1.102	1.104	1.09	**1.102**	n/a	n/a
Indium	115	1.134	1.124	1.129	**1.134**	n/a	n/a
Lutetium	175	1.123	1.117	1.123	**1.123**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**K0648-04 1/5**			**Mean**	**SD**	**%RSD**	
TimeStamp		**2/13/04 10:24**						
Antimony	121	0.4441	0.446	0.4627	**0.4509**	0.0103	2.276	
Antimony	123	0.4557	0.4564	0.4473	**0.4531**	0.0051	1.127	
Arsenic	75	16.58	16.55	16.45	**16.53**	0.0654	0.3956	
~~Cadmium~~	~~111~~	~~299.4~~	~~299.8~~	~~299.5~~	~~**299.6**~~	~~0.2097~~	~~0.068~~	*
Cadmium	114	289.2	288.7	286.9	**288.3**	1.188	0.4121	
Cobalt	59	142.2	141.5	145.2	**143**	1.998	1.397	
Copper	63	73.97	74.62	74.56	**74.38**	0.3587	0.4822	
Copper	65	81.63	81.67	81.82	**81.7**	0.1015	0.1242	
Lead	206	51.16	50.9	52.3	**51.45**	0.742	1.442	
Lead	207	56.44	58.08	57.83	**57.45**	0.8837	1.538	
Lead	208	55.21	55.42	55.7	**55.44**	0.2456	0.443	
~~Manganese~~	~~55~~	~~25650~~	~~25620~~	~~25720~~	~~**25660**~~	~~50.81~~	~~0.198~~	*
Molybdenum	95	1.493	1.486	1.505	**1.495**	0.0094	0.6308	
Molybdenum	97	1.074	1.088	1.056	**1.073**	0.0164	1.533	
Molybdenum	98	1.092	1.07	1.082	**1.081**	0.0111	1.026	
Nickel	60	51.22	50.64	51.03	**50.96**	0.2968	0.5823	
Nickel	62	52.05	51.52	51.2	**51.59**	0.4305	0.8346	
Selenium	77	2.756	2.703	2.607	**2.689**	0.0756	2.813	
Selenium	78	2.161	2.039	2.022	**2.074**	0.0758	3.655	
Selenium	82	22.07	22.74	22.4	**22.41**	0.3355	1.498	
Silver	107	0.3866	0.395	0.3878	**0.3898**	0.0045	1.162	
Silver	109	0.3291	0.3354	0.3292	**0.3312**	0.0036	1.097	
Thallium	203	0.3039	0.31	0.3034	**0.3058**	0.0037	1.207	
Thallium	205	0.3036	0.3058	0.3029	**0.3041**	0.0015	0.503	
Tin	118	5.029	5.041	5.075	**5.048**	0.0241	0.4774	
Tin	120	4.962	5.021	5.051	**5.011**	0.0452	0.9016	
~~Zinc~~	~~66~~	~~52060~~	~~52320~~	~~53130~~	~~**52500**~~	~~556.6~~	~~1.06~~	*
Zinc	67	47560	47060	47330	**47320**	250.1	0.5286	
Zinc	68	50620	50760	51390	**50930**	410.8	0.8067	

* see Dilution JC 2/13/04

Internal Standard Factors:

Scandium	45	1.207	1.189	1.178	**1.207**	n/a	n/a
Indium	115	1.135	1.127	1.129	**1.135**	n/a	n/a
Lutetium	175	1.087	1.084	1.085	**1.087**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-05 1/5			Mean	SD	%RSD
TimeStamp		2/13/04 10:27					
Antimony	121	1.603	1.585	1.565	**1.584**	0.0188	1.189
Antimony	123	1.617	1.602	1.642	**1.62**	0.0199	1.231
Arsenic	75	15.52	15.56	15.61	**15.56**	0.0412	0.2648
Cadmium	111	291.1	294.5	287.8	**291.1**	3.32	1.14
Cadmium	114	272.6	273	276.1	**273.9**	1.889	0.6898
Cobalt	59	35.1	35.11	35.18	**35.13**	0.0458	0.1304
Copper	63	441.2	442.4	446.7	**443.4**	2.918	0.658
~~Copper~~	~~65~~	~~441.5~~	~~439.8~~	~~442.8~~	~~**441.4**~~	~~1.53~~	~~0.3466~~ *
Lead	206	267.9	268.2	273.5	**269.9**	3.119	1.156
Lead	207	287.3	282.8	285.9	**285.3**	2.321	0.8134
Lead	208	284.4	283.4	286	**284.6**	1.288	0.4525
~~Manganese~~	~~55~~	~~5120~~	~~5097~~	~~5077~~	~~**5098**~~	~~21.48~~	~~0.4213~~ *
Molybdenum	95	0.6673	0.6713	0.6601	**0.6663**	0.0057	0.8554
Molybdenum	97	0.5703	0.561	0.5755	**0.5689**	0.0073	1.291
Molybdenum	98	0.588	0.5857	0.595	**0.5896**	0.0049	0.8276
Nickel	60	23.55	23.46	23.34	**23.45**	0.1067	0.4548
Nickel	62	22.97	22.61	22.61	**22.73**	0.2059	0.906
Selenium	77	2.193	2.129	2.142	**2.155**	0.0339	1.575
Selenium	78	1.405	1.644	1.825	**1.625**	0.2111	12.99
Selenium	82	6.625	6.697	6.299	**6.54**	0.2118	3.239
Silver	107	0.636	0.6408	0.6558	**0.6442**	0.0103	1.597
Silver	109	0.6352	0.6277	0.6274	**0.6301**	0.0044	0.698
Thallium	203	0.4781	0.4698	0.474	**0.4739**	0.0041	0.8737
Thallium	205	0.4807	0.4738	0.483	**0.4792**	0.0048	1.003
Tin	118	10.99	11.26	10.93	**11.06**	0.176	1.59
Tin	120	10.96	11.08	10.94	**10.99**	0.0766	0.6969
~~Zinc~~	~~66~~	~~12200~~	~~12200~~	~~12240~~	~~**12210**~~	~~24.35~~	~~0.1994~~ *
Zinc	67	11220	10890	11150	**11090**	171.8	1.55
Zinc	68	11970	12000	11960	**11980**	23.42	0.1955

* see Dilution JC 2/13/04

Internal Standard Factors:

Scandium	45	1.126	1.134	1.133	**1.126**	n/a	n/a
Indium	115	1.119	1.12	1.119	**1.119**	n/a	n/a
Lutetium	175	1.057	1.065	1.066	**1.057**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-02 1/5 X 1/100			Mean	SD	%RSD
TimeStamp		2/13/04 10:39					
Antimony	121	0.0013	0.0018	0.0022	**0.0018**	0.0004	24.28
Antimony	123	0.0013	0.0019	0.003	**0.0021**	0.0009	42.23
Arsenic	75	0.1997	0.217	0.1897	**0.2021**	0.0138	6.829
Cadmium	111	0.8832	0.9085	0.9095	**0.9004**	0.0149	1.657
Cadmium	114	0.8659	0.8782	0.8737	**0.8726**	0.0062	0.7122
Cobalt	59	0.499	0.4819	0.4787	**0.4865**	0.0109	2.247
Copper	63	0.6941	0.6659	0.6452	**0.6684**	0.0245	3.672
Copper	65	0.6756	0.6433	0.6418	**0.6535**	0.0191	2.926
Lead	206	0.8696	0.8496	0.8722	**0.8638**	0.0123	1.429
Lead	207	0.9461	0.9673	0.9481	**0.9539**	0.0117	1.226
Lead	208	0.9187	0.9199	0.9234	**0.9207**	0.0025	0.2663
Manganese	55	116.3	116.7	114.6	**115.9**	1.104	0.9525
Molybdenum	95	0.0096	0.0101	0.0088	**0.0095**	0.0006	6.822
Molybdenum	97	0.0031	0.0027	0.0056	**0.0038**	0.0016	41.82
Molybdenum	98	0.0082	0.0069	0.0082	**0.0078**	0.0007	9.601
Nickel	60	1.217	1.076	1.036	**1.109**	0.0952	8.578
Nickel	62	1.239	1.132	1.017	**1.129**	0.1108	9.815
Selenium	77	-0.1356	-0.213	-0.095	**-0.1479**	0.0599	40.53
Selenium	78	0.1619	0.1189	-0.0308	**0.0833**	0.1012	121.4
Selenium	82	0.1972	0.2029	0.2601	**0.2201**	0.0348	15.79
Silver	107	0.0066	0.0064	0.0071	**0.0067**	0.0003	5.135
Silver	109	0.0054	0.0055	0.006	**0.0056**	0.0004	6.399
Thallium	203	0.0039	0.0039	0.003	**0.0036**	0.0005	14.4
Thallium	205	0.0042	0.0043	0.0045	**0.0043**	0.0002	4.182
Tin	118	0.0211	0.0255	0.0222	**0.0229**	0.0023	9.971
Tin	120	0.0237	0.0233	0.0223	**0.0231**	0.0007	3.134
Zinc	66	276.5	264.7	264.2	**268.5**	6.957	2.591
Zinc	67	256.8	248.3	243.6	**249.5**	6.669	2.673
Zinc	68	269.4	262.8	258.8	**263.7**	5.357	2.032

Internal Standard Factors:

Scandium	45	1.064	1.054	1.061	**1.064**	n/a	n/a
Indium	115	0.94	1	1.009	**0.94**	n/a	n/a
Lutetium	175	0.852	0.923	0.939	**0.852**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**K0648-04 1/5 X 1/100**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 10:43**					
Antimony	121	0.0057	0.0055	0.0058	**0.0057**	0.0001	2.548
Antimony	123	0.0048	0.0056	0.0056	**0.0053**	0.0005	8.732
Arsenic	75	0.1969	0.2463	0.2174	**0.2202**	0.0248	11.28
Cadmium	111	3.237	3.231	3.257	**3.242**	0.0136	0.4202
Cadmium	114	3.097	3.181	3.228	**3.169**	0.0663	2.091
Cobalt	59	1.414	1.42	1.449	**1.428**	0.0186	1.306
Copper	63	0.9269	0.9457	0.943	**0.9385**	0.0102	1.083
Copper	65	0.9195	0.9339	0.9495	**0.9343**	0.015	1.607
Lead	206	0.5037	0.5173	0.5176	**0.5128**	0.008	1.55
Lead	207	0.5552	0.5647	0.5574	**0.5591**	0.0049	0.8848
Lead	208	0.5333	0.5446	0.554	**0.5439**	0.0104	1.906
Manganese	55	255	253.1	258.8	**255.7**	2.873	1.124
Molybdenum	95	0.0201	0.0209	0.017	**0.0193**	0.002	10.58
Molybdenum	97	0.0138	0.0068	0.0118	**0.0108**	0.0036	33.53
Molybdenum	98	0.0159	0.0141	0.014	**0.0147**	0.0011	7.223
Nickel	60	0.6586	0.6509	0.6759	**0.6618**	0.0128	1.94
Nickel	62	0.6386	0.7593	0.626	**0.6746**	0.0736	10.91
Selenium	77	-0.1501	-0.1646	-0.2403	**-0.185**	0.0485	26.19
Selenium	78	-0.0623	0.2758	-0.177	**0.0122**	0.2354	1936
Selenium	82	0.3106	0.4815	0.3621	**0.3847**	0.0877	22.79
Silver	107	0.0055	0.0052	0.0062	**0.0056**	0.0005	9.252
Silver	109	0.0044	0.0052	0.0057	**0.0051**	0.0006	12.02
Thallium	203	0.0034	0.0028	0.0031	**0.0031**	0.0003	9.794
Thallium	205	0.0034	0.0033	0.0029	**0.0032**	0.0003	8.341
Tin	118	0.0573	0.0587	0.0576	**0.0579**	0.0007	1.295
Tin	120	0.0569	0.0563	0.0528	**0.0553**	0.0022	3.961
Zinc	66	622.8	614.4	631.9	**623**	8.794	1.412
Zinc	67	575.9	572.9	589.8	**579.5**	9.066	1.564
Zinc	68	596.9	598.6	607.9	**601.1**	5.943	0.9887

Internal Standard Factors:

Scandium	45	1.062	1.067	1.067	**1.062**	n/a	n/a
Indium	115	1.036	1.036	1.026	**1.036**	n/a	n/a
Lutetium	175	0.948	0.957	0.953	**0.948**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**CCV3 MS4-62-B**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 10:47**					
Antimony	121	24.6	24.8	24.48	**24.63**	0.1617	0.6565
Antimony	123	24.43	25.15	24.75	**24.78**	0.3626	1.464
Arsenic	75	24.87	24.66	24.38	**24.64**	0.244	0.9905
Cadmium	111	25.18	24.96	25.21	**25.12**	0.1369	0.5449
Cadmium	114	25.01	25.07	24.46	**24.85**	0.337	1.356
Cobalt	59	25.1	25.14	24.83	**25.03**	0.169	0.6752
Copper	63	25.06	24.74	24.93	**24.91**	0.1614	0.6479
Copper	65	24.89	24.91	24.96	**24.92**	0.0391	0.1568
Lead	206	22.66	22.97	22.73	**22.79**	0.1655	0.7262
Lead	207	22.49	22.94	22.83	**22.75**	0.2358	1.037
Lead	208	22.69	22.79	22.72	**22.73**	0.0543	0.239
Manganese	55	25.42	25.18	25.43	**25.35**	0.1424	0.5617
Molybdenum	95	24.55	25.22	24.93	**24.9**	0.3347	1.344
Molybdenum	97	25.08	25.44	25.01	**25.18**	0.2309	0.9171
Molybdenum	98	25.37	25.44	24.99	**25.27**	0.2428	0.9607
Nickel	60	25.22	25.22	25.04	**25.16**	0.103	0.4092
Nickel	62	25.36	24.92	24.9	**25.06**	0.2603	1.039
Selenium	77	24.5	25.25	24.37	**24.71**	0.4789	1.939
Selenium	78	24.61	25.05	24.4	**24.69**	0.3334	1.351
Selenium	82	24.55	24.83	24.45	**24.61**	0.1966	0.7988
Silver	107	25.03	25.2	24.52	**24.92**	0.3513	1.41
Silver	109	24.52	24.95	24.42	**24.63**	0.2823	1.146
Thallium	203	22.78	23.08	23.02	**22.96**	0.1595	0.6947
Thallium	205	22.95	22.8	22.73	**22.83**	0.1151	0.504
Tin	118	25.24	25.24	24.88	**25.12**	0.2088	0.831
Tin	120	24.54	25.32	24.07	**24.64**	0.6323	2.566
Zinc	66	25.47	25.96	25.77	**25.73**	0.2458	0.9553
Zinc	67	25.85	25.82	25.76	**25.81**	0.0456	0.1768
Zinc	68	25.69	25.27	25.29	**25.42**	0.2345	0.9225

Internal Standard Factors:

