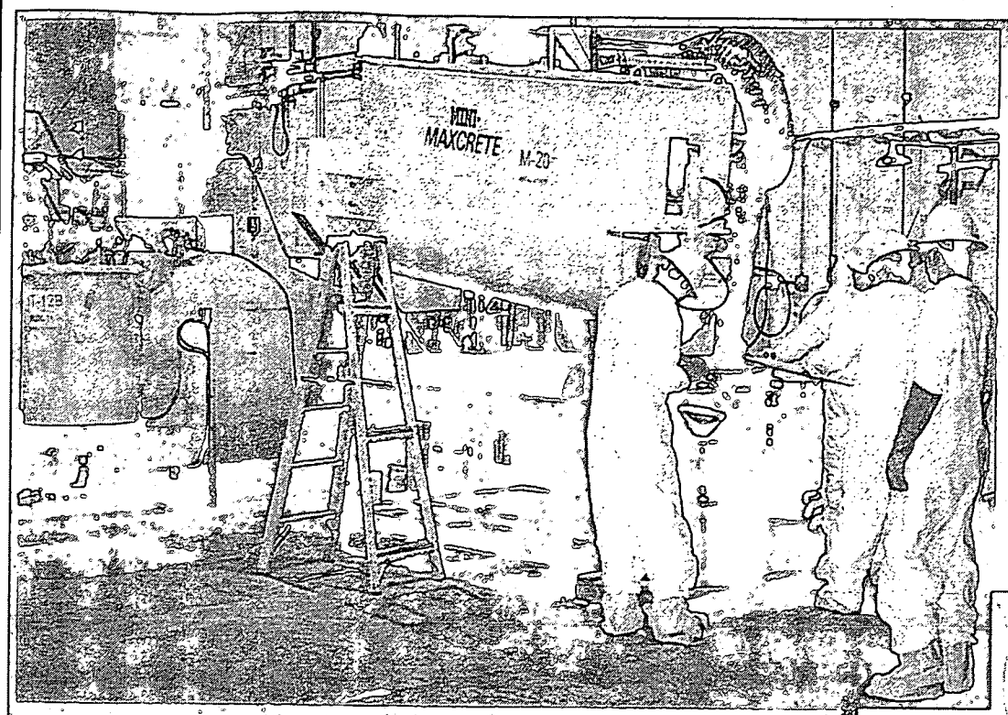
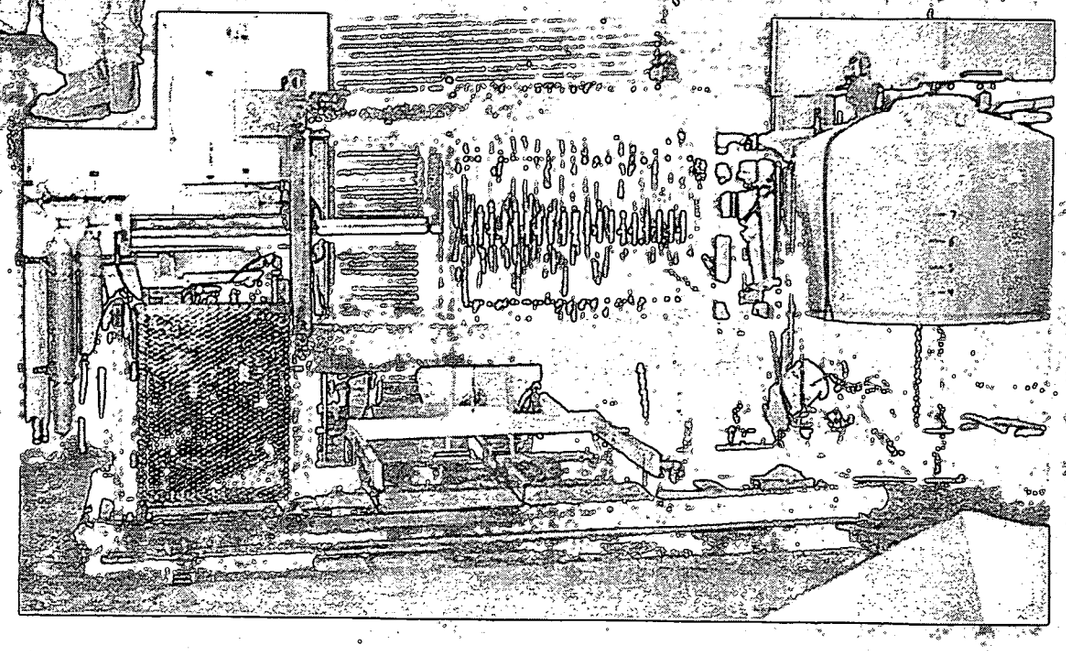
2294



Appendix E through G



Fernald Operable Unit 4, Silos 1 and 2 Proof of Principle Demonstration Final Report

May 14, 1999

IT CORPORATION
A Member of The IT Group

000001

APPENDIX E
ANALYTICAL DATA PACKAGES

RECRA LabNet
Division of Recra Environmental, Inc.
Virtual Laboratories Everywhere

Recra LabNet Philadelphia
Analytical Report

Client : I.T. CORP
RFW# : 9810L027

W.O.# : 02395-604-001-9999-00
Date Received: 10-07-98

METALS CASE NARRATIVE

1. This narrative covers the analyses of 3 TCLP leachate samples.

2. Samples were prepared and analyzed in accordance with methods checked on the attached glossary.

3. All analyses were performed within the required holding times.

4. The cooler temperature has been recorded on the Chain of Custody.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits.

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits.

7. All preparation/method blanks were within method criteria. Refer to the Inorganics Method Blank Data Summary.

8. All ICP Interference Check Standards were within control limits.

9. The laboratory control sample (LCS) was within the laboratory control limits. Refer to the Inorganics Laboratory Control Standards Report.

10. The TCLP extract from sample 1174-10-1D was selected for the matrix spike (MS) for this analytical batch. The MS recovery was greater than 50% as per method criteria.

11. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

Pat E.
J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

10-28-98
Date

mld/m10-027

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 9 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610)-280-3000 • Fax (610) 280-3041

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Accra Lot#: 98104027

Leaching Procedure: __1310 ✓1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A ✓3010A __3015 __3020A __3050A __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B		__200.7				__99
Antimony	__6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	__6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	__6010B		__200.7				__99
Beryllium	__6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	__6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	__6010B		__200.7				__99
Chromium	__6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	__6010B	__7211 [5]	__200.7	__220.2			__99
Iron	__6010B		__200.7				__99
Lead	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	__6010B		__200.7				__99
Manganese	__6010B		__200.7				__99
Mercury	__7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	__6010B		__200.7				__99
Potassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	__6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	__6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	__6010B		__200.7				__99
Zinc	__6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-03/98

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 10/28/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L027

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-004	1174-10-1D	Lead, TCLP Leachate	231000	UG/L	33.7	1.0
-005	1174-12-1D	Lead, TCLP Leachate	22000	UG/L	33.7	1.0
-006	1174-14-1D	Lead, TCLP Leachate	17200	UG/L	33.7	1.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 10/28/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L027

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	98L1355-MB1	Lead, TCLP Leachate	33.7 u	UG/L	33.7	1.0
BLANK2	98L1355-MB2	Lead, TCLP Leachate	33.7 u	UG/L	33.7	1.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 10/28/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L027

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-004	1174-10-1D	Lead, TCLP Leachate	235000	231000	5000	98.9*	1.0

Recra LabNet - Lionville

INORGANICS LABORATORY CONTROL STANDARDS REPORT 10/28/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L027

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	98L1355-LC1	Lead, LCS	2510	2500	UG/L	100.3

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/07/98 RFW LOT # :9810L027

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
1174-10-1D						
TCLP	001	SO	98LTO189	10/06/98	10/26/98	10/27/98
1174-12-1D						
TCLP	002	SO	98LTO189	10/06/98	10/26/98	10/27/98
1174-14-1D						
TCLP	003	SO	98LTO189	10/06/98	10/26/98	10/27/98
[illegible]-10-1D						
LEAD, TCLP LEACHATE	004	W	98L1355	10/27/98	10/27/98	10/28/98
LEAD, TCLP LEACHATE	004 MS	W	98L1355	10/27/98	10/27/98	10/28/98
1174-12-1D						
LEAD, TCLP LEACHATE	005	W	98L1355	10/27/98	10/27/98	10/28/98
1174-14-1D						
LEAD, TCLP LEACHATE	006	W	98L1355	10/27/98	10/27/98	10/28/98

LAB QC:

LEAD LABORATORY	LC1 BS	W	98L1355	N/A	10/27/98	10/28/98
LEAD, TCLP LEACHATE	MB1	W	98L1355	N/A	10/27/98	10/28/98
LEAD, TCLP LEACHATE	MB2	W	98L1355	N/A	10/27/98	10/28/98

98IOL0

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: I.T. Corp
Est. Final Proj. Sampling Date:
Project #:
Project Contact/Phone #:
RECRA Project Manager: GD
QC: STD Del: STD TAT: 14day
Date Rec'd: 10/7/98 Date Due: 10/21/98
Account #:

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

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

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Leachate	6	1P	300g	RECRA LabNet Use Only: HPOTC	1TCLP
001	1174-10-1D			SO	10/6/98	—						
002	1174-12-1D			SO	10/6/98	—						X
003	1174-14-1D			SO	10/6/98	—						X
004	1174-10-1D tclp of 001			L	*	—						X
005	1174-12-1D 002					—					✓	
006	1174-14-1D 003					—					✓	
											✓	

Special Instructions:

DATE/REVISIONS:
1. * see labchron
2.
3.
4.
5.
6.

RECRA LabNet Use Only

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

COC Tape was 1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Receipt (Y) or N
Cooler Temp 17C

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:
* 7916 2657 8798

Relinquished by	Received by	Date	Time
Heater	[illegible]	10/7/98	1000

Relinquished by	Received by	Date	Time

ORIGINAL REWRITTEN

060072

229

Recra LabNet Philadelphia
Analytical Report

Client : I.T. CORP
RFW# : 9810L101

W.O.# : 02395-604-001-9999-00
Date Received: 10-15-98

METALS CASE NARRATIVE

1. This narrative covers the analyses of 18 TCLP leachate samples.

2. Samples were prepared and analyzed in accordance with methods checked on the attached glossary.

3. All analyses were performed within the required holding times.

4. All cooler temperatures have been recorded on the Chain of Custody.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits with the exception of the last two CCVs for Cadmium at 112.9% and 111.2%. There is no significant impact to the results are non-detect or are less than 1 µg/L. This is well below the RCRA and the Universal Treatment Standards Limits.

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits.

7. All preparation/method blanks were within method criteria. Refer to the Inorganics Method Blank Data Summary.

8. All ICP Interference Check Standards were within control limits.

9. All laboratory control samples (LCS) were within the laboratory control limits. Refer to the Inorganics Laboratory Control Standards Report.

10. The TCLP extract from sample 1174-50-01 was selected for the matrix spike (MS) for this analytical batch. The sample was spiked with a cocktail containing all the analytes. In most cases the levels are lower than the RCRA limits. All MS recoveries were greater than 50% as per method criteria.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 028 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610)-280-3000 • Fax (610) 280-3041

11. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

10-30-98
Date

mld/m10-101

METALS METHOD GLOSSARY

2294

e following methods are used as reference for the digestion and analysis of samples contained within this Recra Lot#: 9810L101

Leaching Procedure: __1310 ✓1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A ✓3010A __3015 __3020A __3050A __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B		__200.7				__99
Antimony	✓6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	✓6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	✓6010B		__200.7				__99
Beryllium	✓6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	✓6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	__6010B		__200.7				__99
Chromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	__6010B	__7211 [5]	__200.7	__220.2			__99
Iron	__6010B		__200.7				__99
Lead	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	__6010B		__200.7				__99
Manganese	__6010B		__200.7				__99
Mercury	✓7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	✓6010B		__200.7				__99
Potassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	✓6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	✓6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	✓6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	__6010B		__200.7				__99
Zinc	__6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

000014

Other:_____ Method:_____

~~003~~

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-019	1174-35-01B	Silver, TCLP Leachate	0.83	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	3.3	UG/L	2.8	1.0
		Barium, TCLP Leachate	200	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.42	UG/L	0.40	1.0
		Chromium, TCLP Leachate	21.4	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.8	UG/L	1.5	1.0
		Lead, TCLP Leachate	1260	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	740	UG/L	3.6	1.0
		Thallium, TCLP Leachate	3.2	UG/L	2.8	1.0
020	1174-36-01	Silver, TCLP Leachate	1.6	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	199	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.43	UG/L	0.40	1.0
		Chromium, TCLP Leachate	22.5	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	30.5	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	359	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-021	1174-37-01	Silver, TCLP Leachate	2.5	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	272	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	200	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	11800	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	90.2	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-022	1174-38-01	Silver, TCLP Leachate	1.8	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	292	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	163	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.6	UG/L	1.5	1.0
		Lead, TCLP Leachate	6030	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	81.6	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
23	1174-39-01	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	4.7	UG/L	2.8	1.0
		Barium, TCLP Leachate	1930	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	40.0	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	9610	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	46.6	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-024	1174-40-01	Silver, TCLP Leachate	1.6	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	2250	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.54	UG/L	0.40	1.0
		Chromium, TCLP Leachate	38.8	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.15	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	6850	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	46.7	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-025	1174-41-01	Silver, TCLP Leachate	1.6	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	128	UG/L	2.8	1.0
		Barium, TCLP Leachate	135	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	350	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	92.9	UG/L	1.7	1.0
		Antimony, TCLP Leachate	4.2	UG/L	3.5	1.0
		Selenium, TCLP Leachate	290	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-026	1174-42-01	Silver, TCLP Leachate	1.7	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	118	UG/L	2.8	1.0
		Barium, TCLP Leachate	136	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.56	UG/L	0.40	1.0
		Chromium, TCLP Leachate	193	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	2.2	UG/L	1.5	1.0
		Lead, TCLP Leachate	2.0	UG/L	1.7	1.0
		Antimony, TCLP Leachate	8.4	UG/L	3.5	1.0
		Selenium, TCLP Leachate	275	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-027	1174-43-01	Silver, TCLP Leachate	1.5	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	33.9	UG/L	2.8	1.0
		Barium, TCLP Leachate	177	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	270	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.29	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	2150	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	71.6	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-028	1174-44-01	Silver, TCLP Leachate	1.9	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	37.7	UG/L	2.8	1.0
		Barium, TCLP Leachate	172	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.53	UG/L	0.40	1.0
		Chromium, TCLP Leachate	344	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.7	UG/L	1.5	1.0
		Lead, TCLP Leachate	923	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	87.6	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-029	1174-45-01	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	14.6	UG/L	2.8	1.0
		Barium, TCLP Leachate	1330	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	68.9	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	3640	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	50.7	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-030	1174-46-01	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	14.4	UG/L	2.8	1.0
		Barium, TCLP Leachate	390	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	158	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	2520	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	35.9	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-031	1174-47-01	Silver, TCLP Leachate	2.1	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	15.4	UG/L	2.8	1.0
		Barium, TCLP Leachate	266	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	373	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	5870	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	433	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-032	1174-48-01	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	22.4	UG/L	2.8	1.0
		Barium, TCLP Leachate	175	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	655	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	178	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	623	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-033	1174-49-01	Silver, TCLP Leachate	1.9	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	7.5	UG/L	2.8	1.0
		Barium, TCLP Leachate	302	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.99	UG/L	0.40	1.0
		Chromium, TCLP Leachate	463	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	24.6	UG/L	1.5	1.0
		Lead, TCLP Leachate	25900	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	124	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

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INORGANICS DATA SUMMARY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-034	1174-50-01	Silver, TCLP Leachate	0.87	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	8.0	UG/L	2.8	1.0
		Barium, TCLP Leachate	244	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	693	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	9730	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	130	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-035	1174-51-01	Silver, TCLP Leachate	0.81	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	8.9	UG/L	2.8	1.0
		Barium, TCLP Leachate	438	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	501	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	26100	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	64.0	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-036	1174-52-01	Silver, TCLP Leachate	0.97	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	4.9	UG/L	2.8	1.0
		Barium, TCLP Leachate	316	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	582	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.8	UG/L	1.5	1.0
		Lead, TCLP Leachate	20600	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	60.9	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	98L1356-MB1	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	0.30 u	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.40 u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	0.60 u	UG/L	0.60	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	1.7 u	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	3.6 u	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
BLANK2	98L1356-MB2	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	34.9	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	0.54	UG/L	0.40	1.0
		Chromium, TCLP Leachate	2.8	UG/L	0.60	1.0
		Nickel, TCLP Leachate	2.6	UG/L	1.5	1.0
		Lead, TCLP Leachate	9.8	UG/L	1.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	3.6 u	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
BLANK1	98C0511-MB1	Mercury, Total	0.10 u	UG/L	0.10	1.0
BLANK2	98C0511-MB2	Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0

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INORGANICS ACCURACY REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-034	1174-50-01	Silver, TCLP Leachate	49.9	0.87	50.0	98.1	1.0
		Arsenic, TCLP Leachate	1960	8.0	2000	97.7	1.0
		Barium, TCLP Leachate	2050	244	2000	90.2	1.0
		Beryllium, TCLP Leacha	47.2	0.10u	50.0	94.4	1.0
		Cadmium, TCLP Leachate	47.9	0.40u	50.0	95.8	1.0
		Chromium, TCLP Leachat	899	693	200	102.8	1.0
		Mercury, TCLP Leachate	189	0.10u	200	94.3	100
		Nickel, TCLP Leachate	466	1.5 u	500	93.1	1.0
		Lead, TCLP Leachate	10000	9730	500	57.9*	1.0
		Antimony, TCLP Leachat	444	3.5 u	500	88.8	1.0
		Selenium, TCLP Leachat	2050	130	2000	96.0	1.0
		Thallium, TCLP Leachat	1720	2.8 u	2000	85.9	1.0

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INORGANICS LABORATORY CONTROL STANDARDS REPORT 10/29/98

CLIENT: I.T. CORP

RECRA LOT #: 9810L101

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	98L1356-LC1	Silver, LCS	497	500	UG/L	99.4
		Arsenic, LCS	9790	10000	UG/L	97.9
		Barium, LCS	4840	5000	UG/L	96.8
		Beryllium, LCS	252	250	UG/L	100.6
		Cadmium, LCS	255	250	UG/L	101.9
		Chromium, LCS	498	500	UG/L	99.6
		Nickel, LCS	1980	2000	UG/L	98.9
		Lead, LCS	2510	2500	UG/L	100.5
		Antimony, LCS	2830	3000	UG/L	94.4
		Selenium, LCS	9640	10000	UG/L	96.4
		Thallium, LCS	9780	10000	UG/L	97.8
LCS1	98C0511-LC1	Mercury, LCS	5.2	5.0	UG/L	103.2

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INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
1174-35-01B						
TCLP	001	S	98LTO190	10/12/98	10/27/98	10/27/98
-36-01						
TCLP	002	S	98LTO190	10/12/98	10/27/98	10/27/98
1174-37-01						
TCLP	003	S	98LTO190	10/12/98	10/27/98	10/27/98
-38-01						
TCLP	004	S	98LTO190	10/12/98	10/27/98	10/27/98
1174-39-01						
TCLP	005	S	98LTO190	10/12/98	10/27/98	10/27/98
1174-40-01						
TCLP	006	S	98LTO190	10/12/98	10/27/98	10/27/98
1174-41-01						
P	007	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-42-01						
TCLP	008	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-43-01						
TCLP	009	S	98LTO190	10/13/98	10/27/98	10/27/98
174-44-01						
	010	S	98LTO190	10/13/98	10/27/98	10/27/98

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INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
1174-45-01						
TCLP	011	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-46-01						
TCLP	012	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-47-01						
TCLP	013	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-48-01						
TCLP	014	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-49-01						
TCLP	015	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-50-01						
TCLP	016	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-51-01						
TCLP	017	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-52-01						
TCLP	018	S	98LTO190	10/13/98	10/27/98	10/27/98
1174-35-01B						
SILVER, TCLP LEACHAT	019	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	019	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	019	W	98L1356	10/27/98	10/27/98	10/27/98

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Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BERYLLIUM, TCLP LEAC	019	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	019	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	019	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	019	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	019	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	019	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	019	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	019	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	019	W	98L1356	10/27/98	10/27/98	10/27/98
1174-36-01						
SILVER, TCLP LEACHAT	020	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	020	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	020	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	020	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	020	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	020	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	020	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	020	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	020	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	020	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	020	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	020	W	98L1356	10/27/98	10/27/98	10/27/98
1174-37-01						
SILVER, TCLP LEACHAT	021	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	021	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	021	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	021	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	021	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	021	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	021	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	021	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	021	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	021	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	021	W	98L1356	10/27/98	10/27/98	10/27/98

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INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
THALLIUM, TCLP LEACH	021	W	98L1356	10/27/98	10/27/98	10/27/98
1174-38-01						
SILVER, TCLP LEACHAT	022	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	022	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	022	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	022	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	022	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	022	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	022	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	022	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	022	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	022	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	022	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	022	W	98L1356	10/27/98	10/27/98	10/27/98
1174-39-01						
SILVER, TCLP LEACHAT	023	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	023	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	023	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	023	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	023	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	023	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	023	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	023	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	023	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	023	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	023	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	023	W	98L1356	10/27/98	10/27/98	10/27/98
1174-40-01						
SILVER, TCLP LEACHAT	024	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	024	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	024	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	024	W	98L1356	10/27/98	10/27/98	10/27/98

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INORGANIC ANALYTICAL DATA PACKAGE FOR
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DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TCLP LEACHA	024	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	024	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	024	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	024	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	024	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	024	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	024	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	024	W	98L1356	10/27/98	10/27/98	10/27/98
1174-41-01						
ER, TCLP LEACHAT	025	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	025	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	025	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	025	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	025	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	025	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	025	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	025	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	025	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	025	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	025	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	025	W	98L1356	10/27/98	10/27/98	10/27/98
1174-42-01						
SILVER, TCLP LEACHAT	026	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	026	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	026	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	026	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	026	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	026	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	026	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	026	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	026	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	026	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	026	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	026	W	98L1356	10/27/98	10/27/98	10/27/98

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INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
1174-43-01						
SILVER, TCLP LEACHAT	027	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	027	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	027	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	027	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	027	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	027	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	027	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	027	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	027	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	027	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	027	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	027	W	98L1356	10/27/98	10/27/98	10/27/98
1174-44-01						
SILVER, TCLP LEACHAT	028	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	028	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	028	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	028	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	028	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	028	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	028	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	028	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	028	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	028	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	028	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	028	W	98L1356	10/27/98	10/27/98	10/27/98
1174-45-01						
SILVER, TCLP LEACHAT	029	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	029	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	029	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	029	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	029	W	98L1356	10/27/98	10/27/98	10/27/98

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INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CHROMIUM, TCLP LEACH	029	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	029	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	029	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	029	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	029	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	029	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	029	W	98L1356	10/27/98	10/27/98	10/27/98
1174-46-01						
SILVER, TCLP LEACHAT	030	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	030	W	98L1356	10/27/98	10/27/98	10/27/98
[illegible]IUM, TCLP LEACHAT	030	W	98L1356	10/27/98	10/27/98	10/27/98
[illegible]IUM, TCLP LEAC	030	W	98L1356	10/27/98	10/27/98	10/27/98
[illegible]M, TCLP LEACHA	030	W	98L1356	10/27/98	10/27/98	10/27/98
[illegible]MIUM, TCLP LEACH	030	W	98L1356	10/27/98	10/27/98	10/27/98
[illegible]URY, TCLP LEACHA	030	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	030	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	030	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	030	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	030	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	030	W	98L1356	10/27/98	10/27/98	10/27/98
1174-47-01						
SILVER, TCLP LEACHAT	031	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	031	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	031	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	031	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	031	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	031	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	031	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	031	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	031	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	031	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	031	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	031	W	98L1356	10/27/98	10/27/98	10/27/98
1174-48-01						
ILVER, TCLP LEACHAT	032	W	98L1356	10/27/98	10/27/98	10/27/98

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INORGANIC ANALYTICAL DATA PACKAGE FOR
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CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ARSENIC, TCLP LEACHA	032	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	032	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	032	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	032	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	032	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	032	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	032	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	032	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	032	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	032	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	032	W	98L1356	10/27/98	10/27/98	10/27/98
1174-49-01						
SILVER, TCLP LEACHAT	033	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	033	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	033	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	033	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	033	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	033	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	033	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	033	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	033	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	033	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	033	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	033	W	98L1356	10/27/98	10/27/98	10/27/98
1174-50-01						
SILVER, TCLP LEACHAT	034	W	98L1356	10/27/98	10/27/98	10/27/98
SILVER, TCLP LEACHAT	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	034	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	034	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	034	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	034	W	98L1356	10/27/98	10/27/98	10/27/98

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CADMIUM, TCLP LEACHA	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	034	W	98L1356	10/27/98	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	034	W	98C0511	10/27/98	10/27/98	10/28/98
MERCURY, TCLP LEACHA	034 MS	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	034	W	98L1356	10/27/98	10/27/98	10/27/98
NICKEL, TCLP LEACHAT	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	034	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	034	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	034	W	98L1356	10/27/98	10/27/98	10/27/98
ENIUM, TCLP LEACH	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
ALLIUM, TCLP LEACH	034	W	98L1356	10/27/98	10/27/98	10/27/98
ALLIUM, TCLP LEACH	034 MS	W	98L1356	10/27/98	10/27/98	10/27/98
-51-01						
SILVER, TCLP LEACHAT	035	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	035	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	035	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	035	W	98L1356	10/27/98	10/27/98	10/27/98
ADMIUM, TCLP LEACHA	035	W	98L1356	10/27/98	10/27/98	10/27/98
MIUM, TCLP LEACH	035	W	98L1356	10/27/98	10/27/98	10/27/98
URY, TCLP LEACHA	035	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	035	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	035	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	035	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	035	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	035	W	98L1356	10/27/98	10/27/98	10/27/98
1174-52-01						
SILVER, TCLP LEACHAT	036	W	98L1356	10/27/98	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	036	W	98L1356	10/27/98	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	036	W	98L1356	10/27/98	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	036	W	98L1356	10/27/98	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	036	W	98L1356	10/27/98	10/27/98	10/27/98

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CHROMIUM, TCLP LEACH	036	W	98L1356	10/27/98	10/27/98	10/27/98
MERCURY, TCLP LEACHA	036	W	98C0511	10/27/98	10/27/98	10/28/98
NICKEL, TCLP LEACHAT	036	W	98L1356	10/27/98	10/27/98	10/27/98
LEAD, TCLP LEACHATE	036	W	98L1356	10/27/98	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	036	W	98L1356	10/27/98	10/27/98	10/27/98
SELENIUM, TCLP LEACH	036	W	98L1356	10/27/98	10/27/98	10/27/98
THALLIUM, TCLP LEACH	036	W	98L1356	10/27/98	10/27/98	10/27/98

LAB QC:

SILVER LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
SILVER, TCLP LEACHAT	MB1	W	98L1356	N/A	10/27/98	10/27/98
SILVER, TCLP LEACHAT	MB2	W	98L1356	N/A	10/27/98	10/27/98
ARSENIC LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	MB1	W	98L1356	N/A	10/27/98	10/27/98
ARSENIC, TCLP LEACHA	MB2	W	98L1356	N/A	10/27/98	10/27/98
BARIUM LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	MB1	W	98L1356	N/A	10/27/98	10/27/98
BARIUM, TCLP LEACHAT	MB2	W	98L1356	N/A	10/27/98	10/27/98
BERYLLIUM LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	MB1	W	98L1356	N/A	10/27/98	10/27/98
BERYLLIUM, TCLP LEAC	MB2	W	98L1356	N/A	10/27/98	10/27/98
CADMIUM LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	MB1	W	98L1356	N/A	10/27/98	10/27/98
CADMIUM, TCLP LEACHA	MB2	W	98L1356	N/A	10/27/98	10/27/98
CHROMIUM LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	MB1	W	98L1356	N/A	10/27/98	10/27/98
CHROMIUM, TCLP LEACH	MB2	W	98L1356	N/A	10/27/98	10/27/98
MERCURY LABORATORY	LC1 BS	W	98C0511	N/A	10/27/98	10/28/98
MERCURY, TOTAL	MB1	W	98C0511	N/A	10/27/98	10/28/98
MERCURY, TCLP LEACHA	MB2	W	98C0511	N/A	10/27/98	10/28/98
NICKEL LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
NICKEL, TCLP LEACHAT	MB1	W	98L1356	N/A	10/27/98	10/27/98
NICKEL, TCLP LEACHAT	MB2	W	98L1356	N/A	10/27/98	10/27/98
LEAD LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
LEAD, TCLP LEACHATE	MB1	W	98L1356	N/A	10/27/98	10/27/98
LEAD, TCLP LEACHATE	MB2	W	98L1356	N/A	10/27/98	10/27/98
ANTIMONY LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
I.T. CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9810L101

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ANTIMONY, TCLP LEACH	MB1	W	98L1356	N/A	10/27/98	10/27/98
ANTIMONY, TCLP LEACH	MB2	W	98L1356	N/A	10/27/98	10/27/98
SELENIUM LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
SELENIUM, TCLP LEACH	MB1	W	98L1356	N/A	10/27/98	10/27/98
ENIUM, TCLP LEACH	MB2	W	98L1356	N/A	10/27/98	10/27/98
IUM LABORATORY	LC1 BS	W	98L1356	N/A	10/27/98	10/27/98
LLIUM, TCLP LEACH	MB1	W	98L1356	N/A	10/27/98	10/27/98
THALLIUM, TCLP LEACH	MB2	W	98L1356	N/A	10/27/98	10/27/98

RECRA LabNet Only: 9810L101

Custody Transfer Record/La' Work Request

ECRA LabNet

FIELD PERSONNEL: COMPLETE ONLY S[illegible]DED AREAS

Client: I.T.Corp
Est. Final Proj. Sampling Date:
Project #: 03395-604-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: GD
QC: STD Del: STD TAT: 14 day
Date Rec'd: 10/15/98 Date Due: 10/29/98
Account #:

Refrigerator #										5							
#/Type Container	Liquid																
	Solid									1GL							
Volume	Liquid																
	Solid									1L							
Preservatives																	
ANALYSES REQUESTED →		ORGANIC								INORG							
		VOA	BNA	Pest/PCB	Herb					TCLP Metal		UTS MET.					
		RECRA LabNet Use Only															
										ITCLP							

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected															
001	1174-35-01 R			S	10-12-98	NA															
2	36-01																				
3	37-																				
4	38																				
5	39																				
6	40																				
7	41				10-13-98																
8	42																				
9	43																				
10	44																				

Special Instructions:

000036

DATE/REVISIONS:
#005 1. Bottle Rec'd cracked # AND
2. left in Original Bag.
→ 3. No Ice in coolers.
4.
5.
6.

2294

RECRA LabNet Use Only

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

COC Tape was: 1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec'd Y or N
Cooler Temp 17.7 C 19.6

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES: 7901 5071 1045
* 7916 2945 3703

Relinquished by	Received by	Date	Time
Fed Ex	[illegible]	10-15-98	1000

Relinquished by	Received by	Date	Time

ORIGINAL REWRITTEN

RECRA LabNet Only: 9810L101

Custody Transfer Record/Lab Work Request

RECRA LabNet

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: I.T. Corp
Est. Final Proj. Sampling Date:
Project #:
Project Contact/Phone #:
RECRA Project Manager:
QC: Del: TAT
Date Rec'd: Date Due:
Account #:

Refrigerator #																	
#/Type Container	Liquid									5							
	Solid									1GL							
Volume	Liquid							leachate									
	Solid									1L							
Preservatives																	
ANALYSES REQUESTED		ORGANIC: VOA	BNA	Pest/PCB	Herb				INORG: TCLP Metal		Lab Metal						
RECRA LabNet Use Only								see extract		1TCLP				10/15/98			

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
011	1174-45-01			S	10.15.98	NA												
12	46																	
13	47																	
14	48																	
15	49																	
16	50																	
17	51																	
18	52																	
19	35-01B (1 of 001)			L	*	-				✓								
20	36-01 (1 of 002)			L		-				✓								

Special Instructions:

000037

DATE/REVISIONS:
1. * see labchron
2. Metals = Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Ag, Tl
3.
4. 10/15/98
5.
6.

RECRA LabNet Use Only

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

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

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10.15.98	1000

Relinquished by	Received by	Date	Time

RECRA LabNet Only
9810C101

Custody Transfer Record/Lab Work Request

ECRA LabNet

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: I. T. Corp
Est. Final Proj. Sampling Date:
Project #:
Project Contact/Phone #:
RECRA Project Manager:
QC: Del: TAT:
Date Rec'd: Date Due:
Account #:

see pg 1

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

ANALYSES REQUESTED →

ORGANIC				INORG	
VOA	BNA	Pest/PCB	Herb	Metal	CN

see sheet

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only
021	1174-37-01 top of 003			L	*	–	see pg 1 ✓
22	38 004						✓
23	39 005						✓
24	40 006						✓
25	41 007						✓
26	42 008						✓
27	43 009						✓
28	44 010						✓
29	45 011						✓
30	46 012						✓

Special Instructions:

0000038

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

2294

Relinquished by	Received by	Date	Time
Jedeef	[signature]	10/15/98	1000

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES

RECRA LabNet Use Only

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

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

RECRA LabNet Only: 98101101

Custody Transfer Record/Work Request

RECRA LabNet

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: I. T. Corp
Est. Final Proj. Sampling Date:
Project #:
Project Contact/Phone #:
RECRA Project Manager:
QC: Del: TAT:
Date Rec'd: Date Due:
Account #:

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

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

RECRA LabNet Use Only

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Herb	RECRA LabNet Use Only
031	1174-47-01 tclp of 013			L	*	-		✓
32	48 014							✓
33	49 015							✓
34	50 016							✓
35	51 017							✓
36	52 018							✓

Special Instructions:

000039

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

2294

RECRA LabNet Use Only

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

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

COC Record Present Upon Sample Rec'd Y or N

Cooler Temp C

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

Relinquished by	Received by	Date	Time
Jeclep	V. Henry	10/15/98	1000

Relinquished by	Received by	Date	Time

RECRA LabNet
A division of Recra Environmental, Inc.
Virtual Laboratories Everywhere

Recra LabNet Philadelphia
Analytical Report

Client : IT CORP
RFW# : 9811L393
RELOG of : 9810L101

W.O.# : 02395-604-001-9999-00
Date Received: 10-15-98

METALS CASE NARRATIVE

1. This narrative covers the analyses of 6 TCLP leachate samples.

2. Samples were prepared and analyzed in accordance with methods checked on the attached glossary.

3. The TCLP procedure for Mercury was performed outside of the holding time. The analyses of all leachates was performed within the required holding times.

4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits.

5. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits.

6. All preparation/method blanks were within method criteria. Refer to the Inorganics Method Blank Data Summary.

7. All ICP Interference Check Standards were within control limits.

8. All laboratory control samples (LCS) were within the laboratory control limits. Refer to the Inorganics Laboratory Control Standards Report.

9. A Matrix spike was performed on a sample within the original Recra batch# 9810L101.

10. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

Pat E

J. Michael Taylor
Vice President and Laboratory Manager
Lionville Analytical Laboratory

12-2-99
Date

mld/m11-393

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 19 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610)-280-3000 • Fax (610) 280-3041

METALS METHOD GLOSSARY 2294

The following methods are used as reference for the digestion and analysis of samples contained within this Pecra Lot#: 9811L393

Leaching Procedure: __1310 ✓1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A ✓3010A __3015 __3020A __3050A __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B		__200.7				__99
Antimony	✓6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	✓6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	✓6010B		__200.7				__99
Beryllium	✓6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	✓6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	__6010B		__200.7				__99
Chromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	__6010B	__7211 [5]	__200.7	__220.2			__99
Iron	__6010B		__200.7				__99
Lead	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	__6010B		__200.7				__99
Manganese	__6010B		__200.7				__99
Mercury	✓7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	✓6010B		__200.7				__99
Potassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	✓6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	✓6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	✓6010B	__7841 [5]	__200.7	__279.2__200.9			__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	__6010B		__200.7				__99
Zinc	__6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-03/98

000041

~~002~~

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

RFW 21-21L-033/N-10/96

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 12/02/98

CLIENT: IT CORP

RECRA LOT #: 9811L393

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-007	1174-35-01B	Silver, TCLP Leachate	2.7	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	160	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	95.5	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.9	UG/L	1.5	1.0
		Lead, TCLP Leachate	1780	UG/L	33.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	217	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
	1174-36-01	Silver, TCLP Leachate	3.7	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8 u	UG/L	2.8	1.0
		Barium, TCLP Leachate	154	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	70.2	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	246	UG/L	33.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	222	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-009	1174-41-01	Silver, TCLP Leachate	0.96	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	323	UG/L	2.8	1.0
		Barium, TCLP Leachate	109	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	350	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	42.0	UG/L	33.7	1.0
		Antimony, TCLP Leachate	10.6	UG/L	3.5	1.0
		Selenium, TCLP Leachate	313	UG/L	3.6	1.0
		Thallium, TCLP Leachate	3.1	UG/L	2.8	1.0

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 12/02/98

CLIENT: IT CORP

RECRA LOT #: 9811L393

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-010	1174-42-01	Silver, TCLP Leachate	0.91	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	171	UG/L	2.8	1.0
		Barium, TCLP Leachate	134	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	225	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	33.7 u	UG/L	33.7	1.0
		Antimony, TCLP Leachate	11.5	UG/L	3.5	1.0
		Selenium, TCLP Leachate	226	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
)11	1174-47-01	Silver, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	18.2	UG/L	2.8	1.0
		Barium, TCLP Leachate	250	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	417	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	10400	UG/L	33.7	1.0
		Antimony, TCLP Leachate	3.6	UG/L	3.5	1.0
		Selenium, TCLP Leachate	244	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0
-012	1174-48-01	Silver, TCLP Leachate	1.7	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	19.8	UG/L	2.8	1.0
		Barium, TCLP Leachate	167	UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	756	UG/L	0.60	1.0
		Mercury, TCLP Leachate	0.10 u	UG/L	0.10	1.0
		Nickel, TCLP Leachate	1.5 u	UG/L	1.5	1.0
		Lead, TCLP Leachate	913	UG/L	33.7	1.0
		Antimony, TCLP Leachate	3.5 u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	419	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8 u	UG/L	2.8	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 12/02/98

CLIENT: IT CORP

RECRA LOT #: 9811L393

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	98L1423-MB1	Silver, TCLP Leachate	0.50	u	UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8	u	UG/L	2.8	1.0
		Barium, TCLP Leachate	0.80		UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10	u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3	u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	0.60	u	UG/L	0.60	1.0
		Nickel, TCLP Leachate	1.5	u	UG/L	1.5	1.0
		Lead, TCLP Leachate	33.7	u	UG/L	33.7	1.0
		Antimony, TCLP Leachate	3.5	u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	3.6	u	UG/L	3.6	1.0
		Thallium, TCLP Leachate	3.6		UG/L	2.8	1.0
BLANK2	98L1423-MB2	Silver, TCLP Leachate	3.1		UG/L	0.50	1.0
		Arsenic, TCLP Leachate	2.8	u	UG/L	2.8	1.0
		Barium, TCLP Leachate	81.7		UG/L	0.30	1.0
		Beryllium,TCLP Leachate	0.10	u	UG/L	0.10	1.0
		Cadmium, TCLP Leachate	4.3	u	UG/L	4.3	1.0
		Chromium, TCLP Leachate	3.3		UG/L	0.60	1.0
		Nickel, TCLP Leachate	2.1		UG/L	1.5	1.0
		Lead, TCLP Leachate	33.7	u	UG/L	33.7	1.0
		Antimony, TCLP Leachate	3.5	u	UG/L	3.5	1.0
		Selenium, TCLP Leachate	3.6	u	UG/L	3.6	1.0
		Thallium, TCLP Leachate	2.8	u	UG/L	2.8	1.0
[illegible]NK1	98C0532-MB1	Mercury, Total	0.10	u	UG/L	0.10	1.0
	98C0532-MB2	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
BLANK3	98C0532-MB3	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0

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INORGANICS LABORATORY CONTROL STANDARDS REPORT 12/02/98

CLIENT: IT CORP

RECRA LOT #: 9811L393

WORK ORDER: 02395-604-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	98L1423-LC1	Silver, LCS	522	500	UG/L	104.3
		Arsenic, LCS	10500	10000	UG/L	105.1
		Barium, LCS	4980	5000	UG/L	99.6
		Beryllium, LCS	260	250	UG/L	103.9
		Cadmium, LCS	241	250	UG/L	96.4
		Chromium, LCS	531	500	UG/L	106.3
		Nickel, LCS	2140	2000	UG/L	107.0
		Lead, LCS	2430	2500	UG/L	97.2
		Antimony, LCS	3130	3000	UG/L	104.4
		Selenium, LCS	10400	10000	UG/L	103.9
		Thallium, LCS	10400	10000	UG/L	103.6
LCS1	98C0532-LC1	Mercury, LCS	5.1	5.0	UG/L	101.6

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INORGANIC ANALYTICAL DATA PACKAGE FOR
IT CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9811L393

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
1174-35-01B						
TCLP	001	S	98LTO196	10/12/98	11/14/98	11/15/98
1174-36-01						
	002	S	98LTO196	10/12/98	11/14/98	11/15/98
1174-41-01						
TCLP	003	S	98LTO196	10/13/98	11/14/98	11/15/98
-42-01						
TCLP	004	S	98LTO196	10/13/98	11/14/98	11/15/98
1174-47-01						
TCLP	005	S	98LTO196	10/13/98	11/14/98	11/15/98
1174-48-01						
TCLP	006	S	98LTO196	10/13/98	11/14/98	11/15/98
1174-35-01B						
ER, TCLP LEACHAT	007	W	98L1423	11/15/98	11/24/98	11/27/98
RSENIC, TCLP LEACHA	007	W	98L1423	11/15/98	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	007	W	98L1423	11/15/98	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	007	W	98L1423	11/15/98	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	007	W	98L1423	11/15/98	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	007	W	98L1423	11/15/98	11/24/98	11/27/98
MERCURY, TCLP LEACHA	007	W	98C0532	11/15/98	11/18/98	11/19/98
NICKEL, TCLP LEACHAT	007	W	98L1423	11/15/98	11/24/98	11/27/98
LEAD, TCLP LEACHATE	007	W	98L1423	11/15/98	11/24/98	11/30/98
NTIMONY, TCLP LEACH	007	W	98L1423	11/15/98	11/24/98	11/27/98
LENIUM, TCLP LEACH	007	W	98L1423	11/15/98	11/24/98	11/27/98