Scandium	45	1.083	1.086	1.089	**1.083**	n/a	n/a
Indium	115	1.054	1.063	1.051	**1.054**	n/a	n/a
Lutetium	175	0.958	0.962	0.96	**0.958**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**CCB3**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 10:52**					
Antimony	121	0.0031	0.0016	0.0012	**0.0019**	0.001	51.77
Antimony	123	0.0027	0.0026	0.0022	**0.0025**	0.0002	9.872
Arsenic	75	0.0182	0.0056	0.0245	**0.0161**	0.0096	59.87
Cadmium	111	0.0092	0.0067	0.008	**0.008**	0.0013	16.25
Cadmium	114	0.0056	0.0055	0.0053	**0.0055**	0.0002	3.154
Cobalt	59	0.0036	0.0035	0.0025	**0.0032**	0.0006	19.71
Copper	63	0.0188	0.0207	0.0176	**0.0191**	0.0016	8.224
Copper	65	0.0077	0.0076	0.0116	**0.009**	0.0023	25.89
Lead	206	0.0019	0.0028	0.0019	**0.0022**	0.0005	23.33
Lead	207	0.0024	0.0019	0.0027	**0.0023**	0.0004	16.05
Lead	208	0.0018	0.0022	0.0018	**0.0019**	0.0003	13.17
Manganese	55	0.0439	0.0446	0.0428	**0.0437**	0.0009	2.092
Molybdenum	95	0.0122	0.0075	0.0058	**0.0085**	0.0033	39.18
Molybdenum	97	0.0073	-0.0003	0.0008	**0.0026**	0.0041	159
Molybdenum	98	0.009	0.0067	0.0041	**0.0066**	0.0025	37.1
Nickel	60	0.0855	0.0819	0.0741	**0.0805**	0.0058	7.222
Nickel	62	-0.0505	0.0369	0.1015	**0.0293**	0.0763	260.7
Selenium	77	-0.169	-0.2027	-0.173	**-0.1816**	0.0184	10.15
Selenium	78	0.0025	0.045	0.0423	**0.0299**	0.0238	79.5
Selenium	82	0.0687	0.0406	0.1302	**0.0798**	0.0458	57.42
Silver	107	0.0078	0.0049	0.0041	**0.0056**	0.002	35.12
Silver	109	0.0071	0.0049	0.0041	**0.0054**	0.0016	29.21
Thallium	203	0.0135	0.0104	0.0073	**0.0104**	0.0031	29.68
Thallium	205	0.0139	0.0097	0.0072	**0.0103**	0.0034	32.86
Tin	118	0.0164	0.0121	0.0107	**0.0131**	0.003	22.75
Tin	120	0.0162	0.0109	0.0102	**0.0124**	0.0033	26.51
Zinc	66	0.4761	0.468	0.4527	**0.4656**	0.0119	2.552
Zinc	67	0.1779	0.1701	0.1891	**0.179**	0.0095	5.314
Zinc	68	0.4825	0.4624	0.4271	**0.4573**	0.0281	6.136

Internal Standard Factors:

Scandium	45	1.086	1.079	1.063	**1.086**	n/a	n/a
Indium	115	1.073	1.06	1.069	**1.073**	n/a	n/a
Lutetium	175	0.955	0.958	0.965	**0.955**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

SC 2/13/04

Sample Name:		K0648-01 1/5 X 1/10			Mean	SD	%RSD
TimeStamp		2/13/04 10:56					
Antimony	121	0.0165	0.0174	0.0164	**0.0168**	0.0005	3.204
Antimony	123	0.0182	0.0165	0.0173	**0.0173**	0.0008	4.723
Arsenic	75	2.748	2.666	2.718	**2.711**	0.0412	1.521
Cadmium	111	8.089	8.057	7.762	**7.969**	0.1803	2.263
Cadmium	114	7.74	7.874	7.866	**7.827**	0.0746	0.9539
Cobalt	59	1.377	1.352	1.363	**1.364**	0.0124	0.9083
Copper	63	13.51	13.24	13.25	**13.33**	0.1517	1.138
Copper	65	13.46	13.21	13.43	**13.36**	0.1354	1.013
Lead	206	20.16	20.04	19.62	**19.94**	0.2857	1.433
Lead	207	22.76	22.52	22.09	**22.46**	0.3383	1.507
Lead	208	21.99	21.6	21.16	**21.59**	0.416	1.927
Manganese	55	55.49	54.91	55.28	**55.22**	0.2942	0.5327
Molybdenum	95	0.1493	0.1439	0.1545	**0.1492**	0.0053	3.527
Molybdenum	97	0.1392	0.143	0.1352	**0.1391**	0.0039	2.798
Molybdenum	98	0.1437	0.1483	0.1426	**0.1449**	0.003	2.08
Nickel	60	2.66	2.622	2.636	**2.639**	0.0195	0.7383
Nickel	62	2.539	2.603	2.498	**2.547**	0.0529	2.075
Selenium	77	2.248	2.348	2.378	**2.325**	0.0675	2.901
Selenium	78	2.311	2.207	2.273	**2.264**	0.0526	2.325
Selenium	82	2.939	2.746	2.723	**2.803**	0.1184	4.225
Silver	107	0.278	0.2864	0.2796	**0.2813**	0.0045	1.592
Silver	109	0.2711	0.2771	0.272	**0.2734**	0.0032	1.18
Thallium	203	0.1216	0.1229	0.1249	**0.1231**	0.0017	1.359
Thallium	205	0.1214	0.121	0.1161	**0.1195**	0.003	2.477
Tin	118	0.3307	0.3325	0.3257	**0.3296**	0.0036	1.077
Tin	120	0.3281	0.3297	0.3207	**0.3262**	0.0048	1.473
Zinc	66	792.2	777.8	777	**782.3**	8.584	1.097
Zinc	67	739.7	734.1	727	**733.6**	6.403	0.8728
Zinc	68	771.4	762.2	769.2	**767.6**	4.805	0.626

Internal Standard Factors:

Scandium	45	1.097	1.077	1.084	**1.097**	n/a	n/a
Indium	115	1.074	1.077	1.072	**1.074**	n/a	n/a
Lutetium	175	0.994	0.977	0.96	**0.994**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		**K0648-01 1/5 X 1/2**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 11:05**					
Antimony	121	0.0095	0.0099	0.0096	**0.0097**	0.0002	1.893
Antimony	123	0.0121	0.0086	0.0093	**0.01**	0.0018	18.32
Arsenic	75	1.379	1.434	1.349	**1.387**	0.0432	3.111
Cadmium	111	4.105	4.075	4.099	**4.093**	0.0159	0.3881
Cadmium	114	3.962	3.937	4.035	**3.978**	0.0509	1.279
Cobalt	59	0.6925	0.7081	0.7029	**0.7012**	0.008	1.136
Copper	63	6.872	6.869	6.785	**6.842**	0.0495	0.7235
Copper	65	6.924	6.947	6.811	**6.894**	0.0724	1.05
Lead	206	10.37	10.31	10.37	**10.35**	0.0359	0.3466
Lead	207	11.49	11.6	11.59	**11.56**	0.0604	0.5222
Lead	208	11.13	11.23	11.22	**11.19**	0.056	0.5002
Manganese	55	29.5	29.06	29.66	**29.41**	0.3078	1.047
Molybdenum	95	0.0781	0.0778	0.0769	**0.0776**	0.0007	0.8694
Molybdenum	97	0.0684	0.0681	0.0714	**0.0693**	0.0018	2.588
Molybdenum	98	0.0778	0.0761	0.074	**0.076**	0.0019	2.509
Nickel	60	1.369	1.386	1.398	**1.385**	0.0145	1.045
Nickel	62	1.311	1.309	1.275	**1.298**	0.0198	1.522
Selenium	77	1.173	1.095	1.184	**1.151**	0.0488	4.239
Selenium	78	1.031	1.217	0.8912	**1.046**	0.1634	15.62
Selenium	82	1.511	1.47	1.445	**1.475**	0.0333	2.255
Silver	107	0.1458	0.1487	0.1455	**0.1467**	0.0018	1.204
Silver	109	0.1417	0.1423	0.1435	**0.1425**	0.0009	0.6344
Thallium	203	0.0619	0.0628	0.0607	**0.0618**	0.0011	1.713
Thallium	205	0.0609	0.0614	0.0599	**0.0607**	0.0007	1.222
Tin	118	0.1689	0.1763	0.1764	**0.1739**	0.0043	2.463
Tin	120	0.1703	0.1717	0.1741	**0.1721**	0.0019	1.108
Zinc	66	409.3	405.9	411	**408.7**	2.61	0.6385
Zinc	67	382.1	381.6	375.4	**379.7**	3.71	0.977
Zinc	68	406.6	409.1	402.7	**406.1**	3.202	0.7884

Internal Standard Factors:

Scandium	45	1.103	1.101	1.088	**1.103**	n/a	n/a
Indium	115	1.072	1.059	1.077	**1.072**	n/a	n/a
Lutetium	175	0.989	0.983	0.98	**0.989**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-01D 1/5 X 1/20			Mean	SD	%RSD
TimeStamp		2/13/04 11:10					
Antimony	121	0.0134	0.0122	0.0131	**0.0129**	0.0006	4.77
Antimony	123	0.0128	0.0137	0.0128	**0.0131**	0.0005	3.912
Arsenic	75	1.525	1.596	1.563	**1.561**	0.0354	2.265
Cadmium	111	4.873	4.98	4.834	**4.895**	0.0756	1.544
Cadmium	114	4.726	4.728	4.642	**4.699**	0.0488	1.039
Cobalt	59	0.6572	0.6651	0.6402	**0.6542**	0.0127	1.944
Copper	63	8.292	8.293	8.226	**8.27**	0.0386	0.4669
Copper	65	8.343	8.315	8.194	**8.284**	0.079	0.9542
Lead	206	11.73	11.8	11.75	**11.76**	0.0332	0.2821
Lead	207	13.13	13.23	12.87	**13.08**	0.1837	1.405
Lead	208	12.71	12.76	12.61	**12.69**	0.0789	0.6215
Manganese	55	35.32	35.19	34.32	**34.94**	0.5451	1.56
Molybdenum	95	0.1002	0.1043	0.1042	**0.1029**	0.0024	2.286
Molybdenum	97	0.0956	0.0944	0.0894	**0.0931**	0.0033	3.562
Molybdenum	98	0.1052	0.1074	0.1045	**0.1057**	0.0015	1.429
Nickel	60	1.487	1.506	1.468	**1.487**	0.0191	1.281
Nickel	62	1.413	1.351	1.423	**1.395**	0.0388	2.777
Selenium	77	1.279	1.134	1.085	**1.166**	0.1007	8.639
Selenium	78	1.145	1.038	1.056	**1.08**	0.0573	5.303
Selenium	82	1.619	1.641	1.561	**1.607**	0.0412	2.566
Silver	107	0.1712	0.1776	0.174	**0.1743**	0.0032	1.829
Silver	109	0.1661	0.1702	0.1667	**0.1677**	0.0022	1.32
Thallium	203	0.0491	0.0495	0.0519	**0.0502**	0.0015	3.034
Thallium	205	0.0492	0.0502	0.0493	**0.0496**	0.0006	1.142
Tin	118	0.2571	0.2593	0.2552	**0.2572**	0.002	0.7841
Tin	120	0.2469	0.2575	0.2522	**0.2522**	0.0053	2.089
Zinc	66	474.2	474.2	465.6	**471.3**	4.983	1.057
Zinc	67	447.2	446.4	432.8	**442.1**	8.057	1.822
Zinc	68	467.6	468.7	459.1	**465.1**	5.268	1.133

Internal Standard Factors:

Scandium	45	1.082	1.078	1.067	**1.082**	n/a	n/a
Indium	115	1.079	1.083	1.067	**1.079**	n/a	n/a
Lutetium	175	0.974	0.977	0.969	**0.974**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**K0648-01S 1/5 X 1/20**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 11:14**					
Antimony	121	0.49	0.4768	0.4864	**0.4844**	0.0068	1.409
Antimony	123	0.4982	0.4897	0.4753	**0.4877**	0.0116	2.373
Arsenic	75	11.37	11.2	11.01	**11.19**	0.1804	1.612
Cadmium	111	6.331	6.189	6.143	**6.221**	0.0984	1.582
Cadmium	114	6.078	6.042	5.867	**5.996**	0.113	1.885
Cobalt	59	10.46	10.3	10.28	**10.35**	0.0951	0.919
Copper	63	13.25	13	13.09	**13.11**	0.1296	0.9881
Copper	65	13.09	13.16	13.05	**13.1**	0.0531	0.4049
Lead	206	20.04	20.25	19.85	**20.05**	0.1992	0.9939
Lead	207	22.22	22.11	22.03	**22.12**	0.0979	0.4424
Lead	208	21.33	21.26	21.25	**21.28**	0.0432	0.2028
Manganese	55	43.64	43.52	43.88	**43.68**	0.1808	0.414
Molybdenum	95	6.685	6.611	6.578	**6.625**	0.0546	0.8246
Molybdenum	97	6.617	6.563	6.586	**6.588**	0.0268	0.407
Molybdenum	98	6.768	6.617	6.619	**6.668**	0.0863	1.294
Nickel	60	11.09	11.04	10.92	**11.01**	0.0871	0.7906
Nickel	62	11.34	10.87	10.73	**10.98**	0.3217	2.93
Selenium	77	11.33	11.18	11.3	**11.27**	0.0812	0.7206
Selenium	78	11.34	11.23	11.36	**11.31**	0.0673	0.5947
Selenium	82	11.57	11.63	11.54	**11.58**	0.0484	0.4183
Silver	107	0.4201	0.4117	0.4079	**0.4132**	0.0063	1.518
Silver	109	0.4045	0.4072	0.3969	**0.4029**	0.0053	1.32
Thallium	203	8.824	8.762	8.722	**8.769**	0.0511	0.5829
Thallium	205	8.806	8.746	8.682	**8.745**	0.062	0.7094
Tin	118	0.178	0.1757	0.1722	**0.1753**	0.0029	1.654
Tin	120	0.1758	0.1726	0.1709	**0.1731**	0.0025	1.451
Zinc	66	475.1	468.9	474.1	**472.7**	3.352	0.709
Zinc	67	443.4	443.5	442.5	**443.1**	0.5298	0.1195
Zinc	68	467.5	459.7	463.9	**463.7**	3.926	0.8467

Internal Standard Factors:

Scandium	45	1.09	1.082	1.086	**1.09**	n/a	n/a
Indium	115	1.081	1.076	1.06	**1.081**	n/a	n/a
Lutetium	175	0.988	0.983	0.98	**0.988**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		K0648-05 1/5 X 1/100			Mean	SD	%RSD
TimeStamp		2/13/04 11:18					
Antimony	121	0.0165	0.0167	0.017	**0.0167**	0.0003	1.749
Antimony	123	0.0167	0.0163	0.0162	**0.0164**	0.0002	1.512
Arsenic	75	0.1893	0.1993	0.1946	**0.1944**	0.005	2.592
Cadmium	111	2.99	2.964	2.955	**2.969**	0.0182	0.6134
Cadmium	114	2.877	2.898	2.855	**2.877**	0.0212	0.7374
Cobalt	59	0.3471	0.3502	0.3554	**0.3509**	0.0042	1.19
Copper	63	5.021	4.967	5.014	**5.001**	0.0295	0.5898
Copper	65	5.069	4.993	5.066	**5.043**	0.0428	0.8491
Lead	206	2.379	2.383	2.407	**2.39**	0.0149	0.6238
Lead	207	2.647	2.659	2.708	**2.671**	0.0323	1.208
Lead	208	2.563	2.555	2.59	**2.569**	0.0187	0.7299
Manganese	55	50.84	50.31	51	**50.72**	0.3625	0.7148
Molybdenum	95	0.0191	0.0156	0.0135	**0.0161**	0.0029	17.84
Molybdenum	97	0.0036	0.0043	0.0079	**0.0053**	0.0023	44.59
Molybdenum	98	0.0148	0.0115	0.0124	**0.0129**	0.0017	13.02
Nickel	60	0.3456	0.3423	0.352	**0.3466**	0.0049	1.413
Nickel	62	0.2914	0.2706	0.2787	**0.2802**	0.0105	3.747
Selenium	77	-0.2042	-0.1151	-0.2115	**-0.1769**	0.0537	30.34
Selenium	78	-0.2637	-0.1624	0.0995	**-0.1089**	0.1874	172.1
Selenium	82	0.1699	0.2506	0.1722	**0.1976**	0.0459	23.25
Silver	107	0.0088	0.009	0.01	**0.0092**	0.0006	6.888
Silver	109	0.0083	0.009	0.0084	**0.0085**	0.0004	4.494
Thallium	203	0.0048	0.0061	0.0048	**0.0052**	0.0007	13.92
Thallium	205	0.0063	0.0057	0.0051	**0.0057**	0.0006	10.42
Tin	118	0.1217	0.1185	0.1172	**0.1191**	0.0023	1.958
Tin	120	0.1154	0.1155	0.1166	**0.1158**	0.0007	0.5739
Zinc	66	148.4	146.1	146.3	**146.9**	1.27	0.864
Zinc	67	137.1	138.5	136.7	**137.4**	0.9235	0.672
Zinc	68	143.9	144.2	145.3	**144.5**	0.7282	0.5041

Internal Standard Factors:

Scandium	45	1.08	1.08	1.081	**1.08**	n/a	n/a
Indium	115	1.099	1.087	1.077	**1.099**	n/a	n/a
Lutetium	175	0.98	0.981	0.989	**0.98**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 02-13-04A
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: Jim Chan
Analysis Lot # : KA0323473

Sample Name:		CCV4 MS4-62-B			Mean	SD	%RSD
TimeStamp		2/13/04 11:24					
Antimony	121	24.97	24.52	24.84	**24.77**	0.2317	0.9354
Antimony	123	24.5	24.88	24.98	**24.79**	0.2497	1.008
Arsenic	75	24.97	25.12	24.64	**24.91**	0.2487	0.9983
Cadmium	111	24.72	25.11	25.18	**25**	0.2456	0.9823
Cadmium	114	24.51	24.81	24.9	**24.74**	0.2037	0.8235
Cobalt	59	25.05	25.37	24.89	**25.1**	0.2475	0.986
Copper	63	24.93	24.8	24.85	**24.86**	0.0666	0.2678
Copper	65	24.74	24.98	24.95	**24.89**	0.1286	0.5168
Lead	206	22.42	22.68	22.4	**22.5**	0.1598	0.7102
Lead	207	22.44	22.86	22.27	**22.52**	0.3045	1.352
Lead	208	22.64	22.5	22.13	**22.42**	0.2618	1.168
Manganese	55	25.43	25.42	25.36	**25.4**	0.0359	0.1414
Molybdenum	95	24.61	25.23	25.01	**24.95**	0.3136	1.257
Molybdenum	97	24.91	25.03	25.02	**24.99**	0.069	0.2762
Molybdenum	98	24.86	24.84	25.23	**24.98**	0.2206	0.8831
Nickel	60	24.95	25.16	24.92	**25.01**	0.1329	0.5313
Nickel	62	24.96	24.61	24.71	**24.76**	0.1816	0.7337
Selenium	77	24.62	24.05	24.28	**24.32**	0.285	1.172
Selenium	78	24.75	24.42	24.38	**24.52**	0.2002	0.8166
Selenium	82	24.9	25.39	24.62	**24.97**	0.3909	1.565
Silver	107	24.61	24.71	24.8	**24.71**	0.0986	0.3991
Silver	109	24.65	24.93	24.53	**24.7**	0.2064	0.8355
Thallium	203	22.76	22.54	22.4	**22.57**	0.1827	0.8096
Thallium	205	22.65	22.34	22.26	**22.42**	0.2043	0.9112
Tin	118	24.5	25.16	24.8	**24.82**	0.3342	1.346
Tin	120	24.91	24.45	24.67	**24.68**	0.2297	0.9309
Zinc	66	24.84	25.08	25.02	**24.98**	0.1252	0.5013
Zinc	67	25.65	25.14	24.92	**25.24**	0.3775	1.496
Zinc	68	25.44	25.09	25.11	**25.22**	0.1931	0.7659

Internal Standard Factors:

Scandium	45	1.09	1.099	1.091	**1.09**	n/a	n/a
Indium	115	1.071	1.082	1.082	**1.071**	n/a	n/a
Lutetium	175	1.005	1.002	0.99	**1.005**	n/a	n/a

Instrument ID: Thermo Elemental Excell | **Method: EPA 200.8**
Experiment: 02-13-04A | **Analyst: Jim Chan**
Units: µg/L (ppb) | **Analysis Lot # : KA0323473**

Sample Name:		**CCB4**			**Mean**	**SD**	**%RSD**
TimeStamp		**2/13/04 11:30**					
Antimony	121	0.0018	0.0021	0.0012	**0.0017**	0.0004	26.07
Antimony	123	0.0011	0.0014	0.0013	**0.0013**	0.0001	11.06
Arsenic	75	0.0583	0.061	0.0187	**0.046**	0.0237	51.55
Cadmium	111	0.0034	0.0035	0.0034	**0.0035**	0.0001	2.575
Cadmium	114	0.0022	0.0018	0.0027	**0.0022**	0.0005	21.16
Cobalt	59	0.0031	0.001	0.0014	**0.0018**	0.0011	61.91
Copper	63	0.0201	0.0186	0.0196	**0.0194**	0.0008	3.876
Copper	65	0.0025	0.0092	0.0069	**0.0062**	0.0034	54.76
Lead	206	0.0017	0.0011	0.0013	**0.0014**	0.0003	20.77
Lead	207	0.0026	0.0014	0.0023	**0.0021**	0.0006	29.21
Lead	208	0.0016	0.0012	0.0013	**0.0014**	0.0002	12.69
Manganese	55	0.0208	0.0169	0.0169	**0.0182**	0.0022	12.33
Molybdenum	95	0.0068	0.0049	0.0042	**0.0053**	0.0014	25.82
Molybdenum	97	-0.0012	-0.0026	-0.0024	**-0.002**	0.0008	37.06
Molybdenum	98	0.0041	0.0034	0.0047	**0.0041**	0.0007	15.97
Nickel	60	0.0791	0.0758	0.0662	**0.0737**	0.0067	9.07
Nickel	62	-0.0451	-0.0226	-0.1094	**-0.059**	0.045	76.3
Selenium	77	-0.3523	-0.3169	-0.2258	**-0.2983**	0.0652	21.87
Selenium	78	-0.05	-0.0661	-0.0776	**-0.0646**	0.0139	21.51
Selenium	82	0.1	0.1424	0.0731	**0.1051**	0.0349	33.23
Silver	107	0.0058	0.0046	0.0034	**0.0046**	0.0012	26.64
Silver	109	0.006	0.0051	0.0033	**0.0048**	0.0014	29.13
Thallium	203	0.0089	0.0071	0.0054	**0.0072**	0.0018	24.55
Thallium	205	0.0092	0.0082	0.0058	**0.0077**	0.0018	23
Tin	118	0.0124	0.0089	0.0107	**0.0107**	0.0018	16.68
Tin	120	0.0111	0.0083	0.0073	**0.0089**	0.0019	21.79
Zinc	66	0.2949	0.2775	0.2931	**0.2885**	0.0096	3.313
Zinc	67	0.0533	0.0715	0.0076	**0.0441**	0.0329	74.63
Zinc	68	0.2983	0.2918	0.2928	**0.2943**	0.0035	1.187

Internal Standard Factors:

Scandium	45	1.08	1.07	1.064	**1.08**	n/a	n/a
Indium	115	1.08	1.049	1.098	**1.08**	n/a	n/a
Lutetium	175	0.961	0.969	0.983	**0.961**	n/a	n/a

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Draft, Aug. 1991

Work Order #.: _____ Method: Methylene Blue Colorimetric

Analysis: AVS/SEM

Date Prepared	Sample Name Lab Code	Initial Wt./Vol. (g) or (ml)	AVS - Final Volume (mL)	mLs 50% HCl added	SEM - Final Volume (mL)	Sample description:
2/13/04	MB	50	50		100	
	LCS	10.050				
	0648-1	~~10~~ 9.530				
	-2	10.028				
	-2d	9.869				
	-2MS	10.000				
	-2msd	9.962				
	-4 ①	~~5.395~~	5.520			
	-5	5.078				

LCS 1 = % REC =

LCS 2 = % REC =

Spike = % REC =

Spike Dup.= % REC =

x =

STD ID# = RPD =

Prepared By:	EM	Date Prepared:	2/13/04 1145
Analyzes By:		Date Analyzed:	
Reviewed By:		Date Reviewed:	2/17/04

① EM 2/13/04

Atomic Absorption Data Review Form

Element Hg ~~AA #~~ AB 2/17/04

Analysis Lot # Analytical Batch KA0323270

Cal Std/CCV Source Hg1.26.E

Service Request Numbers:

K0648

	Yes	No	NA
1) Appropriate Standardization Completed	✓		
2) ICV within 10% of true value.	✓		
3) CCVs in Control	✓		
4) CCB's and/or ICB's below MRL	✓		
5) All reported results within calibration range	✓		
6) Calculations Correct	✓		

Comments :

Reviewed By: [signature] Date: 2/17/04

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K0648
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV	—	—	—	5.15		103%
2	ICB	—	—	—	-0.05		<0.2
3	CCV1	—	—	—	4.85		97%
4	CCB1	—	—	—	-0.05		<0.2
5	CRA	100mls AB 2/17/04	100 AB 2/17/04	—	0.18		<0.2
6	PBW P0315509	50 mls	50 mls	1/4	-0.01	<0.02	
7	LCS ↓	↓			5.09	20.36/102%	
8	K0648-01	9.530			0.00	<0.02	
9	-02	10.028			0.02	<0.02	
10	-02D	9.869			-0.02	<0.02	
11	-02S	9.869			4.91	0.199/98%	
12	-04	5.520			-0.02	<0.02	
13	-05	5.078			-0.03	<0.02	
14	CCV2	—	—	—	5.23		105%
15	CCB2	—	—	—	-0.02		<0.2
16							
17							
18							
19							
20			AB 2/17/04				
21							
22							
23							
24							
25							

Comments: Reporting Levels:
Waters - 0.2 µg/L K0648-02S @ 0.203 mg/kg TIME STARTED:
Soil - 0.02 mg/kg
TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
Angela Baird	2/17/04	1

[HGFORM.XLW] HG1.XLS

Columbia Analytical Services
EPA METHOD 7470A

Extr/Prep Batch
KP0315509

Service Request Number(s) : KA048

Sample	Initial Volume	Final Volume	Sample	Initial Volume	Final Volume
PB	5mls.	20mls			
LCS*					
KA048.01					
.02					
.02D					
.02S*					
.04					
.05					
			Std. 0.2	0.2 *	100
			Std. 0.5	0.5 *	100
			Std. 1.0	1.0 *	100
			Std. 5.0	5.0 *	100
			Std. 10.0	10.0 *	100
			ICV	0.5 **	100

AB 2/17/04

Lot # of Reagents Used:

HNO3:Y31024 **K2S2O8 T44H13** **NaCl :Y07624**
H2SO4: 43212 **KMnO4:V25588** **NH2OH-HCL:Y28599**
HCL: K30655903 221 **SnCl2:Y23648**
LCSS = **ERA CLP Soil Lot # 246** **Other:** Waterbath temp. 95°
LCSW= **ICV Intermediate stock solution.**
*** Source Standard:** HG1-216-E 100ppb
**** Source Standard: ICV** HG1-25-C1 1000ppb **TIME STARTED:**

Comments: *0.1 mls HG1-216-D 1000ppb

Analyst: Angela Baird **Date:** 2/17/04

[HGFORM.XLW] 7470

CETAC Hg Analysis Report - 04021700.DB - Tuesday, February 17, 2004, 2:16:55 PM

Analyst ANGELA BAIRD
Date Started Tuesday, February 17, 2004, 13:32:56
Worksheet Hg 2/17/04 RUN1
Comment KA0323270
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	17-Feb-2004, 13:32	0.00	31.00	1.00	107	102	86	48	
Standard #1	17-Feb-2004, 13:34	0.20	2.53	1.00	804	814	852	823	
Standard #2	17-Feb-2004, 13:36	0.50	4.01	1.00	1782	1885	1952	1930	
Standard #3	17-Feb-2004, 13:37	1.00	2.36	1.00	3519	3663	3700	3700	
Standard #4	17-Feb-2004, 13:39	5.00	4.19	1.00	17819	18981	19535	19465	
Standard #5	17-Feb-2004, 13:41	10.00	2.56	1.00	35291	36530	37131	37395	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	17-Feb-2004, 13:42	5.15	2.02	1.00	18460	19050	19229	19305	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	17-Feb-2004, 13:44	-0.05	2.49	1.00	-82	-74	-75	-84	