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
IT CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9811L393

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
THALLIUM, TCLP LEACH	007	W	98L1423	11/15/98	11/24/98	11/27/98
1174-36-01						
SILVER, TCLP LEACHAT	008	W	98L1423	11/15/98	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	008	W	98L1423	11/15/98	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	008	W	98L1423	11/15/98	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	008	W	98L1423	11/15/98	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	008	W	98L1423	11/15/98	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	008	W	98L1423	11/15/98	11/24/98	11/27/98
MERCURY, TCLP LEACHA	008	W	98C0532	11/15/98	11/18/98	11/19/98
NICKEL, TCLP LEACHAT	008	W	98L1423	11/15/98	11/24/98	11/27/98
LEAD, TCLP LEACHATE	008	W	98L1423	11/15/98	11/24/98	11/30/98
ANTIMONY, TCLP LEACH	008	W	98L1423	11/15/98	11/24/98	11/27/98
SELENIUM, TCLP LEACH	008	W	98L1423	11/15/98	11/24/98	11/27/98
THALLIUM, TCLP LEACH	008	W	98L1423	11/15/98	11/24/98	11/27/98
1174-41-01						
SILVER, TCLP LEACHAT	009	W	98L1423	11/15/98	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	009	W	98L1423	11/15/98	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	009	W	98L1423	11/15/98	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	009	W	98L1423	11/15/98	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	009	W	98L1423	11/15/98	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	009	W	98L1423	11/15/98	11/24/98	11/27/98
MERCURY, TCLP LEACHA	009	W	98C0532	11/15/98	11/18/98	11/19/98
NICKEL, TCLP LEACHAT	009	W	98L1423	11/15/98	11/24/98	11/27/98
LEAD, TCLP LEACHATE	009	W	98L1423	11/15/98	11/24/98	11/30/98
ANTIMONY, TCLP LEACH	009	W	98L1423	11/15/98	11/24/98	11/27/98
SELENIUM, TCLP LEACH	009	W	98L1423	11/15/98	11/24/98	11/27/98
THALLIUM, TCLP LEACH	009	W	98L1423	11/15/98	11/24/98	11/27/98
1174-42-01						
SILVER, TCLP LEACHAT	010	W	98L1423	11/15/98	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	010	W	98L1423	11/15/98	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	010	W	98L1423	11/15/98	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	010	W	98L1423	11/15/98	11/24/98	11/27/98

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
IT CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9811L393

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TCLP LEACHA	010	W	98L1423	11/15/98	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	010	W	98L1423	11/15/98	11/24/98	11/27/98
MERCURY, TCLP LEACHA	010	W	98C0532	11/15/98	11/18/98	11/19/98
NICKEL, TCLP LEACHAT	010	W	98L1423	11/15/98	11/24/98	11/27/98
LEAD, TCLP LEACHATE	010	W	98L1423	11/15/98	11/24/98	11/30/98
ANTIMONY, TCLP LEACH	010	W	98L1423	11/15/98	11/24/98	11/27/98
SELENIUM, TCLP LEACH	010	W	98L1423	11/15/98	11/24/98	11/27/98
THALLIUM, TCLP LEACH	010	W	98L1423	11/15/98	11/24/98	11/27/98
1174-47-01						
SILVER, TCLP LEACHAT	011	W	98L1423	11/15/98	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	011	W	98L1423	11/15/98	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	011	W	98L1423	11/15/98	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	011	W	98L1423	11/15/98	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	011	W	98L1423	11/15/98	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	011	W	98L1423	11/15/98	11/24/98	11/27/98
MERCURY, TCLP LEACHA	011	W	98C0532	11/15/98	11/18/98	11/19/98
NICKEL, TCLP LEACHAT	011	W	98L1423	11/15/98	11/24/98	11/27/98
LEAD, TCLP LEACHATE	011	W	98L1423	11/15/98	11/24/98	11/30/98
ANTIMONY, TCLP LEACH	011	W	98L1423	11/15/98	11/24/98	11/27/98
SELENIUM, TCLP LEACH	011	W	98L1423	11/15/98	11/24/98	11/27/98
THALLIUM, TCLP LEACH	011	W	98L1423	11/15/98	11/24/98	11/27/98
1174-48-01						
SILVER, TCLP LEACHAT	012	W	98L1423	11/15/98	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	012	W	98L1423	11/15/98	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	012	W	98L1423	11/15/98	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	012	W	98L1423	11/15/98	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	012	W	98L1423	11/15/98	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	012	W	98L1423	11/15/98	11/24/98	11/27/98
MERCURY, TCLP LEACHA	012	W	98C0532	11/15/98	11/18/98	11/19/98
NICKEL, TCLP LEACHAT	012	W	98L1423	11/15/98	11/24/98	11/27/98
LEAD, TCLP LEACHATE	012	W	98L1423	11/15/98	11/24/98	11/30/98
ANTIMONY, TCLP LEACH	012	W	98L1423	11/15/98	11/24/98	11/27/98
SELENIUM, TCLP LEACH	012	W	98L1423	11/15/98	11/24/98	11/27/98
THALLIUM, TCLP LEACH	012	W	98L1423	11/15/98	11/24/98	11/27/98

QC:

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
IT CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9811L393

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SILVER LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
SILVER, TCLP LEACHAT	MB1	W	98L1423	N/A	11/24/98	11/27/98
SILVER, TCLP LEACHAT	MB2	W	98L1423	N/A	11/24/98	11/27/98
ARSENIC LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	MB1	W	98L1423	N/A	11/24/98	11/27/98
ARSENIC, TCLP LEACHA	MB2	W	98L1423	N/A	11/24/98	11/27/98
BARIUM LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	MB1	W	98L1423	N/A	11/24/98	11/27/98
BARIUM, TCLP LEACHAT	MB2	W	98L1423	N/A	11/24/98	11/27/98
BERYLLIUM LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	MB1	W	98L1423	N/A	11/24/98	11/27/98
BERYLLIUM, TCLP LEAC	MB2	W	98L1423	N/A	11/24/98	11/27/98
CADMIUM LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	MB1	W	98L1423	N/A	11/24/98	11/27/98
CADMIUM, TCLP LEACHA	MB2	W	98L1423	N/A	11/24/98	11/27/98
CHROMIUM LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	MB1	W	98L1423	N/A	11/24/98	11/27/98
CHROMIUM, TCLP LEACH	MB2	W	98L1423	N/A	11/24/98	11/27/98
MERCURY LABORATORY	LC1 BS	W	98C0532	N/A	11/18/98	11/19/98
MERCURY, TOTAL	MB1	W	98C0532	N/A	11/18/98	11/19/98
MERCURY, TCLP LEACHA	MB2	W	98C0532	N/A	11/18/98	11/19/98
MERCURY, TCLP LEACHA	MB3	W	98C0532	N/A	11/18/98	11/19/98
NICKEL LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
NICKEL, TCLP LEACHAT	MB1	W	98L1423	N/A	11/24/98	11/27/98
NICKEL, TCLP LEACHAT	MB2	W	98L1423	N/A	11/24/98	11/27/98
LEAD LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/30/98
LEAD, TCLP LEACHATE	MB1	W	98L1423	N/A	11/24/98	11/30/98
LEAD, TCLP LEACHATE	MB2	W	98L1423	N/A	11/24/98	11/30/98
ANTIMONY LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
ANTIMONY, TCLP LEACH	MB1	W	98L1423	N/A	11/24/98	11/27/98
ANTIMONY, TCLP LEACH	MB2	W	98L1423	N/A	11/24/98	11/27/98
SELENIUM LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98
SELENIUM, TCLP LEACH	MB1	W	98L1423	N/A	11/24/98	11/27/98
SELENIUM, TCLP LEACH	MB2	W	98L1423	N/A	11/24/98	11/27/98
THALLIUM LABORATORY	LC1 BS	W	98L1423	N/A	11/24/98	11/27/98

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
IT CORP

DATE RECEIVED: 10/15/98 RFW LOT # :9811L393

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
THALLIUM, TCLP LEACH	MB1	W	98L1423	N/A	11/24/98	11/27/98
THALLIUM, TCLP LEACH	MB2	W	98L1423	N/A	11/24/98	11/27/98

9811L3[redacted]

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY S[redacted]ED AREAS

RECRA LabNet

Client: IT CORP
Est. Final Proj. Sampling Date:
Project #: 02395-604-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: GD
QC: STD Del: STD TAT: 14 DAY

Date Rec'd: 10/15/98 Date Due: 10/29/98
Account #: GAILPM

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

ANALYSES REQUESTED →

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	ORGANIC VOA	BNA	Pest/PCB	Herb				INORG Metal	CN						
																1					
																NA					
001	1174-35-01 B			S	10/12/98									Met①		iTCLP					
002	36-01				⊥											✓					
003	41				10/13/98											✓					
004	42															✓					
005	47															✓					
006	48															✓					
007	1174-35-01 B (TCLP&FOOL)			L	*									✓							
008	36-01 (002)													✓							
009	41 (003)													✓							
010	42 (004)													✓							

RECRA LabNet Use Only

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

Special Instructions:

000052

DATE/REVISIONS:
1. Met① = Ag, As, Ba, Be, Cd,
2. Cr, Hg, Ni, Pb, Sb, Tl, Se
3. Samples logged from
4. Batch 9810L101 per SDR
5. 98PM742
6.

2294

Relinquished by	Received by	Date	Time
NA	[illegible]	11/11/98	

Relinquished by	Received by	Date	Time

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

RECRA LabNet Use Only

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

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

COC Record Present Upon Sample Rec't Y or N

Cooler Temp C

NA

981113

Lab Work Request

Page 2 of 2

RECRA LabNet

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: IT CORP

Est. Final Proj. Sampling Date:

Project #: (1)

Project Contact/Phone #:

RECRA Project Manager:

QC: Del: TAT:

See page

Date Rec'd: Date Due:

Account #:

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

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected
011	1174-57-01			S	*	
012	1 48 1			1	1	

Special Instructions:

000053

DATE/REVISIONS:

1.
2.
3.
4.
5.
6.

2294

Relinquished by	Received by	Date	Time
NA	B Miller	11/11/98	—

Relinquished by	Received by	Date	Time

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___

Airbill #

2) Ambient or Chilled

3) Received in Good Condition Y or N

4) Labels Indicate Properly Preserved Y or N

5) Received Within Holding Times Y or N

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

COC Record Present Upon Sample Rec'd Y or N

Cooler Temp C

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

COMPUCHEM
a division of Liberty Analytical Corp.

24/FEB/99

IT CORPORATION
ATTN: MS. MARY HALL
304 DIRECTORS DRIVE
KNOXVILLE, TN 37923

Subject: Report of Data - Account Number 501218

ATTN: MS. MARY HALL

Enclosed are the results of analytical work and associated Quality Control data for the samples received by CompuChem under the referenced account number.

As you know, CLP service is performed in accordance with EPA methodologies as defined for the National Contract Laboratory Program; 'SOW For Organic Analysis; Multi-Media, Multi-Concentration'. Your original data has been stored and is available for future reference.

Thank you for selecting CompuChem Environmental for your sample analysis. We would like to continue providing you analytical support and services in the future. If you should have questions or require additional analytical services, please contact your representative at 1-919-406-1600.

Sincerely,

Chuck Scott

Report Preparation

Attachment

501 Madison Avenue ■ Cary, N.C. 27513 ■ Tel: 919-379-4100 ■ Fax: 919-379-4050

COMPUCHEM
a division of Liberty Analytical Corp.

24/FEB/99

IT CORPORATION
ATTN: MS. MARY HALL
304 DIRECTORS DRIVE
KNOXVILLE, TN 37923

ACCOUNT #: 501218

CC#	SAMPLE-ID	RECEIPT DATE
929102	11795206	2/16/99
929107	11795306	2/16/99
929108	11795406	2/16/99
929109	11795506	2/16/99
929110	11795606	2/16/99
929111	11795706	2/16/99
929112	11795806	2/16/99
929113	11795906	2/16/99
929114	11796006	2/16/99
929115	11796106	2/16/99
929116	11796206	2/16/99
929117	11796306	2/16/99
929118	11796406	2/16/99
929119	11796506	2/16/99

TOTAL NUMBER OF SAMPLES = 14

501 Madison Avenue ■ Cary, N.C. 27513 ■ Tel: 919-379-4100 ■ Fax: 919-379-4050

Compuchem Environmental

I. SAMPLE DATA PACKAGE

SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field and analytical samples, reanalyses, blanks, spikes, duplicates, and laboratory control samples. The sample data package consists of the following:

A. Cover Page

B. Sample Data

C. Chain-of-Custody (CoC) Documentation

LAB CODE : COMPU

CONTRACT # : SW-846

CASE # : 34121

SDG # : ØØØØ2

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121 SAS No.: _____ SDG No.:00002_

SOW No.: SW846__

EPA Sample No.	Lab Sample ID
_LEACH_BLANK__	_929610_____
_11795206_____	_929102_____
_11795206D____	_929106_____
_11795206S____	_929103_____
_11795306_____	_929107_____
_11795406_____	_929108_____
_11795506_____	_929109_____
_11795606_____	_929110_____
_11795706_____	_929111_____
_11795806_____	_929112_____
_11795906_____	_929113_____
_11796006_____	_929114_____
_11796106_____	_929115_____
_11796206_____	_929116_____
_11796306_____	_929117_____
_11796406_____	_929118_____
_11796506_____	_929119_____
_____	_____
_____	_____
_____	_____

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 floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Thomas R. Cole for Name: Carol J. Yandell

Date: February 24, 1999 Title: Laboratory Manager

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

INORGANIC CASE SUMMARY NARRATIVE
CASE # 34121 SDG # 00002
PROTOCOL # SW-846

The indicated Sample Delivery Group (SDG) consisting of fourteen (14) soil samples was received into the laboratory management system (LIMS) on February 16, 1999 intact and in good condition with Chain of Custody (COC) records in order. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared as leachates then analyzed for the antimony, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium using analytical methods delineated in SW-846 (Third Edition)-Update III.

SAMPLE IDs:

The following customer IDs are associated with this SDG:

11795206	11795306	11795406	11795506	11795606	11795706
11795806	11795906	11796006	11796016	11796206	11796306
11796406	11796506				

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, CCB) and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSW & PBW) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

Due to insufficient sample volume, only one matrix spike sample was prepared and analyzed.

The sample matrix spike, CCN = 929103 (11795206S) was found to be inside control limits for the requested analytes.

SW-846 control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more; in this case effected analytes are not flagged even if recoveries fall outside percentage recovery control limits.

The sample matrix duplicate, CCN = 929106 (11795206D) was inside control limits for the requested analytes.

SW-846 control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 929102 (11795206L) was performed in accordance with SW-846 requirements for ICP analysis.

The adjusted sample concentrations were inside control limits for all requested analytes.

SW-846 control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution-adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

This SDG package was processed using the Ward Scientific software. This software package has a seven character limitation on the Forms 13 and 14 -- any sample ID's which exceed seven characters are truncated from left to right on these forms.

Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Thomas R. Cole

Thomas R. Cole
Chemist II
February 24, 1999

Note: This report is paginated for reference and accountability.

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I, under the column labeled "C" for concentration qualifier and "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each analyte.

The C (concentration) qualifiers used are:

U: This flag indicates the analyte was analyzed for but not detected. This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL). The IDL will be adjusted to reflect any dilution and, for soils, the percent moisture.

B: This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

The Q qualifiers used are:

E: This flag indicates an estimated value. This flag is used:

1. When the serial dilution (a five fold dilution for CLP and a four fold dilution for SW-846 method 6010A) results are not within 10%. The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample).
2. When the analytical spike recovery associated with the sample is below 40% after two successive dilutions by Graphite Furnace Atomic Absorption (GFAA).

M: This flag applies to GFAA analyses for concentrations greater than the Contract Required Detection Limit (CRDL). This flag is only used for GFAA if the analytical sample or analytical spike duplicate injection reading is not within 20% of the Relative Standard Deviation (RSD).

N: This flag indicates the sample spike recovery is outside of control limits:

*: This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits.

S: This flag applies to GFAA analyses to indicate the reported value was determined by the Method of Standard Additions (MSA).

W: This flag applies to GFAA analyses when the post-digestion spike (analytical spike) is out of control limits (85% - 115%), while sample absorbance is less than 50% of "spike" absorbance ["spike" is defined as (absorbance or concentration of spike sample) minus (absorbance or concentration of the sample)].

+: This flag applies to GFAA analyses when the correlation coefficient for the MSA is less than 0.995 after two MSA analyses.

NOTE: Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

The extensions: D, S, M, L, A, added to the end of the client ID represent as follows:

D: matrix duplicate
S: matrix spike
M: matrix spike duplicate
L: serial dilution
A: post digestion spike

B. Sample Data

1. Results
2. Quality Control Data
3. Quarterly Verification of Instrument Performance
4. Raw Data
5. Digestion and Distillation Logs

LAB CODE : COMPU

CONTRACT # : SW-846

CASE # : 34121

SDG # : ØØØØ2

1. Results

Sample results shall be arranged in packets with the Inorganic Analysis Data Sheet (Form I - IN). These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers, and shall include all the samples in the SDG.

U.S. EPA - CLP

2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LEACH BLANK

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929610

Level (low/med): LOW__ Date Received: 02/22/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.2	B	N	P_
7440-39-3	Barium___	1.3	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	0.20	U		P_
7440-47-3	Chromium_	0.80	U		P_
7439-92-1	Lead_____	2.7	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	8.6	B		P_
7782-49-2	Selenium_	14.1	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

000064

3/17/99.

U.S. EPA - CLP

2294

1

EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

11795206

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929102

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	8.7	B	N	P_
7440-39-3	Barium___	218	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.2	B		P_
7440-47-3	Chromium_	111	B		P_
7439-92-1	Lead_____	110	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	10.5	B		P_
7782-49-2	Selenium_	529	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

Duplicate_(11795206D)

FORM I - IN

SW846

MH 3/17/99

U.S. EPA - CLP

2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795306

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929107

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	4.5	B	N	P_
7440-39-3	Barium___	213	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	19.8	B		P_
7440-47-3	Chromium_	5.8	B		P_
7439-92-1	Lead____	1880			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	293	B		P_
7782-49-2	Selenium_	282	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

000066 SW846

MH
3/17/99

U.S. EPA - CLP

2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795406

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929108

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	7.4	B	N	P_
7440-39-3	Barium___	168	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	15.0	B		P_
7440-47-3	Chromium_	33.2	B		P_
7439-92-1	Lead_____	120	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	14.8	B		P_
7782-49-2	Selenium_	582	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

000067

3/17/99

U.S. EPA - CLP

2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795506

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929109

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	B		P_
7440-38-2	Arsenic__	7.6	B	N	P_
7440-39-3	Barium___	222	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	15.5	B		P_
7440-47-3	Chromium_	13.4	B		P_
7439-92-1	Lead_____	626	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	60.4	B		P_
7782-49-2	Selenium_	394	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

000068 SW846

MN 3/17/99

U.S. EPA - CLP

2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795606

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929110

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	2.2	B		P_
7440-38-2	Arsenic__	36.4		N	P_
7440-39-3	Barium___	426	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	22.9	B		P_
7440-47-3	Chromium_	4.4	B		P_
7439-92-1	Lead_____	5760			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	434	B		P_
7782-49-2	Selenium_	326	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

SW846

000069

MN 3/17/99

U.S. EPA - CLP 2294

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795706

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929111

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	4.5	B	N	P_
7440-39-3	Barium___	201	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	14.4	B		P_
7440-47-3	Chromium_	174	B		P_
7439-92-1	Lead_____	87.8	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	2.2	B		P_
7782-49-2	Selenium_	576	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

MN
3/17/99

U.S. EPA - CLP 2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795806

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929112

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	3.9	B	N	P_
7440-39-3	Barium___	284	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	19.3	B		P_
7440-47-3	Chromium_	175	B		P_
7439-92-1	Lead_____	147	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	2.5	B		P_
7782-49-2	Selenium_	239	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

MN 3/17/99

U.S. EPA - CLP 2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11795906

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929113

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	2.0	B		P_
7440-38-2	Arsenic__	149		N	P_
7440-39-3	Barium___	196	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	20.1	B		P_
7440-47-3	Chromium_	110	B		P_
7439-92-1	Lead_____	391	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	40.9	B		P_
7782-49-2	Selenium_	460	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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U.S. EPA - CLP 2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11796006

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929114

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	13.5	B	N	P_
7440-39-3	Barium___	58.2	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	23.9	B		P_
7440-47-3	Chromium_	13.4	B		P_
7439-92-1	Lead_____	160000			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	768	B		P_
7782-49-2	Selenium_	198	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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U.S. EPA - CLP

2294

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11796106

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929115

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.0	B		P_
7440-38-2	Arsenic__	40.7		N	P_
7440-39-3	Barium___	371	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	20.2	B		P_
7440-47-3	Chromium_	6.8	B		P_
7439-92-1	Lead_____	13100			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	463	B		P_
7782-49-2	Selenium_	310	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

000074

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11796206

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929116

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	61.6		N	P_
7440-39-3	Barium___	398	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	23.6	B		P_
7440-47-3	Chromium_	9.8	B		P_
7439-92-1	Lead_____	55300			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	642	B		P_
7782-49-2	Selenium_	301	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

SW846

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1

2294 EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

11796306

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929117

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	47.1	B	N	P_
7440-39-3	Barium___	162	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	23.1	B		P_
7440-47-3	Chromium_	5.8	B		P_
7439-92-1	Lead_____	13700			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	522	B		P_
7782-49-2	Selenium_	292	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

000076

SW846

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11796406

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929118

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	112		N	P_
7440-39-3	Barium___	235	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.5	B		P_
7440-47-3	Chromium_	59.1	B		P_
7439-92-1	Lead_____	507	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	151	B		P_
7782-49-2	Selenium_	502	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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3/17/99

U.S. EPA - CLP **2294**

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11796506

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Lab Sample ID: 929119

Level (low/med): LOW__ Date Received: 02/16/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	2.1	B		P_
7440-38-2	Arsenic__	151		N	P_
7440-39-3	Barium___	362	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	16.8	B		P_
7440-47-3	Chromium_	129	B		P_
7439-92-1	Lead_____	461	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	22.9	B		P_
7782-49-2	Selenium_	424	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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2. Quality Control Data

a. Initial and Continuing Calibration Verification
[Form II (Part 1) - IN]

b. CRDL Standard for AA (if applicable) and ICP
[Form II (Part 2) - IN]

c. Blanks
[Form III - IN]

d. ICP Interference Check Sample
[Form IV - IN]

e. Spike Sample Recovery
[Form V (Part 1) - IN]

f. Post Digest Spike Sample Recovery
[Form V (Part 2) - IN]

g. Duplicates
[Form VI - IN]

h. Laboratory Control Sample
[Form VII - IN]

i. Standard Addition Results (if applicable)
[Form VIII - IN]

j. ICP Serial Dilutions
[Form IX - IN]

k. Preparation Log
[Form XIII - IN]

l. Analysis Run Log
[Form XIV - IN]

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2294

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony	1000.0	989.60	99.0	1000.0	1001.00	100.1	997.40	99.7	P
Barium	2009.0	2168.00	107.9	1000.0	1049.00	104.9	1043.00	104.3	P
Beryllium	476.0	503.90	105.9	1000.0	1026.00	102.6	1020.00	102.0	P
Cadmium	510.0	502.50	98.5	1000.0	986.70	98.7	981.40	98.1	P
Chromium	471.0	484.80	102.9	1000.0	995.20	99.5	988.70	98.9	P
[illegible]	101.8	100.00	98.2	1000.0	1007.00	100.7	1001.00	100.1	P
Mercury	4.1	3.82	93.2	5.0	5.26	105.2	5.31	106.2	CV
Nickel	497.0	496.80	100.0	1000.0	990.90	99.1	984.50	98.4	P
Selenium	101.4	96.46	95.1	1000.0	1017.00	101.7	1012.00	101.2	P
Silver	487.0	501.40	103.0	100.0	102.20	102.2	102.70	102.7	P
Thallium	98.9	99.88	101.0	1000.0	1033.00	103.3	1026.00	102.6	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_				1000.0	1024.00	102.4	979.20	97.9	P_
Barium___				1000.0	1081.00	108.1	1028.00	102.8	P_
Beryllium				1000.0	1049.00	104.9	999.80	100.0	P_
dmium__				1000.0	1007.00	100.7	962.50	96.2	P_
[illegible]mium_				1000.0	1019.00	101.9	971.00	97.1	P_
[illegible]				1000.0	1030.00	103.0	1002.00	100.2	P_
Mercury__				5.0	5.35	107.0	5.35	107.0	CV
Nickel___				1000.0	1013.00	101.3	966.20	96.6	P_
Selenium_				1000.0	1037.00	103.7	989.30	98.9	P_
Silver___				100.0	101.50	101.5	101.30	101.3	P_
Thallium_				1000.0	1055.00	105.5	1009.00	100.9	P_

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

·te	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)	M
..timony_				1000.0	1025.00	102.5	1013.00	101.3	P
Barium___				1000.0	1075.00	107.5	1062.00	106.2	P
Beryllium				1000.0	1050.00	105.0	1034.00	103.4	P
dmium__				1000.0	1014.00	101.4	992.90	99.3	P
C mium_				1000.0	1022.00	102.2	1006.00	100.6	P
D				1000.0	1034.00	103.4	1018.00	101.8	P
Mercury__									NR
Nickel___				1000.0	1019.00	101.9	998.00	99.8	P
Selenium_				1000.0	1033.00	103.3	1018.00	101.8	P
Silver___				100.0	100.80	100.8	100.40	100.4	P
Thallium_				1000.0	1059.00	105.9	1043.00	104.3	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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2B
LOW RANGE STANDARD FOR AA AND ICP

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

AA CRDL Standard Source: SPEX_____

ICP CRDL Standard Source: LRS_____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Antimony_				10.0	9.13	91.3		
Barium___				10.0	10.82	108.2		
Beryllium				5.0	5.02	100.4		
Cadmium__				5.0	5.64	112.8		
Chromium_				5.0	4.85	97.0		
Lead____				3.0	2.24	74.7		
Mercury__	0.2	0.26	130.0					
Nickel___				5.0	5.09	101.8		
Selenium_				5.0	3.81	76.2		
Silver___				5.0	5.31	106.2		
Thallium_				10.0	9.52	95.2		

3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

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	Prepa-ration Blank	C	M
[illegible]ony	1.0	U	1.0	U	-1.2	B	1.0	U	1.00	U	P
[illegible]um	0.2	U	0.2	U	0.2	B	0.3	B	0.23	B	P
[illegible]llium	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	P
[illegible]ium	0.2	U	0.2	U	0.2	U	0.2	B	0.20	U	P
Chromium	0.8	U	0.8	U	0.8	U	0.8	U	0.80	U	P
Lead	0.7	U	-0.8	B	-1.0	B	0.7	U	0.70	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.10	U	CV
Nickel	0.8	U	0.8	U	0.8	U	0.8	U	0.80	U	P
Selenium	2.6	U	2.6	U	2.6	U	2.6	U	2.60	U	P
Silver	0.4	U	0.4	U	0.4	U	0.4	U	0.40	U	P
Thallium	2.4	U	2.5	B	4.5	B	2.4	U	2.40	U	P

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3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony			1.0	U	1.0	U	1.0	U			P
Arsenic			0.3	B	0.3	B	0.3	B			P
Beryllium			0.5	U	0.5	U	0.5	U			P
Cadmium			0.2	U	0.2	U	0.2	U			P
Chromium			0.8	U	0.8	U	0.8	U			P
Lead			2.2	B	0.7	U	0.7	U			P
Mercury			0.1	U							CV
Nickel			0.8	U	0.8	U	0.8	U			P
Selenium			2.6	U	2.6	U	2.6	U			P
Silver			0.4	U	0.4	U	0.4	U			P
Thallium			2.9	B	2.4	U	2.4	U			P

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4

ICP INTERFERENCE CHECK SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony_	0	600	2	638.3	106.4	4	629.8	105.0
Barium___	0	500	1	566.0	113.2	1	559.6	111.9
Beryllium	0	500	0	512.7	102.5	0	506.4	101.3
Cadmium__	0	1000	-4	967.4	96.7	-4	957.4	95.7
Chromium_	21	500	2	501.7	100.3	1	496.8	99.4
Lead_____	0	50	-5	45.3	90.6	-5	45.2	90.4
Mercury__								
Nickel___	0	1000	2	997.8	99.8	2	988.2	98.8
Selenium_	0	50	-2	54.8	109.6	-1	51.9	103.8
Silver___	0	200	0	204.7	102.3	0	201.2	100.6
Thallium_	0	100	14	109.0	109.0	0	101.4	101.4

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2294

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

11795206S

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75-125	493.1500	B	5.0000	U	500.00	98.6		P
Barium	75-125	2269.5000	B	217.6000	B	2000.00	102.6		P
Beryllium	75-125	48.3600	B	2.5000	U	50.00	96.7		P
Cadmium	75-125	67.4500	B	20.1900	B	50.00	94.5		P
Chromium	75-125	301.4500	B	111.0500	B	200.00	95.2		P
Lead		134.3500	B	110.4500	B	20.00	119.5		P
Mercury	75-125	1.0080	B	0.1000	U	1.00	100.8		CV
Nickel	75-125	485.1000	B	10.4550	B	500.00	94.9		P
Selenium		536.5000	B	529.0000	B	10.00	75.0		P
Silver	75-125	50.9000	B	2.0000	U	50.00	101.8		P
Thallium	75-125	43.4750	B	12.0000	U	50.00	86.9		P

Comments:

FORM V (Part 1) - IN

000087

SW846

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6
DUPLICATES

EPA SAMPLE NO.

11795206D

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Level (low/med): _LOW__

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony_		5.0000	U	5.0000	U			P
Barium___		217.6000	B	216.4500	B	0.5		P
Beryllium		2.5000	U	2.5000	U			P
Cadmium__		20.1900	B	20.3050	B	0.6		P
Chromium_		111.0500	B	110.4500	B	0.5		P
Lead_____		110.4500	B	113.0500	B	2.3		P
Mercury__		0.1000	U	0.1000	U			CV
Nickel___		10.4550	B	6.9900	B	39.7		P
Selenium_		529.0000	B	531.5000	B	0.5		P
Silver___		2.0000	U	2.0000	U			P
Thallium_		12.0000	U	12.0000	U			P

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LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Solid LCS Source: _____

Aqueous LCS Source: PELMER_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony	6000.0	5552.00	92.5						
Barium	20000.0	19290.00	96.4						
Beryllium	500.0	470.80	94.2						
Cadmium	500.0	449.20	89.8						
Chromium	1000.0	898.60	89.9						
Cobalt	300.0	271.90	90.6						
Mercury									
Nickel	4000.0	3555.00	88.9						
Selenium	500.0	461.90	92.4						
Silver	1000.0	931.40	93.1						
Thallium	1000.0	922.20	92.2						

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LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Solid LCS Source: _____

Aqueous LCS Source: IVT_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
mony									
um									
Beryllium									
admium									
romium									
cury	3.0	2.71	90.4						
Nickel									
Selenium									
Silver									
Thallium									

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STANDARD ADDITION RESULTS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract:SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.:_____ SDG No.:00002_

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q

000091

FORM VIII - IN SW846

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U.S. EPA - CLP

9
ICP SERIAL DILUTION

2294 EPA SAMPLE NO.

11795206L

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

Matrix (soil/water): WATER Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	5.00	U	25.00	U			P
Barium	217.60	B	218.97	B	0.6		P
Beryllium	2.50	U	12.50	U			P
Cadmium	20.20	B	17.47	B	13.6		P
Chromium	111.05	B	116.07	B	4.5		P
Lead	110.45	B	128.07	B	15.9		P
Mercury							NR
Nickel	10.45	B	20.00	U	100.0		P
Selenium	529.00	B	529.25	B	0.0		P
Silver	2.00	U	10.00	U			P
Thallium	12.00	U	60.00	U			P

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13
PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34121_ SAS No.: _____ SDG No.:00002_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
1795206	02/23/99		50
1795206D	02/23/99		50
1795206S	02/23/99		50
1795306	02/23/99		50
1795406	02/23/99		50
1795506	02/23/99		50
1795606	02/23/99		50
1795706	02/23/99		50
1795806	02/23/99		50
1795906	02/23/99		50
1796006	02/23/99		50
1796106	02/23/99		50
1796206	02/23/99		50
1796306	02/23/99		50
1796406	02/23/99		50
1796506	02/23/99		50
CSW	02/23/99		50
EACH BLANK	02/23/99		50
BW	02/23/99		50

FORM XIII - IN

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PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34121_ SAS No.: _____ SDG No.:00002_

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
1795206	02/23/99		100
1795206D	02/23/99		100
1795206S	02/23/99		100
1795306	02/23/99		100
1795406	02/23/99		100
1795506	02/23/99		100
1795606	02/23/99		100
1795706	02/23/99		100
1795806	02/23/99		100
1795906	02/23/99		100
1796006	02/23/99		100
1796106	02/23/99		100
1796206	02/23/99		100
1796306	02/23/99		100
1796406	02/23/99		100
1796506	02/23/99		100
CSW	02/23/99		100
EACH BLANK	02/23/99		100
BW	02/23/99		100

FORM XIII - IN SW846

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ANALYSIS RUN LOG

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Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00002_

Instrument ID Number: V2_____ Method: CV

Start Date: 02/23/99 End Date: 02/23/99

EPA Sample No.	D/F	Time	% R	Analytes																							
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL													
	1.00	1255								X																	
S0.2	1.00	1258								X																	
S0.5	1.00	1300								X																	
S1	1.00	1302								X																	
S5	1.00	1305								X																	
S10	1.00	1307								X																	
TCV	1.00	1310								X																	
B	1.00	1312								X																	
[illegible]	1.00	1314								X																	
[illegible]	1.00	1316								X																	
CCB	1.00	1319								X																	
PBW	1.00	1321								X																	
LCSW	1.00	1323								X																	
11795206	1.00	1326								X																	
1795206D	1.00	1328								X																	
1795206S	1.00	1330								X																	
ZZZZZZ	1.00	1332																									
11795306	1.00	1334								X																	
11795406	1.00	1337								X																	
11795506	1.00	1339								X																	
11795606	1.00	1341								X																	
CCV	1.00	1343								X																	
CCB	1.00	1346								X																	
11795706	1.00	1348								X																	
11795806	1.00	1350								X																	
11795906	1.00	1352								X																	
11796006	1.00	1355								X																	
11796106	1.00	1358								X																	
11796206	1.00	1400								X																	
11796306	1.00	1402								X																	
11796406	1.00	1404								X																	
11796506	1.00	1406								X																	

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00002_

Instrument ID Number: V2_____ Method: CV

Start Date: 02/23/99 End Date: 02/23/99

EPA Sample No.	D/F	Time	% R	Analytes																							
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL													
CH BLANK	1.00	1409								X																	
CCV	1.00	1411								X																	
CCB	1.00	1413								X																	
CCV	1.00	1415								X																	
[illegible]	1.00	1418								X																	

FORM XIV - IN

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00002_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/23/99 End Date: 02/23/99

EPA Sample No.	D/F	Time	% R	Analytes										
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL
S0	1.00	1057		X	X	X	X	X	X		X	X	X	X
S	1.00	1104					X	X	X		X	X	X	X
S	1.00	1111												
S	1.00	1117												
S	1.00	1123			X	X								
S	1.00	1129												
S	1.00	1136		X										
CV	1.00	1143			X	X	X	X			X		X	
	1.00	1149							X			X		X
	1.00	1156		X										
ICB	1.00	1203		X	X	X	X	X	X		X	X	X	X
CRI	1.00	1210												
ICSA	1.00	1217		X	X	X	X	X	X		X	X	X	X
ICSAB	1.00	1225		X	X	X	X	X	X		X	X	X	X
CCV	1.00	1232		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1239		X	X	X	X	X	X		X	X	X	X
CCV	1.00	1251		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1258		X	X	X	X	X	X		X	X	X	X
LRS	1.00	1305		X	X	X	X	X	X		X	X	X	X
ZZZZZZ	1.00	1312												
ZZZZZZ	1.00	1318												
ZZZZZZ	1.00	1325												
ZZZZZZ	1.00	1332												
PBW	1.00	1339		X	X	X	X	X	X		X	X	X	X
LCSW	1.00	1346		X	X	X	X	X	X		X	X	X	X
11795206	1.00	1353												
1795206D	1.00	1400												
1795206S	1.00	1407												
CCV	1.00	1414		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1421		X	X	X	X	X	X		X	X	X	X
ZZZZZZ	1.00	1428												
11795206	5.00	1435		X	X	X	X	X	X		X	X	X	X

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ANALYSIS RUN LOG

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Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00002_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/23/99 End Date: 02/23/99

EPA Sample No.	D/F	Time	% R	Analytes											
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL	
11795306	1.00	1458		X	X	X	X	X	X	_	X	X	X	X	
11795406	1.00	1505		X	X	X	X	X	X	_	X	X	X	X	
11795506	1.00	1512		X	X	X	X	X	X	_	X	X	X	X	
11795606	1.00	1519		X	X	X	X	X	X	_	X	X	X	X	
11795706	1.00	1526		X	X	X	X	X	X	_	X	X	X	X	
11795806	1.00	1539		X	X	X	X	X	X	_	X	X	X	X	
11795906	1.00	1546		X	X	X	X	X	X	_	X	X	X	X	
1796006	1.00	1553													
	1.00	1559		X	X	X	X	X	X	_	X	X	X	X	
	1.00	1606		X	X	X	X	X	X	_	X	X	X	X	
11796106	1.00	1613		X	X	X	X	X	X	_	X	X	X	X	
11796206	1.00	1620		_	_	_	_	_	_	_	_	_	_	_	
11796306	1.00	1627		_	_	_	_	_	_	_	_	_	_	_	
11796406	1.00	1634													
11796506	1.00	1641		X	X	X	X	X	X	_	X	X	X	X	
CH BLANK	1.00	1658		X	X	X	X	X	X	_	X	X	X	X	
1795206D	5.00	1705		X	X	X	X	X	X	_	X	X	X	X	
1795206S	5.00	1712		X	X	X	X	X	X	_	X	X	X	X	
1795206L	25.00	1719		X	X	X	X	X	X	_	X	X	X	X	
CCV	1.00	1726		X	X	X	X	X	X	_	X	X	X	X	
CCB	1.00	1733		X	X	X	X	X	X	_	X	X	X	X	
11796006	5.00	1740		X	X	X	X	X	X	_	X	X	X	X	
11796206	5.00	1747		X	X	X	X	X	X	_	X	X	X	X	
11796306	5.00	1754		X	X	X	X	X	X	_	X	X	X	X	
11796406	5.00	1801		X	X	X	X	X	X	_	X	X	X	X	
ZZZZZZ	1.00	1808		_	_	_	_	_	_	_	_	_	_	_	
CRI	1.00	1815													
ICSA	1.00	1822		X	X	X	X	X	X	_	X	X	X	X	
ICSAB	1.00	1828		X	X	X	X	X	X	_	X	X	X	X	
CCV	1.00	1835		X	X	X	X	X	X	_	X	X	X	X	
CCB	1.00	1842		X	X	X	X	X	X	_	X	X	X	X	
				_	_	_	_	_	_	_	_	_	_	_	
				_	_	_	_	_	_	_	_	_	_	_	

FORM XIV - IN

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3. Quarterly Verification of Instrument Performance

a. Instrument Detection Limits (Quarterly)
[Form X - IN]

b. ICP Interelement Correction Factors (Annually)
[Form XI (Part 1) - IN]

c. ICP Interelement Correction Factors (Annually)
[Form XI (Part 2) - IN]

d. ICP Linear Ranges (Quarterly)
[Form XII - IN]

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10

Instrument Detection Limits (Quarterly)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: _____ Date: 12/24/98

Flame AA ID Number : V2_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Antimony			1150		NR
Barium			21000		NR
Beryllium			1220		NR
Cadmium			110		NR
Chromium			800		NR
Lead			750		NR
Mercury	253.70		25.0	0.1	CV
Nickel			11000		NR
Selenium			5700		NR
Silver			140		NR
Thallium			200		NR

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ Date: 02/01/99

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Antimony	206.84		1150	1.0	P
Barium	493.41		21000	0.2	P
Beryllium	313.04		1220	0.5	P
Cadmium	226.50		110	0.2	P
Chromium	267.72		800	0.8	P
Lead	220.35		750	0.7	P
Mercury			25.0		NR
Nickel	231.60		11000	0.8	P
Selenium	196.03		5700	2.6	P
Silver	328.07		140	0.4	P
Thallium	190.86		200	2.4	P

Comments:

FORM X - IN

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	BA_
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0000910	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0001090	0.0000000	-0.0000260	0.0000000	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.03	0.0000000	0.0000000	-0.0001380	0.0000000	0.0000000
Silver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	0.0000000	0.0000000	-0.0024320	0.0000000	0.0000000

Comments:

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11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : BE_	CD_	CO_	CR_	CU_
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0032000	0.0000000
·ium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
·llium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
.um	226.50	0.0000000	0.0000000	-0.0001220	0.0000000	0.0000000
·hromium_	267.72	0.0000810	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0000000	0.0000000	-0.0001090	0.0000000	0.0000000
Mercury__						
ickel	231.60	0.0000880	0.0000000	0.0000000	0.0000000	0.0000000
enium_	196.03	0.0000000	0.0000000	0.0000690	0.0000000	0.0000000
ver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	0.0000000	0.0000000	0.0026730	0.0003390	0.0000000

Comments:

U.S. EPA - CLP

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11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : MN_	MO_	NI_	SB_	SN_
Antimony_	206.84	0.0000000	0.0027990	-0.0001560	0.0000000	-0.0008685
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0000000	0.0000000	0.0001160	0.0000000	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	-0.0009020	0.0000000
Selenium_	196.03	0.0001380	0.0000000	0.0000000	0.0000000	0.0000000
Silver___	328.07	0.0000720	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	-0.0010960	-0.0002290	0.0000000	0.0000000	0.0000000

Comments:

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : TI_	V__	ZN_	___	___
Antimony_	206.84	0.0001630	0.0009140	0.0000000		
Arsenic	493.41	0.0000000	0.0000000	0.0000000		
Beryllium	313.04	0.0000000	0.0001370	0.0000000		
Cadmium	226.50	0.0000000	0.0000000	0.0000000		
Chromium	267.72	0.0000000	0.0002610	0.0000000		
Lead	220.35	-0.0001765	-0.0000600	0.0000000		
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000		
Selenium	196.03	0.0000000	0.0000225	0.0000000		
Silver	328.07	0.0000000	0.0000000	0.0000000		
Thallium	190.86	0.0016540	0.0016560	0.0000000		

Comments:

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00002_

ICP ID Number: ICP3_____ Date: 01/29/99

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Antimony	15.00	10000.0	P
Barium	15.00	120000.0	P
Beryllium	15.00	5000.0	P
Cadmium	15.00	30000.0	P
Chromium	15.00	40000.0	P
Lead	15.00	40000.0	P
Mercury			NR
Nickel	15.00	50000.0	P
Selenium	15.00	50000.0	P
Silver	15.00	4000.0	P
Thallium	15.00	50000.0	P

Comments:

4. Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the Quarterly Verification of Instrument Parameters submitted as a part of each data package.