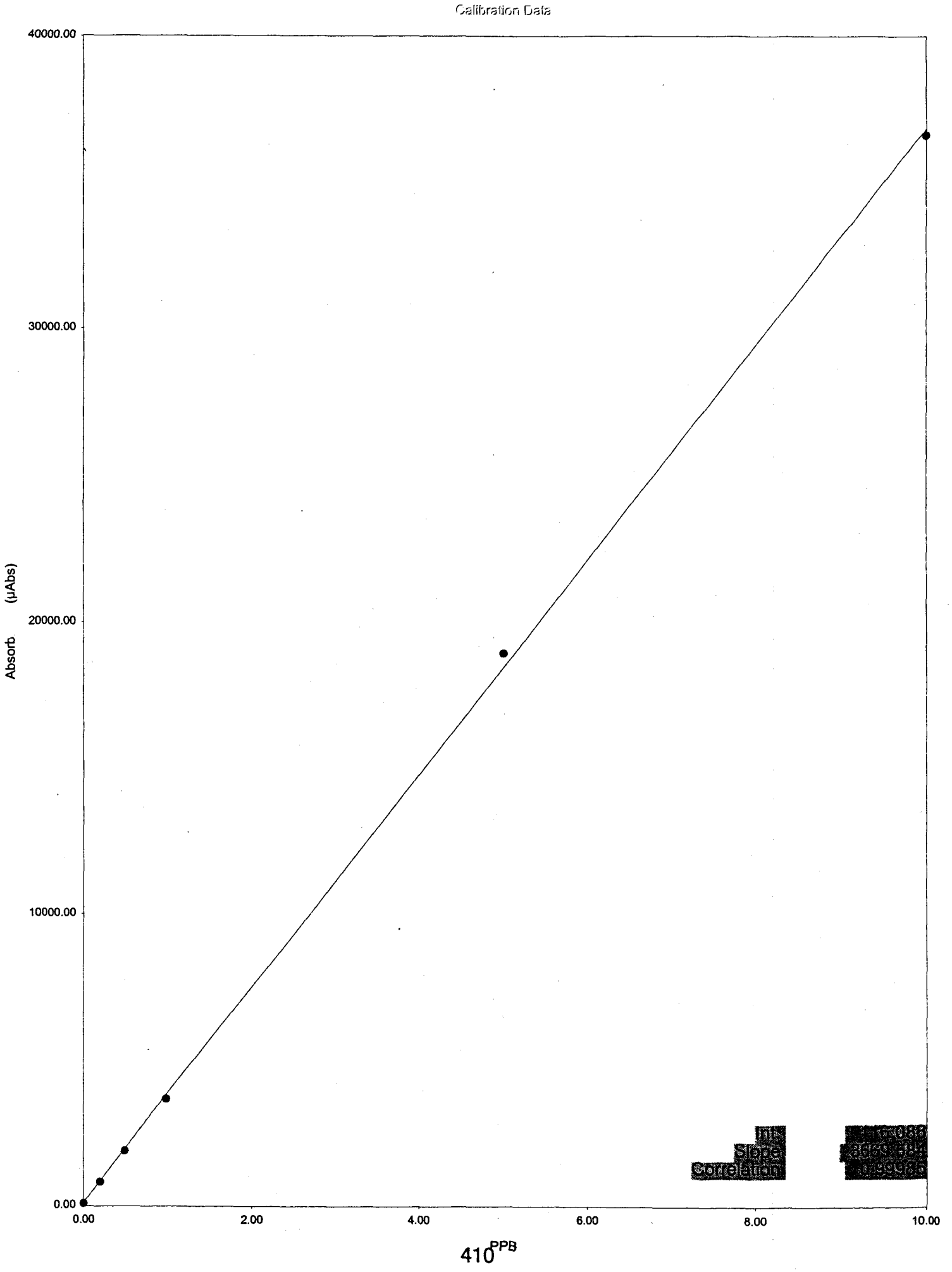
Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	17-Feb-2004, 13:45	4.85	1.41	1.00	17625	18048	18201	17837	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	17-Feb-2004, 13:47	-0.05	5.82	1.00	-48	-43	-45	-64	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	17-Feb-2004, 13:48	0.18	4.52	1.00	732	777	790	800	
PB(KP0315509)	17-Feb-2004, 13:50	-0.01	11.80	1.00	83	85	90	82	
LCS(KP0315509)	17-Feb-2004, 13:52	5.09	3.95	1.00	17738	18790	19363	19233	
K0648-01	17-Feb-2004, 13:53	0.00	42.50	1.00	132	121	132	127	
K0648-02	17-Feb-2004, 13:55	0.02	17.40	1.00	173	190	179	165	
K0648-02D	17-Feb-2004, 13:57	-0.02	46.40	1.00	80	79	36	27	
K0648-02S	17-Feb-2004, 13:58	4.91	2.94	1.00	17385	18307	18631	18213	
K0648-04	17-Feb-2004, 14:00	-0.02	7.05	1.00	46	39	40	33	
K0648-05	17-Feb-2004, 14:01	-0.03	19.40	1.00	14	42	20	-3	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	17-Feb-2004, 14:03	5.23	2.10	1.00	18726	19372	19626	19513	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	17-Feb-2004, 14:05	-0.02	21.10	1.00	61	41	36	22	


Calibration Data
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30000.00
20000.00
10000.00
0.00
Absorb. (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
410PPB
Slope
Correlation

Service Request # K0648

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments
serial dilution for Ni = 112%

Primary Review by [illegible] Date 2/17/04

Secondary Review by [illegible] Date 2/17/04

Method: 2004A Sample Name: Blank Operator:
Comment:
Run Time: 02/17/04 09:36 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}	313.042 {107}
Avg	.1177	.0236	.0145	-.0353	-.1993
Stddev	.0215	.0137	.0147	.0088	.0078
%RSD	18.27	58.26	101.0	24.98	3.933
#1	.1025	.0333	.0249	-.0416	-.1937
#2	.1330	.0138	.0042	-.0291	-.2048

Elem	B_2497	Cd2265	Ca3179	Ca3181	Cr2677
Line	249.773 {134}	226.502 {148}	317.933 {105}	318.128 {105}	267.716 {125}
Avg	.0291	.0513	.0595	-.0692	-.1101
Stddev	.0176	.0039	.0137	.0196	.0030
%RSD	60.63	7.675	23.02	28.28	2.700
#1	.0416	.0540	.0692	-.0830	-.1122
#2	.0166	.0485	.0498	-.0554	-.1080

Elem	Co2286	Cu3247	Fe2599	Fe2714	Pb2203
Line	228.616 {147}	324.754 {103}	259.940 {129}	271.441 {124}	220.353 {152}
Avg	.0457	.0374	.1829	.1191	.1150
Stddev	.0098	.0215	.0001	.0489	.0411
%RSD	21.40	57.61	.0306	41.08	35.75
#1	.0388	.0526	.1829	.0845	.0859
#2	.0526	.0221	.1828	.1537	.1440

Elem	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316
Line	202.582 {166}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	.1344	.0637	.2203	.0346	-.0173
Stddev	.0255	.0274	.0216	.0490	.0480
%RSD	18.98	43.05	9.815	141.4	277.1
#1	.1524	.0443	.2355	.0693	-.0513
#2	.1163	.0830	.2050	.0000	.0166

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899
Line	766.490 { 44}	196.090 {171}	328.068 {102}	589.592 { 57}	189.989 {176}
Avg	-1.866	-.0693	-.0042	2.845	.0838
Stddev	.341	.0196	.0020	.106	.0284
%RSD	18.25	28.25	47.15	3.710	33.92
#1	-2.106	-.0554	-.0028	2.920	.1039
#2	-1.625	-.0831	-.0055	2.770	.0637

Elem	V_3102	Zn2062	P_1782	Si2516	Ti3234
Line	310.230 {108}	206.200 {163}	178.287 {188}	251.612 {134}	323.452 {104}
Avg	.7583	.2119	.1281	.3006	.4179
Stddev	.0000	.0020	.0127	.0687	.0117
%RSD	.0040	.9555	9.907	22.84	2.806
#1	.7583	.2134	.1192	.3492	.4262
#2	.7583	.2105	.1371	.2521	.4096

Elem	Tl1908	Li6707	Sr3464
Line	190.864 {176}	670.784 { 50}	346.446 { 97}
Avg	-.0249	.3778	-.1827
Stddev	.0078	.1037	.0196
%RSD	31.40	27.46	10.71
#1	-.0194	.4511	-.1965
#2	-.0305	.3044	-.1688

ee 2/17/04

Method: 2004A Sample Name: STDA Operator:
Comment: ICP2-24-B
Run Time: 02/17/04 09:39 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	Be3130	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	313.042 {107}	249.773 {134}	226.502 {148}
Avg	3.086	2.702	957.7	53.67	74.32
Stddev	.033	.014	1.3	.03	.25
%RSD	1.079	.5074	.1385	.0623	.3430
#1	3.109	2.712	956.8	53.65	74.14
#2	3.062	2.692	958.7	53.70	74.50

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}	259.940 {129}
Avg	7.533	31.21	45.93	12.78	103.7
Stddev	.007	.16	.13	.02	.2
%RSD	.0892	.5025	.2840	.1876	.1948
#1	7.528	31.10	45.84	12.79	103.6
#2	7.538	31.32	46.02	12.76	103.9

Elem	Pb2203	Mg2852	Mn2576	Mo2020	Ni2316
Line	220.353 {152}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	4.706	33.59	367.5	16.89	43.85
Stddev	.059	.05	4.2	.12	.10
%RSD	1.249	.1458	1.134	.7081	.2348
#1	4.747	33.63	364.5	16.80	43.78
#2	4.664	33.56	370.4	16.97	43.92

Elem	Se1960	Ag3280	Sn1899	V_3102	Zn2062
Line	196.090 {171}	328.068 {102}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	2.494	14.39	4.796	24.27	48.54
Stddev	.051	.07	.014	.03	.34
%RSD	2.043	.4641	.2863	.1241	.7027
#1	2.458	14.44	4.786	24.25	48.30
#2	2.530	14.35	4.806	24.29	48.78

Elem	Si2516	Ti3234	Tl1908
Line	251.612 {134}	323.452 {104}	190.864 {176}
Avg	12.17	25.89	1.896
Stddev	.05	.16	.027
%RSD	.4505	.6004	1.448
#1	12.21	25.78	1.876
#2	12.14	26.00	1.915

Method: 2004A Sample Name: STDB Operator:
Comment: ICP2-17-G
Run Time: 02/17/04 09:42 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Ca3181	Fe2714	Mg2025
Line	237.312 {141}	233.527 {144}	318.128 {105}	271.441 {124}	202.582 {166}
Avg	19.78	660.7	43.96	239.9	56.13
Stddev	.10	3.2	.11	2.2	.14
%RSD	.5106	.4835	.2514	.9161	.2447
#1	19.85	658.4	43.88	238.3	56.04
#2	19.71	663.0	44.04	241.4	56.23

Elem	K_7664	Na5895	P_1782	Li6707	Sr3464
Line	766.490 { 44}	589.592 { 57}	178.287 {188}	670.784 { 50}	346.446 { 97}
Avg	458.8	1627.	11.62	902.9	50.52
Stddev	7.4	27.	.09	19.1	.28
%RSD	1.609	1.632	.7758	2.111	.5642
#1	464.0	1645.	11.56	916.4	50.32
#2	453.5	1608.	11.69	889.5	50.72

Method: 2004A Sample Name: ICV Operator: WM
Comment: KA0323406 ICP2-25-B
Run Time: 02/17/04 09:45 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.088	2.571	2.555	5.363	.1176	.0001	1.267
Stddev	.010	.026	.009	.021	.0000	.0001	.009
%RSD	.1931	1.029	.3399	.3853	.0248	108.8	.7476
#1	5.095	2.552	2.561	5.348	.1175	.0000	1.260
#2	5.081	2.590	2.549	5.377	.1176	.0002	1.273
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	5.000	2.500	2.500	5.000	.1250		1.250
Range	10.00%	10.00%	10.00%	10.00%	10.00%		10.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.91	.5161	1.279	.6425	2.598	2.511	12.59
Stddev	.05	.0008	.009	.0107	.010	.026	.04
%RSD	.3500	.1484	.7336	1.663	.3859	1.038	.3458
#1	12.95	.5155	1.273	.6349	2.591	2.493	12.56
#2	12.88	.5166	1.286	.6500	2.605	2.529	12.62
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.50	.5000	1.250	.6250	2.500	2.500	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.300	2.033	1.279	13.39	2.497	.6373	13.36
Stddev	.001	.011	.006	.04	.022	.0008	.02
%RSD	.0879	.5290	.4970	.3163	.8844	.1218	.1586
#1	1.299	2.026	1.275	13.42	2.513	.6367	13.34
#2	1.300	2.041	1.284	13.36	2.482	.6378	13.37
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	2.000	1.250	12.50	2.500	.6250	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0035	1.279	1.269	.0739	.0216	2.031	2.633
Stddev	.0058	.001	.010	.0008	.0014	.000	.004
%RSD	163.7	.0976	.7529	1.149	6.495	.0088	.1571
#1	-.0077	1.278	1.263	.0745	.0206	2.030	2.630
#2	.0006	1.280	1.276	.0733	.0225	2.031	2.636
Check ?	None	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value		1.250	1.250			2.000	2.500
Range		10.00%	10.00%			10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	.0171
Stddev	.000	.0052
%RSD	704.6	30.49
#1	.0001	.0134
#2	-.0002	.0207
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICV2 Operator: WM
Comment: KA0323406 ICP2-17-F
Run Time: 02/17/04 09:47 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	.0086	-.0153	-.0003	.0000	-.0089	.0010
Stddev	.0108	.0038	.0088	.0002	.000	.0003	.0003
%RSD	389.8	44.16	57.38	67.96	342.6	3.605	29.68
#1	-.0104	.0059	-.0215	-.0001	.0000	-.0087	.0008
#2	.0049	.0113	-.0091	-.0004	.0000	-.0091	.0013
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.916	.0006	.0007	-.0025	25.18	-.0274	24.74
Stddev	.029	.0012	.0012	.0074	.11	.0068	.01
%RSD	.5983	203.1	173.2	293.7	.4328	24.89	.0349
#1	4.895	.0015	.0016	.0027	25.11	-.0226	24.74
#2	4.937	-.0003	-.0002	-.0077	25.26	-.0322	24.75
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	5.000				25.00		25.00
Range	10.00%				10.00%		10.00

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0012	-.0026	.0069	.0146	.0044	.0137
Stddev	.0003	.0024	.0009	.0082	.0069	.0009	.0044
%RSD	21.43	211.9	35.44	117.6	47.26	21.36	32.13
#1	.0011	.0029	-.0032	.0012	.0097	.0037	.0106
#2	.0014	-.0006	-.0019	.0127	.0194	.0051	.0168
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.0054	.0002	.0121	-.0096	.0057	-.0282
Stddev	.0033	.0010	.0001	.0098	.0006	.0015	.0235
%RSD	47.75	18.28	67.36	81.18	5.977	26.64	83.36
#1	.0046	-.0047	.0001	.0191	-.0092	.0068	-.0116
#2	.0093	-.0061	.0003	.0052	-.0100	.0047	-.0448
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0002	.0040
Stddev	.0002	.0033
%RSD	79.02	82.93
#1	.0004	.0063
#2	.0001	.0016
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICV3 Operator: WM
Comment: KA0323406 ICP2-20-H
Run Time: 02/17/04 09:50 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	.0035	-.0005	-.0002	.0000	10.07	.0002
Stddev	.0299	.0007	.0113	.0000	.000	.02	.0000
%RSD	468.7	18.74	2210.	13.35	122.4	.2241	24.95
#1	.0275	.0031	.0075	-.0002	-.0001	10.06	.0001
#2	-.0148	.0040	-.0085	-.0002	.0000	10.09	.0002
Check ?	None	None	None	None	None	QC Pass	None
Value						10.00	
Range						10.00%	

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	.0015	.0000	-.0025	.0053	.0048	.0081
Stddev	.0008	.0006	.0003	.0015	.0003	.0251	.0038
%RSD	11.78	39.56	643.2	61.50	6.433	520.5	47.10
#1	.0061	.0019	-.0002	-.0036	.0055	-.0129	.0107
#2	.0072	.0011	.0002	-.0014	.0051	.0226	.0054
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0015	-.0009	.0032	.0070	-.0004	.0018
Stddev	.0001	.0006	.0000	.0018	.0176	.0015	.0025
%RSD	195.4	39.30	2.434	56.56	250.9	392.8	139.9
#1	.0002	-.0019	-.0009	.0019	-.0054	-.0014	.0000
#2	.0000	-.0011	-.0009	.0044	.0194	.0007	.0035
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.795	.0001	-.0024	4.767	4.656	.0016	-.0109
Stddev	.052	.0005	.0011	.005	.007	.0006	.0031
%RSD	1.090	369.1	47.82	.1115	.1612	37.53	28.26
#1	4.758	.0005	-.0016	4.763	4.651	.0021	-.0130
#2	4.832	-.0002	-.0032	4.770	4.662	.0012	-.0087
Check ?	QC Pass	None	None	QC Pass	QC Pass	None	None
Value	5.000			5.000	5.000		
Range	10.00%			10.00%	10.00%		