The order of the raw data in the data package shall be: ICP, Flame AA (if used), Furnace AA (if used), mercury, and cyanide (if a target analyte).

Raw data shall be labeled using EPA sample number convention in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, interference check samples, ICP serial dilution samples, CRDL standard for ICP and AA (if used), Laboratory Control Sample, and post digestion spike
- diluted and undiluted samples (by client ID number) and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes
- instrument used, including all data voided or data not used and a brief written explanation
- all information for furnace analysis (if used)
- date and time of each analysis (instrument run logs can be submitted if they contain this information
- integration time for AA analyses (if used)

Trace ICP Runlog (P3)

Part (A) of a two part form

Method (Circle one.):
CLP ILM04.0
~~SW-846 6010B~~
MCAWW 200.7

Case: 34121 / 00002
34141 / 30701

Date: 2/23/99

Operator: P. Wong / C. Yiswell

File name: P0223

WSL.NAME P30223.wsl

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	SO			1	123123		
	XCL-11			2	929102	1ml in 5ml (5x)	fr all
	STD3			3	929107		
	XCL-2			4	929108		
	XCL-3A			5	929109		
	PLSBR			6	929110		
	ICV			7	929111		
	ICB			8	929112		
	CRI			9	929113		
	ICSA			10	929114		Dil required
	ICSAB				CCV - 4		
	CCV-1 / CCV-2				CCB - 4		
	CCB-1 / CCB-2			1	929115		
1	LRS			2	929116		Dil required
2	929667	PBW		3	929117		↓
3	929481	LCSW		4	929118		
4	929478			5	929119		
5	929489			6	929610	Leach BLK	
6	929477	PBW		7	929106	2ml in 10ml (5x)	
7	929105	Resin		8	929103	↓	
8	929102		Dil required	9	929102	SDI 0.4ml in 10ml (25x)	
9	929106	Dup	↓	10	~~929102~~ 929103 ~~PDS~~		
10	929103	Spk			CCV - 5		
	CCV - 3				CCB - 5		
	CCB - 3						

COMMENTS

Reviewed By: Thomas R. Cole

Date: 2-24-99

Trace ICP Runlog (P3)

Part (B) of a two part form

Method (Circle one.):
CLP ILM04.0
~~SW-846 6010B~~
MCAWW 200.7

Case: SAME
Date: 2/24/99
Operator: SAME
File name:
WSL.NAME

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
1	929114	2ml in 10ml (5x)		1	~~929128~~		
2	929116			2	929129	2294	
3	929117			3	929130		
4	929118			4	929131		
5	929329	PDS FeO 7800		5	929132		
6	CRI			6	929133		
7	ICSA			7	929134		
8	ICSAB			8	929135		
9	~~2/24/99~~			9	929136		
10				10	929137		
	CCV - L				CCV		
	CCB - L				CCB		
1	~~929294~~	~~PBW~~		1			
2	929123	LCSW		2			
3	929120			3			
4	929124	Dup		4			
5	929121	Spk		5			
6	929122	Spk		6			
7	929120 SDI	2ml in 10ml (5x)		7			
8	929125			8			
9	929126			9			
10	929127			10			
	CCV				CCV		
	~~CCB~~				CCB		

2/24/99

COMMENTS

Reviewed By: Thomas R. Cole
Date 2-24-99

Standardization Rpt. 02/23/99 11:04:35 AM page 1

Method: CLP3I Standard: BLANK

Run Time: 02/23/99 10:57:42

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Avge	-.0377	7.615	.0108	.3092	.0051	-.5325	-.0176
SDev	.0340	.024	.0195	.0041	.0000	.0361	.0034
%RSD	90.32	.3152	180.9	1.312	.0725	6.788	19.53
#1	.0010	7.588	.0264	.3054	.0051	-.5015	-.0213
#2	-.0510	7.633	.0171	.3088	.0051	-.5238	-.0145
#3	-.0630	7.625	-.0111	.3134	.0051	-.5722	-.0171

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Avge	.0236	.8506	.0179	.6521	.0341	.0341	.3854
SDev	.0065	.0097	.0081	.1005	.0039	.0008	.0226
%RSD	27.55	1.142	45.41	15.41	11.39	2.435	5.867
#1	.0307	.8530	.0102	.7598	.0350	.0350	.4056
#2	.0222	.8590	.0264	.6357	.0375	.0341	.3896
#3	.0179	.8400	.0171	.5608	.0299	.0333	.3610

Elem	Ni2316	Tl1908	V_2924	Zn2138	As1890	22031	22032
Avge	-.0193	-.2261	-.0071	-.0151	-.5135	1.409	-.0310
SDev	.0062	.0193	.0021	.0010	.0748	.171	.1432
%RSD	31.88	8.515	30.14	6.611	14.56	12.17	462.5
#1	-.0154	-.2045	-.0094	-.0145	-.5442	1.600	-.1936
#2	-.0264	-.2322	-.0068	-.0145	-.4282	1.357	.0247
#3	-.0162	-.2416	-.0051	-.0162	-.5680	1.269	.0760

Elem	20681	20682	19601	19602	Sn1899	Bi2230	Mo2020
Avge	-.0799	.0478	-.3303	.4273	-.0358	-.0823	.0245
SDev	.0860	.1036	.0625	.0768	.0181	.1897	.0538
%RSD	107.6	216.8	18.93	17.98	50.40	230.6	220.1
#1	-.0009	.1459	-.3054	.3719	-.0495	.0111	.0844
#2	-.1715	-.0606	-.2841	.3950	-.0154	.0427	-.0196
#3	-.0675	.0581	-.4014	.5150	-.0427	-.3006	.0085

Elem	Ti3349
Avge	.1095
SDev	.6397
%RSD	584.0
#1	.7515
#2	.1049
#3	-.5278

000110

[illegible] 2/99

Method: CLP3I Standard: XCL-11
'n Time: 02/23/99 11:04:38

2294

m	Ag3280	Cd2265	Cr2677	Cu3247	Ni2316	Tl1908	Zn2138
ge	22.13	823.6	33.58	130.2	29.80	34.08	24.53
SDev	.05	.3	.02	.4	.03	.05	.02
%RSD	.2056	.0366	.0592	.3009	.0848	.1448	.0840
#1	22.09	823.2	33.58	129.8	29.78	34.09	24.51
#2	22.12	823.7	33.61	130.3	29.83	34.12	24.55
#3	22.18	823.8	33.57	130.5	29.79	34.02	24.52

Elem	22031	22032	19601	19602
Avge	231.7	195.3	35.67	69.43
SDev	.3	.6	.09	.22
%RSD	.1220	.3182	.2626	.3190
#1	231.8	194.6	35.71	69.65
#2	231.9	195.8	35.73	69.41
#3	231.4	195.5	35.56	69.21

Method: CLP3I Standard: STD3
n Time: 02/23/99 11:11:33

2294

	Al3082	Ca3179	Fe2714	Mg2790
Mean	1771.	12.11	49.18	230.3
SDev	5.	.22	.96	4.5
%RSD	.2726	1.834	1.959	1.964
#1	1772.	12.24	49.75	233.2
#2	1775.	12.24	49.72	232.6
#3	1765.	11.85	48.07	225.1

Method: CLP3I Standard: STD3
Run Time: 02/23/99 11:17:43

2294

	Al3082	Ca3179	Fe2714	Mg2790
Avge	1775.	12.50	50.64	237.7
SDev	9.	.01	.06	.2
%RSD	.4954	.1073	.1283	.0997
#1	1765.	12.48	50.57	237.4
#2	1780.	12.50	50.64	237.9
#3	1780.	12.50	50.70	237.8

Method: CLP3I Standard: XCL-2
in Time: 02/23/99 11:23:04

2294

m	Ba4934	Be3130	Co2286	Mn2576	V 2924	As1890	Mo2020
e	411.3	1646.	124.3	48.25	15.87	152.0	118.9
Sdev	.6	2.	.2	.10	.02	.4	.2
%RSD	.1568	.1027	.1971	.2090	.1205	.2633	.1618
#1	412.0	1647.	124.5	48.33	15.88	151.8	119.1
#2	411.2	1647.	124.4	48.28	15.87	152.5	119.0
#3	410.7	1644.	124.0	48.13	15.85	151.8	118.7

Method: CLP3I Standard: XCL-3A
Run Time: 02/23/99 11:29:59

2294

[illegible]m	K 7664	Na3302
[illegible]e	733.9	38.52
SDev	.8	.07
%RSD	.1103	.1810
#1	733.0	38.47
#2	734.1	38.49
#3	734.6	38.60

Method: CLP3I Standard: PLSBR
Run Time: 02/23/99 11:36:53

2294

m	20681	20682	Sn1899	Bi2230	Ti3349
e	130.8	76.30	20.44	157.1	145.3
SDev	2.8	.94	.28	2.2	1.8
%RSD	2.117	1.231	1.382	1.391	1.223
#1	128.8	75.82	20.31	156.1	146.1
#2	129.6	75.71	20.25	155.6	143.3
#3	133.9	77.39	20.77	159.6	146.6

Method: CLP3I Sample Name: ICV1 Operator:
n Time: 02/23/99 11:43:01 2294
ment: ICV ICV1
: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	501.4	2011.	2168.	503.9	51640.	502.5	566.3
SDev	1.6	12.	43.	10.4	1067.	9.3	11.9
%RSD	.3198	.6206	1.981	2.058	2.067	1.850	2.099
#1	499.6	1997.	2131.	494.4	50690.	493.9	555.4
#2	502.0	2013.	2159.	502.3	51440.	501.3	564.5
#3	502.7	2022.	Q2215.	515.0	52790.	512.4	Q579.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	487.0	1956.	2009.	476.0	50710.	510.0	520.0
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	484.8	503.4	2024.	47860.	25000.	519.1	48950.
SDev	9.7	2.4	45.	897.	504.	10.3	872.
%RSD	2.000	.4745	2.238	1.874	2.017	1.990	1.782
#1	476.1	501.0	1977.	47100.	24550.	509.8	48150.
#2	482.9	503.3	2028.	47640.	24910.	517.2	48830.
#3	495.2	505.8	2068.	48850.	25540.	530.2	49880.
ors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
ue	471.0	497.0	1985.	49600.	24590.	491.0	48790.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
vge	496.8	-1.848	528.7	3098.	5097.	.9306	2.327
v	11.3	1.141	10.2	65.	103.	1.861	1.779
D	2.275	61.73	1.936	2.095	2.019	199.9	76.45
#1	487.8	-2.042	519.4	3040.	5002.	.1232	4.379
#2	493.1	-2.880	527.1	3086.	5081.	-.3900	1.393
#3	509.5	-.6230	539.7	3168.	5206.	3.059	1.210
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	497.0		492.0	3012.			
ange	10.00		10.00	10.00			

m	As1890	22031	22032	20681	20682	19601	19602
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0725	5125.	5083.	3.287	1.838	.1571	1.306
SDev	1.625	99.	105.	2.132	1.990	2.482	1.668
%RSD	2241.	1.937	2.061	64.88	108.3	1580.	127.7
#1	.5680	5036.	4985.	5.059	4.029	-1.728	1.037
#2	-1.742	5106.	5069.	3.880	.1410	-.7697	-.2109
#3	1.392	5232.	5194.	.9203	1.344	2.969	3.093
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.536	.2685	-.0107	-2.728
SDev	3.279	.9592	.5644	12.731
%RSD	129.3	357.3	5272.	466.8
#1	1.230	1.376	.1970	11.94
2	.1114	-.2996	.4204	-9.276
#3	6.267	-.2709	-.6496	-10.85
rs	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Analysis Report QC Standard 02/23/99 11:56:50 AM page 1

Method: CLP3I Sample Name: ICV3 Operator:
n Time: 02/23/99 11:49:57
mment: ICV ICV3
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	99.61	-2.471	.4962	.1290	-57.40	96.93	.3438
SDev	.26	1.821	.1583	.0306	3.38	.19	.4958
%RSD	.2655	73.71	31.89	23.69	5.887	.1943	144.2
#1	99.31	-.4715	.6711	.1617	-53.50	96.82	.9154
#2	99.81	-2.905	.4549	.1243	-59.30	97.15	.0303
#3	99.70	-4.035	.3628	.1011	-59.41	96.83	.0856
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1737	-.0876	-16.61	239.8	-3.329	-1.111	317.8
SDev	.4068	.0309	2.59	21.7	1.223	.040	164.7
%RSD	234.2	35.27	15.61	9.036	36.74	3.631	51.82
#1	.6086	-.0876	-19.44	263.6	-1.917	-1.064	455.7
#2	.1098	-.1185	-16.02	234.6	-4.018	-1.134	362.1
#3	-.1974	-.0567	-14.36	221.2	-4.052	-1.135	135.5
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6145	99.88	.1139	-3.711	100.0	96.46	1021.
SDev	.6874	2.30	.1618	.090	.6	.80	5.
%RSD	111.9	2.303	142.1	2.414	.6357	.8301	.5230
#1	.1631	99.43	.1502	-3.633	100.1	96.15	1015.
#2	-.8650	97.83	.2546	-3.692	100.7	95.85	1026.
#3	-1.142	102.4	-.0630	-3.809	99.41	97.36	1021.
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		98.90			98.80	101.4	
Range		10.00			10.00	10.00	

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	99.45	99.52	100.3	1022.	1020.	93.85	97.74
SDev	2.13	1.42	1.2	7.	5.	1.96	.36
%RSD	2.140	1.428	1.173	.6816	.4467	2.087	.3674
#1	99.76	101.2	99.49	1015.	1016.	92.58	97.92
#2	101.4	98.71	101.6	1028.	1025.	92.87	97.33
#3	97.18	98.69	99.75	1024.	1020.	96.11	97.98
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	101.8						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4110	2.618	.0207	6.070
SDev	2.557	2.965	.1375	15.63
%RSD	622.0	113.2	664.3	257.5
#1	2.427	4.243	.0438	23.44
#2	-2.465	4.415	.1452	1.621
#3	1.271	-.8035	-.1269	-6.853
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000118

~~63~~

Analysis Report QC Standard 02/23/99 12:03:46 PM

Method: CLP3I Sample Name: SPEXASSE Operator:
n Time: 02/23/99 11:56:53
mment: ICV SPEXASSE
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0119	46.20	.3849	-.0029	-65.04	.0569	-.6964
SDev	.2779	7.94	.1020	.0504	.05	.1618	.2212
%RSD	2328.	17.18	26.50	1766.	.0752	284.4	31.77
#1	.3038	51.25	.5007	.0262	-64.99	.2388	-.9138
#2	-.1202	50.29	.3459	.0263	-65.05	.0026	-.4715
#3	-.2194	37.05	.3082	-.0611	-65.08	-.0708	-.7040
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5381	.0605	-18.60	-4.773	-8.505	-1.250	173.6
SDev	.4453	.2894	6.12	17.604	1.615	.114	50.0
%RSD	82.76	478.6	32.87	368.8	18.99	9.109	28.78
#1	-.0272	-.0581	-11.56	15.19	-10.05	-1.202	216.2
#2	-.8441	-.1509	-22.56	-11.43	-6.830	-1.167	118.6
#3	-.7430	.3904	-21.69	-18.08	-8.633	-1.379	186.1
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8023	2.411	-12.77	-4.230	-.2822	1.379	989.6
SDev	.3658	1.097	.02	.118	.7807	1.337	4.9
%RSD	45.59	45.51	.1754	2.788	276.6	96.98	.4986
#1	-.6533	2.722	-12.79	-4.113	-.9569	1.733	990.6
#2	-.5345	3.319	-12.76	-4.348	-.4626	-.0997	994.0
#3	-1.219	1.192	-12.75	-4.228	.5728	2.504	984.3
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value							1000.
Range							10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4778	-.6719	-.0979	996.5	986.2	.7832	1.666
SDev	.3537	.5819	1.2264	3.4	6.8	3.028	.617
%RSD	74.02	86.60	1253.	.3427	.6907	386.7	37.03
#1	.1041	-1.079	-.9060	993.3	989.2	2.287	1.446
#2	.5220	-.0056	-.7011	1000.	990.9	-2.703	1.190
#3	.8073	-.9308	1.313	996.1	978.4	2.765	2.363
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	989.4	998.2	1035.	995.4
SDev	1.7	1.5	2.	18.1
%RSD	.1729	.1476	.1765	1.818
#1	988.1	997.6	1034.	1015.
#2	988.6	999.9	1034.	992.0
#3	991.3	997.2	1037.	979.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Analysis Report QC Standard 02/23/99 12:10:41 PM page 1

Method: CLP3I Sample Name: S0 Operator:
Analysis Time: 02/23/99 12:03:49
Segment: ICB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0722	-38.06	.0591	-.1159	-67.23	.0148	.2232
SDev	.1542	3.11	.0476	.0189	3.17	.1923	.2201
%RSD	213.7	8.161	80.59	16.33	4.722	1298.	98.65
#1	.2496	-41.44	.0935	-.0943	-70.89	.2311	-.0062
#2	-.0030	-37.42	.0047	-.1295	-65.49	-.0496	.4328
#3	-.0301	-35.32	.0792	-.1238	-65.30	-.1370	.2429
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0572	.7989	-3.425	1.975	-7.939	-.0196	185.1
SDev	.2598	.0893	7.336	17.46	.921	.0271	39.9
%RSD	454.5	11.18	214.2	884.3	11.60	138.7	21.58
#1	.1272	.9020	4.328	13.35	-8.586	.0077	229.0
#2	-.3544	.7474	-10.26	-18.13	-8.347	-.0198	150.9
#3	.0557	.7474	-4.346	10.71	-6.885	-.0466	175.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0478	2.363	-.0657	-3.867	-.1801	-.7578	-.2238
SDev	.3554	.188	.1009	.057	.1354	.4288	1.0268
%RSD	744.0	7.938	153.6	1.485	75.15	56.59	458.9
#1	.0890	2.149	.0310	-3.872	-.1362	-.9716	.3240
#2	-.4513	2.500	-.0577	-3.922	-.0722	-.2641	.4129
#3	.2189	2.440	-.1703	-3.808	-.3320	-1.038	-1.408
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0676	.1526	-.3565	-.4952	-.0984	.4722	-1.382
SDev	.5617	2.074	1.2338	1.2820	1.3601	2.412	1.233
%RSD	831.1	1359.	346.1	258.9	1382.	510.8	89.24
#1	-.7153	.0294	-.2292	.9850	-.0163	-2.244	-.3466
#2	.2267	-1.857	.8088	-1.221	1.219	1.296	-1.053
#3	.2859	2.285	-1.649	-1.249	-1.498	2.365	-2.747
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8802	1.853	-.0855	3.634
SDev	1.5137	2.338	.4708	6.984
%RSD	172.0	126.2	550.8	192.2
#1	.8190	4.487	.4113	11.07
#2	-2.084	1.047	-.1426	-2.790
#3	-1.375	.0243	-.5252	2.625
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000120

Method: CLP3I Sample Name: CRI Operator:
Run Time: 02/23/99 12:10:45
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.79	-18.19	.0645	10.20	-64.87	9.967	103.2
SDev	.47	2.59	.0789	.23	.51	.229	2.1
%RSD	2.359	14.25	122.4	2.219	.7904	2.294	2.080
#1	20.28	-19.84	.1512	10.11	-65.00	10.13	102.5
#2	19.73	-19.52	.0453	10.46	-64.30	10.06	105.6
#3	19.35	-15.20	-.0031	10.03	-65.30	9.705	101.5
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.32	50.35	-13.66	5.511	-10.42	30.04	204.1
SDev	1.03	.32	6.75	21.00	1.10	.66	231.0
%RSD	5.087	.6300	49.41	381.1	10.51	2.188	113.2
#1	21.09	50.16	-11.05	28.89	-9.366	29.83	461.5
#2	20.72	50.72	-21.33	-.5927	-10.35	30.78	136.1
#3	19.14	50.18	-8.612	-11.76	-11.55	29.52	14.72
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	79.60	21.17	104.0	33.28	5.487	10.90	120.8
SDev	2.12	1.13	2.3	1.19	.306	2.19	3.0
%RSD	2.660	5.351	2.199	3.564	5.570	20.11	2.471
#1	79.40	21.09	103.1	33.21	5.570	12.29	118.5
#2	81.81	22.34	106.6	34.49	5.744	12.04	124.2
#3	77.58	20.08	102.3	32.12	5.149	8.372	119.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.97	6.083	5.178	120.4	121.0	9.897	11.39
SDev	1.80	3.202	1.210	5.5	1.8	2.703	2.56
%RSD	8.565	52.65	23.36	4.537	1.465	27.31	22.52
#1	22.76	8.500	4.095	115.8	119.8	12.97	11.93
#2	20.97	7.297	4.955	126.4	123.0	8.814	13.64
#3	19.17	2.451	6.484	119.0	120.1	7.903	8.596
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.15	41.83	21.94	66.35
SDev	2.63	3.37	.81	14.71
%RSD	6.557	8.058	3.670	22.17
#1	42.49	45.50	21.02	82.18
#2	40.67	41.10	22.44	63.77
#3	37.30	38.88	22.38	53.10
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

Method: CLP3I Sample Name: ICSA Operator:
Run Time: 02/23/99 12:17:40
Comment: ICSA ICSA
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1384	552300.	1.390	.0160	528700.	-3.693	-.1362
SDev	.1228	805.	.140	.0124	229.	.423	.4654
%RSD	88.75	.1458	10.10	77.13	.0433	11.46	341.7
#1	.2767	551400.	1.547	.0202	528800.	-3.204	-.6274
#2	.0422	552800.	1.279	.0021	528800.	-3.919	-.0792
#3	.0963	552700.	1.342	.0258	528400.	-3.954	.2981
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.560	3.191	203000.	27.29	540500.	-.6824	423.6
SDev	.487	.117	102.	5.33	260.	.0365	139.4
%RSD	31.24	3.658	.0504	19.53	.0482	5.349	32.90
#1	2.076	3.206	202900.	33.31	540200.	-.6430	472.5
#2	1.107	3.067	203000.	23.16	540500.	-.6893	532.0
#3	1.496	3.299	203100.	25.41	540700.	-.7150	266.4
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.969	13.57	3.696	-4.804	-4.510	-1.863	1.735
SDev	.094	.76	.372	.249	1.215	2.941	1.368
%RSD	4.785	5.634	10.07	5.193	26.93	157.9	78.84
#1	1.866	13.00	3.272	-4.743	-5.896	-5.259	3.314
#2	1.989	14.44	3.968	-4.591	-3.629	-.1363	.9928
#3	2.052	13.29	3.848	-5.078	-4.006	-.1939	.8988
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.111	31.74	-22.62	-.6227	2.901	-10.24	2.308
SDev	1.849	2.83	3.21	1.8272	2.602	6.37	3.817
%RSD	87.61	8.900	14.18	293.4	89.67	62.20	165.4
#1	2.504	34.75	-26.20	-1.661	5.787	-14.23	-.7913
#2	3.731	29.14	-20.00	1.487	.7349	-13.59	6.571
#3	.0964	31.34	-21.67	-1.694	2.182	-2.894	1.143
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.790	11.30	-.7275	-16.89
SDev	.706	2.88	.5078	26.32
%RSD	39.45	25.48	69.80	155.8
#1	-2.300	12.40	-.7919	13.50
#2	-2.087	8.029	-1.200	-31.94
#3	-.9843	13.46	-.1906	-32.24
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: ICSAB Operator:
Run Time: 02/23/99 12:25:13
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	204.7	550200.	566.0	512.7	524600.	967.4	521.0
SDev	.6	2081.	.8	.7	956.	.8	1.6
%RSD	.3058	.3783	.1423	.1332	.1823	.0867	.3035
#1	204.0	548100.	565.3	511.9	523500.	966.7	519.3
#2	204.9	550100.	565.9	512.8	524800.	967.3	521.1
#3	205.3	552300.	566.9	513.3	525300.	968.4	522.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	501.7	526.5	203100.	8.493	540600.	525.6	-253.5
SDev	.9	2.1	406.	16.90	1220.	.8	189.1
%RSD	.1739	.4060	.1998	199.0	.2257	.1518	74.59
#1	501.9	524.2	202700.	26.58	539200.	524.7	-89.44
#2	500.8	526.8	203200.	5.781	540900.	525.8	-460.2
#3	502.5	528.5	203500.	-6.886	541600.	526.2	-210.7
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	997.8	109.0	528.3	1028.	45.34	54.84	638.3
SDev	1.4	.6	1.0	1.	1.70	1.79	2.1
%RSD	.1424	.5449	.1930	.1020	3.744	3.258	.3336
#1	996.3	109.7	527.2	1027.	43.43	56.89	636.8
#2	997.9	108.9	528.7	1028.	46.69	54.07	637.3
#3	999.1	108.5	529.1	1029.	45.89	53.58	640.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	107.9	78.74	28.65	641.9	636.5	50.87	56.82
SDev	2.2	1.81	3.38	9.1	2.2	5.63	2.39
%RSD	2.068	2.295	11.79	1.412	.3466	11.07	4.212
#1	105.4	80.77	24.78	632.6	639.0	54.17	58.24
#2	108.8	78.12	30.98	642.6	634.7	54.07	54.05
#3	109.6	77.32	30.19	650.6	635.8	44.37	58.16
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1015.	1115.	1057.	1027.
SDev	4.	1.	2.	45.
%RSD	.4152	.1220	.1768	4.347
#1	1019.	1116.	1056.	1078.
#2	1011.	1113.	1056.	997.2
#3	1016.	1114.	1059.	1005.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I Sample Name: CCV Operator:
n Time: 02/23/99 12:32:09
ment: CCV CVS1
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	102.2	2058.	1049.	1026.	49140.	986.7	1033.
SDev	.1	39.	21.	20.	977.	18.5	20.
%RSD	.0844	1.891	1.973	1.922	1.987	1.873	1.914
#1	102.1	2094.	1045.	1019.	48650.	981.0	1024.
#2	102.2	2063.	1072.	1049.	50270.	1007.	1055.
#3	102.2	2017.	1031.	1012.	48500.	971.7	1018.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	995.2	1019.	1982.	46770.	49020.	1032.	48260.
SDev	19.3	6.	44.	868.	946.	20.	733.
%RSD	1.939	.5604	2.222	1.856	1.930	1.963	1.519
#1	986.8	1020.	1971.	46550.	48640.	1023.	47860.
#2	1017.	1024.	2031.	47730.	50100.	1055.	49100.
#3	981.6	1012.	1945.	46040.	48320.	1018.	47810.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	990.9	1033.	1039.	995.8	1007.	1017.	1001.
SDev	20.3	20.	21.	19.2	16.	12.	16.
%RSD	2.052	1.955	2.022	1.932	1.553	1.224	1.643
#1	983.6	1027.	1031.	987.8	999.5	1016.	1000.
#2	1014.	1056.	1063.	1018.	1025.	1031.	1017.
#3	975.3	1017.	1023.	981.9	996.8	1006.	984.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1039.	1013.	1004.	1009.	996.5	1018.	1017.
SDev	18.	15.	16.	18.	16.6	8.	15.
%RSD	1.698	1.438	1.611	1.752	1.661	.7972	1.438
#1	1032.	1006.	996.4	1002.	999.4	1017.	1015.
#2	1059.	1029.	1023.	1029.	1011.	1026.	1033.
#3	1025.	1003.	993.8	995.9	978.7	1010.	1004.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	997.6	1036.	1039.	988.3
SDev	20.4	20.	21.	20.2
%RSD	2.047	1.908	1.978	2.047
#1	988.1	1035.	1031.	992.1
#2	1021.	1057.	1063.	1006.
#3	983.6	1017.	1024.	966.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

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Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/23/99 12:39:06
Comment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2315	-33.33	.1903	.0633	-55.80	-.0079	.3385
SDev	.1825	1.88	.0624	.0165	2.78	.2376	.2497
%RSD	78.80	5.651	32.79	26.00	4.978	3014.	73.78
#1	.1594	-34.93	.2500	.0727	-52.59	.1371	.1028
#2	.0962	-31.25	.1953	.0730	-57.38	.1213	.6002
#3	.4390	-33.80	.1255	.0443	-57.42	-.2821	.3125
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5556	.7010	.9662	13.62	6.667	.2209	320.1
SDev	.3081	.0155	6.389	10.57	3.544	.0392	28.2
%RSD	55.45	2.207	661.3	77.63	53.16	17.75	8.811
#1	.8592	.7009	-5.751	25.23	10.37	.2332	348.4
#2	.5645	.7164	6.968	4.532	6.331	.2525	319.9
#3	.2432	.6855	1.681	11.11	3.302	.1770	292.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5421	2.452	-.1425	-4.070	-.8383	1.229	.0893
SDev	.3580	2.150	.1203	.071	.2211	1.380	1.253
%RSD	66.05	87.70	84.38	1.751	26.37	112.3	1403.
#1	.9495	4.715	-.1929	-3.996	-1.015	.9403	1.525
#2	.2779	.4367	-.0053	-4.077	-.5903	.0154	-.7877
#3	.3987	2.203	-.2294	-4.138	-.9096	2.730	-.4692
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.314	.1708	-1.353	1.462	-.6066	-.1658	1.914
SDev	.788	1.002	.821	1.805	1.2609	2.8269	1.651
%RSD	59.96	586.3	60.73	123.4	207.9	1705.	86.23
#1	-.7349	.6718	-1.867	2.989	.7837	2.026	.3881
#2	-2.212	-.9824	-.4053	-.5295	-.9274	-3.357	1.688
#3	-.9966	.8231	-1.785	1.927	-1.676	.8336	3.666
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.905	3.238	.3533	6.353
SDev	2.434	2.711	.2990	4.148
%RSD	127.8	83.72	84.62	65.29
#1	-4.686	.9703	.6352	11.08
#2	-.8651	2.503	.0398	4.666
#3	-.1629	6.241	.3849	3.315
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000125

Analysis Report QC Standard 02/23/99 12:58:07 PM page 1

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/23/99 12:51:13
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	102.7	2016.	1043.	1020.	48710.	981.4	1024.
SDev	.3	7.	17.	18.	908.	16.3	18.
%RSD	.2822	.3410	1.666	1.786	1.864	1.657	1.791
#1	102.4	2009.	1031.	1007.	48020.	969.5	1010.
#2	103.0	2022.	1063.	1041.	49740.	999.9	1045.
#3	102.8	2017.	1035.	1013.	48360.	974.8	1018.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	988.7	1018.	1950.	46590.	48730.	1024.	47990.
SDev	17.5	4.	41.	726.	864.	18.	754.
%RSD	1.770	.3713	2.113	1.558	1.772	1.757	1.571
#1	976.9	1014.	1923.	46130.	48100.	1011.	47560.
#2	1009.	1022.	1998.	47430.	49710.	1045.	48860.
#3	980.4	1018.	1929.	46210.	48370.	1017.	47550.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	984.5	1026.	1032.	989.6	1001.	1012.	997.4
SDev	17.4	16.	19.	18.1	14.	12.	17.2
%RSD	1.772	1.591	1.839	1.830	1.362	1.185	1.728
#1	972.8	1011.	1018.	976.4	989.4	1004.	984.5
#2	1005.	1043.	1053.	1010.	1016.	1025.	1017.
#3	976.1	1024.	1024.	982.2	998.2	1005.	990.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1035.	1010.	997.1	999.1	996.6	1011.	1012.
SDev	18.	12.	14.5	16.6	17.6	12.	13.
%RSD	1.759	1.210	1.455	1.661	1.766	1.153	1.277
#1	1020.	1001.	983.6	987.9	982.7	1009.	1002.
#2	1055.	1024.	1012.	1018.	1016.	1023.	1027.
#3	1030.	1004.	995.1	991.3	990.6	1000.	1008.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	987.5	1029.	1030.	987.8
SDev	18.8	17.	18.	19.5
%RSD	1.903	1.682	1.718	1.979
#1	974.1	1019.	1017.	997.3
#2	1009.	1049.	1050.	1001.
#3	979.4	1018.	1023.	965.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
n Time: 02/23/99 12:58:10 2294
ment: CCB
M CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0421	-7.771	.2252	.2205	-62.62	.0727	.1444
SDev	.3078	1.074	.1105	.0279	3.52	.1144	.2280
%RSD	731.3	13.82	49.07	12.64	5.620	157.4	157.9
#1	.2947	-7.771	.3475	.2526	-58.56	.0979	.0884
#2	.1323	-8.845	.1956	.2066	-64.65	.1724	-.0504
#3	-.3007	-6.697	.1325	.2022	-64.66	-.0522	.3951
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4840	-.1701	-6.035	17.47	-.0396	.1756	322.1
SDev	.4665	.2776	9.869	10.28	4.0007	.0560	75.0
%RSD	96.39	163.2	163.5	58.87	10100.	31.90	23.27
#1	.9671	-.3815	-12.57	23.66	3.130	.2371	405.3
#2	.4488	-.2732	-10.85	23.15	-4.535	.1276	260.0
#3	.0360	.1443	5.319	5.599	1.286	.1621	300.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6980	4.501	.0964	-4.258	-1.035	-.1624	-1.235
SDev	.6922	2.631	.2271	.091	.400	.7147	1.214
%RSD	99.17	58.47	235.6	2.145	38.67	440.2	98.27
#1	1.472	7.258	.0230	-4.179	-1.380	-.4897	.0682
#2	.4851	2.016	-.0849	-4.358	-1.129	-.6548	-2.334
#3	.1373	4.229	.3511	-4.238	-.5963	.6574	-1.441
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.029	-.2713	-1.427	.0100	-1.868	-.8307	.1609
SDev	1.408	.6873	.939	1.943	1.001	3.1824	.8096
%RSD	136.8	253.3	65.82	19420.	53.59	383.1	503.2
#1	-.5347	.2085	-2.184	1.610	-.7119	-.5585	-.4658
#2	2.196	.0362	-1.721	-2.152	-2.435	-4.140	1.075
#3	1.426	-1.059	-.3759	.5723	-2.456	2.207	-.1266
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.077	2.774	1.175	11.79
SDev	1.302	3.162	.427	8.73
%RSD	62.69	114.0	36.37	74.00
#1	-2.420	6.127	1.511	20.31
#2	-3.173	2.346	1.320	12.20
#3	-.6377	-.1522	.6941	2.867
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: LRS #15 Operator:
Run Time: 02/23/99 13:05:07
Comment: SDG:00002 ClientID:PBS 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.310	99.76	10.82	5.025	897.6	5.644	5.155
SDev	.178	1.90	.16	.062	4.4	.122	.253
%RSD	3.347	1.903	1.460	1.233	.4887	2.159	4.899
#1	5.112	102.0	11.00	5.096	902.3	5.657	5.207
#2	5.364	98.55	10.73	4.989	896.7	5.759	5.378
#3	5.455	98.78	10.73	4.988	893.6	5.516	4.881
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	150.0	15.00	7.500	1500.	7.500	7.500
Low	2.500	50.00	5.000	2.500	500.0	2.500	2.500

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.847	4.810	96.64	699.7	941.5	8.998	2270.
SDev	.288	.024	11.13	8.0	5.7	.025	74.
%RSD	5.933	.4913	11.52	1.149	.6098	.2825	3.268
#1	5.120	4.831	91.01	704.0	947.6	9.021	2263.
#2	4.547	4.816	109.5	704.7	940.6	9.002	2347.
#3	4.875	4.785	89.44	690.4	936.3	8.971	2199.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	7.500	150.0	1500.	1500.	15.00	3000.
Low	2.500	2.500	50.00	500.0	500.0	5.000	1000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.090	9.525	20.52	15.46	2.238	3.806	9.134
SDev	.104	2.311	.40	.16	.669	.736	.600
%RSD	2.037	24.26	1.960	1.010	29.91	19.34	6.570
#1	5.030	12.14	20.44	15.57	2.643	4.197	8.993
#2	5.210	7.743	20.95	15.53	L1.466	2.957	9.792
#3	5.030	8.696	20.16	15.28	2.606	4.263	8.617
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	15.00	30.00	30.00	4.500	7.500	15.00
Low	2.500	5.000	10.00	10.00	1.500	2.500	5.000

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.47	3.653	1.520	9.781	8.801	3.157	4.119
SDev	1.07	1.829	.824	2.080	.139	3.111	1.107
%RSD	10.18	50.07	54.20	21.27	1.579	98.53	26.88
#1	10.55	2.963	2.472	9.296	8.831	2.046	5.261
#2	9.364	2.269	1.053	12.06	8.650	.7547	4.046
#3	11.49	5.727	1.036	7.985	8.923	6.671	3.050
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	15.00						
Low	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18.82	54.01	5.395	46.49
SDev	1.25	2.43	.120	5.71
%RSD	6.615	4.499	2.229	12.28
#1	19.97	54.37	5.531	52.99
#2	17.50	56.24	5.350	44.21
#3	19.00	51.42	5.304	42.28
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	75.00	7.500	60.00
Low	10.00	25.00	2.500	20.00

Analysis Report 924669 02/23/99 01:18:56 PM page 1

Method: CLP3I Sample Name: ~~PBW~~ #16 Operator:
Run Time: 02/23/99 13:12:03
Comment: SDG:00002 ClientID:PBS 1:1
Mode: CONC Corr. Factor: 1

mp 2/24/99

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2046	50.98	.1774	-.0736	-53.36	-.0648	.2148
SDev	.1418	2.79	.0748	.0286	.23	.1612	.2947
%RSD	69.31	5.474	42.18	38.82	.4340	248.6	137.2
#1	.3670	48.02	.2630	-.0406	-53.10	.1201	.1324
#2	.1053	51.36	.1453	-.0916	-53.41	-.1391	-.0300
#3	.1414	53.56	.1240	-.0885	-53.56	-.1754	.5418
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0776	1.191	1.816	18.26	-3.793	-.9586	254.9
SDev	.3455	.196	8.923	4.85	4.117	.0331	43.0
%RSD	445.3	16.45	491.2	26.57	108.6	3.453	16.87
#1	.4756	.9793	-5.904	20.87	-8.263	-.9907	284.7
#2	-.1444	1.366	11.59	12.66	-2.960	-.9246	274.3
#3	-.0984	1.227	-.2327	21.25	-.1558	-.9607	205.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.222	2.094	-.0669	-1.985	-.9427	-.3113	.3596
SDev	.118	.891	.1908	.169	.5693	2.4939	.5021
%RSD	9.697	42.55	285.2	8.501	60.39	801.2	139.6
#1	1.355	3.121	-.2873	-2.153	-1.485	-2.964	.3501
#2	1.127	1.623	.0418	-1.986	-.9929	1.986	-.1376
#3	1.184	1.537	.0447	-1.816	-.3500	.0440	.8664
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6736	.4960	-1.671	.2494	.4045	2.553	-1.752
SDev	1.1435	2.580	2.057	2.855	1.707	2.533	2.561
%RSD	169.8	520.2	123.1	1145.	422.1	99.22	146.2
#1	-1.842	3.474	-3.971	-3.003	2.014	.3268	-4.617
#2	-.6225	-.9300	-1.035	2.343	-1.386	5.310	.3163
#3	.4435	-1.056	-.0076	1.409	.5856	2.023	-.9544
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.524	3.519	-.2009	11.02
SDev	.934	3.774	.4371	8.17
%RSD	61.28	107.2	217.5	74.15
#1	-1.002	7.478	.2348	20.26
#2	-.9681	3.117	-.6394	4.732
#3	-2.602	-.0380	-.1983	8.074
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

000129

~~74~~

Method: CLP3I
Run Time: 02/23/99 13:18:59
Segment: SDG:00002
Mode: CONC Corr.

Sample Name: PLCSW 92948/ #17 Operator:
ClientID: ~~PBS~~ 1:1
Factor: 1

MP 2/24/99

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	966.4	19290.	21430.	525.6	52080.	501.5	5260.
SDev	.9	25.	46.	1.5	234.	1.6	16.
%RSD	.0910	.1297	.2169	.2858	.4490	.3176	.2980
#1	966.0	19280.	21400.	524.0	51810.	499.6	5246.
#2	967.4	19310.	21490.	527.0	52260.	502.6	5277.
#3	965.8	19270.	21420.	525.8	52160.	502.2	5258.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1007.	2426.	10420.	49650.	51210.	1582.	50560.
SDev	4.	3.	34.	127.	141.	4.	86.
%RSD	.3511	.1211	.3220	.2548	.2761	.2696	.1702
#1	1004.	2426.	10380.	49620.	51070.	1578.	50460.
#2	1011.	2429.	10450.	49790.	51350.	1587.	50630.
#3	1007.	2423.	10430.	49540.	51200.	1581.	50580.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3974.	1023.	5349.	2097.	302.4	513.7	6168.
SDev	16.	6.	15.	7.	2.7	3.1	28.
%RSD	.4055	.5912	.2824	.3436	.8812	.5991	.4489
#1	3957.	1016.	5334.	2089.	299.4	510.2	6136.
#2	3989.	1028.	5365.	2103.	304.5	515.9	6189.
#3	3978.	1025.	5349.	2099.	303.4	515.1	6178.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1062.	307.5	299.9	6203.	6150.	512.1	514.6
SDev	4.	1.3	3.4	46.	19.	2.8	4.0
%RSD	.4105	.4232	1.136	.7401	.3040	.5545	.7789
#1	1058.	306.3	296.0	6150.	6129.	510.0	510.3
#2	1062.	308.8	302.3	6235.	6165.	511.0	518.3
#3	1067.	307.3	301.3	6223.	6155.	515.3	515.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1024.	1035.	1066.	1023.
SDev	2.	3.	5.	11.
%RSD	.2243	.2709	.4350	1.100
#1	1021.	1033.	1061.	1036.
#2	1025.	1034.	1070.	1020.
#3	1026.	1038.	1066.	1014.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	1205.	1205.	1205.	1205.
Low	795.0	795.0	795.0	795.0

Method: CLP3I Sample Name: 929478 #18 Operator:
Run Time: 02/23/99 13:25:55
Comment: SDG:00002 ClientID: ~~PBS~~ MP 2/26/99
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1955	-9.246	4.456	.1700	-49.60	.1424	1.153
SDev	.3263	4.603	1.600	.0512	6.81	.1471	.742
%RSD	166.9	49.79	35.90	30.11	13.73	103.3	64.42
#1	-.1112	-11.96	3.846	.1532	-53.28	.3014	.6798
#2	.1594	-11.85	3.251	.1293	-53.79	.0112	.7697
#3	.5383	-3.931	6.270	.2274	-41.75	.1146	2.008
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4233	1.366	-8.085	14.14	3.407	-.5982	187.2
SDev	.3545	.416	4.196	3.26	6.779	.1115	90.3
%RSD	83.75	30.46	51.90	23.06	199.0	18.63	48.24
#1	.8222	1.026	-12.72	15.90	-.0574	-.6748	284.9
#2	.1442	1.242	-6.989	10.38	-.9400	-.6494	169.9
#3	.3036	1.830	-4.546	16.14	11.22	-.4703	106.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.203	1.409	.9662	-1.734	-.7730	.0443	2.290
SDev	.481	1.204	.6848	.189	.1113	2.544	1.503
%RSD	39.99	85.50	70.87	10.92	14.40	5740.	65.63
#1	1.012	2.639	.4674	-1.801	-.8957	-1.326	3.598
#2	.8468	1.356	.6843	-1.880	-.6784	2.980	2.623
#3	1.750	.2313	1.747	-1.520	-.7450	-1.521	.6481
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0468	1.039	-1.688	3.618	1.616	.2803	-.0836
SDev	.1384	1.181	.553	1.835	1.887	.4383	3.8220
%RSD	295.9	113.7	32.77	50.72	116.8	156.4	4572.
#1	.1666	.1968	-1.451	3.384	3.694	-.1656	-1.916
#2	-.1047	.5316	-1.293	5.559	1.147	.2957	4.310
#3	.0784	2.390	-2.320	1.911	.0073	.7106	-2.645
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0944	2.568	.2351	8.088
SDev	2.861	3.377	.5626	6.250
%RSD	3032.	131.5	239.3	77.27
#1	-.4017	6.099	.8327	15.08
#2	-2.486	2.233	-.2842	3.054
#3	3.171	-.6290	.1568	6.128
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929489 #19 Operator:
Run Time: 02/23/99 13:32:51
Comment: SDG:00002 ClientID: ~~PBS~~ MP 2/24/99
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1747	-3.473	88.63	.0797	96110.	.9244	.1406
SDev	.1240	1.338	.38	.0078	1087.	.0920	.3429
%RSD	71.01	38.54	.4266	9.744	1.131	9.955	243.9
#1	-.0393	-4.434	88.28	.0764	94850.	.8385	-.0626
#2	-.2017	-4.040	89.03	.0886	96740.	.9133	-.0522
#3	-.2829	-1.944	88.58	.0742	96730.	1.022	.5364
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4884	.5258	-41.30	2017.	25910.	3.292	26540.
SDev	.0958	.2514	4.77	14.	256.	.029	269.
%RSD	19.62	47.82	11.55	.7075	.9897	.8658	1.015
#1	.5947	.3299	-41.43	2002.	25620.	3.260	26250.
#2	.4086	.8093	-36.47	2018.	26080.	3.306	26610.
#3	.4620	.4381	-46.01	2031.	26040.	3.311	26770.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.9659	2.009	.2769	2.629	-.2325	1.023	.6760
SDev	.3881	1.492	.2511	.223	1.0541	3.082	1.126
%RSD	40.18	74.30	90.68	8.468	453.3	301.2	166.6
#1	1.413	2.769	.1363	2.420	-.6956	-2.470	1.882
#2	.7135	.2892	.5669	2.605	-.9758	3.358	.4952
#3	.7715	2.968	.1276	2.863	.9738	2.181	-.3489
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3304	-.3872	-.1657	1.189	.4093	.9910	1.029
SDev	.5703	1.8281	2.4636	1.233	1.087	6.156	1.548
%RSD	172.6	472.1	1487.	103.7	265.6	621.2	150.5
#1	-.3250	.9876	-1.546	2.399	1.613	-6.004	-.7157
#2	.6034	.3126	-1.629	1.235	.1155	5.582	2.237
#3	.7129	-2.462	2.679	-.0659	-.5007	3.395	1.564
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-4.813	2.207	4.857	-5.795
SDev	2.486	1.675	.187	3.947
%RSD	51.66	75.88	3.856	68.11
#1	-2.050	1.201	4.789	-2.443
#2	-6.870	1.280	4.713	-10.14
#3	-5.517	4.140	5.068	-4.797
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Analysis Report 2/24/99 02/23/99 01:46:39 PM page 1

Method: CLP3I Sample Name: ~~PBS~~ 929477 #20 Operator:
Run Time: 02/23/99 13:39:46
Comment: SDG:00002 ClientID:PBS 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1534	-26.42	.2307	-.0113	-35.98	-.1207	.0236
SDev	.4332	10.51	.1690	.0643	1.66	.1727	.3562
%RSD	282.3	39.79	73.28	569.7	4.623	143.1	1506.
#1	.5925	-15.58	.4254	.0598	-34.06	.0609	-.3044
#2	-.2736	-27.12	.1219	-.0281	-37.00	-.1403	-.0271
#3	.1414	-36.57	.1447	-.0656	-36.89	-.2828	.4025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2467	.2526	-5.382	14.99	5.507	-.8648	468.3
SDev	.6979	.2638	6.528	6.68	.806	.0913	4.9
%RSD	282.9	104.5	121.3	44.55	14.63	10.55	1.055
#1	1.029	.0361	-11.65	21.58	6.127	-.9465	474.0
#2	-.3104	.1752	-5.877	8.233	4.597	-.8817	465.7
#3	.0211	.5464	1.379	15.14	5.798	-.7663	465.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4553	-.7200	-.0514	-1.945	-.4865	1.321	.4897
SDev	.7461	1.0620	.2336	.170	.8423	1.440	.6474
%RSD	163.8	147.5	454.0	8.715	173.1	109.0	132.2
#1	1.181	.4613	-.0905	-2.126	-1.458	1.347	-.2557
#2	.4953	-1.026	-.2631	-1.921	-.0341	2.747	.8141
#3	-.3099	-1.596	.1992	-1.789	.0329	-.1321	.9108
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6209	1.151	-1.315	.4401	.5037	-1.763	2.849
SDev	.6979	.103	1.304	2.221	.2034	4.733	2.281
%RSD	112.4	8.908	99.15	504.7	40.38	268.4	80.07
#1	.2541	1.248	-2.820	-2.063	.6363	3.031	.4953
#2	1.426	1.044	-.5835	1.210	.6053	-1.888	5.050
#3	.1828	1.160	-.5411	2.173	.2695	-6.433	3.003
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2361	2.546	-.0410	6.675
SDev	2.2304	2.643	.4276	15.21
%RSD	944.5	103.8	1042.	227.8
#1	-1.681	3.604	-.0895	24.21
#2	2.333	-.4627	.4087	-1.310
#3	-1.360	4.495	-.4423	-2.878
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

000133

75

Method: CLP3I Sample Name: PLCS929105 #21 Operator:
Run Time: 02/23/99 13:46:42
mment: SDG:00002 ClientID:LCS
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	931.4	18600.	19290.	470.8	46460.	449.2	4703.
SDev	2.3	47.	318.	7.5	763.	7.3	77.
%RSD	.2502	.2553	1.648	1.588	1.641	1.624	1.645
#1	931.8	18620.	19500.	475.2	46900.	453.1	4749.
#2	933.5	18640.	19460.	475.0	46910.	453.7	4747.
#3	928.9	18550.	18930.	462.2	45580.	440.8	4614.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	898.6	2350.	9255.	44190.	45660.	1416.	45740.
SDev	15.2	6.	152.	777.	755.	23.	742.
%RSD	1.692	.2620	1.644	1.759	1.653	1.653	1.623
#1	907.1	2352.	9345.	44700.	46120.	1430.	46280.
#2	907.7	2354.	9340.	44570.	46070.	1429.	46050.
#3	881.1	2343.	9079.	43300.	44790.	1389.	44890.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3555.	922.2	4794.	1856.	271.9	461.9	5552.
SDev	54.	16.8	77.	31.	4.1	6.2	73.
%RSD	1.516	1.819	1.609	1.656	1.518	1.336	1.313
#1	3588.	931.8	4840.	1874.	273.8	465.6	5600.
#2	3584.	931.9	4837.	1874.	274.7	465.4	5588.
#3	3493.	902.8	4705.	1821.	267.1	454.8	5468.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	953.0	276.7	269.5	5591.	5532.	462.2	461.8
SDev	16.8	6.5	3.6	69.	76.	8.1	5.3
%RSD	1.761	2.337	1.344	1.229	1.373	1.746	1.140
#1	963.1	282.5	269.5	5623.	5588.	467.8	464.5
#2	962.3	277.8	273.1	5638.	5562.	465.8	465.2
#3	933.6	269.7	265.8	5513.	5446.	452.9	455.7
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	910.6	925.4	952.7	909.7
SDev	15.3	14.8	15.0	29.1
%RSD	1.681	1.596	1.570	3.204
#1	919.1	935.7	960.4	937.9
#2	919.8	932.1	962.1	911.5
#3	893.0	908.5	935.4	879.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	1205.	1205.	1205.	1205.
Low	795.0	795.0	795.0	795.0

000134

Method: CLP3I Sample Name: 929102 #22 Operator:
Run Time: 02/23/99 13:53:37
Comment: SDG:00002 ClientID:11795206 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k.0962	k25.88	227.2	.1275	C.0000	k.1032	k.9708
SDev	.0413	3.73	2.3	.0185	.0000	.1759	.4244
%RSD	42.98	14.40	1.018	14.54	.0000	170.4	43.72
#1	k.0872	k21.75	229.4	.1474	C.0000	k.2993	k.6175
#2	k.0601	k26.90	227.5	.1244	C.0000	k.0510	k1.442
#3	k.1413	k28.99	224.8	.1107	C.0000	k-.0406	k.8534
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	106.8	10.54	k-11.70	38860.	k36560.	k.2245	k43030.
SDev	1.0	.18	2.68	222.	154.	.0981	223.
%RSD	.9144	1.750	22.90	.5722	.4199	43.68	.5173
#1	107.8	10.69	k-10.12	39070.	k36690.	k.2883	k43170.
#2	106.8	10.60	k-14.79	38860.	k36610.	k.2736	k43150.
#3	105.8	10.34	k-10.18	38630.	k36390.	k.1116	k42770.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.852	k-4.427	25.81	k8.768	k114.4	k571.5	k2.521
SDev	1.048	3.524	.24	.092	1.4	.6	.290
%RSD	21.59	79.60	.9288	1.054	1.257	.0968	11.52
#1	5.648	k-1.973	25.77	k8.875	k115.6	k571.2	k2.186
#2	5.242	k-2.843	26.07	k8.711	k114.9	k572.1	k2.676
#3	3.665	k-8.465	25.59	k8.719	k112.8	k571.1	k2.700
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.72	k118.4	k112.4	k1.946	2.796	k584.9	k564.8
SDev	2.14	2.0	1.9	1.903	.530	3.7	2.3
%RSD	16.85	1.705	1.709	97.76	18.94	.6330	.4105
#1	12.24	k120.6	k113.0	k-.2254	3.378	k589.2	k562.2
#2	15.07	k116.7	k114.0	k3.321	2.342	k582.8	k566.7
#3	10.86	k117.8	k110.3	k2.743	2.668	k582.7	k565.3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-61.55	4.074	14.20	k5.489
SDev	1.15	1.633	.32	9.878
%RSD	1.866	40.07	2.274	180.0
#1	L-62.87	4.444	14.51	k16.62
#2	L-60.95	5.490	14.22	k2.079
#3	L-60.82	2.288	13.87	k-2.233
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000135

Method: CLP3I Sample Name: 929106 #23 Operator:
Run Time: 02/23/99 14:00:33
Comment: SDG:00002 ClientID:11795206D 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.0902	k29.58	217.0	.0438	C.0000	k-.1041	k.2024
SDev	.1655	.76	.8	.0304	.0000	.0719	.3139
%RSD	183.4	2.572	.3865	69.46	.0000	69.06	155.1
#1	k.0962	k30.13	217.7	.0735	C.0000	k-.1565	k-.1349
#2	k-.2195	k28.72	217.1	.0453	C.0000	k-.1338	k.4859
#3	k-.1474	k29.91	216.1	.0127	C.0000	k-.0221	k.2561
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	103.0	10.85	k19.60	37410.	k35080.	k.1140	k41370.
SDev	.5	.16	9.62	114.	80.	.0403	142.
%RSD	.4915	1.497	49.05	.3049	.2278	35.32	.3431
#1	103.6	10.69	k10.05	37520.	k35120.	k.1015	k41430.
#2	102.8	11.02	k29.28	37400.	k35120.	k.1590	k41470.
#3	102.6	10.85	k19.49	37290.	k34980.	k.0815	k41210.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.195	k-6.182	23.96	k8.734	k108.4	k550.9	k1.707
SDev	.255	1.415	.38	.156	.8	3.2	1.021
%RSD	4.906	22.89	1.567	1.786	.7731	.5814	59.81
#1	4.917	k-6.057	24.02	k8.857	k107.5	k547.9	k1.502
#2	5.251	k-7.655	24.30	k8.558	k108.8	k554.3	k2.816
#3	5.418	k-4.833	23.56	k8.786	k109.0	k550.4	k.8047
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.67	k110.4	k107.4	k2.313	1.394	k569.3	k541.7
SDev	1.60	1.1	1.7	1.690	1.316	2.8	5.5
%RSD	12.62	.9560	1.580	73.06	94.37	.4867	1.007
#1	12.32	k111.2	k105.6	k.4890	1.997	k572.0	k535.9
#2	14.41	k110.7	k107.8	k3.825	2.301	k569.4	k546.7
#3	11.27	k109.2	k108.9	k2.625	-.1149	k566.5	k542.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-61.18	-.0675	13.50	k3.022
SDev	2.60	1.3044	.78	8.982
%RSD	4.250	1932.	5.792	297.3
#1	L-62.12	1.093	13.57	k13.02
#2	L-58.25	.1836	12.64	k.4217
#3	L-63.19	-1.479	14.17	k-4.374
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929103 #24 Operator:
Run Time: 02/23/99 14:07:29
Comment: SDG:00002 ClientID:11795206S 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k49.19	k2092.	2305.	46.30	C.0000	k44.84	k481.4
SDev	.18	7.	4.	.02	.0000	.23	.3
%RSD	.3654	.3288	.1577	.0531	.0000	.5062	.0681
#1	k49.40	k2084.	2307.	46.31	C.0000	k45.10	k481.3
#2	k49.09	k2094.	2307.	46.27	C.0000	k44.73	k481.7
#3	k49.09	k2097.	2301.	46.31	C.0000	k44.69	k481.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	287.2	258.5	k933.4	37900.	k35520.	k486.8	k41730.
SDev	.6	.7	8.2	71.	21.	.1	58.
%RSD	.2171	.2857	.8794	.1883	.0598	.0254	.1378
#1	287.9	257.6	k931.6	37910.	k35530.	k486.8	k41790.
#2	287.0	258.9	k926.3	37960.	k35540.	k486.9	k41740.
#3	286.7	259.0	k942.4	37820.	k35500.	k486.7	k41670.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	464.2	k43.81	512.3	k484.3	k129.8	k566.5	k493.3
SDev	1.0	2.58	.3	.1	1.2	4.1	2.3
%RSD	.2127	5.895	.0494	.0285	.8993	.7277	.4630
#1	463.2	k42.29	512.1	k484.4	k131.0	k571.2	k495.4
#2	465.1	k42.34	512.1	k484.4	k129.6	k564.6	k493.6
#3	464.4	k46.79	512.6	k484.1	k128.7	k563.6	k490.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	53.59	k131.4	k129.0	k502.2	488.8	k579.3	k560.1
SDev	.73	1.3	1.2	3.6	3.5	10.4	1.3
%RSD	1.366	.9987	.9196	.7081	.7228	1.803	.2340
#1	54.24	k132.5	k130.3	k500.4	492.9	k591.3	k561.1
#2	53.73	k131.8	k128.4	k506.3	487.3	k572.8	k560.4
#3	52.79	k129.9	k128.1	k499.9	486.3	k573.7	k558.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	882.6	1077.	997.5	k964.5
SDev	4.1	5.	1.5	18.0
%RSD	.4596	.4652	.1516	1.862
#1	878.5	1083.	997.0	k985.2
#2	882.6	1074.	996.3	k952.7
#3	886.6	1075.	999.2	k955.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/23/99 14:14:25
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.5	1999.	1081.	1049.	50480.	1007.	1054.
SDev	.8	17.	3.	.	45.	2.	1.
%RSD	.7664	.8641	.2477	.0335	.0893	.2292	.1272
#1	100.7	2014.	1084.	1049.	50500.	1008.	1053.
#2	102.2	2003.	1080.	1049.	50510.	1009.	1054.
#3	101.8	1980.	1079.	1049.	50420.	1004.	1056.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1019.	1013.	2000.	47720.	49820.	1054.	49290.
SDev	.	1.	13.	98.	21.	2.	348.
%RSD	.0163	.1287	.6546	.2049	.0416	.1787	.7063
#1	1019.	1014.	1990.	47840.	49800.	1052.	48950.
#2	1019.	1012.	2015.	47650.	49820.	1055.	49280.
#3	1019.	1012.	1996.	47690.	49840.	1056.	49640.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1013.	1055.	1065.	1019.	1030.	1037.	1024.
SDev	3.	2.	.	.	4.	2.	1.
%RSD	.3165	.1761	.0231	.0419	.4029	.1510	.1106
#1	1016.	1054.	1066.	1018.	1026.	1038.	1025.
#2	1014.	1057.	1065.	1019.	1033.	1037.	1023.
#3	1010.	1053.	1065.	1019.	1032.	1035.	1024.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1059.	1037.	1027.	1031.	1021.	1034.	1038.
SDev	1.	1.	6.	6.	4.	8.	3.
%RSD	.0725	.1269	.5494	.5509	.3622	.7741	.3098
#1	1059.	1036.	1021.	1027.	1025.	1043.	1036.
#2	1058.	1037.	1031.	1030.	1020.	1027.	1042.
#3	1060.	1038.	1029.	1038.	1017.	1032.	1037.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1017.	1058.	1060.	1014.
SDev	7.	5.	2.	14.
%RSD	.7270	.4790	.1579	1.332
#1	1025.	1063.	1058.	1029.
#2	1018.	1055.	1062.	1009.
#3	1010.	1054.	1060.	1003.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000138

Method: CLP3I Sample Name: CCB Operator:
n Time: 02/23/99 14:21:21
ent: CCB
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1774	-32.93	.2802	.1338	-25.66	.2280	.2406
SDev	.3585	2.60	.1416	.0537	15.00	.2606	.1494
%RSD	202.1	7.889	50.54	40.12	58.46	114.3	62.11
#1	.5563	-35.78	.4437	.1956	-9.502	.5102	.3819
#2	-.1564	-32.33	.2041	.1069	-28.34	.1772	.2559
#3	.1323	-30.69	.1930	.0989	-39.15	-.0035	.0841
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4698	.4175	-3.916	20.95	1.215	.2406	272.7
SDev	.4483	.1315	3.005	15.10	3.474	.0788	88.9
%RSD	95.43	31.49	76.74	72.07	285.8	32.76	32.59
#1	.9321	.4690	-6.528	37.83	5.091	.3209	375.1
#2	.0369	.5154	-.6319	8.746	-1.619	.1633	216.8
#3	.4405	.2680	-4.586	16.27	.1745	.2377	226.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5351	.1455	.0529	-4.185	-.4583	-.1310	.0972
SDev	.2098	.2631	.2716	.128	1.0560	2.1065	1.020
%RSD	39.21	180.8	513.4	3.061	230.4	1608.	1049.
#1	.7708	.2769	-.2030	-4.061	.0201	-1.018	-1.029
#2	.3688	.3169	.0238	-4.177	-1.669	-1.649	.9592
#3	.4656	-.1574	.3379	-4.317	.2739	2.274	.3610
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2112	1.953	-1.673	.5631	-.1459	-1.321	.4528
SDev	.2279	1.319	1.024	1.756	.7051	4.262	1.043
%RSD	107.9	67.53	61.24	311.8	483.2	322.5	230.3
#1	.0539	3.087	-1.521	-1.187	-.9601	-2.825	-.1263
#2	.1072	.5051	-2.765	2.325	.2671	-4.628	-.1721
#3	.4726	2.269	-.7326	.5515	.2552	3.489	1.657
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.9191	2.487	.6062	9.500
SDev	2.8466	1.510	.5763	8.827
%RSD	309.7	60.69	95.07	92.91
#1	2.308	3.911	1.041	19.55
#2	-1.992	.9041	-.0475	3.019
#3	-3.073	2.648	.8252	5.928
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000139

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Method: CLP3I Sample Name: ~~929104~~ 123123 cgs 3/24/99 #27 Operator:
Run Time: 02/23/99 14:28:17
Comment: SDG:00002 ClientID:11795206S 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k49.84	k2115.	2401.	48.24	C.0000	k46.84	k502.9
SDev	.32	5.	45.	.88	.0000	1.05	8.9
%RSD	.6328	.2281	1.877	1.815	.0000	2.235	1.774
#1	k50.18	k2113.	2442.	49.02	C.0000	k47.83	k510.3
#2	k49.78	k2121.	2408.	48.41	C.0000	k46.94	k505.4
#3	k49.56	k2112.	2353.	47.29	C.0000	k45.74	k493.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	299.3	263.3	k975.5	39470.	k37040.	k507.5	k43490.
SDev	5.6	.8	20.9	708.	694.	9.3	807.
%RSD	1.883	.3159	2.148	1.793	1.873	1.830	1.856
#1	304.2	263.8	k989.8	40090.	k37660.	k515.6	k44240.
#2	300.7	263.7	k985.2	39610.	k37180.	k509.5	k43590.
#3	293.1	262.3	k951.4	38700.	k36290.	k497.4	k42630.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	481.0	k42.77	533.4	k505.0	k134.0	k591.0	k515.7
SDev	8.6	3.76	9.7	10.0	2.8	9.3	8.6
%RSD	1.786	8.799	1.812	1.982	2.112	1.582	1.677
#1	488.4	k45.65	541.9	k513.8	k135.0	k598.4	k523.1
#2	482.9	k44.14	535.4	k507.0	k136.1	k594.1	k517.8
#3	471.6	k38.51	522.9	k494.1	k130.7	k580.5	k506.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	55.81	k136.5	k132.7	k522.7	512.2	k605.2	k583.9
SDev	2.18	6.0	2.3	7.4	9.3	13.3	8.5
%RSD	3.901	4.419	1.767	1.410	1.813	2.197	1.463
#1	57.81	k141.9	k131.5	k528.9	520.2	k619.5	k587.8
#2	53.49	k137.5	k135.4	k524.6	514.4	k602.8	k589.8
#3	56.13	k130.0	k131.1	k514.6	502.0	k593.2	k574.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	922.5	1117.	1038.	k1001.
SDev	11.4	22.	18.	30.
%RSD	1.233	1.969	1.744	2.980
#1	928.3	1137.	1054.	k1033.
#2	929.8	1120.	1042.	k996.8
#3	909.4	1093.	1018.	k973.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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Method: CLP3I Sample Name: ~~SDI~~929102 #28 Operator:
Run Time: 02/23/99 14:35:13
Comment: SDG:00002 ClientID:11795206L 1:5
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0330	-2.818	43.52	.0503	405200.	4.038	.2463
SDev	.4535	2.256	.24	.0194	784.	.112	.2167
%RSD	1372.	80.08	.5461	38.55	.1936	2.780	87.97
#1	.2045	-1.403	43.79	.0675	404300.	4.023	.0028
#2	-.4812	-1.631	43.45	.0293	405500.	3.934	.4178
#3	.3759	-5.420	43.33	.0540	405800.	4.157	.3182
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	22.21	2.145	-6.183	5710.	7232.	.3533	8041.
SDev	.21	.202	6.924	8.	7.	.0399	47.
%RSD	.9252	9.409	112.0	.1396	.0977	11.29	.5827
#1	22.43	1.954	-11.39	5717.	7224.	.3367	8075.
#2	22.19	2.124	-8.828	5712.	7234.	.3987	7988.
#3	22.02	2.356	1.673	5701.	7237.	.3243	8060.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.091	.1564	5.256	.7762	22.09	105.8	-.0074
SDev	.379	.8696	.187	.1202	.27	2.2	.5337
%RSD	18.12	556.0	3.551	15.48	1.244	2.096	7235.
#1	2.313	.8323	5.162	.6900	22.34	105.1	-.1228
#2	2.307	.4616	5.471	.9135	22.13	104.0	-.4739
#3	1.654	-.8246	5.136	.7251	21.79	108.3	.5745
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.740	24.88	20.69	-1.073	.5138	107.8	104.8
SDev	.324	2.33	.91	.578	.7445	4.8	4.1
%RSD	18.60	9.359	4.381	53.86	144.9	4.485	3.877
#1	1.622	27.56	19.72	-1.728	.6681	113.2	101.1
#2	2.106	23.35	21.52	-.8522	-.2957	103.8	104.1
#3	1.491	23.73	20.82	-.6376	1.169	106.6	109.2
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-12.47	2.626	3.117	6.558
SDev	3.98	2.839	.302	9.008
%RSD	31.92	108.1	9.698	137.4
#1	-12.25	-.0865	3.425	15.52
#2	-8.609	2.388	3.104	-2.491
#3	-16.56	5.577	2.821	6.640
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000141

Method: CLP3I Sample Name: 929107 #29 Operator:
Run Time: 02/23/99 14:58:53
Comment: SDG:00002 ClientID:11795306 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0714	30.96	213.4	.0103	H1968000.	19.80	9.487
SDev	.4303	2.76	1.0	.0083	15939.	.16	.226
%RSD	602.8	8.916	.4578	80.04	.8099	.7908	2.378
#1	.4036	27.96	214.5	.0029	H1981000.	19.82	9.230
#2	-.1827	31.53	213.3	.0192	H1973000.	19.95	9.655
#3	-.4351	33.40	212.5	.0088	H1950000.	19.64	9.575
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.834	7.196	-22.72	39830.	91300.	617.1	41190.
SDev	.235	.172	7.48	191.	356.	2.5	210.
%RSD	4.025	2.393	32.93	.4795	.3898	.4000	.5094
#1	6.082	7.041	-31.36	40040.	91650.	619.4	41340.
#2	5.807	7.165	-18.40	39790.	91320.	617.6	41280.
#3	5.615	7.381	-18.40	39660.	90940.	614.5	40950.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	293.4	-5.657	2.139	13.43	1882.	281.9	.9342
SDev	.1	.843	.073	.26	7.	2.0	1.427
%RSD	.0467	14.91	3.396	1.956	.3815	.6942	152.8
#1	293.4	-5.150	2.186	13.32	1889.	283.6	-.2601
#2	293.3	-5.190	2.177	13.25	1881.	279.8	2.515
#3	293.6	-6.630	2.056	13.73	1875.	282.4	.5479
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.525	1919.	1863.	2.602	.0903	295.2	275.3
SDev	.692	10.	6.	3.015	.8261	6.7	1.7
%RSD	15.30	.5354	.3028	115.8	914.9	2.263	.6216
#1	3.765	1930.	1869.	-.5102	-.1464	297.3	276.7
#2	5.119	1918.	1863.	5.509	1.009	287.7	275.8
#3	4.691	1910.	1857.	2.808	-.5916	300.5	273.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-72.52	3.804	2.126	-17.58
SDev	4.89	2.804	.780	10.50
%RSD	6.740	73.72	36.71	59.74
#1	L-74.96	7.041	2.000	-6.533
#2	L-66.89	2.117	2.961	-18.77
#3	L-75.70	2.254	1.416	-27.44
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929108 #30 Operator:
Run Time: 02/23/99 15:05:49
Comment: SDG:00002 ClientID:11795406 1:1
Type: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0787	28.80	168.1	.0706	H1506000.	15.00	.1696
SDev	.0729	2.20	.5	.0098	2974.	.03	.0568
%RSD	92.69	7.632	.2727	13.88	.1975	.2256	33.48
#1	-.0666	28.14	168.3	.0679	H1503000.	14.96	.1046
#2	-.1569	27.00	168.5	.0814	H1509000.	15.02	.2094
#3	-.0125	31.25	167.6	.0624	H1507000.	15.02	.1949
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	33.20	9.520	-27.29	36380.	55560.	6.810	43130.
SDev	.38	.114	2.98	89.	90.	.058	118.
%RSD	1.153	1.198	10.91	.2439	.1614	.8490	.2738
#1	33.00	9.391	-28.64	36400.	55540.	6.745	43060.
#2	32.95	9.608	-29.36	36460.	55660.	6.853	43270.
#3	33.64	9.562	-23.88	36290.	55490.	6.834	43060.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.84	-4.292	3.813	5.299	120.0	581.8	.1730
SDev	.68	2.730	.344	.179	.3	1.2	.3772
%RSD	4.566	63.61	9.020	3.381	.2572	.2076	218.0
#1	14.71	-1.255	3.473	5.094	119.8	582.4	.6064
#2	15.57	-5.077	4.161	5.378	120.4	582.6	-.0066
#3	14.24	-6.543	3.804	5.425	119.9	580.4	-.0808
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.360	123.9	118.1	.1765	.1601	593.3	576.0
SDev	2.317	.5	.7	1.718	1.030	3.4	.7
%RSD	31.48	.3882	.5880	973.6	643.5	.5725	.1157
#1	4.774	124.3	117.6	-.0316	.9139	596.1	575.5
#2	9.249	123.4	118.9	1.989	-1.014	594.2	576.7
#3	8.056	123.9	117.9	-1.428	.5808	589.5	575.8
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-59.78	1.705	15.78	-3.270
SDev	2.32	2.897	.57	9.835
%RSD	3.881	169.9	3.642	300.8
#1	L-57.34	3.485	16.43	7.969
#2	L-60.04	-1.638	15.53	-10.30
#3	L-61.96	3.268	15.37	-7.478
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929109 #31 Operator:
In Time: 02/23/99 15:12:45
Segment: SDG:00002 ClientID:11795506 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1369	30.20	222.0	-.0419	H1554000.	15.46	.6250
SDev	.3169	7.78	1.4	.0702	11183.	.11	.2511
%RSD	231.6	25.75	.6404	167.6	.7195	.6923	40.18
#1	.2090	38.31	223.7	.0389	H1567000.	15.54	.5528
#2	-.2060	29.48	221.5	-.0764	H1546000.	15.34	.4180
#3	-.4135	22.80	221.0	-.0882	H1549000.	15.50	.9044
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.43	23.73	19.50	35940.	71400.	63.24	41730.
SDev	.54	.07	6.01	261.	317.	.24	158.
%RSD	4.038	.2938	30.82	.7276	.4444	.3818	.3786
#1	14.00	23.80	12.75	36230.	71760.	63.52	41850.
#2	12.92	23.66	24.26	35850.	71240.	63.09	41550.
#3	13.37	23.73	21.50	35730.	71190.	63.11	41790.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	60.37	-5.308	3.400	20.93	625.7	393.7	1.002
SDev	1.25	2.767	.238	.09	2.6	3.1	1.407
%RSD	2.071	52.12	7.010	.4381	.4185	.7755	140.4
#1	61.79	-7.630	3.338	20.95	628.6	397.2	2.109
#2	59.90	-6.047	3.199	20.83	623.6	391.4	-.5815
#3	59.43	-2.247	3.663	21.01	624.9	392.5	1.479
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.602	637.3	620.0	1.846	.5700	402.3	389.4
SDev	.952	6.0	1.5	2.072	2.564	7.0	2.2
%RSD	12.53	.9453	.2372	112.2	449.8	1.730	.5703
#1	8.508	644.2	620.9	-.2467	3.274	409.9	390.8
#2	7.688	634.2	618.3	1.888	-1.825	400.5	386.8
#3	6.609	633.4	620.7	3.898	.2608	396.4	390.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-66.80	1.247	17.60	-8.269
SDev	.52	2.586	.80	15.895
%RSD	.7724	207.4	4.564	192.2
#1	L-66.64	4.231	18.53	9.994
#2	L-66.38	-.3599	17.14	-18.97
#3	L-67.38	-.1290	17.14	-15.83
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000144

Method: CLP3I Sample Name: 929110 #32 Operator:
Run Time: 02/23/99 15:19:42
Comment: SDG:00002 ClientID:11795606 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1772	144.5	426.2	-.0201	H2233000.	22.91	24.08
SDev	.5597	3.0	2.6	.0142	28742.	.57	.37
%RSD	315.9	2.076	.6202	70.93	1.287	2.489	1.550
#1	-.1535	141.5	429.1	-.0307	H2264000.	23.56	23.68
#2	-.7484	144.5	425.5	-.0256	H2207000.	22.67	24.15
#3	.3704	147.5	424.0	-.0039	H2227000.	22.49	24.42
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.432	20.57	71.52	48830.	68690.	1085.	36660.
SDev	.254	.12	7.73	370.	278.	5.	168.
%RSD	5.732	.6012	10.81	.7582	.4043	.4445	.4595
#1	4.617	20.57	77.01	49230.	69010.	1091.	36850.
#2	4.142	20.70	62.68	48780.	68570.	1083.	36520.
#3	4.537	20.45	74.87	48490.	68500.	1082.	36600.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	434.2	-4.301	8.384	221.4	5762.	326.3	2.161
SDev	1.1	.784	.328	.6	9.	3.4	.719
%RSD	.2578	18.22	3.911	.2580	.1646	1.040	33.29
#1	435.4	-3.401	8.124	222.0	5772.	323.7	1.620
#2	433.4	-4.832	8.277	220.9	5754.	325.2	1.886
#3	433.6	-4.669	8.752	221.2	5758.	330.2	2.978
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	36.38	5887.	5699.	4.299	1.083	341.1	319.0
SDev	2.13	23.	3.	3.126	.535	2.5	5.8
%RSD	5.865	.3854	.0510	72.71	49.39	.7276	1.809
#1	34.51	5913.	5702.	1.498	1.670	343.9	313.6
#2	35.93	5870.	5697.	3.729	.9549	339.1	318.3
#3	38.70	5878.	5698.	7.671	.6234	340.4	325.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-78.67	4.608	3.302	.8177
SDev	3.72	5.298	.310	11.71
%RSD	4.726	115.0	9.386	1432.
#1	L-82.24	10.10	3.366	13.95
#2	L-78.94	4.188	2.965	-8.520
#3	L-74.82	-.4665	3.574	-2.980
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929111 #33 Operator:
Run Time: 02/23/99 15:26:38
Comment: SDG:00002 ClientID:11795706 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1955	37.05	200.7	.0074	H1460000.	14.41	.0608
SDev	.0317	1.13	1.7	.0086	17498.	.21	.1557
%RSD	16.21	3.053	.8514	116.2	1.198	1.472	256.0
#1	-.1654	37.79	201.5	.0151	H1461000.	14.46	-.0452
#2	-.2286	35.75	201.9	-.0019	H1477000.	14.59	.2396
#3	-.1925	37.62	198.8	.0090	H1442000.	14.18	-.0120
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	174.1	9.476	11.66	42160.	6306.	.0979	39420.
SDev	1.4	.095	3.41	436.	54.	.0968	353.
%RSD	.7821	.9972	29.26	1.035	.8545	98.89	.8963
#1	174.2	9.393	10.38	42300.	6319.	.1561	39550.
#2	175.4	9.579	15.53	42510.	6352.	.1514	39690.
#3	172.7	9.455	9.077	41670.	6247.	-.0139	39020.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.165	-1.514	20.00	7.444	87.81	576.1	.7061
SDev	.483	1.304	.30	.094	.50	2.5	1.531
%RSD	22.29	86.10	1.521	1.256	.5725	.4406	216.8
#1	2.603	-.1233	20.08	7.383	87.79	575.9	2.233
#2	2.245	-1.711	20.25	7.552	88.33	578.7	.7150
#3	1.648	-2.709	19.66	7.397	87.32	573.6	-.8295
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.500	89.03	87.20	2.027	.0362	586.4	570.9
SDev	.780	.17	.84	1.710	2.110	2.7	2.5
%RSD	17.34	.1964	.9622	84.35	5823.	.4551	.4357
#1	5.268	89.07	87.14	1.785	2.445	585.9	571.0
#2	3.708	88.83	88.06	3.844	-.8578	589.3	573.4
#3	4.526	89.17	86.39	.4507	-1.479	584.1	568.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-51.85	1.082	20.08	10.62
SDev	2.92	1.919	.56	10.53
%RSD	5.624	177.4	2.786	99.16
#1	L-48.96	2.962	19.49	22.69
#2	L-54.80	-.8742	20.60	5.861
#3	L-51.79	1.158	20.14	3.309
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929112 #34 Operator:
Run Time: 02/23/99 15:39:09
Comment: SDG:00002 ClientID:11795806 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0361	5.284	283.7	-.0716	H1937000.	19.26	.2417
SDev	.0445	2.814	4.1	.0273	58077.	.62	.3920
%RSD	123.4	53.26	1.436	38.11	2.998	3.234	162.2
#1	.0151	8.491	286.5	-.0410	H1971000.	19.56	-.1183
#2	-.0661	3.227	285.7	-.0804	H1971000.	19.67	.6592
#3	-.0571	4.134	279.1	-.0935	H1870000.	18.54	.1842
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	175.1	14.57	41.88	45390.	3031.	-.3515	44690.
SDev	2.5	.08	4.89	636.	39.	.0741	606.
%RSD	1.427	.5344	11.68	1.401	1.295	21.08	1.356
#1	176.8	14.50	37.97	45800.	3057.	-.4302	45010.
#2	176.4	14.65	40.29	45720.	3051.	-.2830	45080.
#3	172.3	14.56	47.36	44660.	2986.	-.3415	44000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.493	-4.262	29.42	7.945	147.1	239.1	.6153
SDev	.123	.174	.28	.110	2.2	1.8	.9079
%RSD	4.924	4.086	.9349	1.389	1.500	.7424	147.6
#1	2.360	-4.106	29.20	7.975	148.1	240.2	-.1436
#2	2.602	-4.450	29.73	8.038	148.6	240.0	.3683
#3	2.518	-4.229	29.32	7.823	144.5	237.0	1.621
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.925	148.8	146.2	3.295	-.7338	251.7	232.8
SDev	1.611	3.0	2.0	2.623	1.2278	4.1	.8
%RSD	41.03	2.025	1.339	79.59	167.3	1.613	.3348
#1	3.040	151.2	146.5	.3233	-.3878	253.6	233.6
#2	5.784	149.8	148.0	5.285	-2.097	254.5	232.7
#3	2.951	145.4	144.1	4.277	.2839	247.0	232.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-49.28	2.706	17.41	13.72
SDev	2.71	2.266	.31	8.43
%RSD	5.495	83.75	1.764	61.46
#1	L-52.03	4.547	17.51	23.39
#2	L-46.62	.1749	17.65	7.902
#3	L-49.18	3.397	17.06	9.867
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929113 #35 Operator:
Run Time: 02/23/99 15:46:05
Comment: SDG:00002 ClientID:11795906 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4095	47.14	196.4	-.0012	H2039000.	20.13	-.1427
SDev	.0239	1.98	.6	.0176	8063.	.06	.2412
%RSD	5.831	4.206	.3222	1410.	.3955	.2738	168.9
#1	-.4005	45.24	197.1	.0119	H2031000.	20.11	-.3741
#2	-.4366	46.99	196.2	-.0213	H2047000.	20.19	-.1613
#3	-.3915	49.20	195.8	.0056	H2038000.	20.09	.1071
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	110.4	19.31	-15.24	46930.	37760.	7.368	36210.
SDev	.6	.36	8.00	246.	43.	.133	86.
%RSD	.5548	1.851	52.47	.5232	.1132	1.801	.2388
#1	110.2	18.94	-20.78	47210.	37780.	7.280	36310.
#2	111.1	19.65	-6.072	46850.	37790.	7.521	36150.
#3	109.9	19.35	-18.86	46730.	37710.	7.303	36180.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.87	-7.674	46.17	9.405	391.4	460.2	2.021
SDev	.21	.805	.36	.155	.5	3.6	.436
%RSD	.5185	10.49	.7830	1.653	.1342	.7931	21.55
#1	41.03	-8.597	45.84	9.257	391.0	456.9	1.533
#2	40.63	-7.309	46.11	9.567	392.0	464.1	2.161
#3	40.95	-7.116	46.56	9.389	391.3	459.5	2.370
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	148.7	399.3	387.5	4.713	.6664	471.6	454.5
SDev	2.3	1.7	1.6	1.122	.3158	2.8	6.9
%RSD	1.527	.4247	.4205	23.81	47.39	.5908	1.509
#1	146.1	400.6	386.2	3.462	.5591	473.9	448.4
#2	149.7	397.4	389.3	5.629	.4183	468.5	461.9
#3	150.3	400.1	386.9	5.048	1.022	472.4	453.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-52.75	3.019	15.21	.2620
SDev	2.76	1.019	.70	6.954
%RSD	5.233	33.76	4.614	2654.
#1	L-51.17	4.010	14.61	8.288
#2	L-51.15	3.072	15.04	-3.984
#3	L-55.94	1.974	15.98	-3.517
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929114 #36 Operator:
'n Time: 02/23/99 15:53:01
ment: SDG:00002 ClientID:11796006 1:1
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.0333	k598.6	58.76	.5400	C.0000	k1.792	k28.54
SDev	.2300	4.4	.58	.0253	.0000	.186	.75
%RSD	691.0	.7419	.9946	4.675	.0000	10.38	2.629
#1	k.1312	k593.6	58.09	.5276	C.0000	k2.004	k27.67
#2	k-.2961	k600.2	59.16	.5234	C.0000	k1.657	k29.04
#3	k.0650	k602.0	59.04	.5691	C.0000	k1.715	k28.89
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.99	64.69	k1974.	36930.	k98520.	k1804.	k45280.
SDev	.73	.42	34.	404.	1357.	26.	400.
%RSD	4.838	.6507	1.732	1.094	1.378	1.433	.8839
#1	15.81	64.30	k1935.	36460.	k96960.	k1774.	k44830.
#2	14.74	65.13	k1996.	37170.	k99400.	k1820.	k45600.
#3	14.43	64.62	k1993.	37150.	k99200.	k1817.	k45410.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
vge	734.2	k-8.083	1.911	k1764.	k154500.	k192.2	k-.0650
v	11.8	.979	.076	26.	1963.	2.3	1.0604
D	1.606	12.11	3.956	1.486	1.270	1.189	1631.
#1	720.7	k-8.702	1.823	k1734.	k152200.	k190.0	k-.4783
#2	741.6	k-6.954	1.955	k1778.	k155700.	k194.5	k1.140
#3	740.5	k-8.592	1.953	k1781.	k155600.	k192.1	k-.8565
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.330	k157400.	k153100.	k3.148	-1.680	k209.8	k183.4
SDev	1.377	1313.	2299.	2.742	.244	7.3	6.1
%RSD	41.35	.8342	1.502	87.10	14.50	3.458	3.303
#1	2.543	k155900.	k150400.	k1.874	-1.664	k217.2	k176.4
#2	2.527	k158400.	k154300.	k6.295	-1.445	k209.7	k186.9
#3	4.920	k157900.	k154500.	k1.275	-1.932	k202.7	k186.8
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-135.3	3.228	-1.402	k-12.96
SDev	4.7	1.665	1.235	18.01
%RSD	3.457	51.59	88.06	139.0
#1	L-136.0	2.195	.0065	k7.590
2	L-130.4	5.149	-2.297	k-20.47
#3	L-139.6	2.340	-1.917	k-26.01
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000149