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	5.025	2.029
Stddev	.026	.011
%RSD	.5118	.5233
#1	5.043	2.021
#2	5.007	2.036
Check ?	QC Pass	QC Pass
Value	5.000	2.000
Range	10.00%	10.00%

Method: 2004A Sample Name: ICB Operator: WM
Comment: KA0323406
Run Time: 02/17/04 09:54 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.0004	.0008	.0002	-.0001	.0066	.0004
Stddev	.0239	.0140	.0007	.0006	.0001	.0016	.0005
%RSD	678.4	3455.	94.17	374.6	104.6	24.40	134.0
#1	.0204	.0103	.0013	.0006	-.0001	.0077	.0007
#2	-.0134	-.0095	.0003	-.0003	.0000	.0055	.0000
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0439	.0007	.0001	.0023	.0007	.0135
Stddev	.0063	.0045	.0014	.0005	.0018	.0001	.0044
%RSD	485.4	10.18	212.1	525.7	80.83	18.72	32.52
#1	-.0031	-.0408	.0017	-.0003	.0036	.0008	.0166
#2	.0057	-.0471	-.0003	.0005	.0010	.0006	.0104
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0069	H .0284	.0043	.0000	-.0012	-.0009	.0098
Stddev	.0077	.0104	.0038	.0002	.0013	.0004	.0035
%RSD	110.7	36.70	87.63	646.7	111.1	46.27	35.66
#1	-.0123	.0211	.0016	.0001	-.0002	-.0012	.0123
#2	-.0015	.0358	.0070	-.0001	-.0021	-.0006	.0073
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	-.0001	-.0019	-.0048	.0012	.0008	-.0054
Stddev	.0084	.0032	.0013	.0029	.0017	.0005	.0013
%RSD	62.23	3696.	66.44	60.05	141.7	66.49	23.54
#1	.0076	-.0024	-.0010	-.0069	.0023	.0004	-.0045
#2	.0194	.0022	-.0029	-.0028	.0000	.0011	-.0063
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0025	.0036	-.0001	.0061
Stddev	.0007	.0006	.0031	.0002	.0010
%RSD	57.86	24.54	84.85	312.7	15.65
#1	.0018	.0029	.0058	-.0002	.0055
#2	.0008	.0021	.0014	.0001	.0068
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: CCVA1 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 09:57 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4896	.4795	.4543	.4800	.4825	.4924	.4939
Stddev	.0168	.0109	.0063	.0005	.0009	.0014	.0020
%RSD	3.435	2.268	1.380	.1100	.1789	.2895	.4052
#1	.4922	.4806	.4591	.4803	.4837	.4940	.4960
#2	.4668	.4778	.4549	.4795	.4825	.4930	.4935
#3	.5073	.4666	.4453	.4805	.4821	.4919	.4913
#4	.4922	.4931	.4580	.4795	.4817	.4907	.4948
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4777	.4944	.4923	.4969	.4944	.4876	2.455
Stddev	.0070	.0016	.0012	.0026	.0020	.0129	.015
%RSD	1.473	.3183	.2508	.5175	.4115	2.644	.6018
#1	.4840	.4962	.4935	.4945	.4964	.4969	2.464
#2	.4720	.4949	.4917	.4966	.4957	.5004	2.458
#3	.4836	.4941	.4931	.4959	.4937	.4766	2.434
#4	.4712	.4924	.4909	.5005	.4919	.4763	2.466
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4751	.4913	.4919	5.365	.4849	.4904	.5548
Stddev	.0006	.0019	.0012	.055	.0057	.0078	.0077
%RSD	.1335	.3962	.2369	1.021	1.172	1.585	1.388
#1	.4751	.4928	.4933	5.341	.4815	.4904	.5510
#2	.4745	.4927	.4924	5.420	.4793	.4855	.5597
#3	.4760	.4911	.4911	5.301	.4920	.4843	.5459
#4	.4749	.4886	.4908	5.400	.4869	.5014	.5625
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4666	.4882	.4894	-.0020	.2472	.4891	.4758
Stddev	.0042	.0018	.0020	.0078	.0013	.0015	.0149
%RSD	.9038	.3741	.4163	382.8	.5279	.3041	3.128
#1	.4621	.4904	.4907	.0004	.2463	.4909	.4853
#2	.4641	.4869	.4883	.0070	.2481	.4883	.4563
#3	.4691	.4865	.4916	-.0117	.2460	.4897	.4893
#4	.4712	.4890	.4872	-.0039	.2486	.4876	.4722
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA1 Run Time: 02/17/04 09:57

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0001	.0082
Stddev	.0002	.0038
%RSD	311.8	46.53
#1	.0001	.0027
#2	.0001	.0095
#3	-.0003	.0092
#4	-.0003	.0114
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB1 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.971	.0166	-.0169	2.470	.0014	-.0079	.0033
Stddev	.011	.0067	.0116	.013	.0001	.0010	.0008
%RSD	.2299	40.16	68.73	.5433	3.807	12.73	24.74
#1	4.980	.0131	-.0029	2.455	.0014	-.0071	.0041
#2	4.954	.0103	-.0313	2.488	.0014	-.0094	.0035
#3	4.975	.0176	-.0169	2.467	.0013	-.0075	.0032
#4	4.975	.0256	-.0163	2.470	.0014	-.0075	.0022
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.40	.0041	.0005	-.0027	25.07	-.0086	25.09
Stddev	.21	.0004	.0006	.0015	.06	.0021	.09
%RSD	.8160	10.38	104.8	53.57	.2227	25.04	.3751
#1	25.10	.0036	.0010	-.0023	24.99	-.0073	25.19
#2	25.49	.0043	.0001	-.0012	25.12	-.0085	25.07
#3	25.56	.0041	.0010	-.0047	25.07	-.0116	24.97
#4	25.45	.0046	.0000	-.0027	25.08	-.0067	25.11
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0016	.0003	10.36	.0248	.0011	10.32
Stddev	.0002	.0012	.0011	.02	.0090	.0028	.04
%RSD	8.210	71.87	412.9	.1805	36.04	263.4	.4141
#1	.0027	.0027	-.0012	10.36	.0227	-.0020	10.31
#2	.0026	.0014	.0001	10.38	.0367	.0047	10.38
#3	.0028	.0024	.0015	10.34	.0248	.0001	10.32
#4	.0023	.0001	.0007	10.36	.0151	.0015	10.27
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0015	.0027	2.567	.0040	.0042	-.0217
Stddev	.0050	.0040	.0007	.018	.0026	.0018	.0131
%RSD	195.5	268.0	25.55	.7119	65.94	42.60	60.35
#1	.0078	-.0019	.0029	2.558	.0029	.0031	-.0188
#2	-.0019	.0070	.0022	2.589	.0070	.0023	-.0043
#3	.0060	.0019	.0022	2.572	.0010	.0055	-.0318
#4	-.0016	-.0010	.0036	2.547	.0049	.0059	-.0318
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Sample Name: CCVB1 Run Time: 02/17/04 10:08

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5097	2.508
tddev	.0020	.016
%RSD	.3843	.6426
#1	.5078	2.490
#2	.5123	2.501
#3	.5100	2.515
#4	.5087	2.527
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB1 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 10:12 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0303	-.0019	-.0013	.0005	.0000	.0013	.0004
Stddev	.0159	.0033	.0007	.0003	.0000	.0011	.0001
%RSD	52.56	170.7	56.47	56.78	464.9	86.61	20.28
#1	.0415	.0004	-.0008	.0007	.0000	.0020	.0003
#2	.0190	-.0042	-.0018	.0003	.0000	.0005	.0004
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	L -.0565	.0021	-.0001	.0023	.0010	.0127
Stddev	.0031	.0133	.0023	.0010	.0077	.0002	.0112
%RSD	54.79	23.54	107.1	1595.	336.4	21.74	87.91
#1	.0080	-.0471	.0005	-.0008	.0077	.0012	.0207
#2	.0035	-.0660	.0037	.0006	-.0031	.0009	.0048
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0000	.0016	.0002	-.0024	-.0015	.0034
Stddev	.0119	.016	.0000	.0000	.0009	.0006	.0179
%RSD	3753.	103700.	.1271	13.72	39.00	39.74	522.3
#1	-.0087	.0112	.0017	.0002	-.0017	-.0019	-.0093
#2	.0081	-.0112	.0016	.0001	-.0030	-.0011	.0161
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0146	.0018	-.0024	-.0041	.0012	.0003	-.0012
Stddev	.0038	.0014	.0002	.0006	.0020	.0003	.0038
%RSD	26.17	74.18	7.817	15.19	170.8	123.8	317.1
#1	.0119	.0009	-.0025	-.0045	.0026	.0005	-.0039
#2	.0173	.0028	-.0023	-.0037	-.0002	.0000	.0015
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0008	-.0116	-.0004	.0048
Stddev	.0013	.0003	.0082	.0006	.0041
%RSD	250.9	41.13	70.67	132.9	84.75
#1	-.0015	.0010	-.0173	.0000	.0076
#2	.0004	.0005	-.0058	-.0008	.0019
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: CRI Operator: WM
Comment: KA0323406 ICP2-24-A
Run Time: 02/17/04 10:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0655	.0609	.0789	.0043	.0044	.0006	.0053
Stddev	.0159	.0140	.0186	.0002	.0001	.0002	.0002
%RSD	24.26	23.07	23.54	4.575	1.154	37.66	3.689
#1	.0542	.0708	.0658	.0044	.0045	.0004	.0052
#2	.0767	.0509	.0920	.0041	.0044	.0007	.0054
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	.0500	.0500	.1000	.0050	.0050		.0050
Range	50.00%	50.00%	50.00%	50.00%	50.00%		50.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0516	.0047	.0090	.0098	.0226	.0448	.0147
Stddev	.0047	.0025	.0006	.0026	.0000	.0009	.0009
%RSD	9.053	54.01	6.310	26.82	.1277	1.978	5.870
#1	.0550	.0065	.0086	.0079	.0226	.0455	.0153
#2	.0483	.0029	.0095	.0116	.0226	.0442	.0140
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0050	.0100	.0100	.0200	.0500	.0200
Range	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0058	.0175	1.987	.0907	.0128	.1044
Stddev	.0000	.0021	.0006	.042	.0091	.0008	.0014
%RSD	.6847	35.90	3.660	2.105	10.08	6.483	1.326
#1	.0050	.0073	.0171	2.016	.0843	.0122	.1054
#2	.0049	.0044	.0180	1.957	.0972	.0133	.1034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0100	.0200	2.000	.1000	.0100	.1000
Range	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0102	.0088	.0048	.0041	.0037	-.0166
Stddev	.0000	.0039	.0003	.0081	.0005	.0017	.0071
%RSD	.0824	37.66	3.089	168.5	12.07	46.10	42.92
#1	.0031	.0075	.0089	.0106	.0045	.0025	-.0116
#2	.0031	.0130	.0086	-.0009	.0038	.0049	-.0217
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.0100	.0100				
Range		50.00%	50.00%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0001	.0082
Stddev	.0001	.0015
%RSD	54.39	18.81
#1	-.0002	.0071
#2	-.0001	.0093
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICSA Operator: WM
Comment: KA0323406 ICP2-17-B
Run Time: 02/17/04 10:20 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	490.3	.0494	-.0548	-.0031	.0001	-.0824	.0069
Stddev	1.9	.0134	.0104	.0002	.0001	.0017	.0004
%RSD	.3808	27.04	18.90	7.104	72.72	2.104	6.089
#1	491.7	.0589	-.0475	-.0033	.0001	-.0812	.0066
#2	489.0	.0400	-.0622	-.0030	.0002	-.0837	.0072
Check ?	QC Pass	None	None	None	None	None	None
Value	500.0						
Range	20.00%						

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	513.7	.0016	.0025	-.0045	187.7	-.0230	527.3
Stddev	.7	.0024	.0001	.0017	1.7	.0045	.6
%RSD	.1350	145.9	2.471	36.96	.9213	19.52	.1063
#1	514.2	.0033	.0026	-.0057	186.5	-.0199	526.9
#2	513.2	-.0001	.0025	-.0034	189.0	-.0262	527.7
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	500.0				200.0		500.0
Range	20.00%				20.00%		20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	-.0048	-.0039	.0007	-.0054	.0047	.0752
Stddev	.0001	.0010	.0014	.0051	.0092	.0005	.0041
%RSD	1.340	21.94	35.30	780.4	169.4	11.54	5.479
#1	.0094	-.0040	-.0048	-.0030	-.0119	.0051	.0723
#2	.0096	-.0055	-.0029	.0043	.0011	.0043	.0781
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0310	.0011	.0125	.0564	-.0173	.0156	-.1243
Stddev	.0027	.0020	.0001	.0145	.0007	.0011	.0429
%RSD	8.694	174.0	.6432	25.71	3.791	6.888	34.54
#1	-.0291	.0026	.0126	.0666	-.0178	.0164	-.0939
#2	-.0329	-.0003	.0125	.0461	-.0169	.0148	-.1547
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0197	.0177
Stddev	.0004	.0062
%RSD	1.997	34.78
#1	.0200	.0221
#2	.0194	.0134
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: ICSAB Operator: WM
Comment: KA0323406 ICP2-18-A
Run Time: 02/17/04 10:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	489.6	.9589	-.0451	.4376	.4517	-.0834	.8866
Stddev	.5	.0223	.0054	.0016	.0006	.0005	.0038
%RSD	.0968	2.330	12.05	.3702	.1404	.6229	.4342
#1	489.3	.9747	-.0490	.4365	.4522	-.0837	.8838
#2	490.0	.9431	-.0413	.4388	.4513	-.0830	.8893
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	None	QC Pass
Value	500.0	1.000		.5000	.5000		1.000
Range	20.00%	20.00%		20.00%	20.00%		20.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	512.0	.4486	.4364	.4533	187.1	.8614	525.3
Stddev	1.0	.0041	.0010	.0057	.3	.0130	.1
%RSD	.2017	.9106	.2318	1.251	.1419	1.514	.0230
#1	511.3	.4457	.4371	.4573	187.3	.8522	525.3
#2	512.8	.4515	.4357	.4493	186.9	.8706	525.4
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	.5000	.5000	.5000	200.0	1.000	500.0
Range	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4445	-.0055	.8551	-.0080	.0041	.9459	.0100
Stddev	.0045	.0026	.0064	.0076	.0023	.0056	.0036
%RSD	1.013	46.44	.7490	94.74	55.78	.5873	35.59
#1	.4414	-.0073	.8506	-.0133	.0025	.9420	.0075
#2	.4477	-.0037	.8597	-.0026	.0057	.9498	.0125
Check ?	QC Pass	None	QC Pass	None	None	QC Pass	None
Value	.5000		1.000			1.000	
Range	20.00%		20.00%			20.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0310	.4421	.8666	.0395	-.0167	.0132	-.1128
Stddev	.0015	.0020	.0064	.0034	.0020	.0014	.0184
%RSD	4.689	.4508	.7403	8.630	11.77	10.42	16.32
#1	-.0321	.4435	.8621	.0371	-.0153	.0122	-.1258
#2	-.0300	.4407	.8712	.0419	-.0181	.0142	-.0998
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.5000	1.000				
Range		20.00%	20.00%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0138	.0168
Stddev	.0003	.0108
%RSD	2.247	64.18
#1	.0136	.0092
#2	.0140	.0244
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323406 K0648 SEM
Run Time: 02/17/04 10:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0563	-.0014	-.0131	.0005	-.0001	.0025	.0002
#1	.0682	.0103	-.0193	.0001	-.0001	.0027	.0002
#2	.0443	-.0132	-.0070	.0008	-.0001	.0023	.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247 *	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0798	.0008	-.0004	.0216	.0663	-.0006	.0590
#1	.0794	.0013	-.0004	.0170	.0656	-.0027	.0607
#2	.0801	.0003	-.0004	.0261	.0671	.0015	.0574