Method: CLP3I
Sample Name: CCV
Operator:
Run Time: 02/23/99 15:59:57
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.3	1992.	1028.	999.8	48050.	962.5	1006.
SDev	.3	13.	1.	3.6	108.	2.4	4.
%RSD	.2632	.6423	.1405	.3640	.2258	.2458	.4227
#1	101.3	2003.	1027.	996.1	47920.	959.8	1002.
#2	101.6	1996.	1027.	1000.	48110.	963.4	1008.
#3	101.0	1978.	1030.	1003.	48120.	964.3	1010.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	971.0	1005.	1900.	45730.	47430.	1005.	47260.
SDev	3.6	1.	14.	94.	191.	5.	429.
%RSD	.3726	.1315	.7395	.2046	.4033	.4969	.9075
#1	967.4	1004.	1884.	45650.	47230.	999.8	46880.
#2	971.0	1007.	1910.	45710.	47460.	1006.	47180.
#3	974.6	1004.	1907.	45830.	47610.	1010.	47730.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	966.2	1009.	1015.	971.3	1002.	989.3	979.2
SDev	.8	5.	4.	4.0	7.	3.3	5.3
%RSD	.0831	.4632	.3964	.4101	.7018	.3307	.5381
#1	965.4	1006.	1010.	967.2	1010.	993.0	973.4
#2	966.1	1006.	1016.	971.8	1000.	988.1	980.6
#3	967.0	1014.	1018.	975.1	996.0	986.7	983.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1014.	1007.	999.3	984.1	976.8	988.9	989.4
SDev	4.	8.	6.7	9.5	3.2	8.4	1.4
%RSD	.4099	.7904	.6685	.9676	.3270	.8484	.1375
#1	1009.	1016.	1006.	973.4	973.4	998.6	990.1
#2	1016.	1004.	998.4	987.6	977.1	983.7	990.3
#3	1017.	1002.	993.1	991.4	979.8	984.5	987.8
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	971.6	1015.	1015.	968.1
SDev	4.2	1.	3.	20.9
%RSD	.4301	.1096	.3235	2.161
#1	967.7	1016.	1013.	992.1
#2	976.0	1014.	1013.	958.0
#3	971.1	1015.	1018.	954.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Analysis Report QC Standard 02/23/99 04:13:46 PM page 1

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/23/99 16:06:53
Comment: CCB
Type: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1203	-23.29	.2786	.1789	-25.14	.1471	.3663
SDev	.2162	2.79	.0911	.0661	18.41	.0200	.4213
%RSD	179.8	11.96	32.71	36.94	73.24	13.58	115.0
#1	.2406	-25.76	.3806	.2550	-5.051	.1334	.1872
#2	.2496	-23.84	.2051	.1466	-29.16	.1701	.8476
#3	-.1293	-20.27	.2502	.1353	-41.21	.1379	.0641
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4264	.5360	-3.381	9.345	5.302	.1914	225.9
SDev	.1311	.2367	4.343	7.588	3.144	.1173	11.7
%RSD	30.76	44.16	128.4	81.19	59.30	61.30	5.170
#1	.3284	.6237	-5.870	6.773	8.704	.3250	213.0
#2	.3753	.7164	1.634	17.88	4.695	.1435	228.7
#3	.5754	.2680	-5.908	3.378	2.505	.1056	235.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2655	2.890	.1065	-4.089	Q2.187	.7695	.3613
SDev	.3581	1.944	.1628	.035	2.269	1.887	.7508
%RSD	134.9	67.26	152.9	.8645	103.7	245.2	207.8
#1	.3782	.7022	.2484	-4.110	Q4.629	-1.306	.9115
#2	-.1355	4.418	.1423	-4.109	1.786	2.381	-.4940
#3	.5537	3.548	-.0712	-4.048	.1453	1.234	.6665
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1533	3.702	1.421	.6302	.2169	-.5519	1.419
SDev	1.314	2.057	2.391	.9001	.7555	5.9918	.532
%RSD	856.8	55.57	168.3	142.8	348.3	1086.	37.51
#1	-1.353	6.021	3.924	1.585	.5648	-6.679	1.366
#2	1.063	2.986	1.177	-.2022	-.6499	5.295	.9154
#3	.7496	2.098	-.8398	.5075	.7357	-.2719	1.976
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.476	2.357	.8111	7.274
SDev	2.542	1.555	.6311	3.205
%RSD	172.2	66.00	77.80	44.06
#1	-.0124	2.093	1.519	10.05
#2	-.0043	4.026	.3073	3.765
#3	-4.412	.9496	.6072	8.012
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000151

86

Method: CLP3I Sample Name: 929115 #39 Operator:
Run Time: 02/23/99 16:13:54
Comment: SDG:00002 ClientID:11796106 1:1
Type: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0399	658.0	370.9	.1162	H1981000.	20.25	23.21
SDev	.2736	2.8	.7	.0040	10576.	.08	.24
%RSD	685.3	.4185	.1826	3.437	.5338	.4032	1.043
#1	.2025	655.1	371.7	.1203	H1969000.	20.16	23.49
#2	.1933	660.5	370.4	.1160	H1985000.	20.32	23.03
#3	-.2760	658.6	370.6	.1123	H1989000.	20.26	23.11
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.809	17.65	492.2	45650.	65720.	1287.	33840.
SDev	.490	.19	14.6	113.	77.	2.	48.
%RSD	7.191	1.077	2.959	.2485	.1179	.1529	.1419
#1	7.318	17.57	475.4	45780.	65630.	1285.	33890.
#2	6.341	17.87	501.3	45580.	65760.	1287.	33850.
#3	6.767	17.51	499.9	45590.	65760.	1288.	33800.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	463.2	-3.737	17.47	462.4	13060.	309.8	1.047
SDev	1.0	1.662	.07	.8	46.	4.8	1.195
%RSD	.2057	44.48	.4114	.1628	.3496	1.546	114.2
#1	462.1	-4.673	17.51	461.5	13010.	307.0	1.741
#2	463.4	-4.719	17.51	462.7	13090.	315.3	-.3333
#3	464.0	-1.818	17.39	462.9	13090.	307.0	1.733
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.70	13350.	12920.	3.124	-.0008	323.1	303.1
SDev	3.45	9.	64.	3.898	2.3152	6.3	5.4
%RSD	8.482	.0707	.4945	124.8	282900.	1.944	1.779
#1	37.10	13340.	12850.	-.1251	2.662	324.9	298.1
#2	43.98	13360.	12960.	2.050	-1.534	328.3	308.8
#3	41.03	13350.	12960.	7.446	-1.131	316.1	302.5
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-72.36	3.822	.8725	-1.650
SDev	.90	2.676	.5430	12.031
%RSD	1.247	70.01	62.23	729.1
#1	L-72.76	4.705	1.498	12.15
#2	L-72.99	5.944	.5220	-7.189
#3	L-71.32	.8159	.5976	-9.914
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

87

Method: CLP3I Sample Name: 929116 #40 Operator:
Run Time: 02/23/99 16:20:50
Comment: SDG:00002 ClientID:11796206 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.2703	k677.9	415.8	.3942	C.0000	k1.798	k36.70
SDev	.3169	1.8	1.0	.0299	.0000	.325	.43
%RSD	117.2	.2706	.2401	7.572	.0000	18.05	1.168
#1	k.0606	k680.0	416.9	.4268	C.0000	k2.110	k36.93
#2	k-.3005	k676.7	415.5	.3874	C.0000	k1.822	k36.98
#3	k-.5711	k676.9	414.9	.3683	C.0000	k1.462	k36.21
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.70	80.92	k595.5	50610.	k74190.	k2006.	k36790.
SDev	.51	.29	8.3	170.	26.	2.	43.
%RSD	4.722	.3551	1.397	.3354	.0349	.0769	.1160
#1	11.27	80.60	k587.8	50800.	k74220.	k2004.	k36830.
#2	10.50	81.00	k604.3	50560.	k74190.	k2007.	k36810.
#3	10.32	81.16	k594.4	50470.	k74170.	k2007.	k36740.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	623.5	k-6.928	14.50	k1704.	k54450.	k325.2	k.8053
SDev	.8	3.538	.18	1.	80.	1.4	1.263
%RSD	.1209	51.07	1.227	.0326	.1477	.4318	156.8
#1	624.2	k-5.615	14.30	k1704.	k54360.	k323.6	k2.095
#2	622.7	k-4.234	14.55	k1705.	k54490.	k326.2	k-.4282
#3	623.6	k-10.93	14.65	k1704.	k54510.	k325.8	k.7488
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	59.53	k55630.	k53860.	k3.134	-.3683	k342.1	k316.7
SDev	2.87	62.	146.	3.264	3.0532	5.4	4.2
%RSD	4.813	.1117	.2710	104.2	829.0	1.578	1.341
#1	56.51	k55690.	k53700.	k-.0542	3.157	k346.3	k312.3
#2	62.21	k55650.	k53910.	k2.987	-2.144	k344.1	k317.2
#3	59.87	k55570.	k53980.	k6.468	-2.118	k336.0	k320.7
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-90.26	5.068	-.4366	k-4.742
SDev	6.36	1.816	.3327	16.664
%RSD	7.046	35.83	76.21	351.4
#1	L-97.47	7.110	-.1262	k14.00
#2	L-85.44	4.458	-.3956	k-10.33
#3	L-87.88	3.635	-.7879	k-17.89
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000153

Method: CLP3I Sample Name: 929117 #41 Operator:
Run Time: 02/23/99 16:27:46
Comment: SDG:00002 ClientID:11796306 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k.0371	k719.7	172.9	-.0064	C.0000	k.8199	k26.51
SDev	.5258	8.0	8.2	.0446	.0000	.3370	1.16
%RSD	1417.	1.114	4.735	702.6	.0000	41.10	4.360
#1	k.6034	k725.3	167.6	.0436	C.0000	k1.005	k25.70
#2	k-.4357	k710.5	168.8	-.0425	C.0000	k1.024	k25.99
#3	k-.0564	k723.3	182.4	-.0202	C.0000	k.4309	k27.83
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.497	12.82	k350.3	49300.	k69980.	k1535.	k37780.
SDev	.283	.06	30.0	2404.	3503.	77.	1798.
%RSD	3.779	.4576	8.563	4.876	5.006	5.000	4.759
#1	7.373	12.79	k329.7	47790.	k67500.	k1480.	k36590.
#2	7.296	12.78	k336.4	48050.	k68450.	k1503.	k36900.
#3	7.821	12.89	k384.7	52070.	k73980.	k1623.	k39850.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	528.7	k-2.289	15.82	k746.3	k14060.	k315.4	k.2321
SDev	26.0	1.082	1.09	38.5	615.	12.8	.9234
%RSD	4.926	47.25	6.887	5.161	4.376	4.055	397.8
#1	511.7	k-2.189	15.30	k718.8	k13590.	k302.7	k.6918
#2	515.7	k-1.261	15.09	k729.8	k13820.	k315.2	k-.8309
#3	558.6	k-3.417	17.08	k790.4	k14750.	k328.3	k.8355
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	45.72	k14410.	k13880.	k1.502	-.4134	k328.9	k308.6
SDev	1.39	632.	607.	3.940	2.4974	16.1	11.5
%RSD	3.031	4.387	4.377	262.4	604.1	4.887	3.730
#1	44.77	k13970.	k13410.	k-2.751	2.399	k315.6	k296.2
#2	45.08	k14130.	k13670.	k2.229	-2.370	k324.4	k310.6
#3	47.31	k15130.	k14560.	k5.027	-1.270	k346.8	k319.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-142.2	4.571	.1542	k7.228
SDev	4.9	2.326	.6484	18.17
%RSD	3.477	50.88	420.5	251.3
#1	L-138.0	5.917	.8760	k28.21
#2	L-141.0	1.886	-.3792	k-3.444
#3	L-147.7	5.911	-.0342	k-3.077
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000154

Method: CLP3I Sample Name: 929118 #42 Operator:
Run Time: 02/23/99 16:34:41
Comment: SDG:00002 ClientID:11796406 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.3998	k31.64	233.7	-.0052	C.0000	k-.1165	k2.083
SDev	.3930	2.08	.5	.0110	.0000	.1757	.077
%RSD	98.29	6.583	.1969	210.0	.0000	150.8	3.692
#1	k.0333	k29.24	233.2	.0070	C.0000	k.0545	k1.994
#2	k-.4991	k32.63	233.9	-.0142	C.0000	k-.1075	k2.128
#3	k-.7336	k33.03	234.1	-.0084	C.0000	k-.2966	k2.127
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	58.64	24.94	k-32.10	56220.	k63200.	k123.6	k45960.
SDev	.45	.28	3.71	119.	217.	.5	79.
%RSD	.7616	1.103	11.56	.2115	.3431	.3646	.1728
#1	59.02	24.75	k-34.82	56100.	k62950.	k123.0	k45960.
#2	58.15	25.26	k-33.62	56220.	k63300.	k123.7	k46040.
#3	58.74	24.82	k-27.88	56340.	k63340.	k123.9	k45880.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	142.8	k-7.105	13.71	k22.60	k492.4	k496.7	k1.456
SDev	.2	2.007	.45	.10	1.5	3.5	1.492
%RSD	.1372	28.24	3.263	.4526	.3078	.7010	102.5
#1	142.7	k-5.838	13.42	k22.53	k493.7	k494.2	k1.378
#2	143.0	k-9.419	14.23	k22.72	k492.9	k495.1	k2.986
#3	142.7	k-6.058	13.49	k22.55	k490.8	k500.7	k.0050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	102.6	k502.5	k487.4	k4.107	.1215	k506.7	k491.6
SDev	3.7	5.7	.9	3.264	1.699	3.6	3.5
%RSD	3.620	1.131	.1785	79.48	1398.	.7167	.7021
#1	101.3	k508.1	k486.4	k1.149	1.480	k503.6	k489.5
#2	99.66	k502.5	k488.1	k7.608	.6672	k505.8	k489.7
#3	106.8	k496.8	k487.7	k3.563	-1.783	k510.7	k495.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-74.00	5.509	12.18	k-.2179
SDev	2.90	5.138	.80	23.340
%RSD	3.913	93.28	6.592	10710.
#1	L-75.46	10.94	13.11	k25.97
#2	L-75.87	4.854	11.77	k-7.788
#3	L-70.66	.7292	11.67	k-18.83
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929119 #43 Operator:
Run Time: 02/23/99 16:41:37
Comment: SDG:00002 ClientID:11796506 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3770	61.97	361.9	.0747	H1678000.	16.82	-.1882
SDev	.4742	1.23	.8	.0132	17253.	.22	.1987
%RSD	125.8	1.978	.2246	17.72	1.028	1.313	105.5
#1	.1493	63.10	361.6	.0799	H1661000.	16.99	-.1844
#2	-.5093	60.67	361.4	.0597	H1676000.	16.57	-.3888
#3	-.7709	62.14	362.9	.0847	H1696000.	16.90	.0085
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	128.7	5.359	60.91	46300.	30890.	14.87	34910.
SDev	.1	.240	2.92	55.	119.	.07	72.
%RSD	.0884	4.473	4.790	.1181	.3850	.4868	.2065
#1	128.6	5.596	63.43	46300.	30780.	14.83	34830.
#2	128.7	5.364	57.71	46240.	30880.	14.82	34970.
#3	128.8	5.117	61.57	46350.	31020.	14.95	34910.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	22.90	-4.226	82.48	12.56	460.9	424.0	2.145
SDev	.93	2.007	.18	.06	2.5	2.3	1.044
%RSD	4.055	47.50	.2197	.4736	.5507	.5501	48.67
#1	23.73	-5.619	82.27	12.51	458.4	424.3	2.227
#2	21.90	-5.133	82.56	12.62	460.8	421.6	3.146
#3	23.08	-1.925	82.60	12.54	463.5	426.2	1.062
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	151.4	468.2	457.3	5.156	.6308	433.3	419.4
SDev	1.8	.8	4.1	2.769	.5969	6.4	1.6
%RSD	1.191	.1725	.9053	53.71	94.63	1.487	.3743
#1	149.8	469.1	453.1	4.147	1.257	437.3	417.8
#2	153.4	467.7	457.4	8.288	.5673	425.8	419.4
#3	151.0	467.8	461.3	3.032	.0682	436.7	421.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-48.67	3.042	14.42	10.40
SDev	4.63	4.659	.61	12.12
%RSD	9.513	153.2	4.233	116.5
#1	L-53.90	8.421	14.76	24.04
#2	L-45.11	.4173	13.71	.8869
#3	L-46.98	.2864	14.78	6.268
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000156

~~11~~

Method: CLP3I Sample Name: LEACHBLK #44 Operator:
Run Time: 02/23/99 16:58:28
Comment: SDG:00002 ClientID: ~~PBS~~ MP 2/24/99 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2887	-2.771	1.327	.0583	-7.139	.1465	.4205
SDev	.3189	3.987	.056	.0219	3.743	.0175	.6731
%RSD	110.5	143.9	4.248	37.50	52.43	11.97	160.1
#1	.1323	-6.690	1.375	.0370	-11.46	.1659	-.2346
#2	.6555	-2.904	1.340	.0572	-4.999	.1420	.3858
#3	.0782	1.280	1.265	.0808	-4.958	.1317	1.110
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.7634	.9380	3.436	545.1	11.40	.4626	H1137000.
SDev	.4646	.3802	21.70	8.7	7.99	.0789	655.
%RSD	60.85	40.53	631.6	1.598	70.07	17.06	.0576
#1	1.219	.5771	-18.56	538.1	2.244	.3742	H1136000.
#2	.7818	.9020	4.035	542.4	15.00	.5260	H1137000.
#3	.2900	1.335	24.83	554.9	16.95	.4877	H1137000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	H8.585	-5.538	-.2221	-.0965	H2.673	H14.10	.1262
SDev	.153	.437	.8829	.1322	.588	3.16	2.079
%RSD	1.781	7.884	397.6	137.0	21.98	22.44	1648.
#1	H8.745	-5.178	-1.185	-.2029	H3.296	H17.75	2.081
#2	H8.441	-5.413	-.0296	-.1381	H2.596	H12.44	-2.058
#3	H8.567	-6.024	.5487	.0515	H2.128	H12.11	.3561
Errors	LC High	LC Pass	LC Pass	LC Pass	LC High	LC High	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.202	7.430	.2874	-.1691	.2626	30.00	6.156
SDev	1.288	4.128	1.413	3.9754	2.714	6.10	1.962
%RSD	58.48	55.56	491.5	2351.	1033.	20.34	31.87
#1	1.390	10.03	-.0776	-.5636	3.390	36.71	8.278
#2	3.686	9.590	-.9068	-3.933	-1.134	28.50	4.409
#3	1.529	2.670	1.847	3.989	-1.469	24.78	5.780
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-24.56	3.871	-1.225	13.96
SDev	2.74	1.562	.259	5.85
%RSD	11.16	40.35	21.14	41.95
#1	L-24.64	2.729	-1.075	20.02
#2	L-21.78	5.651	-1.075	13.50
#3	L-27.27	3.233	-1.524	8.341
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

Method: CLP3I Sample Name: 929106 5X Operator:
Run Time: 02/23/99 17:05:29
Comment:
Mode: CONC Corr. Factor: 1 11795 2000 MP 2/24/99

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1263	-1.458	43.29	.0847	405600.	4.061	.0792
SDev	.0729	2.159	.11	.0141	722.	.082	.2375
%RSD	57.74	148.1	.2544	16.68	.1781	2.007	299.8
#1	.1684	-3.721	43.40	.1010	405400.	4.007	-.1566
#2	.0421	.5788	43.28	.0768	406400.	4.022	.3184
#3	.1684	-1.231	43.18	.0763	404900.	4.155	.0758
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	22.09	1.366	-6.725	5688.	7227.	.0522	8259.
SDev	.45	.193	12.545	16.	11.	.0530	113.
%RSD	2.035	14.13	186.5	.2805	.1529	101.6	1.370
#1	22.53	1.428	-17.54	5706.	7231.	.0108	8317.
#2	22.09	1.521	7.029	5677.	7236.	.1119	8331.
#3	21.64	1.150	-9.665	5682.	7215.	.0337	8128.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.398	-.0948	4.823	1.341	22.61	106.3	-.3208
SDev	.686	1.3329	.103	.104	1.22	2.1	.3888
%RSD	49.05	1406.	2.134	7.748	5.403	2.022	121.2
#1	1.417	1.444	4.729	1.344	23.84	105.8	-.1004
#2	2.073	-.8456	4.933	1.443	22.58	108.7	-.0923
#3	.7025	-.8829	4.807	1.235	21.40	104.4	-.7697
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.874	25.33	21.24	.2654	-.6242	107.5	105.7
SDev	1.536	1.57	1.05	1.544	.1890	4.4	2.7
%RSD	53.46	6.208	4.926	581.7	30.27	4.110	2.584
#1	4.616	26.91	22.30	1.096	-.7083	111.1	103.2
#2	1.710	25.29	21.22	1.216	-.7564	108.7	108.6
#3	2.297	23.77	20.20	-1.516	-.4077	102.6	105.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-14.24	3.125	2.759	3.934
SDev	.91	4.731	.265	6.486
%RSD	6.382	151.4	9.618	164.9
#1	-13.19	8.459	3.005	10.44
#2	-14.75	-.5610	2.478	3.890
#3	-14.77	1.476	2.796	-2.530
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000158

Method: CLP3I Sample Name: 929103 5X Operator:
Run Time: 02/23/99 17:12:25
Comment:
Mode: CONC Corr. Factor: 1 11795 2005 MP 2/24/99

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.18	366.8	453.9	9.672	408000.	13.49	100.2
SDev	.46	6.7	.8	.060	740.	.15	.5
%RSD	4.495	1.822	.1806	.6223	.1814	1.131	.4974
#1	10.09	374.6	454.7	9.739	407200.	13.66	99.92
#2	9.778	363.2	454.1	9.654	408700.	13.45	99.94
#3	10.68	362.7	453.0	9.622	408000.	13.37	100.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	60.29	50.65	198.1	5689.	7255.	101.2	8227.
SDev	.15	.28	5.1	20.	11.	.1	24.
%RSD	.2421	.5498	2.553	.3448	.1505	.1327	.2920
#1	60.24	50.33	192.4	5711.	7249.	101.1	8253.
#2	60.45	50.78	202.1	5673.	7267.	101.4	8206.
#3	60.17	50.84	199.8	5682.	7247.	101.2	8222.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	97.02	8.695	104.5	93.79	26.87	107.3	98.63
SDev	.16	1.413	.2	.24	1.13	.5	.73
%RSD	.1679	16.25	.1733	.2589	4.214	.5030	.7404
#1	97.20	8.146	104.6	93.53	27.59	107.7	97.91
#2	96.96	7.639	104.3	94.01	25.57	107.3	98.62
#3	96.89	10.30	104.7	93.82	27.46	106.7	99.37
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.84	27.93	26.33	100.8	97.54	114.1	103.8
SDev	1.28	2.20	1.41	1.7	.91	2.5	.8
%RSD	9.961	7.881	5.345	1.705	.9315	2.220	.8139
#1	13.54	30.47	26.14	98.97	97.37	117.0	103.1
#2	11.36	26.61	25.04	102.4	96.73	112.5	104.8
#3	13.60	26.71	27.83	101.0	98.52	112.7	103.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	182.1	210.2	204.5	204.8
SDev	2.3	5.2	2.0	9.8
%RSD	1.285	2.462	.9548	4.793
#1	180.0	216.2	206.6	216.1
#2	181.6	207.3	204.1	199.7
#3	184.7	207.1	202.8	198.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000159

Method: CLP3I Sample Name: SDI929102 25X Operator:
Run Time: 02/23/99 17:19:21
Comment:
Mode: CONC Corr. Factor: 1 1179520CL MP2/24/99 2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0601	-18.32	8.759	-.0050	81830.	.6995	.1241
SDev	.4782	7.54	.170	.0154	358.	.1968	.5113
%RSD	795.1	41.14	1.935	307.3	.4369	28.14	411.9
#1	.5383	-25.20	8.952	-.0186	82240.	.9263	.5678
#2	.0601	-19.49	8.692	-.0081	81680.	.5981	.2397
#3	-.4180	-10.27	8.633	.0117	81580.	.5740	-.4351
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.643	.2527	-7.015	918.1	1450.	.1025	1905.
SDev	.634	.2573	3.248	25.9	3.	.0491	104.
%RSD	13.66	101.8	46.30	2.826	.2204	47.90	5.478
#1	5.209	.5465	-8.413	946.4	1454.	.0683	2022.
#2	4.762	.1445	-3.302	912.5	1447.	.1587	1871.
#3	3.957	.0671	-9.328	895.4	1449.	.0805	1822.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6687	1.205	1.080	.1786	5.123	21.17	.2212
SDev	.2749	2.147	.169	.1436	.315	2.28	.4426
%RSD	41.11	178.2	15.63	80.38	6.142	10.79	200.1
#1	.7612	-1.223	.8959	.0131	4.765	21.33	.4336
#2	.8855	1.986	1.227	.2687	5.244	23.36	-.2876
#3	.3595	2.853	1.116	.2540	5.358	18.81	.5175
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3039	5.246	5.051	1.310	-.3331	19.73	21.88
SDev	1.979	2.502	1.634	2.585	1.6725	5.52	2.61
%RSD	651.2	47.69	32.35	197.3	502.1	27.96	11.95
#1	-1.595	7.730	3.275	-1.674	1.475	24.77	19.61
#2	.1522	2.727	6.490	2.770	-1.824	20.59	24.74
#3	2.354	5.280	5.387	2.836	-.6502	13.84	21.28
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-3.842	3.109	.9565	8.280
SDev	1.996	4.377	.3725	14.89
%RSD	51.96	140.8	38.94	179.8
#1	-5.867	8.088	1.336	23.88
#2	-3.781	1.371	.5920	6.752
#3	-1.876	-.1315	.9410	-5.788
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000160

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/23/99 17:26:33
Comment:
Type: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.8	2000.	1075.	1050.	50330.	1014.	1058.
SDev	.2	7.	1.	2.	189.	3.	2.
%RSD	.2058	.3412	.0723	.2331	.3747	.2882	.1482
#1	100.6	1994.	1076.	1049.	50210.	1011.	1056.
#2	101.0	2007.	1074.	1049.	50230.	1013.	1057.
#3	100.8	1998.	1076.	1053.	50550.	1017.	1059.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1022.	999.2	1990.	47870.	49820.	1056.	49230.
SDev	2.	2.7	3.	60.	91.	3.	81.
%RSD	.2138	.2673	.1749	.1247	.1817	.2538	.1654
#1	1020.	996.3	1987.	47900.	49760.	1054.	49200.
#2	1022.	1002.	1994.	47800.	49770.	1055.	49160.
#3	1024.	999.7	1989.	47910.	49920.	1059.	49320.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1019.	1059.	1065.	1022.	1034.	1033.	1025.
SDev	1.	2.	2.	3.	3.	4.	2.
%RSD	.1390	.1632	.1763	.2872	.2808	.4096	.1637
#1	1020.	1061.	1065.	1021.	1032.	1035.	1025.
#2	1017.	1059.	1064.	1020.	1032.	1028.	1023.
#3	1019.	1057.	1068.	1026.	1037.	1035.	1026.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1061.	1040.	1031.	1029.	1022.	1034.	1032.
SDev	3.	6.	4.	4.	2.	7.	4.
%RSD	.3129	.5834	.4283	.4277	.2138	.6322	.4228
#1	1059.	1044.	1026.	1026.	1025.	1041.	1032.
#2	1059.	1033.	1032.	1028.	1020.	1028.	1028.
#3	1065.	1042.	1035.	1034.	1022.	1033.	1036.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1024.	1059.	1065.	1018.
SDev	2.	2.	4.	24.
%RSD	.2374	.2027	.3991	2.385
#1	1023.	1061.	1063.	1046.
#2	1022.	1056.	1062.	1003.
#3	1027.	1059.	1070.	1004.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator: 2294
n Time: 02/23/99 17:33:30
mment:
M: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1293	-34.04	.2760	.1855	-52.02	.1819	.2462
SDev	.1858	3.30	.1387	.0710	5.63	.1863	.4170
%RSD	143.7	9.704	50.24	38.27	10.83	102.4	169.3
#1	.3037	-36.51	.4268	.2654	-46.51	.3739	.1305
#2	-.0662	-35.33	.2472	.1615	-51.78	.0019	.7088
#3	.1503	-30.29	.1540	.1296	-57.77	.1698	-.1007
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2255	.4329	-7.028	7.280	4.450	.2694	251.1
SDev	.6393	.1315	1.371	15.92	1.261	.0592	29.5
%RSD	283.5	30.39	19.50	218.7	28.33	21.97	11.75
#1	.8092	.2834	-8.307	22.12	4.561	.2345	217.8
#2	.3250	.5309	-5.581	9.258	5.651	.3378	261.7
#3	-.4578	.4845	-7.196	-9.537	3.137	.2360	273.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6704	1.640	-.0598	-3.984	-.5120	.5677	-.0809
SDev	.1339	.344	.2180	.075	.6760	1.425	.2141
%RSD	19.98	20.97	364.6	1.886	132.1	251.0	264.8
#1	.6013	1.717	-.3026	-3.936	.0242	-.9698	.1599
#2	.8248	1.938	.1192	-3.945	-.2886	.8298	-.1526
#3	.5852	1.264	.0041	-4.070	-1.271	1.843	-.2498
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5074	.5798	-1.068	1.192	-.7268	-.9437	1.312
SDev	.7157	1.732	1.104	.850	.3976	2.9075	3.498
%RSD	141.1	298.7	103.4	71.28	54.71	308.1	266.7
#1	-1.250	2.394	-1.169	1.432	-.4857	2.399	-2.662
#2	-.4498	-1.056	.0839	1.896	-1.186	-2.885	2.674
#3	.1779	.4013	-2.117	.2481	-.5090	-2.345	3.924
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.295	1.401	.5848	1.418
SDev	1.615	1.533	1.432	7.535
%RSD	124.7	109.4	244.9	531.5
#1	2.065	2.665	2.236	9.131
#2	2.382	1.843	-.1595	1.046
#3	-.5607	-.3038	-.3220	-5.925
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 929114 5X Operator:
Run Time: 02/23/99 17:40:26
Comment:
Type: CONC Corr. Factor: 1 11796006 MP 2/24/99

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0207	110.4	11.64	.1913	414100.	4.780	6.103
SDev	.2122	4.1	.09	.0260	1145.	.152	.059
%RSD	1025.	3.746	.7952	13.56	.2765	3.187	.9750
#1	.2229	105.9	11.73	.1872	412800.	4.952	6.044
#2	-.1651	111.4	11.55	.1677	414500.	4.663	6.103
#3	-.1200	114.0	11.65	.2191	415000.	4.724	6.163
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.688	13.08	376.4	5549.	20100.	372.0	8383.
SDev	.588	.05	5.4	3.	20.	.6	83.
%RSD	21.87	.3799	1.442	.0605	.0985	.1598	.9932
#1	3.292	13.10	371.0	5551.	20070.	371.3	8447.
#2	2.118	13.12	376.4	5549.	20110.	372.3	8289.
#3	2.654	13.02	381.9	5545.	20100.	372.3	8414.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	153.6	.1019	.5195	347.8	31920.	39.52	.8957
SDev	.6	2.109	.1724	.5	67.	1.56	.8562
%RSD	.3918	2070.	33.20	.1568	.2090	3.941	95.60
#1	152.9	.8566	.5572	347.4	31850.	37.85	.7082
#2	154.1	-2.281	.3313	347.4	31950.	39.78	.1487
#3	153.7	1.730	.6699	348.4	31980.	40.93	1.830
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.705	32100.	31840.	2.008	.3297	47.60	35.48
SDev	.630	19.	91.	1.426	1.594	1.47	3.05
%RSD	23.30	.0593	.2849	71.03	483.4	3.080	8.584
#1	3.324	32080.	31730.	.4931	.8049	49.29	32.13
#2	2.725	32110.	31870.	3.324	-1.448	46.90	36.22
#3	2.065	32110.	31910.	2.206	1.632	46.62	38.08
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-27.02	3.233	.1214	3.865
SDev	3.56	1.301	.6311	10.21
%RSD	13.19	40.24	520.0	264.2
#1	L-29.49	4.035	.4779	14.95
#2	L-22.93	3.933	-.6073	-5.164
#3	L-28.63	1.732	.4935	1.815
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929116 5X Operator:
Run Time: 02/23/99 17:47:22
Comment:
Type: CONC Corr. Factor: 1 11796204 MP 2/24/99

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0502	132.2	79.62	.1159	406500.	4.715	7.110
SDev	.1743	10.6	.93	.0508	4734.	.195	.094
%RSD	347.2	8.039	1.164	43.82	1.165	4.137	1.319
#1	-.1767	142.2	80.37	.1737	409200.	4.497	7.134
#2	.1486	133.4	78.58	.0956	401100.	4.872	7.006
#3	-.1225	121.0	79.90	.0784	409300.	4.776	7.189
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.963	15.72	96.98	7584.	14860.	406.0	6637.
SDev	.117	.23	2.80	80.	168.	4.2	193.
%RSD	5.940	1.490	2.891	1.058	1.133	1.045	2.908
#1	2.095	15.89	96.70	7655.	14990.	408.5	6809.
#2	1.919	15.45	94.33	7497.	14670.	401.1	6428.
#3	1.875	15.82	99.91	7599.	14920.	408.4	6673.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	128.4	1.083	3.012	328.6	11060.	60.13	.8856
SDev	1.0	1.356	.209	3.6	118.	2.15	.9171
%RSD	.8056	125.3	6.928	1.092	1.068	3.578	103.6
#1	129.2	.0582	3.252	330.9	11140.	61.57	-.1200
#2	127.3	2.621	2.874	324.4	10920.	57.66	1.676
#3	128.8	.5690	2.911	330.3	11110.	61.16	1.101
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.32	11130.	11020.	.9883	.8237	68.57	55.91
SDev	.44	138.	110.	1.965	1.406	4.93	.92
%RSD	3.602	1.237	.9954	198.9	170.7	7.183	1.651
#1	11.82	11210.	11100.	-.3849	.0015	70.97	56.87
#2	12.44	10970.	10900.	.1102	2.447	62.90	55.03
#3	12.68	11220.	11060.	3.240	.0225	71.83	55.82
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-18.35	3.285	-.6083	6.299
SDev	1.37	2.264	.8525	2.994
%RSD	7.444	68.92	140.2	47.53
#1	-18.07	.6732	.2029	2.998
#2	-19.84	4.688	-1.497	7.060
#3	-17.15	4.496	-.5309	8.838
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

1 of 9

Method: CLP3I Sample Name: 929117 5X Operator:
un Time: 02/23/99 17:54:18
omment:
e: CONC Corr. Factor: 1

1179630 MP 2/24/99

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2072	129.5	32.33	-.0277	416300.	4.611	5.735
SDev	.2217	4.2	.52	.0195	5890.	.204	.274
%RSD	107.0	3.275	1.614	70.36	1.415	4.413	4.773
#1	.0836	126.7	32.86	-.0348	421300.	4.843	5.497
#2	.4631	127.4	31.82	-.0425	409800.	4.532	5.674
#3	.0748	134.4	32.30	-.0056	417800.	4.460	6.034
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.158	3.681	53.73	7398.	13440.	297.7	6801.
SDev	.102	.294	6.18	133.	186.	4.1	118.
%RSD	8.818	7.985	11.51	1.801	1.381	1.371	1.742
#1	1.276	3.670	53.05	7546.	13610.	301.6	6910.
#2	1.109	3.979	47.91	7289.	13240.	293.4	6675.
#3	1.090	3.392	60.22	7359.	13480.	298.2	6818.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	104.5	-.1294	3.330	150.5	2750.	58.41	-.8529
SDev	1.8	1.0680	.382	2.6	26.	2.09	.0798
%RSD	1.754	825.5	11.48	1.729	.9634	3.578	9.353
#1	106.5	-1.297	3.506	153.4	2771.	57.18	-.8088
#2	102.9	.1094	2.891	148.5	2720.	57.22	-.9450
#3	104.1	.7991	3.592	149.5	2758.	60.82	-.8049
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	9.421	2765.	2742.	-.2919	-1.144	64.44	55.39
SDev	1.010	37.	22.	.8668	.545	1.73	2.36
%RSD	10.72	1.353	.7871	297.0	47.69	2.681	4.261
#1	10.57	2801.	2757.	-.4078	-1.020	64.16	53.69
#2	8.670	2726.	2717.	.6271	-1.740	62.86	54.39
#3	9.023	2770.	2753.	-1.095	-.6708	66.29	58.08
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-23.62	2.878	.2335	6.994
SDev	1.76	.738	.1843	7.040
%RSD	7.443	25.66	78.93	100.7
#1	L-25.61	3.672	.2097	14.42
#2	L-22.28	2.212	.0623	6.140
#3	L-22.97	2.749	.4286	.4195
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 929118 5X Operator:
n Time: 02/23/99 18:01:14
mment:
: CONC Corr. Factor: 1 11796400 up 2/24/99

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0168	11.69	46.92	.0965	399600.	4.108	.6234
SDev	.5465	1.77	3.55	.0287	33522.	.236	.5353
%RSD	3251.	15.12	7.573	29.79	8.390	5.749	85.86
#1	.6088	9.806	44.92	.0688	379900.	3.943	1.220
#2	-.2576	13.31	51.02	.1261	438300.	4.379	.4650
#3	-.4017	11.96	44.82	.0945	380500.	4.002	.1853
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.83	4.892	-28.92	8889.	13000.	24.75	8692.
SDev	1.08	.041	1.71	666.	1002.	2.01	689.
%RSD	9.153	.8363	5.910	7.494	7.703	8.115	7.925
#1	11.93	4.923	-27.18	8508.	12420.	23.62	8404.
#2	12.86	4.907	-28.99	9658.	14160.	27.07	9478.
#3	10.70	4.845	-30.60	8500.	12430.	23.56	8194.
ors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
	40000.	40000.	300000.	400000.	600000.	20000.	500000.
	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
vge	30.16	2.059	2.825	3.931	101.4	100.4	.1322
Dev	2.30	2.164	.100	.632	6.3	6.9	1.351
D	7.637	105.1	3.552	16.09	6.219	6.839	1022.
#1	29.13	4.537	2.723	3.580	98.16	98.18	-.4992
#2	32.80	.5426	2.923	4.661	108.7	108.0	1.683
#3	28.55	1.097	2.829	3.552	97.45	94.84	-.7871
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	22.41	102.1	101.1	-.1992	.2864	106.6	97.22
SDev	1.73	7.2	5.9	1.4663	1.474	6.8	7.31
%RSD	7.725	7.056	5.812	736.0	514.5	6.407	7.521
#1	20.96	98.87	97.80	-1.630	.0547	107.8	93.39
#2	24.33	110.3	107.9	1.300	1.862	112.8	105.6
#3	21.95	97.03	97.65	-.2670	-1.058	99.30	92.61
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-14.17	1.858	2.889	1.015
SDev	4.05	2.022	.391	8.613
%RSD	28.61	108.8	13.53	848.3
#1	-9.507	3.561	3.048	10.16
#2	-16.14	2.391	3.174	-.1747
#3	-16.86	-.3772	2.443	-6.941
ors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS929329 FE 7800 Operator:
Run Time: 02/23/99 18:08:10
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3648	99620.	994.0	3.688	50240.	L-8.741	88.46
SDev	.4484	679.	25.2	.117	1481.	.318	2.68
%RSD	122.9	.6813	2.537	3.166	2.948	3.637	3.029
#1	.1375	99010.	973.4	3.653	48900.	L-8.459	86.00
#2	-.5072	100300.	1022.	3.819	51830.	L-9.085	91.32
#3	-.7246	99490.	986.6	3.593	50000.	L-8.677	88.07
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	287.6	238.4	184400.	10090.	55970.	3279.	2149.
SDev	7.3	1.6	5160.	240.	1564.	92.	46.
%RSD	2.540	.6657	2.798	2.384	2.794	2.819	2.135
#1	281.4	237.0	179800.	9893.	54540.	3195.	2156.
#2	295.7	240.1	190000.	10360.	57640.	3378.	2191.
#3	285.9	238.0	183600.	10010.	55710.	3265.	2100.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	408.2	32.87	295.4	446.6	76.30	4.558	2.849
SDev	10.2	4.04	7.6	13.0	2.20	3.210	2.204
%RSD	2.504	12.28	2.575	2.917	2.887	70.42	77.37
#1	399.9	28.91	288.7	434.4	74.29	6.467	1.280
#2	419.6	36.98	303.7	460.3	78.66	.8520	5.369
#3	405.0	32.72	293.9	445.1	75.95	6.355	1.898
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	47.00	92.63	68.13	1.236	3.643	-9.200	11.42
SDev	2.16	1.10	3.29	5.880	1.188	3.702	3.10
%RSD	4.604	1.187	4.828	475.6	32.61	40.24	27.12
#1	44.64	93.30	64.79	-4.580	4.195	-6.013	12.69
#2	48.90	93.23	71.37	7.177	4.455	-13.26	7.887
#3	47.45	91.36	68.24	1.112	2.280	-8.327	13.68
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5819	6.577	.8888	1922.
SDev	2.2382	1.078	.8284	39.
%RSD	384.6	16.39	93.21	2.004
#1	-3.163	7.821	1.841	1924.
#2	.5881	5.914	.4886	1959.
#3	.8287	5.997	.3364	1882.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000167