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	-.0020	-.0003	.0214	.0167	.0012	.0690
#1	.0032	-.0009	.0012	.0174	.0108	.0016	.0711
#2	.0033	-.0030	-.0017	.0254	.0227	.0007	.0668

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0005	.0174	.0129	.1332	.0016	.0072
#1	-.0007	-.0031	.0169	.0159	.1314	.0005	.0029
#2	.0010	.0040	.0179	.0099	.1350	.0027	.0116

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0004	.0120
#1	-.0004	.0090
#2	-.0004	.0150

* See re-run
m 2/17/04

Analysis Report 02/17/04 10:47:11 page 1

Method: 2004A Sample Name: LCSW Operator: WM
Comment: KA0323406 K0648 SEM
Run Time: 02/17/04 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.850	2.497	2.444	5.223	.1120	-.0006	1.253
#1	4.837	2.511	2.444	5.232	.1121	-.0011	1.254
#2	4.862	2.483	2.444	5.213	.1119	-.0001	1.253

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203 *	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.66	.5007	1.234	.6162	2.485	2.457	12.14
#1	12.72	.4993	1.236	.6137	2.479	2.466	12.14
#2	12.60	.5021	1.233	.6187	2.490	2.449	12.14

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.248	-.0025	1.236	12.78	2.418	.6069	12.79
#1	1.259	-.0009	1.236	12.92	2.420	.6085	12.91
#2	1.237	-.0042	1.236	12.65	2.417	.6054	12.66

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	1.227	1.232	.0724	.0005	.0016	2.554
#1	.0075	1.226	1.231	.0630	.0024	.0018	2.556
#2	-.0057	1.228	1.233	.0817	-.0014	.0015	2.552

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	.0071
#1	.0005	.0101
#2	.0002	.0041

* Ignore cross out

[illegible]
2/17/04

LCSW = 0.05 mls of CICU4 · MET 1-25-J
CICU-2 MET 1-25-K
CICU-3 MET 1-25-O

diluted to 10 mls

[illegible]
2/17/04

Method: 2004A Sample Name: PBW Operator: WM
Comment: KA0323406 RE-RUN Cu K0648 SEM
Run Time: 02/17/04 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0506	.0044	-.0075	.0001	.0000	.0017	.0006
#1	.0542	-.0069	-.0100	.0003	.0000	.0012	.0002
#2	.0470	.0157	-.0049	-.0001	.0001	.0023	.0009

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0779	.0027	.0003	.0169	.0672	.0039	.0559
#1	.0790	.0024	.0001	.0198	.0675	.0075	.0557
#2	.0768	.0029	.0004	.0140	.0668	.0003	.0561

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	-.0030	.0007	.0306	.0200	.0028	.0670
#1	.0034	-.0053	.0010	.0362	.0248	.0056	.0728
#2	.0032	-.0006	.0003	.0249	.0151	-.0001	.0612

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	-.0019	.0177	.0177	.1368	.0006	.0159
#1	-.0002	-.0010	.0169	.0099	.1341	-.0014	.0145
#2	-.0031	-.0028	.0185	.0255	.1395	.0027	.0173

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0006	.0141
#1	.0008	.0142
#2	.0004	.0139

Method: 2004A Sample Name: K0648-01 Operator: WM
Comment: KA0323406 SEM
Run Time: 02/17/04 10:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	174.8	.0708	-.0226	2.422	.0271	1.454	2.426
#1	174.7	.0781	-.0287	2.416	.0270	1.454	2.486
#2	174.9	.0635	-.0164	2.429	.0271	1.454	2.366

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1505.	.1515	.1167	-.0037	148.9	5.865	275.6
#1	1501.	.1502	.1165	-.0065	149.1	5.851	274.1
#2	1510.	.1527	.1169	-.0009	148.6	5.879	277.1

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.24	-.0823	.1596	153.2	.0730	.0024	>162.0
#1	12.20	-.0800	.1584	153.1	.0768	.0012	>162.0
#2	12.28	-.0846	.1608	153.3	.0692	.0036	>162.0

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0229	.7904	>180.0	15.64	108.7	.3026	-.1510
#1	-.0289	.7856	>180.0	15.60	108.6	.3032	-.1618
#2	-.0169	.7951	>180.0	15.68	108.9	.3019	-.1401

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.2342	4.861
#1	.2323	4.843
#2	.2360	4.879

Analysis Report 02/17/04 11:00:44 page 1

Method: 2004A Sample Name: K0648-02 Operator: WM
Comment: KA0323406 SEM
Run Time: 02/17/04 10:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	103.8	.0621	.0051	.7411	.0148	1.225	2.526
#1	104.6	.0567	-.0201	.7428	.0147	1.233	2.530
#2	103.0	.0675	.0304	.7394	.0150	1.218	2.523

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>1800.	.2228	.7814	.7619	95.92	1.596	176.0
#1	>1800.	.2235	.7799	.7482	96.21	1.589	177.6
#2	>1800.	.2220	.7828	.7757	95.62	1.604	174.4

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm**	ppm
Avg	^ *****	-.1424	1.162	93.71	.1328	.0453	>162.0
#1	^ -----	-.1418	1.160	90.21	.1258	.0453	>162.0
#2	^ -----	-.1430	1.163	97.21	.1399	.0453	>162.0

Elem	Sn1899	V_3102	Zn2062 *	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0849	.4385	>180.0	10.88	k 99.04	.3147	k -.0998
#1	-.0925	.4308	>180.0	10.92	k 99.23	.3168	k -.1049
#2	-.0773	.4461	>180.0	10.84	k 98.85	.3127	k -.0948

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1914	4.996
#1	.1831	5.011
#2	.1997	4.982

*see dilution
2/17/04

** Ag corrected for MnIEC =
0.045 - (0.000125 + 395.6) = -0.0041

Method: 2004A Sample Name: K0648-02D Operator: WM
Comment: KA0323406 SEM
Run Time: 02/17/04 11:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	129.4	.1029	-.0025	.8187	.0183	1.537	4.394
#1	128.4	.1121	.0096	.8165	.0184	1.526	4.402
#2	130.4	.0937	-.0145	.8210	.0183	1.548	4.387

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>1800.	.3148	1.214	1.071	120.4	1.896	219.9
#1	>1800.	.3143	1.210	1.080	120.0	1.897	218.1
#2	>1800.	.3154	1.218	1.063	120.7	1.895	221.6

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm**	ppm
Avg	^ *****	-.1947	1.529	110.3	.1859	.0804	>162.0
#1	^ -----	-.1887	1.524	111.7	.1724	.0850	>162.0
#2	^ -----	-.2007	1.533	109.0	.1994	.0757	>162.0

Elem	Sn1899	V_3102	Zn2062 *	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.1277	.5232	>180.0	13.89	k 106.4	.2760	k -.1331
#1	-.1357	.5272	>180.0	13.80	k 105.4	.2713	k -.1324
#2	-.1196	.5192	>180.0	13.97	k 107.4	.2806	k -.1338

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.2417	6.573
#1	.2443	6.577
#2	.2391	6.569

* Ag corrected = -0.0098

Analysis Report 02/17/04 11:08:09 page 1

Method: 2004A Sample Name: K0648-02S Operator: WM
Comment: KA0323406 SEM
Run Time: 02/17/04 11:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265 **
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	112.6	2.468	2.427	5.448	.1148	1.244	3.671
#1	113.4	2.490	2.443	5.464	.1153	1.253	3.678
#2	111.8	2.446	2.410	5.431	.1142	1.236	3.663

Elem	Ca3181	Cr2677	Co2286	Cu3247 *	Fe2714	Pb2203 *	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>1800.	.6643	1.850	1.379	99.70	3.731	192.2
#1	>1800.	.6676	1.851	1.404	100.5	3.756	193.0
#2	>1800.	.6611	1.849	1.354	98.91	3.707	191.4

Elem	Mn2576	Mo2020	Ni2316 *	K_7664	Se1960	Ag3280 *	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	-.1437	2.232	105.7	2.507	.6567	>162.0
#1	^ -----	-.1473	2.240	108.2	2.520	*** .6605	>162.0
#2	^ -----	-.1402	2.224	103.1	2.494	.6528	>162.0

Elem	Sn1899	V_3102	Zn2062 **	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0819	1.556	>180.0	11.15	k 99.30	.2955	k 2.060
#1	-.0779	1.569	>180.0	11.21	k 99.96	.2974	k 2.064
#2	-.0858	1.543	>180.0	11.08	k 98.64	.2936	k 2.056

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1916	5.030
#1	.1971	5.016
#2	.1861	5.044

** see dilution
[illegible]
2/17/04

Spike * = 0.05 ml of CICU-1 METI-25J
CICU-2 METI-25 *
CICU-3 METI-25-0
dilated to 10 mls w/ 9.85 mls of sample

[illegible]
2/17/04

*** Ag corrected = 0.072

Method: 2004A Sample Name: CCVA2 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 11:10 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4985	.4881	.4525	.4883	.4834	.4942	.5031
Stddev	.0011	.0031	.0012	.0024	.0025	.0041	.0002
%RSD	.2151	.6288	.2552	.4975	.5222	.8301	.0344
#1	.4993	.4859	.4533	.4865	.4816	.4913	.5033
#2	.4977	.4903	.4517	.4900	.4852	.4972	.5030
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4855	.5046	.4997	.5054	.4979	.4805	2.486
Stddev	.0100	.0010	.0019	.0038	.0027	.0067	.012
%RSD	2.066	.2040	.3865	.7602	.5495	1.404	.4956
#1	.4784	.5039	.4984	.5081	.4960	.4758	2.477
#2	.4926	.5054	.5011	.5027	.4998	.4853	2.495
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4840	.4990	.4992	5.193	.4896	.4997	.5633
Stddev	.0010	.0011	.0016	.035	.0053	.0023	.0040
%RSD	.1997	.2232	.3136	.6844	1.081	.4659	.7121
#1	.4833	.4998	.4981	5.168	.4858	.5013	.5605
#2	.4847	.4982	.5003	5.218	.4933	.4980	.5661
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4560	.4854	.5054	.0061	.2615	.4920	.4620
Stddev	.0061	.0020	.0017	.0038	.0040	.0089	.0163
%RSD	1.328	.4060	.3340	62.85	1.523	1.810	3.532
#1	.4603	.4868	.5066	.0034	.2643	.4857	.4505
#2	.4517	.4840	.5042	.0088	.2587	.4983	.4736
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0002	.0130
Stddev	.0001	.0089
%RSD	61.36	68.10
#1	.0003	.0068
#2	.0001	.0193
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB2 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 11:16 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.011	.0242	-.0053	2.484	.0014	-.0104	.0031
Stddev	.036	.0172	.0025	.004	.0000	.0002	.0005
%RSD	.7128	71.14	48.13	.1633	2.074	1.727	14.59
#1	4.986	.0364	-.0035	2.481	.0014	-.0102	.0035
#2	5.036	.0120	-.0071	2.487	.0014	-.0105	.0028
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.44	.0055	.0006	-.0021	24.82	-.0074	25.22
Stddev	.33	.0004	.0006	.0018	.12	.0017	.10
%RSD	1.308	7.501	94.53	89.36	.4814	22.95	.3823
#1	25.21	.0052	.0002	-.0008	24.73	-.0086	25.29
#2	25.68	.0058	.0011	-.0034	24.90	-.0062	25.15
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0002	.0001	10.44	.0238	.0068	10.49
Stddev	.0000	.0005	.0002	.15	.0061	.0035	.14
%RSD	1.662	188.7	136.7	1.437	25.72	51.76	1.297
#1	.0029	.0001	.0000	10.54	.0281	.0043	10.58
#2	.0029	-.0006	.0002	10.33	.0194	.0093	10.39
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	.0024	.0080	2.579	.0059	.0024	-.0036
Stddev	.0031	.0005	.0001	.012	.0008	.0011	.0092
%RSD	44.17	20.44	1.787	.4789	13.98	45.25	254.3
#1	.0048	.0021	.0079	2.570	.0053	.0016	-.0101
#2	.0093	.0028	.0081	2.588	.0065	.0031	.0029
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5139	2.482
Stddev	.0065	.016
%RSD	1.256	.6280
#1	.5185	2.471
#2	.5094	2.493
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB2 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 11:20 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0190	.0013	.0031	-.0004	.0000	.0010	.0003
Stddev	.0080	.0051	.0026	.0002	.0000	.0007	.0004
%RSD	41.98	404.0	82.52	55.23	27.69	72.60	124.8
#1	.0247	-.0023	.0049	-.0002	.0000	.0005	.0000
#2	.0134	.0049	.0013	-.0006	.0001	.0015	.0006
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0063	.0007	.0001	-.0010	.0015	H .0266
Stddev	.0081	.0755	.0008	.0009	.0095	.0005	.0153
%RSD	1098.	1204.	110.4	1407.	970.7	32.31	57.60
#1	.0065	-.0597	.0013	.0007	.0057	.0019	.0374
#2	-.0050	.0471	.0002	-.0005	-.0077	.0012	.0158
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	H .0210	.0016	.0002	-.0029	-.0006	.0179
Stddev	.0077	.0244	.0041	.0000	.0002	.0002	.0056
%RSD	94.40	116.2	247.6	13.98	8.074	27.58	31.31
#1	.0027	.0383	-.0012	.0003	-.0027	-.0007	.0140
#2	.0135	.0038	.0045	.0002	-.0030	-.0005	.0219
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205	.0039	.0244	-.0016	-.0019	.0052	.0048
Stddev	.0061	.0016	.0012	.0029	.0010	.0009	.0064
%RSD	29.78	41.47	4.929	179.4	52.75	16.54	132.8
#1	.0162	.0051	.0235	-.0037	-.0026	.0058	.0093
#2	.0248	.0028	.0252	.0004	-.0012	.0046	.0003
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0046	-.0001	-.0029	.0001	.0083
Stddev	.0016	.0009	.0020	.0003	.0037
%RSD	33.66	810.9	70.64	204.3	44.02
#1	.0058	.0005	-.0014	.0003	.0109
#2	.0035	-.0008	-.0043	-.0001	.0057
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: CCVA3 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 11:23 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5161	.5020	.4998	.4888	.4995	.4964	.4975
Stddev	.0077	.0015	.0195	.0040	.0004	.0017	.0040
%RSD	1.483	.2926	3.898	.8218	.0807	.3491	.8011
#1	.5107	.5031	.4860	.4860	.4998	.4952	.4947
#2	.5216	.5010	.5135	.4917	.4992	.4977	.5003
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5004	.4982	.4969	.4941	.5005	.5135	2.470
Stddev	.0073	.0025	.0029	.0030	.0017	.0166	.011
%RSD	1.465	.5018	.5882	.6005	.3383	3.226	.4268
#1	.4952	.4964	.4949	.4962	.4993	.5018	2.463
#2	.5056	.5000	.4990	.4920	.5017	.5252	2.478
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4967	.4961	.4987	5.001	.4871	.4909	.5321
Stddev	.0021	.0064	.0026	.007	.0122	.0060	.0063
%RSD	.4189	1.286	.5214	.1386	2.515	1.228	1.188
#1	.4952	.4916	.4968	5.006	.4784	.4952	.5366
#2	.4982	.5007	.5005	4.996	.4957	.4867	.5276
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5215	.5035	.4942	.0097	.2400	.4969	.4974
Stddev	.0047	.0054	.0057	.0091	.0006	.0016	.0053
%RSD	.9058	1.067	1.152	93.59	.2500	.3264	1.059
#1	.5181	.4997	.4902	.0033	.2404	.4958	.4937
#2	.5248	.5073	.4982	.0161	.2396	.4981	.5012
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	.0078
Stddev	.0001	.0018
%RSD	242.6	22.44
#1	.0001	.0090
#2	.0000	.0066
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB3 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 11:26 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.985	.0189	-.0146	2.503	.0014	-.0097	.0030
Stddev	.007	.0038	.0117	.001	.0001	.0002	.0001
%RSD	.1358	20.32	79.95	.0185	5.734	1.765	1.966
#1	4.980	.0162	-.0229	2.503	.0015	-.0096	.0031
#2	4.990	.0216	-.0064	2.504	.0013	-.0098	.0030
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.00	.0037	.0007	-.0083	25.26	-.0182	24.89
Stddev	.11	.0002	.0001	.0015	.10	.0018	.04
%RSD	.4208	5.964	19.64	18.33	.4092	9.771	.1726
#1	24.93	.0035	.0006	-.0093	25.19	-.0170	24.86
#2	25.08	.0038	.0008	-.0072	25.33	-.0195	24.92
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0018	.0008	9.841	.0160	.0073	9.746
Stddev	.0001	.0029	.0001	.011	.0086	.0015	.021
%RSD	1.900	160.7	12.18	.1084	53.68	20.50	.2204
#1	.0029	.0039	.0007	9.849	.0099	.0083	9.761
#2	.0029	-.0002	.0009	9.834	.0221	.0062	9.730
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	-.0003	.0063	2.521	.0069	.0032	-.0196
Stddev	.0093	.0014	.0001	.027	.0012	.0009	.0011
%RSD	115.7	499.1	.9560	1.064	17.09	29.44	5.660
#1	.0015	.0007	.0063	2.502	.0077	.0038	-.0188
#2	.0146	-.0012	.0062	2.540	.0061	.0025	-.0203
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.4874	2.532
Stddev	.0009	.007
%RSD	.1863	.2935
#1	.4881	2.527
#2	.4868	2.537
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB3 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 11:29 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0225	.0045	-.0105	.0002	.0000	.0002	.0006
Stddev	.0010	.0151	.0048	.0002	.0001	.0002	.0003
%RSD	4.296	332.7	45.87	96.22	268.3	94.37	47.21
#1	.0218	-.0061	-.0071	.0004	.0001	.0004	.0009
#2	.0232	.0152	-.0140	.0001	.0000	.0001	.0004
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	L -.0833	.0012	.0004	-.0008	.0023	H .0210
Stddev	.0057	.0261	.0007	.0003	.0000	.0023	.0128
%RSD	106.0	31.30	60.13	77.33	.5562	101.1	60.84
#1	.0013	-.0649	.0017	.0006	-.0008	.0039	.0120
#2	.0093	-.1017	.0007	.0002	-.0008	.0006	.0301
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0183	.0021	.0002	-.0026	-.0008	.0072
Stddev	.0088	.0035	.0029	.0002	.0012	.0011	.0084
%RSD	570.4	18.86	141.3	138.1	45.61	133.5	116.7
#1	-.0047	.0159	.0000	.0003	-.0034	.0000	.0013
#2	.0078	.0208	.0041	.0000	-.0017	-.0016	.0132
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	.0012	.0131	-.0021	-.0033	.0036	.0018
Stddev	.0226	.0000	.0000	.0009	.0029	.0011	.0029
%RSD	105.1	.5439	.2227	43.59	88.10	30.35	164.0
#1	.0375	.0012	.0132	-.0014	-.0053	.0044	-.0003
#2	.0055	.0012	.0131	-.0027	-.0012	.0029	.0038
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0010	.0031	.0000	.0069
Stddev	.0008	.0019	.0044	.0005	.0004
%RSD	48.46	189.7	141.1	2101.	5.522
#1	.0011	-.0003	.0063	-.0003	.0071
#2	.0022	.0023	.0000	.0003	.0066
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Analysis Report 02/17/04 11:33:54 page 1