Analysis Report QC Standard 02/23/99 06:21:59 PM page 1

Method: CLP3I Sample Name: CRI Operator:
Run Time: 02/23/99 18:15:06
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.41	-8.179	.2033	10.29	-49.17	9.962	104.3
SDev	.05	1.477	.1076	.05	9.57	.032	.7
%RSD	.2415	18.06	52.91	.5259	19.46	.3223	.6651
#1	19.44	-6.499	.3249	10.23	-38.74	9.926	103.5
#2	19.44	-8.766	.1644	10.33	-51.22	9.989	104.6
#3	19.36	-9.273	.1206	10.31	-57.54	9.969	104.8
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.21	48.37	18.55	11.08	2.851	30.90	283.4
SDev	.00	.10	14.26	3.13	4.280	.18	107.0
%RSD	.0155	.2129	76.90	28.22	150.1	.5967	37.77
#1	20.21	48.40	30.09	10.51	5.865	31.08	251.9
#2	20.20	48.46	22.94	14.45	4.736	30.89	402.7
#3	20.21	48.26	2.605	8.275	-2.048	30.71	195.6
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.96	20.54	105.2	33.53	5.570	9.162	121.9
SDev	.48	1.12	.4	.24	.298	1.187	2.0
%RSD	.5871	5.453	.4252	.7033	5.346	12.96	1.665
#1	80.47	19.27	104.8	33.29	5.274	9.958	119.7
#2	81.42	20.95	105.7	33.76	5.568	9.730	122.5
#3	81.00	21.39	105.3	33.54	5.869	7.797	123.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.03	6.907	4.891	121.9	121.9	9.048	9.208
SDev	.78	1.400	.940	.6	2.8	3.172	1.159
%RSD	3.696	20.27	19.21	.4827	2.291	35.06	12.59
#1	21.83	6.571	4.614	121.3	118.9	12.59	8.634
#2	20.97	8.445	4.120	122.4	122.5	8.081	10.54
#3	20.28	5.706	5.937	122.1	124.4	6.471	8.449
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.21	42.30	21.96	65.41
SDev	2.01	2.34	.46	6.69
%RSD	5.009	5.528	2.103	10.22
#1	39.14	41.76	22.31	71.83
#2	38.96	40.28	22.13	65.91
#3	42.53	44.86	21.43	58.49
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

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Method: CLP3I Sample Name: ICSA Operator:
Run Time: 02/23/99 18:22:02 2294
Comment:
Units: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1895	537500.	1.418	.0734	521500.	-3.960	.0375
SDev	.3974	1547.	.094	.0066	1803.	.548	.3984
%RSD	209.7	.2879	6.599	8.937	.3457	13.84	1062.
#1	.6376	535800.	1.522	.0718	519500.	-3.370	-.1934
#2	-.1202	538900.	1.340	.0678	522100.	-4.453	-.1915
#3	.0512	537800.	1.392	.0806	523000.	-4.056	.4975
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5423	2.449	201300.	18.81	534500.	-.7372	390.2
SDev	.4300	.178	587.	15.07	1724.	.0379	155.4
%RSD	79.30	7.283	.2915	80.13	.3226	5.137	39.83
#1	.9826	2.310	200700.	33.72	532600.	-.6964	517.4
#2	.1234	2.387	201500.	3.584	535000.	-.7439	217.0
#3	.5208	2.650	201800.	19.13	535900.	-.7712	436.1
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.681	-.1526	3.737	-4.369	-4.831	-1.079	3.507
SDev	.524	2.0387	.249	.138	1.480	3.667	1.811
%RSD	31.15	1336.	6.652	3.169	30.63	339.8	51.64
#1	2.130	1.744	3.663	-4.458	-4.134	3.125	3.559
#2	1.106	-2.308	3.534	-4.440	-3.828	-2.747	1.671
#3	1.808	.1064	4.014	-4.210	-6.531	-3.616	5.292
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3967	35.50	-24.98	-.3982	5.446	-3.489	.1126
SDev	1.195	4.28	1.03	4.4186	3.160	5.380	2.926
%RSD	301.3	12.05	4.111	1110.	58.03	154.2	2600.
#1	-.9188	39.35	-25.86	-5.384	8.012	2.697	3.328
#2	.6935	36.25	-23.85	1.157	1.916	-7.080	-.5950
#3	1.415	30.89	-25.23	3.032	6.409	-6.083	-2.395
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.741	10.52	-.9827	-12.80
SDev	6.044	3.25	.1863	34.56
%RSD	220.5	30.88	18.95	269.9
#1	-9.091	14.23	-.7808	27.10
#2	-2.075	9.136	-1.020	-33.23
#3	2.943	8.194	-1.148	-32.28
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: ICSAB Operator:
Run Time: 02/23/99 18:28:58
Comment:
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	201.2	534800.	559.6	506.4	520800.	957.4	515.9
SDev	.5	392.	.4	1.0	2495.	1.0	2.1
%RSD	.2655	.0732	.0782	.1899	.4791	.1066	.4029
#1	200.9	534900.	560.1	505.3	518100.	956.2	513.6
#2	201.8	535100.	559.2	506.5	521100.	957.8	516.8
#3	200.8	534300.	559.6	507.2	523100.	958.2	517.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	496.8	510.3	201500.	16.80	536000.	520.0	-40.20
SDev	1.3	.6	375.	13.14	1835.	1.9	143.62
%RSD	.2642	.1161	.1860	78.22	.3424	.3722	357.2
#1	496.0	510.9	201100.	31.36	534100.	517.9	3.825
#2	496.2	510.1	201600.	13.21	536100.	520.5	-200.7
#3	498.3	509.8	201800.	5.825	537800.	521.7	76.25
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	988.2	101.4	524.4	1019.	45.23	51.87	629.8
SDev	2.3	5.4	1.5	3.	2.06	2.44	.3
%RSD	.2287	5.320	.2876	.3007	4.550	4.705	.0420
#1	986.8	101.3	522.7	1016.	43.71	54.68	629.6
#2	990.8	106.8	525.0	1018.	47.58	50.56	630.1
#3	986.9	96.00	525.5	1022.	44.42	50.36	629.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	106.4	86.99	24.37	636.2	626.5	41.00	57.28
SDev	2.4	1.96	3.79	7.5	3.5	3.28	4.30
%RSD	2.228	2.256	15.56	1.180	.5524	8.004	7.512
#1	108.6	89.26	20.96	627.7	630.5	40.38	61.81
#2	103.9	85.85	28.45	641.8	624.2	38.07	56.78
#3	106.7	85.87	23.71	639.2	624.9	44.54	53.25
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1001.	1106.	1045.	1010.
SDev	3.	4.	2.	40.
%RSD	.3078	.3312	.2038	3.985
#1	999.9	1110.	1042.	1056.
#2	1005.	1102.	1046.	983.8
#3	999.1	1107.	1046.	989.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I
Run Time: 02/23/99 18:35:54
Comment: CCV CVS1
Type: CONC Corr. Factor: 1

Operator:

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.4	2019.	1062.	1034.	49560.	992.9	1041.
SDev	.2	18.	1.	3.	117.	2.7	3.
%RSD	.2109	.8738	.1308	.3169	.2355	.2758	.2771
#1	100.2	2038.	1060.	1031.	49430.	989.8	1039.
#2	100.5	2018.	1062.	1035.	49600.	994.1	1042.
#3	100.7	2003.	1063.	1037.	49650.	994.9	1044.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1006.	997.9	2013.	47380.	49560.	1042.	49150.
SDev	3.	3.7	9.	73.	134.	2.	72.
%RSD	.2664	.3750	.4299	.1531	.2697	.2041	.1458
#1	1004.	993.9	2017.	47300.	49410.	1040.	49210.
#2	1007.	998.3	2019.	47420.	49620.	1043.	49170.
#3	1009.	1001.	2003.	47420.	49650.	1044.	49070.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	998.0	1043.	1051.	1007.	1018.	1018.	1013.
SDev	4.3	8.	2.	3.	5.	4.	4.
%RSD	.4273	.7702	.2297	.2501	.4470	.3954	.4363
#1	993.1	1034.	1048.	1004.	1012.	1014.	1008.
#2	1001.	1049.	1051.	1009.	1020.	1018.	1016.
#3	999.9	1048.	1053.	1009.	1020.	1022.	1015.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1046.	1024.	1014.	1022.	1008.	1019.	1018.
SDev	2.	3.	6.	4.	5.	6.	8.
%RSD	.2100	.2502	.5571	.4095	.4795	.6288	.7381
#1	1045.	1021.	1008.	1018.	1003.	1016.	1013.
#2	1046.	1026.	1017.	1024.	1013.	1026.	1014.
#3	1049.	1025.	1018.	1026.	1009.	1014.	1027.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1008.	1045.	1051.	997.8
SDev	4.	3.	3.	12.8
%RSD	.4259	.2467	.2770	1.287
#1	1006.	1047.	1048.	1012.
#2	1005.	1042.	1050.	988.9
#3	1013.	1045.	1054.	991.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
n Time: 02/23/99 18:42:50
mment: CCB
: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0391	-11.62	.2604	.2949	-49.12	.1583	.3462
SDev	.3742	4.14	.1785	.1232	12.49	.2258	.0915
%RSD	957.7	35.61	68.55	41.78	25.44	142.6	26.44
#1	.4571	-7.206	.4584	.4241	-34.78	.4005	.4065
#2	-.0752	-12.24	.2115	.2818	-54.93	.1210	.3911
#3	-.2646	-15.41	.1115	.1787	-57.65	-.0465	.2409
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3391	.0721	6.870	15.67	17.69	.3123	385.2
SDev	.5096	.0793	3.225	28.05	8.93	.1776	163.3
%RSD	150.3	110.0	46.95	179.0	50.49	56.85	42.39
#1	.9269	.1597	9.622	44.29	27.44	.4849	554.0
#2	.0689	.0051	7.665	14.52	15.70	.3219	373.5
#3	.0214	.0515	3.321	-11.78	9.917	.1302	228.1
ors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
alue	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3804	.5147	.0769	-4.213	-.3057	-1.130	.2235
Dev	.7698	1.863	.0882	.150	.8373	1.330	1.906
D	202.3	362.0	114.7	3.567	273.9	117.7	852.7
#1	1.105	-1.452	.1738	-4.387	.3327	.0334	-1.732
#2	-.4276	.7417	.0558	-4.119	-1.254	-2.580	2.077
#3	.4638	2.254	.0012	-4.135	.0041	-.8431	.3258
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0571	3.578	-2.256	-.5490	.5981	-4.361	.4719
SDev	.7665	1.214	1.265	1.5032	2.149	2.908	.6362
%RSD	1343.	33.93	56.07	273.8	359.3	66.69	134.8
#1	-.0933	4.813	-1.916	-1.802	-1.708	-2.293	1.183
#2	.8876	3.535	-3.656	1.118	2.544	-7.686	-.0421
#3	-.6231	2.386	-1.196	-.9627	.9584	-3.103	.2743
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8285	3.188	.7199	6.122
SDev	.9961	2.487	1.240	15.14
%RSD	120.2	78.02	172.3	247.3
#1	-1.723	5.508	2.095	23.18
#2	.2448	3.496	-.3152	.9246
#3	-1.007	.5616	.3800	-5.735
ors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

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000173

STANDARDS and REAGENTS TRACEABILITY

Date: 2-19-99

HNO3 [Baker Instra-analyzed Trace-Metals grade,	Ref#*: 1M2-153-4
HCl [Baker Instra-analyzed Trace-Metals grade,	Ref#: 1M2-152-17
XCL-11 multi-element standard mix	Ref#: 7M2-226-14
XCL-2 multi-element standard mix	Ref#: ↓ 15
XCL-3A multi-element standard mix	Ref#: ↓ 13
ICV1 multi-element standard mix	Ref#: 7M1-3-9
ICV2 multi-element standard mix	Ref#: ↓ 10
ICV3 multi-element standard mix	Ref#: ↓ 11
ICV4 multi-element standard mix	Ref#: ↓ 12
ICSA multi-element standard mix	Ref#: 7M1-4-27
ICSAB multi-element standard mix	Ref#: 7M1-3-24
LRS-1 multi-element standard mix	Ref#: 7M1-2-12
LRS-2 multi-element standard mix	Ref#: ↓ 13
Spex multi-element standard mix	Ref#: 7M1-1-13
COM Lab mix 5	Ref#: 7M1-3-4
CRDL-1 multi-element standard mix	Ref#: 7M1-1-9
ANTIMONY (Sb) 1,000 PPM single-element standard	Ref#: ↓ 5
BISMUTH (Bi) 1,000 PPM single-element standard	Ref#: 7M1-2-21
TITANIUM (Ti) 1,000 PPM single-element standard	Ref#: 7M1-1-6
TIN (Sn) 1,000 PPM single-element standard	Ref#: ↓ 8
IRON (Fe) 10,000 PPM single-element standard	Ref#: 7M1-4-22
ALUMINUM (Al) 10,000 PPM single-element standard	Ref#: ↓ 14
CALCIUM (Ca) 10,000 PPM single-element standard	Ref#: 7M1-1-1
MAGNESIUM (Mg) 10,000 PPM single-element standard	Ref#: ↓ 2
MOLYBDENUM (Mo) 1,000 PPM single-element standard	Ref#: 7M1-3-15
ARSENIC (As) 1, 000 PPM single-element standard	Ref#: 7M1-4-3

The following standard solutions are applicable only when dissolved samples are analyzed.

XCL-LCS multi-element standard mix	Ref#: NA
XCL-20 multi-element standard mix	Ref#:

Reviewed By: [illegible]
Date: 2/22/99

The following spaces are provided for non-CLP metals standards not previously identified.

NA [illegible] of NA 1,000 PPM standard	Ref# NA
[illegible] of NA 1,000 PPM standard	Ref#

*Ref# = Logbook ID, Page number and ite[illegible]ber. from Materials Receipt Log

Standards/QC Preparation for Trace ICAP

2294

Standard Lot Number*	Preparation instructions
SO/ICB/CCB- 021999-PW	Place in a 500-ml volumetric flask: 100 ml of deionized water 30 ml concentrated HNO_3, and 25 ml concentrated HCl. Bring up to volume with deionized water. Prepare weekly.
XCL-11- 021999-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml XCL-11 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-2- 021999-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of XCL-2 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-3A- 021999-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 1.0 ml of XCL-3A into flask. Bring up to volume with deionized water. Prepare weekly.
PLSB2-2X- 021999-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml of concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of Sn, Bi, Ti, Sb, ___, ___, into flask. Bring up to volume with deionized water. Prepare weekly.
STD3- 021999-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 5 ml concentrated HCl 1.0 ml of 10,000-ppm Al, 0.5 ml of 10,000-ppm Fe, 1.0 ml of 10,000-ppm Mg 1.0 ml of 10,000-ppm Ca, Bring up to volume with deionized water. Prepare weekly.
CVSI- 021999-PW	Place in a 500-ml volumetric flask: 400 ml of deionized water 30 ml concentrated HNO_3 25 ml of concentrated HCl 0.5ml of Sb, 0.5 ml of Sn, 0.5 ml of Bi, 0.5 ml of Ti, 0.05 ml of Al, 0.05 ml of Fe 0.500 ml of XCL-2. 0.500 ml of XCL-11, 2.5 ml of XCL-3A Bring to volume with deionized water. Prepare weekly.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: M Parnell Date: 2/22/99

000174

Standard Lot Number*	Preparation instructions*
ICV1-02 19 99-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml of concentrated HNO_3 10 ml concentrated HCl, Pipet 20.0 ml of ICV1 into flask. Bring up to volume with deionized water. Prepare as needed.
ICV3-02 19 99-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated. HNO_3 10 ml concentrated HCl Pipet:20.0 ml of ICV3, 20.0 ml of ICV2, and 20.0 ml of ICV4 into flask. Bring to volume with deionized water. Prepare as needed.
SPEXAS-02 19 99-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 0.2 ml of CompuChem SPEX into flask. Bring up to volume with deionized water. Prepare as needed.
ICSA-02 19 99-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA into flask. Bring up to volume with deionized water. Prepare as needed.
ICSAB-02 19 99-PW	Place in a 200-ml volumetric flask: 50 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA and 20.0 ml ICSB into flask. Pipet: 0.20 ml Bi standard — ml Sn standard — ml Ti standard — ml Mo standard into flask. Bring up to volume with deionized water. Prepare as needed.
LRS-02 19 99-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 and 5 ml concentrated HCl . Pipet 0.10 ml LRS-1 and 0.10 ml LRS-2 into flask. Prepare as needed.

2294

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: M Powell Date: 2/22/99

0001000

Standard Lot Number*	Preparation instructions*
CRI - 021999-PW 2294	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet: 0.20 CRDL-1 into flask. 0.005 ml Bi into flask. 0.005 ml Sn into flask. 0.004 ml Mo into flask. 0.002 ml Ti into flask. NA ml NA 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. Bring up to volume with deionized water. Prepare as needed.
Internal Standard- 021999-PW	Place in a 2000-ml volumetric flask: 1000 ml of deionized water 20 ml of concentrated HNO_3 Pipet: 10 mL of COM LAB MIX #5 internal standard. Bring up to volume with DI water. Prepare as needed. Yttrium, introduced into the sample stream yielding a final concentration in the plasma of 1 ppm, is used as an internal standard. Cesium, introduced into the sample stream yielding a final concentration in the plasma of 50ppm, is used as a reducing agent.
As- 021999-PW	Place 100 ml volumetric flask 50 ml DI water 1 ml concentrated HNO_3 0.1 ml 1000 ppm As Bring to volume. Prepare as needed.

	Prepared By	Date Prepared	Preparation Instructions
Dissolved Metals only: LCS	NA	NA	Add 1.0 ml of XCL-LCS solution to 9.0 ml of acidified water NA ml HNO_3 + NA ml HCl .
Prep Blank	↓	↓	Use acidified water (1% HNO_3 + 5% HCl NA ml HNO_3 + NA ml HCl
Sample Spike	↓	↓	Add 0.1 ml of XCL-20 to 10.0 ml of sample.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed by: M Powell Date: 2/22/99

000178

CompuChem a division of Liberty Analytical Corp. LOGBOOK 1 BBB 24 **2294**

Automated Mercury Runlog

Case name: ~~341441/04564~~ 341211/0000 2-

Method (Circle one.): CLP (SW-846) MCAWW Date: 2/23/99 Page 1 of 1

Operator: LCOOKE File name: LC0223 WSL name V222352

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	0 ppb			1	929111		
	0.2 ppb			2	929112		
	0.5 ppb			3	929113		
	1.0 ppb			4	929114		
	5.0 ppb			5	929115		
	10.0 ppb			6	929116		
	ICV			7	929117		
	ICB			8	929118		
	CRA			9	929119		
	CCV-1			10	929610	leach BLK	
	CCB-1				CCV-3		
1	929477	PBW			CCB-3		
2	929105	LCSW		~~1~~			
3	929102	ORG		2			
4	929106	dup		3			
5	929103	SS		4			
6	~~929104~~	~~SSD~~ 123123	W 2/23/99	5			
7	929107			6		LCOOKE 2/23/99	
8	929108			7			
9	929109			8			
10	929110			9			
	CCV-2			~~10~~			
	CCB-2				CCV-4		
					CCB-4		

COMMENTS

Reviewed By: Carol J. Yardley

Date: 2/23/99

000177

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~~122~~

2294

ine	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 0 12:55:58 23 Feb 1999 HG

Hg .0000 PPB -1440
Ave. Int. = -1440 S. D. = 0

*** Standard: 2 Rep: 1 Seq: 1 12:58:17 23 Feb 1999 HG

Hg .2000 PPB 2942
Ave. Int. = 2942 S. D. = 0

*** Standard: 3 Rep: 1 Seq: 2 13:00:34 23 Feb 1999 HG

Hg .5000 PPB 11200
Ave. Int. = 11200 S. D. = 0

*** Standard: 4 Rep: 1 Seq: 3 13:02:52 23 Feb 1999 HG

Hg 1.000 PPB 24672
Ave. Int. = 24672 S. D. = 0

*** Standard: 5 Rep: 1 Seq: 4 13:05:12 23 Feb 1999 HG

g 5.000 PPB 130271
Ave. Int. = 130271 S. D. = 0

*** Standard: 6 Rep: 1 Seq: 5 13:07:42 23 Feb 1999 HG

Hg 10.00 PPB 261173
Ave. Int. = 261173 S. D. = 0

2294

Protocol: HG2

Rev: 2.005 Time: 13:07:48 23 Feb 1999

Folder: LC0223 Seq: 6 Print: On

User: Batch: Id: Std6Rep1 Cup: Gas: 0.30 LPM

State: Idle Macro AUTOCRA 01 : F3 Print Xmit: Off Autosampler: On

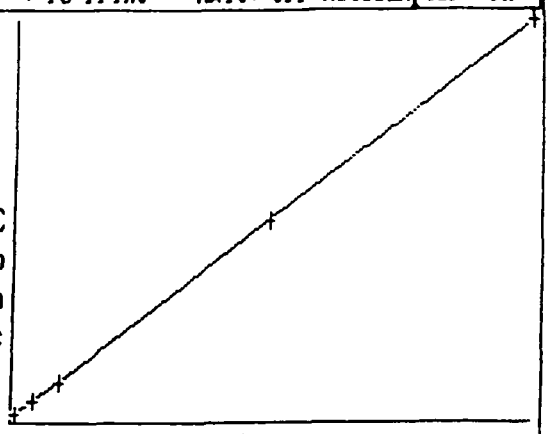
CALIBRATION: Line Calibration

Line: Hg

	Conc.	Calc.	Dev.	Accepted
S1	.0000	.0130	.0130	LiNear
S2	.2000	.1795	-.0205	Quadratic
S3	.5000	.4933	-.0067	WtdLinear
S4	1.000	1.005	.0052	Accept
S5	5.000	5.018	.0176	
S6	10.00	9.991	-.0007	StdAdd

A .0000000 r .999993

B 3.79962e-5 C 6.77577e-2



	Mean	%RSD	
S1	-1440	0	-1440
S2	2942	0	2942
S3	11200	0	11200
S4	24672	0	24672
S5	138271	0	138271
S6	261173	0	261173

New cal coefficients stored

Line Conc. Units SD/RSD 1 2 3 4 5

*** Check Standard: 3 Ck3ICV Seq: 6 13:10:12 23 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		93.12	3.818	4.100	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 7 13:12:28 23 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0355	.2000	PPB	.0000

*** Check Standard: 4 Ck4CRA Seq: 8 13:14:43 23 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		128.4	.2567	.2000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 9 13:16:59 23 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		105.2	5.261	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 10 13:19:20 23 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0520	.2000	PPB	.0000

*** Sample ID: ~~PBS~~ 929477 VC 2/23/99 Seq: 11 13:21:34 23 Feb 1999 HG
PBS 1:1
Hg .0690 PPB .0000 .0691

*** Sample ID: LCS929105 WMP 2/24/99 Seq: 12 13:23:47 23 Feb 1999 HG
LCSS 1:1
Hg 2.712 PPB .0000 2.712

*** Sample ID: 929102 Seq: 13 13:26:05 23 Feb 1999 HG
11795206 1:1
Hg .0583 PPB .0000 .0583

*** Sample ID: 929106 Seq: 14 13:28:18 23 Feb 1999 HG
11795206D 1:1
Hg .0793 PPB .0000 .0793

*** Sample ID: 929103 Seq: 15 13:30:31 23 Feb 1999 HG
11795206S 1:1
Hg 1.008 PPB .0000 1.008

*** Sample ID: ~~929104~~ 123123 VC 2/23/99 Seq: 16 13:32:44 23 Feb 1999 HG
11795206S 1:1
Hg .0521 PPB .0000 .0521

*** Sample ID: 929107 Seq: 17 13:34:57 23 Feb 1999 HG
11795306 1:1
Hg .0566 PPB .0000 .0566

2294

```
ne   Conc.  Units     SD/RSD      1       2       3       4       5
-----------------------------------------------------------------------

*** Sample ID: 929108                    Seq:  18     13:37:10 23 Feb 1999 HG
                              11795406    1:1
Hg    .0615   PPB        .0000     .0615

*** Sample ID: 929109                    Seq:  19     13:39:23 23 Feb 1999 HG
                              11795506    1:1
Hg    .0839   PPB        .0000     .0839

*** Sample ID: 929110                    Seq:  20     13:41:36 23 Feb 1999 HG
                              11795606    1:1
Hg    .0804   PPB        .0000     .0804

*** Check Standard: 2  Ck2CCV        Seq:  21      13:43:51 23 Feb 1999 HG
Line  Flag  %Rcv.    Found     True  Units      SD/RSD
Hg          106.3    5.314    5.000  PPB         .0000

*** Check Standard: 1  Ck1ICB/CCB    Seq:  22      13:46:09 23 Feb 1999 HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg          .0693    .2000    PPB        .0000

*** Sample ID: 929111                    Seq:  23     13:48:23 23 Feb 1999 HG
                              11795706    1:1
g     .0665   PPB        .0000     .0665

*** Sample ID: 929112                    Seq:  24     13:50:40 23 Feb 1999 HG
                              11795806    1:1
Hg    .0776   PPB        .0000     .0776

*** Sample ID: 929113                    Seq:  25     13:52:55 23 Feb 1999 HG
                              11795906    1:1
Hg    .0669   PPB        .0000     .0669

*** Sample ID: 929114                    Seq:  26     13:55:43 23 Feb 1999 HG
                              11796006    1:1
Hg    .0805   PPB        .0000     .0805

*** Sample ID: 929115                    Seq:  27     13:58:00 23 Feb 1999 HG
                              11796106    1:1
Hg    .0868   PPB        .0000     .0868

*** Sample ID: 929116                    Seq:  28     14:00:13 23 Feb 1999 HG
                              11796206    1:1
Hg    .0825   PPB        .0000     .0825

*** Sample ID: 929117                    Seq:  29     14:02:26 23 Feb 1999 HG
                              11796306    1:1
Hg    .0476   PPB        .0000     .0476
```

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Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 929118 Seq: 30 14:04:38 23 Feb 1999 HG
11796406 1:1

Hg	.0719	PPB	.0000	.0719

*** Sample ID: 929119 Seq: 31 14:06:51 23 Feb 1999 HG
2/24/99 96506 1:1

Hg	.0661	PPB	.0000	.0661

*** Sample ID: 929610 Seq: 32 14:09:04 23 Feb 1999 HG
LEACH BLANK

Hg	.0899	PPB	.0000	.0900

*** Check Standard: 2 Ck2CCV Seq: 33 14:11:18 23 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		107.0	5.351	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 34 14:13:36 23 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0724	.2000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 35 14:15:51 23 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
		107.0	5.348	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 36 14:18:09 23 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0669	.2000	PPB	.0000

Standards/QC Preparation Log for Cold Vapor Mercury

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 NNN 25

STANDARDS AND REAGENTS TRACEABILITY	
ICV-5	Ref#: 1m1-2-26
Sulfuric Acid (H_2SO_4)	Ref#: 1m2-152-24
Nitric Acid (HNO_3)	Ref#: 1m2-153-10
Potassium Permanganate ($KMnO_4$)	Ref#: 7m2-177-4
Hydrochloric Acid (HCl)	Ref#: 1m2-153-18
Mercury (20-ppm Hg)	Ref#: 7m1-3-7
Potassium Persulfate ($K_2S_2O_8$)	Ref#: 1m2-151-27
Hydroxylamine Hydrochloride (NH_2OH-HCl)	Ref#: 1m2-154-3
Stannous Chloride ($SnCl_2$-$2H_2O$)	Ref#: 1m2-153-1
STANDARD LOT NUMBER	**PREPARATION INSTRUCTIONS**
Hg 100 ppb- 0 2 1 6 9 9 - P W	Place in a 100-ml volumetric flask: 0.5 ml of 20-ppm Hg stock solution 5.0 ml of concentrated HNO_3 Baker instra-analyzed Trace Metals grade Dilute to 100 volume with DI water. Prepare as needed
$K_2S_2O_8$- 0 1 2 7 9 9 - 1 C Potassium persulfate	Place in a 1000-ml Erienmeyer flask: 50.0 g of $K_2S_2O_8$ Baker instra-analyzed Trace Metals grade Dilute to 1000 volume with DI water. Transfer a repippettor bottle. Prepare as needed
$KMnO_4$- 0 2 1 9 9 9 - P W Potassium permanganate	Place in a 1000-ml Erienmeyer flask: 50.0 g of $KMnO_4$ Baker instra-analyzed Trace Metals grade Dilute to 1000 volume with DI water. Transfer to a repipettor bottle. Prepare as needed
NH_2OH-HCl- 0 2 1 9 9 9 - P W Hydroxylamine hydrochloride	Place in a 1000-ml volumetric flask: 240.0 g of NH_2OH-HCl Baker analyzed Dilute to 1000 volume with DI water. Place solution in a repippetor bottle. Prepare as needed

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: Carol J. Yandell Date: 2/23/99

2294

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~~123~~

Standards/QC Preparation Log for Cold Vapor Mercury COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK LNNN

STANDARD LOT NUMBER	PREPARATION INSTRUCTIONS
$SnCl_2$-021999-PW Stannous chloride	Place in a 1000-ml volumetric flask 100 g of $SnCl_2$-$2H_2O$ Baker Analyzed 250 ml of HCl Baker Analyzed, Dilute to 1000 ml with DI water Prepare as needed
0-022399-LC 0.2-022399-LC 0.5-022399-LC 1.0-022399-LC 5.0-022399-LC 10.0-022399-LC Standard Curve (0, 0.2, 0.5, 1.0, 5.0, 10.0 ppb)	Pipet into 250-ml fleakers: 0, 0.2, 0.5, 1.0, 5.0, 10.0 ml of 100-ppb Hg standard solution; dilute each to 100 mL with DI water. Add: 5.0 ml of H_2SO_4 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution. All standards are digested with samples and recorded on the appropriate logs submitted with this data. Prepare with each batch of samples.
ICV-5-022399-LC	Pipet into 250-ml fleaker: 1.0 ml of ICV-5 and 99 ml of DI water. Add: 5.0 ml of H_2SO_4 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Prepare with each batch of samples. This standard is digested with samples and recorded on the appropriate logs submitted with this data. Prepare with each batch of samples.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: [signature] Date: 2/23/99

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5. Digestion and Distillation Logs

Logs shall be submitted in the following order: digestion logs for ICP, flame AA (if used), furnace AA (if used), and mercury preparations, followed by a copy of the distillation log for cyanide.

2294

Metals Preparation Log

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK ID 53

Method (Circle one.): CLP(ILM04.0) 200.7 3010A 3020A 3050B 3005A

Case/SDG No. 34121/00002 Digestion Temp.: 95°C Prepared by LCooke Date 2/23/99

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial Plasma (wt/vol)	Final Plasma (vol)	Initial Furnace (wt/vol)	Final Furnace (vol)	Description Before	Description After	pH
1	929102	11795206	2/16/99	50ml	50ml	n/a	n/a	colorless/clear	colorless/clear	<2
2	929107	11795306								
3	929108	11795406								
4	929109	11795506								
5	929110	11795606								
6	929111	11795706								
7	929112	11795806								
8	929113	11795906								
9	929114	11796006								
10	929115	11796106								
11	929116	11796206								
12	929117	11796306								
13	929118	11796406								
14	929119	11796506								
15	929610	ICIPBLKAF	2/23/99							
16			WP 2/24/99							
17										
18										
19		LCooke 2/23/99								
20										
21	Sample Spike: 929103 ①	QC	n/a	50ml	50ml	n/a	n/a	REF CCN: (929102)	QC SS 0.5ml x 0.L 20 P Ref#: 7M1-5-2	
22	Duplicate Sample 929106	F Refs						REF CCN: (929102)		
23	Lab Ctrl Sample: 929105	QC						Reviewed By:	QC LCSW 5.0ml x 0.L LCS P Ref#: 7M1-5-1	
24	Prep. Blank 929477	F Refs						Date: 2/23/99		
25	Reagent Manufacturer & Lot #'s: HNO3: BIA lot # M28025 (1M2-153-10) HCl: BIA lot # M28034 (1M2-153-18)									

① Insufficient sample for SSD

0001186

CompuChem a division of Liberty Analytical Corp. Logbook 1F 41

Mercury Preparation Log

Method (Circle one.): MCAWW: 245.1 245.5 ILM04.0: 245.1-M 245.5-M SW846: 7470A 7471A

Case/SDG: 34121 / 000002 Prepared by LCWOOLE Date 2/23/99

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial (wt/vol)	Final (vol)	Description Before	Description After	pH
	929102	11795206	2/16/99	100ml	100ml	colorless/clear	violet	<2
	929107	11795306						
	929108	11795406						
	929109	11795506						
5	929110	11795606						
6	929111	11795706						
7	929112	11795806						
8	929113	11795906						
9	929114	11796006						
10	929115	11796106						
11	929116	11796206						
12	929117	11796306						
13	929118	11796406						
14	929119	11796506						
15	929610	TCLPBIKAP	2/28/99					
16			MP 2/24/99					
17								
18								
19		LCWOOLE 2/23/99						
20								
21	929103 (*)	Sample Spike	N/A	100ml	100ml	N/A	Ref CCN: (929102)	
22	929106	Duplicate Sample					Ref CCN: (929102)	
23	929105	Lab Ctrl Sample					Reviewed by: Sarah J. Yandrisevits	
24	929477	Prep. Blank					Date: 2/23/99	

Standard Curve

0 ml 100 ppb Hg to 100 ml
0.2 ml 100 ppb Hg to 100 ml
0.5 ml 100 ppb Hg to 100 ml
1.0 ml 100 ppb Hg to 100 ml
5.0 ml 100 ppb Hg to 100 ml
10.0 ml 100 ppb Hg to 100 ml
ICV-5:
1.0 ml of ICV-5 to 100 ml

The standards listed above were digested in the same manner and at the same time as the associated samples. For all standards and QC preparations, and lot #s associated with this batch, refer to the attached Standard Preparation Logbook (1NNN), pages.

Time started: 9AM
Time finished: 11AM
Water bath temp: 95 °C

QC (SS): 1.0ml 100ppb Hg
Ref#: 7M1-3-7
QC (LCS): 3.0ml 100ppb Hg
Ref#: 7M1-3-7

25 Reagent Manufacturer & Lot #s:
HNO3: BIA lot # M78075 (1M2-153-16) H2SO4 BIA lot # M31628 (1M2-152-24)
KMnO4. lot # 7006 KLAS (7M2-177-4) K2S2O8 lot # J03776 (1M2-151-27)

(*) Insufficient sample for SSD

2294

2958

000187

COMPUCHEM

ASSIGNED TO: Carl Hooker

DATE EXTRACTED 2/22/99

TCLP WASTE CHARACTERIZATION LEACHATE

EMPLOYEE ID: 1750

-814

QUEUE # 54

COMPU-CHEM SAMPLE NUMBER	CASE #	CLIENT #	PRE-TEST pH VALUE START	PRE-TEST pH VALUE FINAL	EXTRACTION FLUID AND VOL. (mL) ADDED[1] 1	EXTRACTION FLUID AND VOL. (mL) ADDED[1] 2	PARTICLE REDUCT. DONE (Y/N)	SAMPLE WEIGHT (g)	FINAL LEACH. pH VALUE	FINAL VOLUME (ml)	Percent Solid	COMMENTS
929102	34121 00002	11795206	11.55	11.37	N/A	200	N	100.0	5.76	1000	100	
929107		11795306	11.38	10.88		200	N	100.0	5.73	1000	100	
929108		11795406	11.48	10.98		200	N	100.0	5.47	1000	100	
929109		11795506	11.54	11.00		200	N	100.0	5.51	1000	100	
929110		11795606	11.33	10.74		200	N	100.0	5.26	1000	100	
929111		11795706	11.52	11.02		200	N	100.0	5.56	1000	100	
929112		11795806	11.33	11.20		200	N	100.0	5.57	1000	100	
929113		11795906	11.28	10.85		200	N	100.0	5.61	1000	100	
929114		11795006	11.14	10.30		200	N	100.0	4.67	1000	100	
929115		11796106	11.35	10.58		200	N	100.0	5.02	1000	100	
929116		11796206	11.27	10.32		200	N	100.0	4.77	1000	100	
929117		11796306	10.82	9.99		200	N	100.0	4.80	1000	100	
929118		11796406	10.62	10.35		200	N	100.0	5.84	1000	100	
929119		11796506	11.14	10.58	N/A	200	N	100.0	5.36	1000	100	
929548	34145 00001	OTC	8.30	2.81	2000	N/A	N	103.00	4.55	1000	97	
929610	BLANK	TCLPBLKAP	4.91	4.91	2000		N/A	100.0	4.88	N/A	N/A	
929611	BLANK	TCLPBLKAQ	2.90	2.90		200	N/A	100.0	2.89	N/A	N/A	

CH 2/22/99

LOADED TUMBLER CALIB. CHECK (MUST BE 30 rpm ± 2 rpm)	
TUMBLER #:	CALC. RPM
1A	31
1B	30

(COUN[illegible] FOR 30 sec. AND MU[illegible] NUMBER BY 2 TO CA[illegible]ATE RPM)

MANUAL COUNTER 468/ 2104

ROATATION TIME ONLY

DATE/TIME STARTED 2/22/99 2:40 PM

DATE/TIME COMPLETED 2/23/99 6:45 AM

Room Temp. 22°

Final Vol. Verified C Hooker

Reviewed By: [illegible]

Received By: Temp Storage

Ext. Fluid 1 pH 4.91 (4.93 ± 0.05)

Ext. Fluid 2 pH 2.90 (2.88 ± 0.05)

[1] Enter volume (mL) of Extraction Fluid added into appropriate column, e.g. enter volume into column 1 if Extraction Fluid # 1 is used. Ensure that the fluid vol[illegible] sample weight ratio is 20:1.

229 4

000188

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C. Chain-of-Custody Documentation

The laboratory shall include a copy of the Chain-of-Custody (CoC) Documentation for all of the samples in the SDG. The CoC documentation shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 5[illegible]031
Page 1 of 2

775743

Project Name/No. [1] Fernald Silo 1&2 POP
Sample Team Members [2] Bennett
Profit Center No. [3] 6585001
Project Manager [4] P. Lear
Purchase Order No. [6]
Required Report Date [11]

Samples' Shipment Date [7] 2/15/99
Lab Destination [8] CompuChem
Lab Contact [9] Chuck Smith 919 379 4018
Project Contact/Phone [12] Mary Hall 423 694 7326
Carrier/Waybill No. [13] FedX

Bill to: [5] IT Corp
Accts Payable
312 Directors Dr
Knoxville, TN 37923

Report to: [10] Mary Hall
IT Corp
304 Directors Dr
Knoxville, TN 37923

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
11795206	Stabilized Silo 1	2/4/99	GLASS	1 l	None	TCLP UTS metals Ba, Cd, Cr, Pb, Hg, Se, Ag, Sb, Be, Ni, Th	FOR LAB USE ONLY	
11795306								
11795406								
11795506								
11795606							FOR LAB USE ONLY	
11795706								
11795806								
11795906	Stabilized Silo 2	2/5/99						

Special Instructions: [23] See Attachment For Detection Limits Analyze on 2/17/99 Wed.

Possible Hazard Identification: [24]
Non-hazard ☑ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☑ 7 working Days

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Mary M. Hall	Date: 2-15-99 Time: 2:30pm	1. Received by [28] (Signature/Affiliation)	Date: Time:
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation) [illegible] CompuChem	Date: 2/16/99 Time: 8:54

Comments: [29] Please include pH Data (all 3) in Report. 20°C

MCA 3/15/91

Yellow: Field copy

*See back of form for special instructions.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Project Name Fernald S/O 1&2

Project No. 775743

Reference Document No.[30] 6832

Page 2 of 2

Samples Shipment Date 2/15/99

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
11796006	Stabilized S/O 2	2/5/99	GLASS	1L	NONE	TCLP UTS metals Ba, Cd, Cr, Pb, Hg, Se, Ag Sb, Be, Ni, Th.		
11796106								
11796206								
11796306								
11796406								
11796506								

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions.

2294

000191

MCA 3/15/91

COMPUCHEM

a division of Liberty Analytical Corp.

2294

16/FEB/99

IT CORPORATION
ATTN: MS. MARY HALL
304 DIRECTORS DRIVE
KNOXVILLE, TN 37923

Subject: Report of Data - Account Number# 501218 Order# 34121

ATTN: MS. MARY HALL

Enclosed are the results of analytical work performed in accordance with the referenced account number.

This report covers 11 sample(s) appearing on the attached listing.

Thank you for selecting CompuChem Environmental for your sample analysis. If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097.

Sincerely,

CompuChem Environmental
a division of Liberty Analytical

Attachment

000193

501 Madison Avenue ■ Cary, N.C. 27513 ■ Tel: 919-379-4100 ■ Fax: 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp.

2294

16/FEB/99

IT CORPORATION
ATTN: MS. MARY HALL
304 DIRECTORS DRIVE
KNOXVILLE, TN 37923

ACCOUNT #: 501218

CC#	SAMPLE-ID	RECEIPT DATE
928430	17-01-002	2/09/99
928435	18-02-002	2/09/99
928436	19-03-002	2/09/99
928438	20-04-002	2/09/99
928439	21-05-002	2/09/99
928440	22-06-002	2/09/99
928442	23-07-002	2/09/99
928443	24-08-002	2/09/99
928445	25-09-002	2/09/99
928447	26-10-002	2/09/99
928449	28-11-002	2/09/99

TOTAL NUMBER OF SAMPLES = 11

000194

501 Madison Avenue ■ Cary, N.C. 27513 ■ Tel: 919-379-4100 ■ Fax: 919-379-4050

CompuChem Environmental

I. SAMPLE DATA PACKAGE

SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field and analytical samples, reanalyses, blanks, spikes, duplicates, and laboratory control samples. The sample data package consists of the following:

A. Cover Page

B. Sample Data

C. Chain-of-Custody (CoC) Documentation

LAB CODE : COMPU

CONTRACT # : SW-846

CASE # : 34121

SDG # : 00001

A. Cover Page -

Inorganic Analyses Data Package

The Cover Page includes laboratory information, the Case and SDG numbers, the client ID numbers in alphanumeric order showing the client ID numbers cross-referenced with Lab ID numbers, comments, and completion of the statement on the use of ICP background and interelement correction for the samples.

On separate pages, the laboratory will include any problems encountered; both technical and administrative, the corrective action taken, and the resolution. This information is included in the Inorganic Case Summary Narrative which follows the Cover Page.

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121 SAS No.: _____ SDG No.:00001_

SOW No.: SW846__

EPA Sample No.	Lab Sample ID
LEACH_BLANK	928457
17-01-002	928430
17-01-002D	928434
17-01-002M	928432
17-01-002S	928431
18-02-002	928435
19-03-002	928436
20-04-002	928438
21-05-002	928439
22-06-002	928440
23-07-002	928442
24-08-002	928443
25-09-002	928445
26-10-002	928447
28-11-002	928449

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 floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Thomas R. Cole for Name: Carol J. Yandell

Date: February 16, 1999 Title: Laboratory Manager

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

INORGANIC CASE SUMMARY NARRATIVE
CASE # 34121 SDG # 00001
PROTOCOL # SW-846

The indicated Sample Delivery Group (SDG) consisting of eleven (11) solid samples was received into the laboratory management system (LIMS) on February 9, 1999 intact and in good condition with Chain of Custody (COC) records in order. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared as leachates then analyzed for antimony, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium using analytical methods delineated in SW-846 (Third Edition)-Update III.

All samples experienced interference and were diluted.

Form 1s could not been generated with mg/L units as requested. Concentration qualifiers do reflect the UTS levels requested.

SAMPLE IDs:

The following customer IDs are associated with this SDG:

17-01-002	18-02-002	19-03-002	20-04-002	21-05-002	22-06-002
23-07-002	24-08-002	25-09-002	26-10-002	28-11-002	

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, CCB) and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSW & PBW) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spike, CCN = 928431 (ID = 17-01-002S) was found to be inside control limits for the requested analytes.

The sample matrix spike duplicate, CCN = 928432 (ID = 17-01-002M) was found to be outside control limits for thallium. The reported concentration for this analyte is flagged with an "N" on all associated Form 1 and on Form 5a.

An "N" indicates a matrix-related interference in the sample preparation procedure &/or analysis for the flagged analyte. This is normally the consequence of a relatively high anionic content in the sample or (for some sediments) an inconsistent sample matrix relative to that analyte.

SW-846 control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more; in this case effected analytes are not flagged even if recoveries fall outside percentage recovery control limits.

Post-digestion spikes are mandatory for analytes demonstrating unsatisfactory matrix spike recoveries during ICP analysis (excluding silver). The results of such spikes are presented on Form 5b.

Unsatisfactory recovery of post-digestion spikes of this type do not have bearing upon the aforementioned "N" flags, but may indicate interference during analysis &/or a solution matrix which is hostile to the analyte in question.

Satisfactory recovery of an analyte in a post-digestion spike of this type implies interference by the required preparation procedure or in the sample matrix itself. Lack of uniformity for an analyte in sediments will also result in satisfactory recovery of post-digestion spikes after failure in the related matrix spike.

The sample matrix duplicate, CCN = 928434 (ID = 17-01-002D) was inside control limits for the requested analytes.

SW-846 control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 928430 (ID = 17-01-002L) was performed in accordance with SW-846 requirements for ICP analysis.

The adjusted sample concentrations were inside control limits for all requested analytes.

SW-846 control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution-adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

This SDG package was processed using the Ward Scientific software. This software package has a seven character limitation on the Forms 13 and 14 -- any sample ID's which exceed seven characters are truncated from left to right on these forms.

Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Thomas R. Cole

Thomas R. Cole
Chemist II
February 16, 1999

Note: This report is paginated for reference and accountability.

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I, under the column labeled "C" for concentration qualifier and "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each analyte.

The C (concentration) qualifiers used are:

U: This flag indicates the analyte was analyzed for but not detected. This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL). The IDL will be adjusted to reflect any dilution and, for soils, the percent moisture.

B: This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

The Q qualifiers used are:

E: This flag indicates an estimated value. This flag is used:

1. When the serial dilution (a five fold dilution for CLP and a four fold dilution for SW-846 method 6010A) results are not within 10%. The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample).
2. When the analytical spike recovery associated with the sample is below 40% after two successive dilutions by Graphite Furnace Atomic Absorption (GFAA).

M: This flag applies to GFAA analyses for concentrations greater than the Contract Required Detection Limit (CRDL). This flag is only used for GFAA if the analytical sample or analytical spike duplicate injection reading is not within 20% of the Relative Standard Deviation (RSD).

N: This flag indicates the sample spike recovery is outside of control limits:

*: This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits.

S: This flag applies to GFAA analyses to indicate the reported value was determined by the Method of Standard Additions (MSA).

W: This flag applies to GFAA analyses when the post-digestion spike (analytical spike) is out of control limits (85% - 115%), while sample absorbance is less than 50% of "spike" absorbance ["spike" is defined as (absorbance or concentration of spike sample) minus (absorbance or concentration of the sample)].

+: This flag applies to GFAA analyses when the correlation coefficient for the MSA is less than 0.995 after two MSA analyses.

NOTE: Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

The extensions: D, S, M, L. A, added to the end of the client ID represent as follows:

D: matrix duplicate
S: matrix spike
M: matrix spike duplicate
L: serial dilution
A: post digestion spike

B. Sample Data

1. Results
2. Quality Control Data
3. Quarterly Verification of Instrument Performance
4. Raw Data
5. Digestion and Distillation Logs

LAB CODE : COMPU

CONTRACT # : SW-846

CASE # : 34121

SDG # : 00001

1. Results

Sample results shall be arranged in packets with the Inorganic Analysis Data Sheet (Form I - IN). These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers, and shall include all the samples in the SDG.

U.S. EPA - CLP **2294**

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LEACH BLANK

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928457

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.2	B		P_
7440-38-2	Arsenic__	1.4	U	N	P_
7440-39-3	Barium___	0.83	B		P_
7440-41-7	Beryllium	0.50	U		P_
7440-43-9	Cadmium__	0.20	U		P_
7440-47-3	Chromium_	0.80	U		P_
7439-92-1	Lead_____	2.9	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	0.80	U		P_
7782-49-2	Selenium_	14.3	B		P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.4	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

17-01-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928430

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	26.8	B		P_
7440-38-2	Arsenic__	73.7		N	P_
7440-39-3	Barium___	473	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	19.3	B		P_
7440-47-3	Chromium_	1020	B		P_
7439-92-1	Lead_____	250	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	338	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

Duplicate_(17-01-002D)

FORM I - IN

SW846

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

18-02-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928435

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	11.0	B		P_
7440-38-2	Arsenic__	88.1		N	P_
7440-39-3	Barium___	445	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	21.4	B		P_
7440-47-3	Chromium_	502	B		P_
7439-92-1	Lead_____	2420	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	401	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

19-03-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928436

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	12.9	B		P
7440-38-2	Arsenic__	55.4		N	P
7440-39-3	Barium___	287	B		P
7440-41-7	Beryllium	2.5	U		P
7440-43-9	Cadmium__	19.0	B		P
7440-47-3	Chromium_	800	B		P
7439-92-1	Lead____	28.8	B		P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P
7782-49-2	Selenium_	351	B		P
7440-22-4	Silver___	2.0	U		P
7440-28-0	Thallium_	12.0	U	N	P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

SW846

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

20-04-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928438

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	38.7	B	N	P_
7440-39-3	Barium___	704	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.4	B		P_
7440-47-3	Chromium_	729	B		P_
7439-92-1	Lead_____	6.9	B		P_
7439-97-6	Mercury__	0.14	B		CV
7440-02-0	Nickel___	11.2	B		P_
7782-49-2	Selenium_	311	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

21-05-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 0001R_

Matrix (soil/water): WATER Lab Sample ID: 928439

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	45.3	B		P_
7440-39-3	Barium___	557	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	19.1	B		P_
7440-47-3	Chromium_	217	B		P_
7439-92-1	Lead_____	68.8	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	7.7	B		P_
7782-49-2	Selenium_	329	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

22-06-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 0001R_

Matrix (soil/water): WATER Lab Sample ID: 928440

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	69.3			P_
7440-39-3	Barium___	436	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	21.7	B		P_
7440-47-3	Chromium_	597	B		P_
7439-92-1	Lead_____	73.7	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	7.8	B		P_
7782-49-2	Selenium_	354	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U		P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

23-07-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928442

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	6.0	B		P_
7440-38-2	Arsenic__	43.7	B	N	P_
7440-39-3	Barium___	578	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.6	B		P_
7440-47-3	Chromium_	534	B		P_
7439-92-1	Lead____	87.4	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	250	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

24-08-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928443

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	9.7	B		P_
7440-38-2	Arsenic__	42.5	B	N	P_
7440-39-3	Barium___	362	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.1	B		P_
7440-47-3	Chromium_	686	B		P_
7439-92-1	Lead_____	12.2	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	302	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

25-09-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928445

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	10.6	B		P_
7440-38-2	Arsenic__	21.6	B	N	P_
7440-39-3	Barium___	400	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.6	B		P_
7440-47-3	Chromium_	642	B		P_
7439-92-1	Lead_____	79.2	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	270	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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U.S. EPA - CLP

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

26-10-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928447

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	9.8	B		P_
7440-38-2	Arsenic__	32.0	B	N	P_
7440-39-3	Barium___	427	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	19.0	B		P_
7440-47-3	Chromium_	716	B		P_
7439-92-1	Lead_____	184	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	246	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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U.S. EPA - CLP

1 2294 EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

28-11-002

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 928449

Level (low/med): LOW__ Date Received: 02/09/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	5.0	U		P_
7440-38-2	Arsenic__	32.6	B	N	P_
7440-39-3	Barium___	435	B		P_
7440-41-7	Beryllium	2.5	U		P_
7440-43-9	Cadmium__	20.9	B		P_
7440-47-3	Chromium_	661	B		P_
7439-92-1	Lead_____	15.1	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	4.0	U		P_
7782-49-2	Selenium_	304	B		P_
7440-22-4	Silver___	2.0	U		P_
7440-28-0	Thallium_	12.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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2. Quality Control Data

a. Initial and Continuing Calibration Verification
[Form II (Part 1) - IN]

b. CRDL Standard for AA (if applicable) and ICP
[Form II (Part 2) - IN]

c. Blanks
[Form III - IN]

d. ICP Interference Check Sample
[Form IV - IN]

e. Spike Sample Recovery
[Form V (Part 1) - IN]

f. Post Digest Spike Sample Recovery
[Form V (Part 2) - IN]

g. Duplicates
[Form VI - IN]

h. Laboratory Control Sample
[Form VII - IN]

i. Standard Addition Results (if applicable)
[Form VIII - IN]

j. ICP Serial Dilutions
[Form IX - IN]

k. Preparation Log
[Form XIII - IN]

l. Analysis Run Log
[Form XIV - IN]

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony	1000.0	993.10	99.3	1000.0	1035.00	103.5	1066.00	106.6	P
Barium	2009.0	2073.00	103.2	1000.0	1040.00	104.0	1079.00	107.9	P
Beryllium	476.0	479.40	100.7	1000.0	998.80	99.9	1032.00	103.2	P
Cadmium	510.0	493.60	96.8	1000.0	993.50	99.3	1025.00	102.5	P
Chromium	471.0	476.70	101.2	1000.0	1003.00	100.3	1036.00	103.6	P
Lead	101.8	99.21	97.5	1000.0	1017.00	101.7	1048.00	104.8	P
Mercury	4.1	3.72	90.7	5.0	5.07	101.4	5.12	102.4	CV
Nickel	497.0	486.10	97.8	1000.0	1002.00	100.2	1037.00	103.7	P
Selenium	101.4	99.93	98.6	1000.0	1033.00	103.3	1062.00	106.2	P
Silver	487.0	498.90	102.4	100.0	101.60	101.6	101.80	101.8	P
Thallium	98.9	101.50	102.6	1000.0	1049.00	104.9	1084.00	108.4	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

2294

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_				1000.0	1060.00	106.0	1073.00	107.3	P_
Barium___				1000.0	1072.00	107.2	1092.00	109.2	P_
Beryllium				1000.0	1014.00	101.4	1027.00	102.7	P_
dmium__				1000.0	1005.00	100.5	1015.00	101.5	P_
mium_				1000.0	1018.00	101.8	1031.00	103.1	P_
				1000.0	1027.00	102.7	1038.00	103.8	P_
Mercury__				5.0	5.07	101.4	5.11	102.2	CV
Nickel___				1000.0	1014.00	101.4	1025.00	102.5	P_
Selenium_				1000.0	1053.00	105.3	1063.00	106.3	P_
Silver___				100.0	100.50	100.5	99.80	99.8	P_
Thallium_				1000.0	1074.00	107.4	1081.00	108.1	P_

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2294

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony				1000.0	1074.00	107.4	1078.00	107.8	P
Barium				1000.0	1009.00	100.9	1003.00	100.3	P
Beryllium				1000.0	1019.00	101.9	1017.00	101.7	P
Cadmium				1000.0	1005.00	100.5	1002.00	100.2	P
Chromium				1000.0	1025.00	102.5	1024.00	102.4	P
Copper				1000.0	1028.00	102.8	1021.00	102.1	P
Mercury				5.0	5.07	101.4	5.06	101.2	CV
Nickel				1000.0	1021.00	102.1	1017.00	101.7	P
Selenium				1000.0	1059.00	105.9	1060.00	106.0	P
Silver				100.0	98.20	98.2	97.68	97.7	P
Thallium				1000.0	1077.00	107.7	1069.00	106.9	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2294

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_				1000.0	1056.00	105.6	1076.00	107.6	P
Barium___				1000.0	1079.00	107.9	1013.00	101.3	P
Beryllium				1000.0	1014.00	101.4	1013.00	101.3	P
Cadmium__				1000.0	1001.00	100.1	1001.00	100.1	P
Chromium_				1000.0	1020.00	102.0	1023.00	102.3	P
Lead_____				1000.0	1026.00	102.6	1021.00	102.1	P
Mercury__									NR
Nickel___				1000.0	1012.00	101.2	1019.00	101.9	P
Selenium_				1000.0	1052.00	105.2	1058.00	105.8	P
Silver___				100.0	98.42	98.4	97.83	97.8	P
Thallium_				1000.0	1064.00	106.4	1070.00	107.0	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_				1000.0	1068.00	106.8	1065.00	106.5	P
Barium___				1000.0	1084.00	108.4	1086.00	108.6	P
Beryllium				1000.0	1035.00	103.5	1028.00	102.8	P
Cadmium__				1000.0	1026.00	102.6	1016.00	101.6	P
Chromium_				1000.0	1042.00	104.2	1035.00	103.5	P
Iron_____				1000.0	1051.00	105.1	1046.00	104.6	P
Mercury__									NR
Nickel___				1000.0	1032.00	103.2	1025.00	102.5	P
Selenium_				1000.0	1061.00	106.1	1058.00	105.8	P
Silver___				100.0	100.70	100.7	100.60	100.6	P
Thallium_				1000.0	1078.00	107.8	1072.00	107.2	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Chromium									NR
[illegible]									NR
Mercury									NR
Nickel									NR
Selenium									NR
Silver									NR
Thallium	98.9	99.69	100.8	1000.0	1056.00	105.6	1059.00	105.9	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_									NR
Barium___									NR
Beryllium									NR
Cadmium__									NR
Chromium_									NR
[illegible]									NR
Mercury__									NR
Nickel___									NR
Selenium_									NR
Silver___									NR
Thallium_				1000.0	1075.00	107.5			P_

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2B
LOW RANGE STANDARD FOR AA AND ICP

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

AA CRDL Standard Source: SPEX_____

ICP CRDL Standard Source: LRS_____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				10.0	11.26	112.6		
Barium				10.0	10.49	104.9		
Beryllium				5.0	4.87	97.4		
Cadmium				5.0	5.35	107.0		
Chromium				5.0	5.13	102.6		
Lead				3.0	3.29	109.7		
Mercury	0.2	0.21	105.0					
Nickel				5.0	4.51	90.2		
Selenium				5.0	5.70	114.0		
Silver				5.0	4.71	94.2		
Thallium				10.0	9.79	97.9		

U.S. EPA - CLP

2B
LOW RANGE STANDARD FOR AA AND ICP

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

AA CRDL Standard Source: _____

ICP CRDL Standard Source: LRS_____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony_								
Barium___								
Beryllium								
Cadmium__								
Chromium_								
Lead____								
Mercury__								
Nickel___								
Selenium_								
Silver___								
Thallium_				10.0	9.80	98.0		

U.S. EPA - CLP

3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

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	Prepa-ration Blank	C	M
Antimony	1.6	B	1.0	U	1.0	U	1.2	B	1.04	B	P
Barium	0.2	U	0.2	U	0.2	U	0.2	U	1.17	B	P
Beryllium	0.5	U	0.5	U	0.5	U	0.5	U	0.50	U	P
Cadmium	0.2	U	0.2	U	0.2	U	0.2	U	0.20	U	P
Chromium	0.8	U	0.8	U	0.8	U	0.8	U	0.80	U	P
Lead	0.7	U	0.7	U	0.7	B	0.7	U	1.57	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.10	U	CV
Nickel	0.8	U	0.8	U	0.8	U	0.8	U	0.80	U	P
Selenium	2.6	U	2.6	U	2.6	U	2.6	U	2.60	U	P
Silver	0.4	U	0.4	U	0.4	U	0.4	U	0.40	U	P
Thallium	2.4	U	2.4	U	2.4	U	2.4	U	2.40	U	P

U.S. EPA - CLP

3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony			1.1	B	1.0	U	1.0	U			P
Barium			0.2	B	0.3	B	0.3	B			P
Beryllium			0.5	U	0.5	U	0.5	U			P
Cadmium			0.2	U	0.2	B	0.3	B			P
Chromium			0.8	U	0.8	U	0.8	U			P
Lead			0.7	U	0.8	B	0.7	U			P
Mercury			0.1	U	0.1	U	0.1	U			CV
Nickel			0.8	U	0.8	U	0.8	U			P
Selenium			2.6	U	2.6	U	2.6	U			P
Silver			0.4	B	0.4	U	0.4	U			P
Thallium			2.4	U	2.4	U	2.4	U			P

FORM III - IN

SW846

U.S. EPA - CLP

3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony			1.7	B	1.3	B	1.0	U			P
Barium			0.2	B	0.3	B	0.3	B			P
Beryllium			0.5	U	0.5	U	0.5	U			P
Cadmium			0.3	B	0.2	U	0.2	U			P
Chromium			0.8	U	0.8	U	0.8	U			P
Lead			1.2	B	0.7	U	0.7	U			P
Mercury											NR
Nickel			-0.8	B	-0.9	B	0.8	U			P
Selenium			2.6	U	2.6	U	3.6	B			P
Silver			0.4	U	0.4	U	0.4	U			P
Thallium			2.4	U	2.4	U	2.4	U			P

FORM III - IN SW846

U.S. EPA - CLP

3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony			1.0	U							P
rium			0.3	B							P
llium			0.5	U							P
ium			0.4	B							P
Chromium			0.8	U							P
Lead			0.7	U							P
Mercury											NR
Nickel			0.8	U							P
Selenium			2.6	U							P
Silver			0.4	U							P
Thallium			2.4	U							P

FORM III - IN SW846

U.S. EPA - CLP

2294

3
BLANKS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Chromium											NR
Lead											NR
Mercury											NR
Nickel											NR
Selenium											NR
Silver											NR
Thallium	2.4	U	2.4	U	2.4	U	2.4	U			P

FORM III - IN

SW846

000229

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4

ICP INTERFERENCE CHECK SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony	0	600	3	637.6	106.3	3	640.0	106.7
Barium	0	500	1	554.9	111.0	1	557.6	111.5
Beryllium	0	500	0	501.4	100.3	0	493.6	98.7
Cadmium	0	1000	-1	982.5	98.2	-2	962.8	96.3
Chromium	21	500	0	505.4	101.1	0	497.4	99.5
Lead	0	50	-1	48.7	97.4	0	50.4	100.8
Mercury								
Nickel	0	1000	1	1013.0	101.3	1	994.4	99.4
Selenium	0	50	-5	51.6	103.2	-8	46.1	92.2
Silver	0	200	0	204.9	102.4	0	201.1	100.5
Thallium	0	100	-8	98.4	98.4	-10	95.1	95.1

U.S. EPA - CLP

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ICP INTERFERENCE CHECK SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony	0	600				5	668.4	111.4
Barium	0	500				1	586.2	117.2
Beryllium	0	500				0	516.7	103.3
Cadmium	0	1000				-2	1008.0	100.8
Chromium	21	500				-1	520.3	104.1
Lead	0	50				-2	51.4	102.8
Mercury								
Nickel	0	1000				1	1045.0	104.5
Selenium	0	50				-6	50.7	101.4
Silver	0	200				0	202.0	101.0
Thallium	0	100				-8	100.5	100.5

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	%R	Final Found Sol. A	Final Found Sol. AB	%R
Antimony	0	600				2	661.0	110.2
Barium	0	500				1	580.4	116.1
Beryllium	0	500				0	515.8	103.2
Cadmium	0	1000				-1	1008.0	100.8
Chromium	21	500				-1	520.8	104.2
Lead	0	50				-2	49.4	98.8
Mercury								
Nickel	0	1000				1	1039.0	103.9
Selenium	0	50				-6	48.6	97.2
Silver	0	200				0	202.0	101.0
Thallium	0	100				-11	100.1	100.1

U.S. EPA - CLP

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ICP INTERFERENCE CHECK SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony								
Barium								
Beryllium								
Cadmium								
Chromium								
Lead								
Mercury								
Nickel								
Selenium								
Silver								
Thallium	0	100	-7	100.2	100.2	-3	101.9	101.9

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY 2294

EPA SAMPLE NO.

17-01-002M

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75-125	487.8500	B	26.8250	B	500.00	92.2		P
Barium	75-125	2442.5000	B	472.7000	B	2000.00	98.5		P
Beryllium	75-125	43.7550	B	2.5000	U	50.00	87.5		P
Cadmium	75-125	63.0500	B	19.3150	B	50.00	87.5		P
Chromium		1134.5000	B	1017.5000	B	200.00	58.5		P
Lead		251.0500	B	250.1000	B	20.00	4.7		P
rcury	75-125	0.8650	B	0.1000	U	1.00	86.5		CV
el	75-125	450.9500	B	4.0000	U	500.00	90.2		P
nium		327.7000	B	338.4000	B	10.00	-107.0		P
Silver	75-125	45.2500	B	2.0000	U	50.00	90.5		P
Thallium	75-125	31.1700	B	12.0000	U	50.00	62.3	N	P

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

2294

EPA SAMPLE NO.

17-01-002S

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75-125	519.0000	B	26.8250	B	500.00	98.4		P
Barium	75-125	2604.0000	B	472.7000	B	2000.00	106.6		P
Beryllium	75-125	46.5950	B	2.5000	U	50.00	93.2		P
Cadmium	75-125	67.0000	B	19.3150	B	50.00	95.4		P
Chromium		1204.0000	B	1017.5000	B	200.00	93.2		P
Lead		265.7500	B	250.1000	B	20.00	78.3		P
Mercury	75-125	0.7630	B	0.1000	U	1.00	76.3		CV
Nickel	75-125	477.5000	B	4.0000	U	500.00	95.5		P
Selenium		348.5500	B	338.4000	B	10.00	101.5		P
Silver	75-125	47.5400	B	2.0000	U	50.00	95.1		P
Thallium	75-125	40.7350	B	12.0000	U	50.00	81.5		P

Comments:

U.S. EPA - CLP

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5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

17-01-002A

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water) : WATER_ Level (low/med): LOW___

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Antimony_									NR
Barium___									NR
Beryllium									NR
Cadmium__									NR
Chromium_									NR
Lead_____									NR
rcury__									NR
ckel___									NR
S[illegible]ium_									NR
S[illegible]er___									NR
Thallium_		94.70	B	12.00	U	100.0	94.7		P

Comments:

FORM V (Part 2) - IN

SW846

000236

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DUPLICATES

2294 EPA SAMPLE NO.

17-01-002D

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Level (low/med): _LOW__

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony		26.8250	B	12.6700	B	71.7		P
Barium		472.7000	B	436.0000	B	8.1		P
Beryllium		2.5000	U	2.5000	U			P
Cadmium		19.3150	B	19.3650	B	0.3		P
Chromium		1017.5000	B	968.0000	B	5.0		P
Lead		250.1000	B	236.6000	B	5.5		P
Mercury		0.1000	U	0.1000	U			CV
Nickel		4.0000	U	4.3100	B	200.0		P
Selenium		338.4000	B	327.5000	B	3.3		P
Silver		2.0000	U	2.0000	U			P
Thallium		12.0000	U	12.0000	U			P

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LABORATORY CONTROL SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Solid LCS Source: _____

Aqueous LCS Source: PELMER_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony	6000.0	6079.00	101.3						
Barium	20000.0	21390.00	106.9						
Beryllium	500.0	487.20	97.4						
Cadmium	500.0	480.40	96.1						
Chromium	1000.0	970.30	97.0						
Lead	300.0	289.90	96.6						
Mercury									
Nickel	4000.0	3844.00	96.1						
Selenium	500.0	499.70	99.9						
Silver	1000.0	939.00	93.9						
Thallium	1000.0	999.70	100.0						

FORM VII - IN

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LABORATORY CONTROL SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Solid LCS Source: _____

Aqueous LCS Source: IVT_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony									
Barium									
Beryllium									
Cadmium									
Chromium									
Lead									
Mercury	3.0	2.45	81.7						
Nickel									
Selenium									
Silver									
Thallium									

FORM VII - IN SW846

000239

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STANDARD ADDITION RESULTS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract:SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.:_____ SDG No.:00001_

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q

FORM VIII - IN

SW846

000240

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ICP SERIAL DILUTION

EPA SAMPLE NO.

17-01-002L

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	5.36	B	9.68	B	80.6		P
Barium	94.54	B	93.90	B	0.7		P
Beryllium	0.50	U	2.50	U			P
Cadmium	3.86	B	2.86	B	25.9		P
Chromium	203.50	B	213.40	B	4.9		P
Lead	50.02	B	51.05	B	2.1		P
Mercury							NR
Nickel	0.80	U	4.00	U			P
Selenium	67.68	B	65.00	B	4.0		P
Silver	0.40	U	2.00	U			P
Thallium	2.40	U	12.00	U			P

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ICP LINEAR RANGES (QUARTERLY) 2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 01/29/99

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Antimony	15.00	10000.0	P
Barium	15.00	120000.0	P
Beryllium	15.00	5000.0	P
Cadmium	15.00	30000.0	P
Chromium	15.00	40000.0	P
Lead	15.00	40000.0	P
Mercury			NR
Nickel	15.00	50000.0	P
Selenium	15.00	50000.0	P
Silver	15.00	4000.0	P
Thallium	15.00	50000.0	P

Comments:

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PREPARATION LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34121_ SAS No.: _____ SDG No.:00001_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
7-01-002	02/11/99		50
7-01-002D	02/11/99		50
7-01-002M	02/11/99		50
7-01-002S	02/11/99		50
8-02-002	02/11/99		50
9-03-002	02/11/99		50
0-04-002	02/11/99		50
1-05-002	02/11/99		50
2-06-002	02/11/99		50
3-07-002	02/11/99		50
4-08-002	02/11/99		50
5-09-002	02/11/99		50
6-10-002	02/11/99		50
8-11-002	02/11/99		50
CSW	02/11/99		50
EACH BLANK	02/11/99		50
BW	02/11/99		50

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PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34121_ SAS No.: _____ SDG No.:00001_

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
7-01-002	02/11/99		100
7-01-002D	02/11/99		100
7-01-002M	02/11/99		100
7-01-002S	02/11/99		100
8-02-002	02/11/99		100
9-03-002	02/11/99		100
0-04-002	02/11/99		100
1-05-002	02/11/99		100
2-06-002	02/11/99		100
3-07-002	02/11/99		100
4-08-002	02/11/99		100
5-09-002	02/11/99		100
6-10-002	02/11/99		100
8-11-002	02/11/99		100
CSW	02/11/99		100
EACH BLANK	02/11/99		100
BW	02/11/99		100

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ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: V2_____ Method: CV

Start Date: 02/12/99 End Date: 02/12/99

EPA Sample No.	D/F	Time	% R	Analytes																						
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL												
S0	1.00	0755								X																
S0.2	1.00	0758								X																
S0.5	1.00	0800								X																
S1	1.00	0802								X																
S5	1.00	0805								X																
S10	1.00	0807								X																
ICV	1.00	0809								X																
CB	1.00	0812								X																
[illegible]	1.00	0814								X																
[illegible]	1.00	0816								X																
CCB	1.00	0818								X																
ZZZZZZ	1.00	0821																								
ZZZZZZ	1.00	0823																								
ZZZZZZ	1.00	0825																								
PBW	1.00	0827								X																
LCSW	1.00	0830								X																
7-01-002	1.00	0832								X																
-01-002D	1.00	0834								X																
-01-002S	1.00	0836								X																
-01-002M	1.00	0839								X																
8-02-002	1.00	0841								X																
CCV	1.00	0843								X																
CCB	1.00	0845								X																
9-03-002	1.00	0848								X																
0-04-002	1.00	0850								X																
1-05-002	1.00	0852								X																
2-06-002	1.00	0854								X																
3-07-002	1.00	0856								X																
4-08-002	1.00	0859								X																
5-09-002	1.00	0901								X																
6-10-002	1.00	0903								X																
8-11-002	1.00	0905								X																

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ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: V2_____ Method: CV

Start Date: 02/12/99 End Date: 02/12/99

EPA Sample No.	D/F	Time	% R	Analytes											
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL	
CH BLANK	1.00	0908								X					
CCV	1.00	0910								X					
CCB	1.00	0912								X					
ZZZZZZ	1.00	0914													
ZZZZZZ	26.00	0917													
ZZZZZZ	1.00	0919													
ZZZZZZ	1.00	0921													
ZZZZ	26.00	0923													
ZZZZ	1.00	0926													
ZZ	1.00	0928													
ZZZZZZ	1.00	0930													
ZZZZZZ	1.00	0932													
ZZZZZZ	1.00	0935													
CCV	1.00	0937								X					
CCB	1.00	0939								X					
ZZZZZZ	1.00	0941													
ZZZZZZ	1.00	0944													
ZZZZZZ	1.00	0946													
ZZZZZZ	1.00	0948													
ZZZZZZ	1.00	0951													
CCV	1.00	0953								X					
CCB	1.00	0955								X					
CCV	1.00	0957								X					
CCB	1.00	1000								X					

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ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/12/99 End Date: 02/12/99

EPA Sample No.	D/F	Time	% R	Analytes										
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL
S0	1.00	0940		X	X	X	X	X	X	_	X	X	X	X
S	1.00	0947		_	_	_	X	X	X	_	X	X	X	X
S	1.00	0954		_	_	_	_	_	_	_	_	_	_	_
S	1.00	0956		_	X	X	_	_	_	_	_	_	_	_
S	1.00	1006		_	_	_	_	_	_	_	_	_	_	_
S	1.00	1013		X	_	_	_	_	_	_	_	_	_	_
CCV	1.00	1019		_	X	X	X	X	_	_	X	_	X	_
CCV	1.00	1026		_	_	_	_	_	X	_	_	X	_	X
[illegible]	1.00	1033		X	_	_	_	_	_	_	_	_	_	_
[illegible]	1.00	1040		X	X	X	X	X	X	_	X	X	X	X
CRI	1.00	1046		_	_	_	_	_	_	_	_	_	_	_
ICSA	1.00	1053		X	X	X	X	X	X	_	X	X	X	X
ICSAB	1.00	1100		X	X	X	X	X	X	_	X	X	X	X
CCV	1.00	1107		X	X	X	X	X	X	_	X	X	X	X
CCB	1.00	1114		X	X	X	X	X	X	_	X	X	X	X
LRS	1.00	1121		X	X	X	X	X	X	_	X	X	X	X
ZZZZZZ	1.00	1130		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1137		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1143		_	_	_	_	_	_	_	_	_	_	_
CRI	1.00	1150		_	_	_	_	_	_	_	_	_	_	_
ICSA	1.00	1157		X	X	X	X	X	X	_	X	X	X	X
ICSAB	1.00	1204		X	X	X	X	X	X	_	X	X	X	X
CCV	1.00	1211		X	X	X	X	X	X	_	X	X	X	X
CCB	1.00	1218		X	X	X	X	X	X	_	X	X	X	X
CCV	1.00	1250		X	X	X	X	X	X	_	X	X	X	X
CCB	1.00	1257		X	X	X	X	X	X	_	X	X	X	X
ZZZZZZ	1.00	1304		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1311		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1318		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1325		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1332		_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	5.00	1339		_	_	_	_	_	_	_	_	_	_	_

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ANALYSIS RUN LOG

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Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/12/99 End Date: 02/12/99

EPA Sample No.	D/F	Time	% R	Analytes										
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL
ZZZZZZ	1.00	1345												
CRI	1.00	1356												
ICSA	1.00	1403		X	X	X	X	X	X		X	X	X	X
ICSAB	1.00	1410		X	X	X	X	X	X		X	X	X	X
CCV	1.00	1417		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1424		X	X	X	X	X	X		X	X	X	X
PBW	1.00	1431												
SW	1.00	1438												
-002	1.00	1445												
002D	1.00	1452												
-01-002S	1.00	1459												
-01-002M	1.00	1506												
-01-002L	5.00	1512												
8-02-002	1.00	1519												
9-03-002	1.00	1526												
CCV	1.00	1533		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1540		X	X	X	X	X	X		X	X	X	X
0-04-002	1.00	1547												
1-05-002	1.00	1554												
2-06-002	1.00	1601												
1-07-002	1.00	1608												
4-08-002	1.00	1615												
5-09-002	1.00	1622												
6-10-002	1.00	1628												
8-11-002	1.00	1635												
CH BLANK	1.00	1642												
ZZZZZZ	1.00	1649												
CCV	1.00	1656		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1703		X	X	X	X	X	X		X	X	X	X
CCV	1.00	1719		X	X	X	X	X	X		X	X	X	X
CCB	1.00	1726		X	X	X	X	X	X		X	X	X	X
PBW	1.00	1733		X	X	X	X	X	X		X	X	X	X

FORM XIV - IN SW846

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/12/99 End Date: 02/12/99

EPA Sample No.	D/F	Time	% R	Analytes										
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL
LCSW	1.00	1740		X	X	X	X	X	X		X	X	X	X
7-01-002	5.00	1751		X	X	X	X	X	X		X	X	X	X
-01-002D	5.00	1758		X	X	X	X	X	X		X	X	X	X
-01-002S	5.00	1805		X	X	X	X	X	X		X	X	X	X
-01-002M	5.00	1812		X	X	X	X	X	X		X	X	X	X
-01-002L	25.00	1819		X	X	X	X	X	X		X	X	X	X
8-02-002	5.00	1826		X	X	X	X	X	X		X	X	X	X
-03-002	5.00	1833		X	X	X	X	X	X		X	X	X	X
[illegible]	1.00	1840		X	X	X	X	X	X		X	X	X	X
[illegible]	1.00	1847		X	X	X	X	X	X		X	X	X	X
0[illegible]4-002	5.00	1854		X	X	X	X	X	X		X	X	X	X
1-05-002	5.00	1900		X	X	X	X	X	X		X	X	X	X
2-06-002	5.00	1907		X	X	X	X	X	X		X	X	X	X
3-07-002	5.00	1914		X	X	X	X	X	X		X	X	X	X
4-08-002	5.00	1921		X	X	X	X	X	X		X	X	X	X
5-09-002	5.00	1928		X	X	X	X	X	X		X	X	X	X
6-10-002	5.00	1935		X	X	X	X	X	X		X	X	X	X
8-11-002	5.00	1942		X	X	X	X	X	X		X	X	X	X
CH BLANK	1.00	1949		X	X	X	X	X	X		X	X	X	X
ZZZZZZ	1.00	1956												
CCV	1.00	2003		X	X	X	X	X	X		X	X	X	X
CCB	1.00	2009		X	X	X	X	X	X		X	X	X	X
CRI	1.00	2016												
ICSA	1.00	2023		X	X	X	X	X	X		X	X	X	X
ICSAB	1.00	2030		X	X	X	X	X	X		X	X	X	X
CCV	1.00	2037		X	X	X	X	X	X		X	X	X	X
CCB	1.00	2044		X	X	X	X	X	X		X	X	X	X

FORM XIV - IN SW846

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ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/15/99 End Date: 02/15/99

EPA Sample No.	D/F	Time	% R	Analytes										
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL
S0	1.00	1044												X
S	1.00	1051												X
S	1.00	1057												
S	1.00	1103												
S	1.00	1110												
S	1.00	1117												
ICV	1.00	1123												
V	1.00	1130												X
I	1.00	1137												
I	1.00	1143												X
CRI	1.00	1150												
ICSA	1.00	1157												X
ICSAB	1.00	1204												X
CCV	1.00	1211												X
CCB	1.00	1218												X
LRS	1.00	1225												X
ZZZZZZ	1.00	1232												
ZZZZZZ	1.00	1239												
ZZZZZZ	1.00	1246												
ZZZZZZ	1.00	1252												
ZZZZZZ	1.00	1259												
ZZZZZZ	1.00	1306												
ZZZZZZ	5.00	1313												
ZZZZZZ	1.00	1320												
ZZZZZZ	1.00	1327												
CCV	1.00	1334												X
CCB	1.00	1341												X
ZZZZZZ	1.00	1348												
ZZZZZZ	1.00	1356												
ZZZZZZ	1.00	1403												
-01-002A	5.00	1410												X
CRI	1.00	1417												

FORM XIV - IN

000250

SW846

U.S. EPA - CLP

14

ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 02/15/99 End Date: 02/15/99

EPA Sample No.	D/F	Time	% R	Analytes											
				SB	BA	BE	CD	CR	PB	HG	NI	SE	AG	TL	
ICSA	1.00	1423												X	
ICSAB	1.00	1430												X	
CCV	1.00	1437												X	
CCB	1.00	1444												X	

FORM XIV - IN SW846

000251

57

3. Quarterly Verification of Instrument Performance

a. Instrument Detection Limits (Quarterly)
[Form X - IN]

b. ICP Interelement Correction Factors (Annually)
[Form XI (Part 1) - IN]

c. ICP Interelement Correction Factors (Annually)
[Form XI (Part 2) - IN]

d. ICP Linear Ranges (Quarterly)
[Form XII - IN]

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly) 2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: _____ Date: 12/24/98

Flame AA ID Number : V2_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Antimony			1150		NR
Barium			21000		NR
Beryllium			1220		NR
Cadmium			110		NR
Chromium			800		NR
Lead			750		NR
Mercury	253.70		25.0	0.1	CV
Nickel			11000		NR
Selenium			5700		NR
Silver			140		NR
Thallium			200		NR

Comments:

FORM X - IN SW846

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 02/01/99

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Antimony	206.84		1150	1.0	P
Barium	493.41		21000	0.2	P
Beryllium	313.04		1220	0.5	P
Cadmium	226.50		110	0.2	P
Chromium	267.72		800	0.8	P
Lead	220.35		750	0.7	P
Mercury			25.0		NR
Nickel	231.60		11000	0.8	P
Selenium	196.03		5700	2.0	P
Silver	328.07		140	0.4	P
Thallium	190.86		200	2.4	P

Comments:

FORM X - IN SW846

U.S. EPA - CLP

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____ 2294

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	BA_
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0000910	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0001090	0.0000000	-0.0000260	0.0000000	0.0000000
Mercury__						
ckel___	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
nium_	196.03	0.0000000	0.0000000	-0.0001380	0.0000000	0.0000000
er___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	0.0000000	0.0000000	-0.0024320	0.0000000	0.0000000

Comments:

FORM XI (Part 1) - IN

U.S. EPA - CLP

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____ 2294

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : BE_	CD_	CO_	CR_	CU_
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0032000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	-0.0001220	0.0000000	0.0000000
Chromium_	267.72	0.0000810	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0000000	0.0000000	-0.0001090	0.0000000	0.0000000
Mercury__						
ckel___	231.60	0.0000880	0.0000000	0.0000000	0.0000000	0.0000000
S nium_	196.03	0.0000000	0.0000000	0.0000690	0.0000000	0.0000000
S er___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Th lium_	190.86	0.0000000	0.0000000	0.0026730	0.0003390	0.0000000

Comments:

000256

FORM XI (Part 2) - IN SW846

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U.S. EPA - CLP

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____ 2294

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : MN_	MO_	NI_	SB_	SN_
Antimony_	206.84	0.0000000	0.0027990	-0.0001560	0.0000000	-0.0008685
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0000000	0.0000000	0.0001160	0.0000000	0.0000000
Mercury__						
ckel___	231.60	0.0000000	0.0000000	0.0000000	-0.0009020	0.0000000
Se nium_	196.03	0.0001380	0.0000000	0.0000000	0.0000000	0.0000000
S er___	328.07	0.0000720	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	-0.0010960	-0.0002290	0.0000000	0.0000000	0.0000000

Comments:

U.S. EPA - CLP

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34121_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : TI_	V__	ZN_	___	___
Antimony_	206.84	0.0001630	0.0009140	0.0000000		
Barium___	493.41	0.0000000	0.0000000	0.0000000		
Beryllium	313.04	0.0000000	0.0001370	0.0000000		
Cadmium__	226.50	0.0000000	0.0000000	0.0000000		
Chromium_	267.72	0.0000000	0.0002610	0.0000000		
Lead_____	220.35	-0.0001765	-0.0000600	0.0000000		
Mercury__						
ckel___	231.60	0.0000000	0.0000000	0.0000000		
enium_	196.03	0.0000000	0.0000225	0.0000000		
er___	328.07	0.0000000	0.0000000	0.0000000		
llium_	190.86	0.0016540	0.0016560	0.0000000		

Comments:

4. Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the Quarterly Verification of Instrument Parameters submitted as a part of each data package.

The order of the raw data in the data package shall be: ICP, Flame AA (if used), Furnace AA (if used), mercury, and cyanide (if a target analyte).