Method: 2004A Sample Name: K0648-04 Operator: WM
Comment: KA0323406 SEM
Run Time: 02/17/04 11:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.68	.0506	-.0158	.9490	.0057	.6332	10.90
#1	57.34	.0583	-.0232	.9522	.0057	.6286	10.90
#2	58.01	.0428	-.0084	.9458	.0058	.6378	10.90

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	526.1	.1289	1.040	1.060	36.58	1.523	80.75
#1	525.5	.1291	1.039	1.054	36.57	1.519	80.28
#2	526.7	.1287	1.042	1.065	36.58	1.527	81.22

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm **	ppm
Avg	^ *****	-.1260	.5308	42.44	.0841	.0291	160.7
#1	^ -----	-.1301	.5277	42.17	.0885	.0309	157.9
#2	>45.00	-.1218	.5340	42.71	.0797	.0274	>162.0

Elem	Sn1899	V_3102	Zn2062 *	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0245	.2344	>180.0	4.770	k 96.00	.5552	k -.0270
#1	-.0224	.2369	>180.0	4.733	k 95.06	.5649	k -.0478
#2	-.0266	.2320	>180.0	4.807	96.94	.5455	-.0063

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0865	2.043
#1	.0858	2.050
#2	.0873	2.037

* sogilution
2/17/04

** Ag corrected =
0.0018

Analysis Report 02/17/04 11:40:45 page 1

Method: 2004A Sample Name: K0648-05 Operator: WM
Comment: KA0323406 SEM
Run Time: 02/17/04 11:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.47	.0712	.0056	1.772	.0069	.7764	12.59
#1	60.58	.0969	.0164	1.774	.0069	.7785	12.63
#2	60.35	.0454	-.0052	1.770	.0070	.7742	12.55

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	856.5	.1745	1.630	1.917	43.75	4.078	116.0
#1	857.5	.1730	1.630	1.911	43.81	4.111	115.7
#2	855.4	.1759	1.629	1.924	43.69	4.045	116.3

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>45.00	-.1319	.8297	55.15	.0997	.0399 **	>162.0
#1	>45.00	-.1373	.8303	55.06	.1074	.0420	>162.0
#2	>45.00	-.1265	.8290	55.24	.0919	.0378	>162.0

Elem	Sn1899	V_3102	Zn2062 *	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	.3077	>180.0	7.224	70.44	.1030	-.1193
#1	-.0105	.3088	>180.0	7.225	70.61	.1005	-.1185
#2	-.0050	.3066	>180.0	7.223	70.26	.1055	-.1200

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1093	3.298
#1	.1091	3.289
#2	.1095	3.306

* See dilution
2/17/04

** Ag corrected = 0.0021

Method: 2004A Sample Name: K0648-05L Operator: WM
Comment: KA0323406 1/5 DILUTION SEM
Run Time: 02/17/04 11:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.73	.0401	-.0054	.3736	.0014	.1636	2.800
#1	12.65	.0332	.0021	.3720	.0014	.1622	2.808
#2	12.81	.0470	-.0128	.3752	.0013	.1650	2.792

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	173.5	.0437	.3636	.4018	9.782	.8910	25.44
#1	172.6	.0427	.3639	.3983	9.727	.8875	25.39
#2	174.4	.0447	.3633	.4054	9.837	.8944	25.49

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>45.00	-.0518	.1853	11.81	.0442	.0137	59.36
#1	>45.00	-.0517	.1857	11.83	.0277	.0107	59.26
#2	>45.00	-.0520	.1850	11.79	.0608	.0167	59.45

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0033	.0668	^ *****	1.526	14.93	.0190	-.0144
#1	-.0017	.0641	139.7	1.503	14.87	.0211	-.0003
#2	-.0049	.0695	^ -----	1.550	15.00	.0169	-.0286

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0235	.7338
#1	.0236	.7292
#2	.0233	.7383

Method: 2004A Sample Name: K0648-01 Operator: WM
Comment: KA0323406 1/100 DILUTION SEM
Run Time: 02/17/04 11:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.766	.0045	-.0029	.0258	.0003	.0150	.0278
#1	1.714	.0040	-.0098	.0249	.0003	.0138	.0281
#2	1.818	.0050	.0039	.0266	.0003	.0162	.0275

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.03	.0015	.0017	-.0050	1.663	.0837	2.680
#1	14.75	.0021	.0010	-.0024	1.628	.0812	2.634
#2	15.32	.0009	.0023	-.0076	1.697	.0862	2.727

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1388	-.0028	-.0001	1.779	.0232	.0025	5.890
#1	.1358	-.0032	-.0003	1.755	.0265	.0011	5.843
#2	.1418	-.0024	.0001	1.802	.0199	.0040	5.937

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0097	4.124	.1593	.9910	.0073	-.0125
#1	.0105	.0102	4.040	.1564	.9709	.0070	-.0109
#2	-.0050	.0092	4.208	.1622	1.011	.0076	-.0140

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0027	.0597
#1	.0022	.0564
#2	.0032	.0630

Method: 2004A Sample Name: K0648-02 Operator: WM
Comment: KA0323406 1/100 DILUTION SEM
Run Time: 02/17/04 11:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.101	.0029	-.0138	.0086	.0001	.0135	.0293
#1	1.087	.0112	-.0150	.0085	.0001	.0133	.0285
#2	1.116	-.0053	-.0127	.0086	.0001	.0137	.0301

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.25	.0062	.0097	.0074	1.090	.0234	1.607
#1	18.99	.0068	.0094	.0057	1.079	.0319	1.576
#2	19.51	.0056	.0100	.0091	1.101	.0150	1.638

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.956	-.0063	.0151	1.082	.0177	.0064	4.689
#1	3.904	-.0072	.0149	1.097	.0276	.0087	4.644
#2	4.008	-.0055	.0153	1.067	.0077	.0041	4.733

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.0038	8.476	.1818	.9423	.0028	.0023
#1	.0018	.0037	8.398	.1797	.9327	.0026	.0047
#2	.0047	.0039	8.555	.1838	.9520	.0030	.0000

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0024	.0632
#1	.0027	.0657
#2	.0021	.0607

Method: 2004A Sample Name: K0648-02D Operator: WM
Comment: KA0323406 1/100 DILUTION SEM
Run Time: 02/17/04 12:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.385	.0047	-.0044	.0094	.0002	.0162	.0553
#1	1.384	.0083	-.0047	.0095	.0002	.0166	.0558
#2	1.386	.0010	-.0041	.0094	.0002	.0158	.0547

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.14	.0069	.0155	.0126	1.442	.0308	1.952
#1	25.04	.0071	.0150	.0154	1.450	.0393	1.949
#2	25.23	.0066	.0160	.0098	1.433	.0224	1.955

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.219	-.0100	.0200	1.260	.0326	.0022	5.174
#1	7.251	-.0106	.0206	1.265	.0287	.0053	5.205
#2	7.187	-.0093	.0195	1.256	.0364	-.0008	5.143

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0062	15.91	.2094	1.053	.0039	-.0128
#1	-.0075	.0078	15.93	.2164	1.062	.0046	-.0143
#2	.0066	.0046	15.89	.2025	1.044	.0032	-.0113

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0029	.0871
#1	.0028	.0836
#2	.0030	.0906

Analysis Report 02/17/04 12:07:30 page 1

Method: 2004A Sample Name: K0648-02S Operator: WM
Comment: KA0323406 1/100 DILUTION SEM
Run Time: 02/17/04 12:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.62	4.980	5.240	10.61	.2287	.0102	2.634
#1	10.55	4.967	5.252	10.59	.2279	.0095	2.633
#2	10.68	4.992	5.228	10.62	.2295	.0110	2.636

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.69	.9847	2.442	1.237	5.967	4.916	26.10
#1	43.59	.9813	2.437	1.235	5.931	4.929	26.11
#2	43.80	.9880	2.447	1.240	6.003	4.902	26.09

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.463	-.0075	2.440	23.97	4.879	1.207	27.38
#1	6.453	-.0082	2.433	24.10	4.878	1.204	27.57
#2	6.473	-.0068	2.448	23.85	4.879	1.210	27.20

Elem	Sn1899	V_3102	Zn2062 *	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	2.512	10.75	.1350	.9215	.0069	5.431
#1	.0008	2.511	10.77	.1254	.9169	.0046	5.391
#2	-.0043	2.513	10.73	.1447	.9261	.0092	5.472

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0025	.0674
#1	.0026	.0666
#2	.0024	.0682

* Spike = 0.1 ml of METI-25J CICU-1, METI-25K CICU-2, METI-25-O CICU-3 diluted to 10 mls w/ 0.1 ml of sample & 9.6 mls of Blank

2/17/04

Method: 2004A Sample Name: K0648-04 Operator: WM
Comment: KA0323406 1/100 DILUTION SEM
Run Time: 02/17/04 12:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5705	.0080	.0003	.0100	.0001	.0055	.1122
#1	.5586	.0085	-.0042	.0099	.0001	.0049	.1115
#2	.5825	.0076	.0049	.0100	.0001	.0061	.1129

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.120	.0054	.0107	.0077	.3773	.0230	.6259
#1	5.044	.0055	.0106	.0106	.3751	.0202	.6181
#2	5.196	.0054	.0107	.0048	.3795	.0258	.6338

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.181	-.0059	.0052	.4486	.0143	.0039	1.830
#1	2.130	-.0050	.0049	.4292	.0099	.0053	1.810
#2	2.233	-.0068	.0055	.4681	.0188	.0026	1.850

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0021	6.859	.1254	.8192	.0036	.0001
#1	-.0024	.0010	6.794	.1330	.8159	.0030	.0024
#2	.0031	.0031	6.924	.1178	.8226	.0043	-.0023

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0006	.0301
#1	.0009	.0256
#2	.0003	.0346

Method: 2004A Sample Name: K0648-05 Operator: WM
Comment: KA0323406 1/100 DILUTION SEM
Run Time: 02/17/04 12:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6520	.0183	-.0042	.0183	.0000	.0086	.1368
#1	.6639	.0307	-.0133	.0180	.0000	.0073	.1362
#2	.6400	.0058	.0049	.0185	.0000	.0099	.1375

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.705	.0043	.0197	.0217	.4929	.0540	.9892
#1	8.677	.0049	.0189	.0255	.4906	.0490	.9791
#2	8.732	.0036	.0205	.0179	.4953	.0590	.9993

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.022	-.0044	.0092	.5919	.0099	.0047	2.908
#1	3.013	-.0047	.0091	.6097	-.0033	.0049	2.919
#2	3.032	-.0042	.0093	.5740	.0232	.0045	2.897

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0034	8.216	.1476	.6868	.0038	-.0114
#1	-.0008	.0037	8.194	.1371	.6900	.0032	-.0082
#2	.0069	.0031	8.239	.1581	.6836	.0043	-.0145

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0009	.0404
#1	.0012	.0421
#2	.0006	.0387

Method: 2004A Sample Name: K0648-05L Operator: WM
Comment: KA0323406 1/5 X 1/100 DILUTION SEM
Run Time: 02/17/04 12:14 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1645	.0137	-.0094	.0036	.0000	.0011	.0288
#1	.1666	.0095	-.0122	.0041	.0000	.0017	.0288
#2	.1624	.0179	-.0065	.0032	.0001	.0005	.0287

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.796	.0024	.0048	.0043	.1066	.0184	.1914
#1	1.792	.0013	.0039	.0038	.1072	.0184	.1931
#2	1.801	.0036	.0056	.0048	.1061	.0185	.1897

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6130	-.0034	.0011	.1239	.0199	.0013	.6147
#1	.6077	-.0055	.0015	.1139	.0099	.0022	.6182
#2	.6183	-.0012	.0007	.1338	.0298	.0005	.6112

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0090	-.0027	1.561	.0187	.1452	-.0002	.0034
#1	-.0092	-.0022	1.553	.0202	.1465	.0008	.0112
#2	-.0088	-.0031	1.569	.0173	.1439	-.0012	-.0045

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	.0209
#1	.0003	.0137
#2	.0006	.0280

Method: 2004A Sample Name: CCVA4 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 12:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5153	.5042	.5042	.4926	.4975	.5005	.5024
Stddev	.0143	.0066	.0001	.0008	.0014	.0013	.0022
%RSD	2.783	1.313	.0230	.1542	.2774	.2644	.4359
#1	.5052	.4995	.5043	.4921	.4965	.5014	.5009
#2	.5255	.5088	.5041	.4932	.4984	.4996	.5040
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4948	.5057	.5074	.5073	.5003	.5097	2.530
Stddev	.0040	.0032	.0018	.0038	.0010	.0163	.013
%RSD	.8054	.6290	.3451	.7456	.1972	3.196	.5143
#1	.4976	.5035	.5061	.5100	.4996	.4981	2.521
#2	.4920	.5080	.5086	.5047	.5010	.5212	2.540
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5165	.5005	.5028	4.954	.5096	.4932	.5290
Stddev	.0096	.0008	.0048	.063	.0050	.0018	.0024
%RSD	1.861	.1541	.9532	1.263	.9765	.3672	.4617
#1	.5233	.4999	.4994	4.909	.5061	.4919	.5273
#2	.5097	.5010	.5061	4.998	.5131	.4944	.5307
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5166	.4989	.4968	.0059	.2410	.5064	.5200
Stddev	.0031	.0048	.0026	.0030	.0059	.0002	.0050
%RSD	.5994	.9524	.5155	50.31	2.461	.0317	.9524
#1	.5144	.4955	.4949	.0080	.2452	.5062	.5235
#2	.5187	.5022	.4986	.0038	.2368	.5065	.5165
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0001	.0090
Stddev	.0005	.0008
%RSD	337.6	8.773
#1	.0005	.0096
#2	-.0002	.0085
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB4 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 12:19 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.990	.0083	.0013	2.517	.0014	-.0147	.0028
Stddev	.017	.0111	.0077	.011	.0000	.0001	.0007
%RSD	.3357	134.9	599.3	.4456	3.333	.7650	23.49
#1	4.978	.0004	-.0041	2.509	.0014	-.0148	.0023
#2	5.001	.0161	.0067	2.525	.0014	-.0146	.0033
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.14	.0041	-.0003	.0013	24.91	-.0176	25.19
Stddev	.30	.0010	.0003	.0005	.12	.0018	.00
%RSD	1.189	23.74	88.76	35.32	.5009	10.06	.0136
#1	24.93	.0034	-.0001	.0010	24.82	-.0164	25.19
#2	25.35	.0047	-.0006	.0016	25.00	-.0189	25.19
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0012	.0010	9.865	.0314	.0052	10.03
Stddev	.0002	.0026	.0002	.009	.0226	.0034	.02
%RSD	5.387	207.4	22.62	.0932	71.97	65.16	.2317
#1	.0028	-.0006	.0012	9.872	.0154	.0076	10.04
#2	.0030	.0030	.0009	9.859	.0474	.0028	10.01
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0023	.0048	2.572	.0053	.0051	-.0258
Stddev	.0016	.0005	.0003	.020	.0009	.0017	.0100
%RSD	30.91	22.53	5.468	.7708	17.84	33.89	38.56
#1	.0040	.0019	.0046	2.558	.0046	.0038	-.0188
#2	.0063	.0026	.0050	2.586	.0060	.0063	-.0328
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.4970	2.462
Stddev	.0013	.007
%RSD	.2711	.2761
#1	.4980	2.467
#2	.4961	2.458
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB4 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 12:22 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0092	-.0091	.0001	-.0001	.0001	.0005
Stddev	.0308	.0058	.0044	.0001	.0000	.0024	.0002
%RSD	313.4	63.45	48.61	108.7	13.48	1825.	47.20
#1	.0316	.0133	-.0060	.0000	-.0001	-.0015	.0006
#2	-.0120	.0051	-.0122	.0001	-.0001	.0018	.0003
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.0309	.0020	.0001	.0035	.0010	.0114
Stddev	.0022	.0742	.0008	.0000	.0000	.0005	.0040
%RSD	59.42	240.4	39.27	33.98	.1956	50.84	35.17
#1	.0021	-.0834	.0025	.0001	.0035	.0014	.0142
#2	.0051	.0216	.0014	.0001	.0035	.0007	.0085
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0062	.0077	.0000	-.0008	-.0001	.0329
Stddev	.0075	.0138	.0015	.0004	.0017	.0014	.0071
%RSD	606.3	224.4	19.01	1009.	211.8	1445.	21.60
#1	-.0041	-.0160	.0066	.0003	-.0021	.0009	.0279
#2	.0066	.0036	.0087	-.0002	.0004	-.0011	.0379
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0166	.0045	.0065	.0011	-.0018	.0023	.0076
Stddev	.0109	.0024	.0006	.0023	.0019	.0001	.0004
%RSD	66.00	53.94	9.596	201.6	104.4	4.181	5.248
#1	.0088	.0028	.0061	-.0005	-.0005	.0023	.0073
#2	.0243	.0062	.0070	.0027	-.0032	.0024	.0079
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0004	-.0023	-.0005	.0139
Stddev	.0027	.0027	.0099	.0002	.0049
%RSD	165.9	605.8	424.8	32.59	34.98
#1	-.0003	.0023	-.0094	-.0004	.0173
#2	.0035	-.0014	.0047	-.0006	.0104
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200

Method: 2004A Sample Name: Mn 500 ppm Operator: WM
Comment: KA0323406 IEC CORRECTION FOR Ag
Run Time: 02/17/04 13:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .1220	-.0019	-.0977	-.0008	-.0003	k -.0159	k .0435
#1	k .1431	-.0011	-.1119	-.0011	-.0002	k -.0174	k .0412
#2	k .1008	-.0027	-.0834	-.0005	-.0004	k -.0143	k .0458

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0282	.1999	.0008	.0080	k -.1389	k .0447	k .0021
#1	.0269	.2021	.0006	.0096	k -.1380	k .0434	k .0017
#2	.0296	.1977	.0010	.0064	k -.1398	k .0459	k .0025

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	-.0457	k .0124	k .0131	k .1610	.0672	.0497
#1	^ -----	-.0482	k .0123	k .0179	k .1600	.0681	.0528
#2	^ -----	-.0432	k .0126	k .0083	k .1621	.0662	.0465

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.1135	.0124	.0247	-.0462	k -.6845	.0002	k -.0016
#1	-.1117	.0131	.0245	-.0488	k -.6778	-.0016	k -.0125
#2	-.1152	.0116	.0249	-.0435	k -.6913	.0021	k .0094

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	-.0003	k -.0027
#1	-.0003	k -.0074
#2	-.0004	k .0019

Mn IEC on ~~Ag~~ Ag = 0.0672/5363 = 0.000125 ppm/ppm

Method: 2004A Sample Name: Mn 500 ppm Operator: WM
Comment: KA0323406 1/100 DILUTION TO CHECK CONCENTRATION
Run Time: 02/17/04 14:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	-.0043	-.0108	-.0007	-.0001	-.0019	.0048
#1	.0148	.0003	-.0231	-.0009	.0000	-.0021	.0052
#2	.0247	-.0089	.0014	-.0005	-.0001	-.0018	.0045

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074	.0046	-.0009	-.0002	.0021	-.0016	.0104
#1	.0067	.0046	-.0012	-.0018	.0026	-.0103	.0141
#2	.0082	.0046	-.0007	.0014	.0016	.0072	.0066

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.363	-.0007	.0004	.0084	.0132	.0022	.0085
#1	5.360	-.0011	.0013	.0022	.0188	.0037	.0065
#2	5.367	-.0002	-.0005	.0146	.0077	.0007	.0105

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0012	.0024	.0030	-.0016	.0003	.0006
#1	-.0047	-.0005	.0026	-.0009	-.0011	.0021	.0162
#2	.0056	-.0019	.0022	.0068	-.0021	-.0014	-.0151

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0000	.0148
#1	.0000	.0214
#2	.0000	.0082

Method: 2004A Sample Name: CCVA5 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 14:06 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4820	.5036	.4969	.4934	.4995	.5014	.5035
Stddev	.0068	.0085	.0082	.0029	.0001	.0011	.0039
%RSD	1.412	1.689	1.654	.5887	.0237	.2288	.7732
#1	.4772	.5096	.5027	.4913	.4994	.5022	.5008
#2	.4868	.4976	.4911	.4954	.4996	.5005	.5063
Check ?	None	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value		.5000	.5000		.5000	.5000	.5000
Range		10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5014	.5057	.5080	.5096	.5041	.5248	2.519
Stddev	.0031	.0010	.0025	.0080	.0005	.0021	.003
%RSD	.6274	.2013	.4916	1.567	.0928	.3935	.1105
#1	.4992	.5064	.5062	.5152	.5038	.5233	2.521
#2	.5036	.5049	.5098	.5039	.5045	.5263	2.517
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5159	.5004	.5054	4.952	.5100	.4943	.5198
Stddev	.0164	.0049	.0020	.020	.0009	.0034	.0004
%RSD	3.170	.9727	.3959	.4084	.1808	.6972	.0847
#1	.5043	.4969	.5040	4.938	.5106	.4919	.5201
#2	.5274	.5038	.5068	4.967	.5093	.4968	.5195
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5145	.4987	.4994	.0091	.2405	.4976	.5141
Stddev	.0019	.0057	.0047	.0058	.0000	.0055	.0242
%RSD	.3707	1.152	.9461	63.22	.0162	1.109	4.711
#1	.5132	.5028	.4961	.0050	.2405	.4937	.4970
#2	.5159	.4947	.5027	.0132	.2406	.5015	.5312
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0003	.0103
Stddev	.0003	.0060
%RSD	107.0	58.66
#1	.0005	.0060
#2	.0001	.0145
Check ?	None	None
Value		
Range		

Method: 2004A Sample Name: CCVB5 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 14:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.983	.0133	-.0093	2.516	.0014	-.0139	.0048
Stddev	.039	.0118	.0089	.001	.0000	.0010	.0001
%RSD	.7789	88.51	95.66	.0181	.3336	6.895	3.069
#1	5.010	.0050	-.0030	2.515	.0014	-.0132	.0049
#2	4.955	.0217	-.0155	2.516	.0014	-.0146	.0047
Check ?	QC Pass	None	None	QC Pass	None	None	None
Value	5.000			2.500			
Range	10.00%			10.00%			

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.00	.0036	.0004	-.0025	24.93	-.0160	25.25
Stddev	.11	.0013	.0004	.0046	.06	.0102	.08
%RSD	.4571	37.22	108.1	185.1	.2272	63.42	.3086
#1	24.92	.0045	.0001	.0008	24.89	-.0088	25.31
#2	25.08	.0026	.0007	-.0057	24.97	-.0232	25.20
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0004	.0000	9.915	.0094	.0038	10.01
Stddev	.0000	.0007	.0019	.032	.0070	.0015	.06
%RSD	.1641	169.6	11320.	.3230	74.95	38.65	.6465
#1	.0034	-.0001	-.0013	9.938	.0143	.0049	10.05
#2	.0034	.0009	.0013	9.892	.0044	.0028	9.962
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	.0046	.0041	2.548	.0032	.0035	-.0203
Stddev	.0082	.0021	.0009	.011	.0018	.0020	.0133
%RSD	78.27	44.95	21.40	.4223	55.90	57.60	65.28
#1	.0047	.0060	.0035	2.541	.0045	.0021	-.0297
#2	.0163	.0031	.0047	2.556	.0020	.0049	-.0109
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5022	2.469
Stddev	.0074	.013
%RSD	1.478	.5458
#1	.5075	2.460
#2	.4970	2.479
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2004A Sample Name: CCB5 Operator: WM
Comment: KA0323406
Run Time: 02/17/04 14:12 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0394	.0045	-.0051	-.0001	.0000	-.0009	.0005
Stddev	.0110	.0033	.0068	.0002	.0000	.0006	.0003
%RSD	27.82	71.76	133.6	261.2	647.3	58.81	52.36
#1	.0316	.0022	-.0100	.0000	.0000	-.0006	.0007
#2	.0471	.0068	-.0003	-.0002	.0000	-.0013	.0003
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0062	.0007	.0004	.0029	.0021	.0043
Stddev	.0005	.0306	.0012	.0005	.0018	.0006	.0001
%RSD	40.26	495.8	172.5	142.0	62.57	28.26	1.760
#1	.0010	-.0278	-.0002	.0000	.0042	.0026	.0043
#2	.0017	.0155	.0016	.0008	.0016	.0017	.0044
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	-.0111	.0064	.0003	-.0027	-.0009	.0040
Stddev	.0137	.0139	.0067	.0002	.0005	.0005	.0116
%RSD	122.0	125.6	104.9	57.34	17.14	58.06	287.5
#1	.0015	-.0012	.0017	.0004	-.0030	-.0012	.0122
#2	.0210	-.0209	.0112	.0002	-.0024	-.0005	-.0041
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0303	.0068	.0026	-.0058	-.0011	.0015	.0000
Stddev	.0117	.0003	.0004	.0071	.0050	.0008	.0012
%RSD	38.57	4.059	15.31	121.9	457.1	52.22	51690.
#1	.0386	.0066	.0029	-.0108	-.0046	.0021	-.0009
#2	.0221	.0070	.0023	-.0008	.0024	.0010	.0009
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.1000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.1000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0015	-.0109	-.0001	.0067
Stddev	.0002	.0008	.0155	.0003	.0072
%RSD	53.33	50.60	141.5	591.0	106.8
#1	.0003	.0010	.0000	.0002	.0118
#2	.0006	.0021	-.0219	-.0003	.0016
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0100	.0500	.0100	.0200
Low Limit	-.0500	-.0100	-.0500	-.0100	-.0200