Raw ~~data~~ shall be labeled using EPA sample number convention in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, interference check samples, ICP serial dilution samples, CRDL standard for ICP and AA (if used), Laboratory Control Sample, and post digestion spike
- diluted and undiluted samples (by client ID number) and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes
- instrument used, including all data voided or data not used and a brief written explanation
- all information for furnace analysis (if used)
- date and time of each analysis (instrument run logs can be submitted if they contain this information
- integration time for AA analyses (if used)

2294

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 OOOO 22

race ICP Runlog (P3)

Part (B) of a two part form

ethod (Circle one.):
.P ILM04.0
N-846 6010B
CAWW 200.7

Case: 130501 **Date:** 2-12-99

34103 100015

3-01 100301

Operator: P. Wang

File name: PW0212, PW-212A

WSL.NAME P321201, P321205

	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	SO			1	927849	PBS	100015
	XCL-11			2	927464	LCS	
	STD3			3	927461		
	XCL-2			4	927463	DUP	
	XCL-3A			5	927462	SPK	
	PLSBR			6	SD927461		
	ICV			7	123123		
	ICB			8	CRI		
	CRI			9	ICSA		
0	ICSA	<ICSAB		10	ICSAB		
	CCV				CCV		
	CCB				CCB		
	LRS			1	928579	PBW	Rerun with 5X
	929660	PBS	130501	2	928433	LCSW	
	929631	LCS		3	925430	(all)	
	928621			4	925434	DUP	
	CRI			5	925431	SPK	
	ICSA			6	925432	SPK	
	ICSAB	<CCV ICB		7	SD925430	5X DF:1	
			PW 2-12-99	8	928435		
				9	925436		
				10		PW	2-12-99
					CCV		
	CCB				CCB		

COMMENTS

000260

Reviewed By: M Powell

Date 2/15/99

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2294

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 OOOO 22

Trace ICP Runlog (P3)

Part (A) of a two part form

Page 2 of 3

Method (Circle one.):
CLP ILM04.0
SW-846 6010B
MCAWW 200.7

Case: SAMPZ **Date:** 2-12-99
Operator: P. Wang
File name: SAMPZ
WSL.NAME

No.	Sample ID	Comments	Action needed	No.	Sample ID	Comments	Action Needed
	SO			1	925579	PDW	100001
	XCL-11			2	925433	CCSW	
	STD3			3	925430	5X D:1	
	XCL-2			4	925434		
	SCL-3A	PW 2-12-99		5	925431		
	PLSBR			6	925432		
	ICV			7	925430SDL	25X D:1	
	ICB			8	925435	5X D:1	
	CRI			9	925436		
	ICSA			10		PW 2-12-99	
	ICSAB				CCV		
	CCV				CCB		
	CCB			1	925438	5X D:1	
1	925438			2	925439		
2	925439			3	925440		
3	925440			4	925442		
4	925442			5	925443		
5	925443			6	925445		
6	925445			7	925447		
7	925447			8	925449		
8	925449			9	925457	PW 2-15-99	
9	925457			10	123123	CCV CCB CRI ICSA ICSAB	
10	123123	CCV CCB			CCV		
	CCV				CCB		
	CCB						

COMMENTS

Reviewed By: M Powell

Date: ~~2/18/99~~ 2/15/99

000261

3291

hod: CLP3I Standard: BLANK
Time: 02/12/99 09:40:17

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Avge	-.0187	7.483	.0108	.0500	.0038	-.6306	-.0127
SDev	.0268	.070	.0109	.0168	.0010	.0548	.0193
%RSD	143.4	.9303	100.3	33.68	25.07	8.685	151.6
#1	-.0230	7.422	.0229	.0344	.0029	-.5812	-.0239
#2	.0100	7.469	.0019	.0478	.0048	-.6212	.0096
#3	-.0430	7.559	.0076	.0678	.0038	-.6895	-.0239

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Avge	.0185	.8936	.0019	.6667	.0169	.0035	.4525
SDev	.0074	.0075	.0051	.1100	.0036	.0006	.0179
%RSD	40.11	.8399	264.5	16.49	21.50	15.80	3.964
#1	.0267	.8980	.0000	.7332	.0153	.0029	.4349
#2	.0124	.8980	.0076	.7272	.0210	.0038	.4518
#3	.0162	.8850	-.0019	.5398	.0143	.0038	.4707

Elem	Ni2316	Tl1908	V 2924	Zn2138	As1890	22031	22032
Avge	-.0223	-.2356	-.0070	-.0207	-.6080	1.851	-.2528
SDev	.0096	.0103	.0022	.0011	.0499	.178	.1014
%RSD	42.90	4.367	31.42	5.265	8.208	9.629	40.12
#1	-.0258	-.2251	-.0095	-.0219	-.6489	1.922	-.1546
#2	-.0115	-.2359	-.0057	-.0201	-.5524	1.649	-.2466
#3	-.0296	-.2457	-.0057	-.0201	-.6227	1.984	-.3572

Elem	20681	20682	19601	19602	Sn1899	Bi2230	Mo2020
Avge	-.1897	.0777	-.4469	.5123	-.0356	.1738	-.0134
SDev	.1625	.0637	.0335	.1090	.0274	.1113	.0381
RSD	85.67	81.97	7.499	21.28	76.94	64.03	285.5
[illegible]	-.2195	.0115	-.4590	.4075	-.0649	.3016	-.0544
[illegible]	-.0143	.0831	-.4091	.6250	-.0315	.1214	-.0067
[illegible]	-.3352	.1385	-.4727	.5042	-.0105	.0984	.0210

Elem	Ti3349
Avge	.5575
SDev	.6030
%RSD	108.2
#1	1.252
#2	.2523
#3	.1681

2294

Method: CLP3I Standard: XCL-11
Run Time: 02/12/99 09:47:12

Elem	Ag3280	Cd2265	Cr2677	Cu3247	Ni2316	Tl1908	Zn2138
Avge	21.95	869.3	36.20	130.1	31.97	37.56	26.79
SDev	.10	7.1	.34	.4	.24	.22	.25
%RSD	.4400	.8180	.9451	.2723	.7364	.5845	.9290
#1	21.85	863.3	35.92	129.7	31.75	37.38	26.54
#2	21.94	867.6	36.11	130.4	31.92	37.50	26.79
#3	22.04	877.2	36.58	130.1	32.22	37.81	27.04

Elem	22031	22032	19601	19602
Avge	249.2	209.3	39.43	78.15
SDev	2.1	2.6	.39	.98
%RSD	.8259	1.220	.9896	1.259
#1	247.5	206.8	39.18	77.55
#2	248.5	209.2	39.23	77.61
#3	251.5	211.9	39.88	79.28

thod: CLP3I Standard: STD3
n Time: 02/12/99 09:54:05

2294

m	Al3082	Ca3179	Fe2714	Mg2790
Avge	1782.	13.15	53.86	255.9
SDev	11.	.04	.10	.6
%RSD	.6198	.2711	.1907	.2351
#1	1770.	13.19	53.97	256.5
#2	1785.	13.16	53.85	255.9
#3	1792.	13.11	53.76	255.3

2294

thod: CLP3I Standard: XCL-2
Time: 02/12/99 09:59:25

m	Ba4934	Be3130	Co2286	Mn2576	V 2924	As1890	Mo2020
Avge	478.0	1781.	138.8	54.15	17.86	172.2	135.2
SDev	1.7	21.	1.4	.52	.15	1.4	1.4
%RSD	.3567	1.197	1.034	.9555	.8202	.8370	1.060
#1	476.5	1760.	137.4	53.65	17.71	171.1	133.8
#2	477.6	1781.	138.7	54.12	17.86	171.7	135.1
#3	479.9	1802.	140.2	54.69	18.00	173.8	136.7

Method: CLP3I Standard: XCL-3A
Run Time: 02/12/99 10:06:19

2294

	K 7664	Na3302
Avge	838.8	46.06
SDev	3.1	.26
%RSD	.3726	.5584
#1	837.5	45.96
#2	842.4	46.35
#3	836.5	45.86

Method: CLP3I Standard: PLSBR
Run Time: 02/12/99 10:13:13

2294

Elem	20681	20682	Sn1899	Bi2230	Ti3349
Avge	150.5	86.90	21.98	179.0	161.8
SDev	.6	.60	.20	1.1	1.9
%RSD	.4030	.6877	.9223	.5881	1.187
#1	150.7	87.45	22.16	179.4	163.9
#2	149.8	86.26	21.76	177.8	160.1
#3	150.9	86.98	22.03	179.9	161.5

Method: CLP3I Sample Name: ICV1 Operator:
Analysis Time: 02/12/99 10:19:20
Client: ICV ICV1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	498.9	1997.	2073.	479.4	50800.	493.6	540.3
SDev	1.8	5.	13.	1.0	97.	1.2	.2
%RSD	.3637	.2490	.6380	.2162	.1900	.2507	.0462
#1	499.2	2002.	2075.	480.5	50910.	495.0	540.6
#2	500.6	1995.	2058.	478.5	50730.	493.2	540.3
#3	497.0	1993.	2084.	479.2	50760.	492.6	540.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	487.0	1956.	2009.	476.0	50710.	510.0	520.0
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	476.7	501.4	2000.	46380.	24690.	495.6	47550.
SDev	.8	.2	9.	265.	69.	1.0	225.
%RSD	.1664	.0463	.4542	.5707	.2783	.2002	.4728
#1	477.5	501.4	1992.	46530.	24700.	496.5	47440.
#2	475.9	501.6	2010.	46080.	24620.	494.5	47400.
#3	476.8	501.2	1998.	46540.	24750.	495.9	47810.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	471.0	497.0	1985.	49600.	24590.	491.0	48790.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	486.1	-3.136	503.6	3041.	5025.	-.9427	1.104
SDev	2.9	1.785	1.4	7.	10.	1.1385	.411
%RSD	.6045	56.92	.2836	.2236	.2089	120.8	37.25
#1	489.5	-3.499	503.9	3047.	5036.	-1.850	1.433
#2	484.3	-1.198	502.0	3033.	5025.	.3347	.6428
#3	484.5	-4.712	504.8	3042.	5015.	-1.312	1.235
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	497.0		492.0	3012.			
Range	10.00		10.00	10.00			

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.691	5055.	5011.	2.724	.2831	-1.438	-.7072
SDev	.282	18.	7.	2.375	1.232	2.070	1.8682
%RSD	16.68	.3654	.1321	87.19	435.2	144.0	264.2
#1	1.701	5074.	5017.	1.131	1.572	.0444	-2.808
#2	1.968	5052.	5012.	1.587	.1599	-.5548	.7672
#3	1.404	5038.	5004.	5.454	-.8826	-3.803	-.0806
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.700	-3.378	-.0719	-10.22
SDev	.952	1.055	.1224	17.30
%RSD	56.02	31.22	170.2	169.3
#1	-2.175	-2.839	-.1926	9.001
	-2.320	-4.593	-.0753	-15.11
	-.6034	-2.702	.0521	-24.54
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000268

thod: CLP3I Sample Name: ICV3 Operator:
Time: 02/12/99 10:26:15
ent: ICV ICV3
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	98.28	3.774	.3196	.0671	-49.95	97.10	-.1885
SDev	.36	3.407	.1053	.0231	3.58	.52	.2718
%RSD	.3656	90.27	32.95	34.44	7.175	.5400	144.2
#1	97.87	-.0194	.4408	.0489	-51.77	97.22	.0757
#2	98.52	4.769	.2509	.0593	-45.82	96.53	-.1740
#3	98.45	6.573	.2671	.0931	-52.26	97.56	-.4673
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1841	.0929	-3.270	226.9	3.192	.1347	304.6
SDev	.2777	.3512	2.088	18.9	3.236	.0198	78.6
%RSD	150.8	378.0	63.83	8.345	101.4	14.68	25.81
#1	.5033	.2219	-4.521	246.7	5.333	.1253	366.4
#2	.0513	.3613	-.8604	224.8	4.773	.1213	331.2
#3	-.0022	-.3045	-4.430	209.0	-.5314	.1574	216.1
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.265	101.5	.0932	-4.159	99.21	99.93	1026.
SDev	.384	2.3	.1648	.123	.70	3.13	2.
%RSD	30.37	2.217	176.8	2.962	.7023	3.135	.2145
#1	-.8229	103.4	.1227	-4.065	99.59	101.7	1028.
#2	-1.456	102.1	.2413	-4.114	98.41	96.31	1024.
#3	-1.517	99.05	-.0844	-4.299	99.64	101.8	1025.
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		98.90			98.80	101.4	
Range		10.00			10.00	10.00	

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	95.84	99.30	99.16	1028.	1025.	96.29	101.7
SDev	1.34	1.61	.87	.	3.	2.71	3.3
%RSD	1.402	1.621	.8801	.0353	.3050	2.817	3.291
#1	95.17	101.1	98.79	1028.	1028.	97.62	103.7
#2	97.39	98.16	98.52	1027.	1022.	93.17	97.87
#3	94.96	98.61	100.2	1028.	1023.	98.08	103.6
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	101.8						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.715	.1281	-.0216	.0631
SDev	1.585	1.863	.5804	10.03
%RSD	92.46	1454.	2684.	15890.
#1	-.8757	-.4019	.3287	11.64
#2	-3.543	-1.412	.2980	-6.073
#3	-.7250	2.198	-.6915	-5.378
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000269

Analysis Report QC Standard 02/12/99 10:40:01 AM page 1

Method: CLP3I Sample Name: SPEXASSE Operator:
Run Time: 02/12/99 10:33:09
Segment: ICV SPEXASSE
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1609	12.77	.1566	-.0264	-58.49	.1932	-.2666
SDev	.2760	7.47	.1054	.0743	.11	.1231	.5419
%RSD	171.6	58.49	67.27	281.3	.1876	63.69	203.3
#1	.3247	21.39	.2782	.0477	-58.46	.3181	-.7052
#2	.3156	8.775	.0932	-.0261	-58.61	.1896	-.4337
#3	-.1578	8.151	.0984	-.1009	-58.39	.0720	.3392
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0627	.4632	.8060	7.087	.7961	.0632	271.7
SDev	.5553	.2898	6.010	18.89	2.886	.0211	30.5
%RSD	886.0	62.57	745.7	266.5	362.5	33.45	11.23
#1	.5515	.3445	-4.309	14.24	-2.005	.0517	303.8
#2	-.2103	.2516	-.6983	-14.33	.6321	.0504	243.1
#3	-.5293	.7936	7.425	21.35	3.761	.0877	268.1
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.134	-.2059	-11.73	-4.454	-1.819	-1.193	993.1
SDev	.257	.6997	.44	.040	1.071	1.773	4.0
%RSD	22.69	339.8	3.759	.8995	58.87	148.7	.3982
#1	-1.177	-.0100	-11.71	-4.434	-1.774	-2.395	991.9
#2	-.8584	.3749	-12.18	-4.427	-2.912	-2.027	989.9
#3	-1.368	-.9827	-11.30	-4.500	-.7719	.8437	997.6
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value							1000.
Range							10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2591	-3.819	-.8327	1001.	989.1	-1.416	-1.093
SDev	1.0635	3.168	2.2479	9.	1.5	2.922	3.853
%RSD	410.5	82.96	269.9	.9112	.1566	206.3	352.5
#1	-.4053	-.1626	-2.590	999.8	988.0	1.898	-4.550
#2	-1.242	-5.547	-1.609	992.9	988.5	-2.527	-1.789
#3	.8700	-5.747	1.700	1011.	990.9	-3.620	3.060
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1003.	996.4	1007.	1007.
SDev	8.	1.7	4.	18.
%RSD	.7511	.1708	.3720	1.787
#1	994.0	998.0	1004.	1028.
#2	1008.	994.6	1007.	996.6
#3	1006.	996.4	1011.	996.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000270

thod: CLP3I Sample Name: S0 Operator:
Time: 02/12/99 10:40:03
ent: ICB
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0030	3.549	.0395	.0054	-60.55	-.0237	-.0332
SDev	.0878	5.028	.0476	.0389	3.75	.1997	.1860
%RSD	2892.	141.7	120.5	723.4	6.193	843.9	560.4
#1	.0971	-.8066	.0936	-.0353	-58.53	.1943	-.1965
#2	-.0395	2.404	.0208	.0093	-58.24	-.0674	-.0725
#3	-.0668	9.051	.0041	.0421	-64.87	-.1979	.1693
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0812	-.2839	-3.562	3.403	-1.730	.0160	133.8
SDev	.4950	.0586	8.677	18.54	.825	.0004	90.7
%RSD	609.8	20.65	243.6	544.7	47.68	2.320	67.79
#1	.4904	-.2426	-11.72	24.02	-2.398	.0155	237.7
#2	-.3657	-.2580	5.557	-1.902	-.8080	.0162	69.84
#3	-.3683	-.3509	-4.526	-11.90	-1.983	.0162	94.01
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7170	1.119	-.0219	-4.667	-.1630	1.069	1.568
SDev	.5079	1.231	.1640	.136	.4378	3.785	.921
%RSD	70.83	110.0	750.0	2.905	268.6	354.2	58.78
#1	-.2548	-.2534	-.1996	-4.616	.2080	-1.813	2.566
#2	-1.261	1.483	.0104	-4.821	-.6459	-.3372	.7498
#3	-.6355	2.127	.1235	-4.565	-.0511	Q5.356	1.387
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8851	-2.981	1.232	2.624	1.028	-1.389	2.284
SDev	1.0556	1.131	.187	1.799	1.061	5.675	3.000
%RSD	119.3	37.92	15.19	68.54	103.2	408.6	131.4
#1	.3035	-2.293	1.445	4.424	1.627	-4.413	-.5261
#2	-1.245	-4.286	1.160	2.622	-.1969	-4.911	1.935
#3	-1.713	-2.365	1.092	.8265	1.655	5.158	5.443
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.188	-.2126	.4292	.2909
SDev	3.006	2.9733	.4789	9.833
%RSD	253.1	1398.	111.6	3380.
#1	-1.550	.0325	.8474	11.63
#2	1.983	-3.301	.5334	-5.795
#3	-3.996	2.631	-.0933	-4.967
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000271

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Analysis Report QC Standard 02/12/99 10:53:49 AM page 1

Method: CLP3I Sample Name: CRI Operator:
Run Time: 02/12/99 10:46:57
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.42	2.086	.0129	10.14	-60.37	10.15	101.3
SDev	.41	11.16	.0398	.14	3.97	.22	.8
%RSD	2.134	535.1	309.4	1.370	6.569	2.209	.7678
#1	19.41	14.16	.0385	10.29	-57.86	10.33	102.2
#2	19.84	-.0354	.0330	10.09	-58.30	9.900	101.2
#3	19.02	-7.864	-.0330	10.02	-64.94	10.22	100.7
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.16	50.08	-.0059	-10.89	-.7493	30.76	167.8
SDev	.72	.17	9.2887	2.06	2.4058	.25	103.3
%RSD	3.594	.3404	158700.	18.94	321.1	.8172	61.58
#1	20.92	49.92	-8.256	-12.01	-3.527	31.04	187.3
#2	20.07	50.07	10.05	-12.14	.6577	30.68	259.9
#3	19.48	50.26	-1.816	-8.508	.6215	30.56	56.07
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.88	18.43	101.6	33.80	5.470	11.14	120.9
SDev	1.07	2.49	.8	.28	1.083	.34	2.0
%RSD	1.329	13.49	.7435	.8389	19.80	3.011	1.623
#1	82.08	21.21	102.4	34.12	5.439	11.37	121.9
#2	80.58	16.43	101.6	33.70	6.569	10.76	122.2
#3	80.00	17.65	100.9	33.58	4.403	11.30	118.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.70	4.523	5.928	121.9	120.4	13.97	9.722
SDev	.25	.892	1.246	2.0	2.7	1.25	.711
%RSD	1.248	19.71	21.02	1.649	2.214	8.912	7.312
#1	19.98	4.975	5.655	120.4	122.6	13.02	10.54
#2	19.64	5.098	7.288	124.1	121.2	13.52	9.371
#3	19.50	3.496	4.841	121.0	117.5	15.38	9.254
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	42.73	39.33	Q85.62	59.77
SDev	3.08	3.31	1.89	9.07
%RSD	7.203	8.419	2.202	15.18
#1	40.16	42.98	Q87.73	69.41
#2	41.89	36.54	Q84.11	58.50
#3	46.14	38.46	Q85.03	51.40
Errors	QC Pass	QC Pass	QC Fail	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

000272

Analysis Report QC Standard 02/12/99 11:00:43 AM page 1

Method: CLP3I Sample Name: ICSA Operator:
Run Time: 02/12/99 10:53:51
Instrument: ICSA ICSA
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2792	545800.	1.222	-.0900	517700.	-.7445	-.4065
SDev	.2959	1205.	.044	.0518	2357.	.2702	.2117
%RSD	106.0	.2208	3.605	57.51	.4553	36.29	52.09
#1	-.2762	544400.	1.257	-.1147	519900.	-.5141	-.4691
#2	.0151	546500.	1.236	-.1249	517900.	-.6776	-.1705
#3	-.5767	546400.	1.173	-.0305	515200.	-1.042	-.5798
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1346	3.118	199700.	-3.087	536600.	.4099	52.05
SDev	.2789	.253	570.	4.797	1881.	.0508	175.5
%RSD	207.1	8.130	.2854	155.4	.3506	12.40	337.2
#1	.1698	2.901	200300.	-7.728	538400.	.4378	114.9
#2	-.1958	3.396	199800.	-3.385	536800.	.4408	-146.3
#3	-.3779	3.056	199200.	1.852	534600.	.3513	187.5
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.9032	-8.179	3.491	-3.906	-.8273	-5.156	2.872
SDev	.3424	5.055	.433	.297	1.7869	2.917	2.105
%RSD	37.91	61.81	12.39	7.611	216.0	56.57	73.29
#1	.9889	-7.934	3.317	-3.615	-1.314	-2.091	.6049
#2	.5261	-13.35	3.172	-3.893	-2.320	-5.480	3.247
#3	1.195	-3.250	3.983	-4.209	1.153	-7.897	4.765
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8414	7.810	-5.155	-4.562	6.571	-9.524	-2.988
SDev	.1007	5.248	4.003	9.126	1.754	6.915	1.398
%RSD	11.97	67.20	77.65	200.1	26.69	72.60	46.80
#1	-.9432	13.84	-8.897	-15.06	8.412	-3.412	-1.444
#2	-.8390	4.288	-5.635	-.1306	4.920	-8.130	-4.170
#3	-.7419	5.300	-.9338	1.503	6.380	-17.03	-3.351
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-4.940	3.629	-1.011	-13.21
SDev	5.553	.546	1.366	31.52
%RSD	112.4	15.04	135.1	238.5
#1	-10.46	3.514	.5482	23.18
#2	-4.998	3.150	-1.995	-31.18
#3	.6421	4.224	-1.587	-31.64
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000273

Method: CLP3I Sample Name: ICSAB Operator:
Run Time: 02/12/99 11:00:45
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	204.9	547700.	554.9	501.4	529400.	982.5	511.3
SDev	.9	1721.	1.8	3.2	4897.	5.7	3.3
%RSD	.4445	.3143	.3248	.6440	.9251	.5820	.6458
#1	203.9	545700.	555.0	498.6	525000.	978.0	508.7
#2	204.9	548300.	553.1	500.6	528500.	980.6	510.3
#3	205.8	549000.	556.7	504.9	534700.	989.0	515.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	505.4	530.6	204600.	6.640	548500.	513.8	70.09
SDev	3.1	1.2	1320.	14.20	4025.	3.7	183.3
%RSD	.6115	.2324	.6454	213.8	.7338	.7131	261.5
#1	502.7	529.2	203500.	14.20	545100.	510.6	-133.8
#2	504.8	531.1	204100.	15.46	547400.	513.0	122.8
#3	508.8	531.4	206000.	-9.737	552900.	517.8	221.2
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1013.	98.42	516.5	1038.	48.75	51.57	637.6
SDev	5.	2.55	3.7	7.	1.22	2.45	1.0
%RSD	.4711	2.595	.7096	.6845	2.512	4.750	.1644
#1	1009.	97.55	513.2	1032.	47.34	49.37	638.8
#2	1012.	96.41	515.8	1036.	49.29	54.21	636.9
#3	1018.	101.3	520.4	1046.	49.60	51.13	637.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	105.5	67.50	39.37	641.3	635.7	39.66	57.51
SDev	3.3	6.31	4.82	6.5	4.7	11.19	9.22
%RSD	3.134	9.347	12.25	1.007	.7457	28.22	16.03
#1	102.4	74.20	33.92	634.5	640.9	47.91	50.09
#2	104.9	61.67	43.10	647.4	631.6	26.92	67.83
#3	109.0	66.63	41.09	641.9	634.7	44.15	54.61
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1039.	1125.	1032.	1038.
SDev	9.	4.	7.	34.
%RSD	.8923	.3348	.6429	3.243
#1	1031.	1125.	1027.	1077.
#2	1036.	1120.	1030.	1016.
#3	1049.	1128.	1040.	1021.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

000274

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 11:07:40
Segment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.6	2079.	1040.	998.8	49810.	993.5	1006.
SDev	.7	3.	8.	6.3	329.	5.6	7.
%RSD	.7055	.1581	.7567	.6268	.6609	.5620	.6484
#1	100.8	2080.	1032.	992.6	49500.	988.0	999.2
#2	102.2	2083.	1047.	1005.	50160.	999.2	1012.
#3	101.9	2076.	1041.	998.8	49760.	993.2	1006.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1003.	1027.	2008.	47480.	50640.	1005.	48450.
SDev	6.	5.	3.	335.	352.	7.	294.
%RSD	.6368	.4598	.1620	.7063	.6946	.6632	.6073
#1	997.4	1022.	2011.	47130.	50300.	997.8	48170.
#2	1010.	1028.	2009.	47800.	51000.	1011.	48760.
#3	1002.	1031.	2005.	47510.	50630.	1005.	48430.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1002.	1049.	1016.	1007.	1017.	1033.	1035.
SDev	6.	11.	7.	6.	7.	11.	9.
%RSD	.5902	1.056	.7286	.5919	.6904	1.067	.8296
#1	995.3	1036.	1008.	1001.	1010.	1021.	1027.
#2	1007.	1057.	1023.	1013.	1024.	1042.	1044.
#3	1002.	1053.	1016.	1007.	1016.	1036.	1034.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1016.	1019.	1016.	1052.	1027.	1024.	1037.
SDev	6.	10.	6.	4.	11.	14.	10.
%RSD	.5575	.9902	.5824	.3784	1.063	1.375	.9506
#1	1011.	1008.	1012.	1048.	1016.	1008.	1027.
#2	1022.	1028.	1023.	1056.	1038.	1033.	1047.
#3	1016.	1022.	1014.	1052.	1025.	1033.	1038.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1021.	1043.	1013.	1007.
SDev	7.	10.	8.	4.
%RSD	.7167	.9765	.8227	.4031
#1	1018.	1033.	1005.	1011.
#2	1030.	1053.	1022.	1006.
#3	1016.	1042.	1013.	1002.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000275

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Analysis Report QC Standard 02/12/99 11:21:26 AM page 1

Method: CLP3I Sample Name: CCB Operator:
Analysis Time: 02/12/99 11:14:35
Comment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0850	14.01	.1785	.2070	-47.88	.1788	-.1669
SDev	.0707	10.52	.1202	.0893	3.70	.2085	.2801
%RSD	83.23	75.08	67.33	43.14	7.738	116.6	167.8
#1	.1062	25.33	.3006	.2989	-45.70	.4091	-.4895
#2	.0061	12.15	.1745	.2017	-52.15	.0030	.0151
#3	.1426	4.544	.0603	.1205	-45.77	.1242	-.0264
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2872	-.3148	-6.265	-.0540	12.78	.1580	178.7
SDev	.6832	.1504	3.908	8.0110	1.91	.0004	104.9
%RSD	237.9	47.77	62.39	14820.	14.98	.2620	58.73
#1	1.076	-.4439	-10.75	6.281	14.69	.1583	134.6
#2	-.1063	-.3509	-4.479	2.616	12.80	.1581	102.9
#3	-.1082	-.1497	-3.568	-9.059	10.86	.1575	298.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0651	.2613	.0585	-4.591	-.4188	.5378	.7520
SDev	.0602	1.569	.1661	.096	.2416	.6859	1.308
%RSD	92.52	600.5	283.7	2.097	57.68	127.5	173.9
#1	-.0667	1.511	-.0870	-4.613	-.5890	.8081	-.5488
#2	-.0041	.7727	.2394	-4.674	-.5251	-.2420	2.067
#3	-.1244	-1.500	.0232	-4.486	-.1423	1.047	.7378
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8974	-1.246	-.0176	2.249	-.0071	1.096	.2476
SDev	1.097	1.731	1.1454	1.395	1.3350	.430	1.159
%RSD	122.3	138.9	6526.	62.02	18720.	39.24	468.2
#1	.9027	.7410	-1.265	1.249	-1.458	1.395	.5036
#2	-.2026	-2.051	.2249	3.843	1.169	1.290	-1.018
#3	1.992	-2.428	.9872	1.656	.2680	.6030	1.258
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.001	.1189	1.075	2.946
SDev	.803	1.878	.795	8.427
%RSD	80.27	1579.	73.92	286.1
#1	.6763	2.287	1.823	12.17
#2	.4103	-.9533	1.162	1.021
#3	1.915	-.9770	.2407	-4.352
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000276

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thod: CLP3I Sample Name: LRS #15 Operator:
Time: 02/12/99 11:21:29
C nt: SDG:0001S ClientID:PBS 1:1
Mo : CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.713	95.33	10.49	4.872	933.5	5.352	5.176
SDev	.222	3.19	.23	.117	18.9	.013	.243
%RSD	4.701	3.351	2.180	2.409	2.027	.2471	4.694
#1	4.822	96.55	10.75	5.007	954.4	5.363	5.040
#2	4.458	91.71	10.40	4.810	928.5	5.337	5.456
#3	4.858	97.74	10.32	4.798	917.5	5.357	5.031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	150.0	15.00	7.500	1500.	7.500	7.500
Low	2.500	50.00	5.000	2.500	500.0	2.500	2.500

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.130	4.987	105.8	714.0	989.7	10.18	2257.
SDev	.437	.124	3.5	19.5	18.5	.19	52.
%RSD	8.510	2.490	3.305	2.735	1.866	1.862	2.309
#1	5.633	5.116	109.7	736.4	1009.	10.39	2316.
#2	4.911	4.868	104.9	704.4	987.6	10.13	2238.
#3	4.847	4.977	102.9	701.0	972.3	10.02	2217.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	7.500	150.0	1500.	1500.	15.00	3000.
Low	2.500	2.500	50.00	500.0	500.0	5.000	1000.

lem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
e	4.508	9.787	21.10	15.49	3.295	5.700	11.26
v	.077	2.319	.33	.28	.148	1.548	.77
D	1.705	23.70	1.548	1.800	4.505	27.16	6.844
#1	4.494	9.347	21.30	15.79	3.295	4.683	10.96
#2	4.440	12.29	21.27	15.45	3.444	7.482	12.13
#3	4.591	7.719	20.72	15.24	3.147	4.936	10.68
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	15.00	30.00	30.00	4.500	7.500	15.00
Low	2.500	5.000	10.00	10.00	1.500	2.500	5.000

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.06	-.0080	4.931	12.61	10.57	2.962	7.056
SDev	1.54	1.4467	.505	2.16	1.73	2.914	1.526
%RSD	15.31	18070.	10.24	17.12	16.37	98.40	21.63
#1	11.80	-.3087	5.080	15.08	8.891	-.2831	7.150
#2	8.878	1.565	4.368	11.68	12.35	5.356	8.532
#3	9.507	-1.281	5.344	11.08	10.47	3.812	5.485
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	15.00						
Low	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.21	49.99	5.163	37.68
SDev	1.34	3.15	.863	6.65
%RSD	6.965	6.309	16.72	17.65
1	20.44	53.52	6.128	44.65
#2	17.78	49.02	4.464	31.41
#	19.41	47.45	4.898	36.99
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	75.00	7.500	60.00
Low	10.00	25.00	2.500	20.00

000277

Method: CLP3I Sample Name: 928660 #23 Operator:
Run Time: 02/12/99 11:30:06
Client: SDG:30501 ClientID:PBS 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0668	7.118	-.0004	.0889	-64.49	.1181	.1017
SDev	.2601	10.93	.0549	.0486	.08	.1128	.0792
%RSD	389.6	153.6	14230.	54.62	.1257	95.58	77.86
#1	.3156	19.19	.0432	.1441	-64.40	-.0101	.1400
#2	.0880	4.264	.0176	.0699	-64.50	.2027	.1546
#3	-.2033	-2.103	-.0620	.0527	-64.56	.1616	.0107
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2265	-.2219	-9.537	-2.880	-1.759	-.0178	-573.2
SDev	.2071	.1705	2.711	7.706	2.238	.0365	51.1
%RSD	91.41	76.84	28.42	267.6	127.3	205.0	8.924
#1	-.4637	-.3045	-11.13	-5.101	.0964	-.0544	-629.2
#2	-.1344	-.3355	-11.08	-9.231	-4.245	-.0177	-528.9
#3	-.0815	-.0258	-6.407	5.693	-1.128	.0186	-561.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2375	3.055	-.1140	-2.742	-1.304	1.332	.9885
SDev	.2932	3.018	.0036	.063	.254	2.012	.1817
%RSD	123.4	98.78	3.194	2.304	19.46	151.1	18.38
#1	-.5590	.5501	-.1180	-2.740	-1.016	.7101	.7979
#2	.0151	2.210	-.1132	-2.806	-1.495	3.581	1.008
#3	-.1687	6.405	-.1109	-2.679	-1.401	-.2958	1.160
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8490	-2.608	-.6649	1.403	.7694	4.647	-.3349
SDev	1.476	2.700	1.1991	2.970	1.279	3.864	1.1910
%RSD	173.8	103.5	180.3	211.7	166.2	83.15	355.6
#1	.0784	-.5456	-1.263	-.1812	1.275	2.616	-.2535
#2	-.0818	-1.614	-1.448	-.4391	1.718	9.102	.8133
#3	2.550	-5.663	.7155	4.830	-.6847	2.222	-1.565
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.173	-2.856	.0998	-3.346
SDev	2.350	1.621	.6291	1.974
%RSD	200.3	56.75	630.3	58.99
#1	.0361	-2.743	.3466	-5.362
#2	3.875	-4.531	.5681	-3.258
#3	-.3923	-1.295	-.6152	-1.418
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

000278

thod: CLP3I Sample Name: PLCSS928631 #24 Operator:
Time: 02/12/99 11:37:00 2294
ent: SDG:30501 ClientID:LCSS 1:1
: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	526.4	44410.	2014.	748.5	13690.	1070.	678.4
SDev	.9	122.	14.	5.7	134.	8.	5.8
%RSD	.1671	.2752	.6979	.7682	.9800	.7303	.8479
#1	525.6	44290.	2023.	750.6	13710.	1073.	680.7
#2	526.3	44400.	2021.	752.8	13810.	1075.	682.7
#3	527.4	44530.	1998.	741.9	13550.	1061.	671.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	735.0	76900.	2610.	1010.	16600.	1420.	956.0
Low	408.0	37600.	1280.	565.0	9030.	849.0	518.0

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1647.	1037.	61000.	12340.	11030.	2406.	17960.
SDev	13.	3.	477.	86.	94.	19.	251.
%RSD	.7745	.2907	.7812	.6938	.8529	.7900	1.396
#1	1654.	1035.	61180.	12400.	11060.	2413.	18000.
#2	1656.	1036.	61360.	12380.	11100.	2420.	18190.
#3	1633.	1041.	60460.	12240.	10920.	2384.	17690.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2290.	1170.	133000.	20400.	15300.	3190.	18300.
Low	1210.	646.0	48300.	9570.	8880.	2040.	9390.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	614.1	851.8	866.4	1852.	633.9	1173.	106.6
SDev	4.4	6.6	6.5	17.	3.7	6.	1.2
%RSD	.7084	.7763	.7508	.8922	.5909	.5114	1.085
#1	614.4	856.2	870.2	1860.	635.4	1172.	106.4
#2	618.3	855.0	870.2	1864.	636.7	1179.	107.8
#3	609.6	844.2	858.9	1833.	629.6	1168.	105.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	986.0	1140.	1260.	2360.	873.0	1550.	496.0
Low	381.0	458.0	651.0	1440.	447.0	914.0	34.90

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1609.	641.6	630.0	111.0	104.3	1148.	1185.
SDev	13.	4.5	3.7	1.3	2.2	9.	6.
%RSD	.8248	.7008	.5897	1.198	2.145	.8266	.4961
#1	1617.	645.4	630.4	110.0	104.7	1141.	1188.
#2	1616.	642.9	633.5	110.5	106.4	1159.	1190.
#3	1594.	636.6	626.1	112.5	101.9	1145.	1179.
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	2250.						
Low	1020.						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1627.	-5.698	1036.	1838.
SDev	11.	1.997	9.	46.
%RSD	.6623	35.05	.8391	2.527
#1	1629.	-7.610	1041.	1888.
#2	1636.	-5.857	1042.	1830.
#3	1615.	-3.626	1026.	1797.
Errors	LC Pass	NOCHECK	LC Pass	LC Pass
High	2240.		1460.	3580.
Low	1240.		789.0	1110.

Method: CLP3I Sample Name: 928621 #27 Operator:
Analysis Time: 02/12/99 11:43:55
Client: SDG:30501 ClientID:SD00001 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8612	1967.	186.0	.2828	H907900.	7.204	2.230
SDev	.2148	9.	1.0	.0883	13251.	.192	.391
%RSD	24.94	.4739	.5440	31.23	1.460	2.671	17.54
#1	1.065	1977.	186.4	.3799	H897200.	7.350	2.039
#2	.8824	1961.	184.9	.2610	H903800.	6.986	1.971
#3	.6365	1961.	186.8	.2074	H922700.	7.275	2.680
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	52.52	205.9	37870.	4913.	3451.	95.48	12210.
SDev	.62	.7	354.	47.	30.	.79	145.
%RSD	1.171	.3579	.9340	.9542	.8608	.8318	1.188
#1	52.89	205.2	37630.	4956.	3429.	95.09	12220.
#2	51.81	205.7	37690.	4863.	3439.	94.95	12060.
#3	52.86	206.7	38270.	4919.	3484.	96.39	12350.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.75	-.4608	10.54	75.45	139.7	.8600	3.190
SDev	.89	2.8332	.12	.89	1.1	2.533	.722
%RSD	4.268	614.8	1.116	1.182	.7879	294.5	22.63
#1	21.74	-3.607	10.50	74.82	139.5	-2.060	3.866
#2	20.03	1.890	10.45	75.06	138.7	2.177	3.274
#3	20.50	.3347	10.67	76.47	140.8	2.463	2.430
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.633	146.6	136.2	3.582	2.982	-6.412	4.478
SDev	2.077	3.4	2.2	1.472	1.435	1.355	3.624
%RSD	44.83	2.323	1.580	41.08	48.11	21.14	80.94
#1	2.374	150.3	134.1	2.310	4.631	-7.024	.4063
#2	5.063	143.7	136.1	5.194	2.304	-4.859	5.677
#3	6.461	145.7	138.4	3.241	2.012	-7.353	7.351
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-135.4	1.128	19.95	328.8
SDev	3.0	1.470	.59	24.3
%RSD	2.237	130.3	2.970	7.383
#1	L-132.1	2.678	20.61	356.3
#2	L-138.0	.9529	19.73	310.5
#3	L-136.2	-.2466	19.49	319.5
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000280

:hod: CLP3I Sample Name: CRI Operator:
Time: 02/12/99 11:50:49
ent:
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18.97	6.273	.0374	9.914	-4.202	9.942	100.4
SDev	.18	4.465	.0315	.136	13.210	.289	1.0
%RSD	.9361	71.18	84.23	1.371	314.4	2.902	.9863
#1	18.89	9.991	.0514	10.03	9.197	9.701	101.0
#2	18.84	1.321	.0595	9.765	-4.588	9.864	99.24
#3	19.17	7.509	.0013	9.946	-17.21	10.26	100.8
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.79	50.02	6.573	-14.49	-.4973	30.51	126.3
SDev	.23	.08	4.578	7.73	2.0468	.26	132.7
%RSD	1.187	.1638	69.66	53.36	411.6	.8385	105.0
#1	20.06	50.12	8.645	-21.30	.0128	30.64	235.8
#2	19.61	49.96	1.325	-16.08	-2.751	30.22	-21.21
#3	19.71	49.99	9.749	-6.086	1.246	30.68	164.4
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

lem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
e	79.84	18.58	101.7	35.59	5.877	10.16	122.0
v	1.05	1.36	1.0	.20	.385	1.72	.8
D	1.313	7.307	.9710	.5727	6.546	16.88	.6196
#1	80.05	17.70	101.9	35.45	5.606	12.08	122.9
#2	78.70	20.15	100.6	35.48	5.707	9.615	121.5
#3	80.76	17.90	102.6	35.82	6.317	8.787	121.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.95	2.989	7.303	124.0	121.1	8.385	11.04
SDev	1.12	.797	.813	.3	1.2	2.536	1.57
%RSD	5.328	26.66	11.14	.2124	.9727	30.24	14.22
#1	22.08	2.521	7.131	123.8	122.4	10.56	12.83
#2	20.91	3.909	6.590	123.8	120.4	8.990	9.916
#3	19.85	2.537	8.189	124.3	120.4	5.601	10.37
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	41.10	38.09	Q84.42	52.86
SDev	3.38	1.59	.44	4.27
%RSD	8.214	4.183	.5168	8.079
1	40.94	39.78	Q84.92	51.15
#2	44.56	37.88	Q84.17	49.71
	37.81	36.61	Q84.16	57.72
Errors	QC Pass	QC Pass	QC Fail	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

000281

Method: CLP3I Sample Name: ICSA Operator:
Run Time: 02/12/99 11:57:43
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0061	543200.	1.281	.0876	510600.	-1.632	-.8374
SDev	.2388	1908.	.099	.0327	5823.	.201	.2858
%RSD	3942.	.3512	7.707	37.33	1.140	12.30	34.13
#1	.0425	541000.	1.389	.1132	505000.	-1.453	-1.167
#2	.2246	543900.	1.260	.0990	510100.	-1.594	-.6705
#3	-.2489	544600.	1.195	.0508	516700.	-1.849	-.6743
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2498	2.529	200200.	-3.787	537900.	.1627	211.9
SDev	1.021	.102	1630.	13.464	3867.	.0603	97.9
%RSD	408.8	4.015	.8140	355.5	.7189	37.03	46.22
#1	1.038	2.421	198800.	6.092	534500.	.2196	309.7
#2	.6153	2.545	199900.	1.669	537000.	.1690	212.0
#3	-.9039	2.622	202000.	-19.12	542100.	.0996	113.9
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.9524	-9.873	3.398	-4.389	-.0766	-7.578	3.296
SDev	.8828	3.152	.117	.455	1.5942	.739	1.168
%RSD	92.68	31.93	3.434	10.37	2082.	9.750	35.45
#1	1.925	-13.20	3.287	-4.863	-1.689	-8.039	3.755
#2	.2030	-6.933	3.388	-4.349	1.499	-6.726	4.164
#3	.7289	-9.485	3.519	-3.954	-.0399	-7.970	1.967
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.105	11.36	-5.801	-1.091	5.473	-10.89	-5.939
SDev	2.194	2.00	3.367	2.397	1.280	7.33	3.744
%RSD	104.2	17.61	58.05	219.8	23.38	67.28	63.05
#1	-4.544	13.59	-9.333	-2.348	6.789	-4.118	-10.01
#2	-1.481	9.732	-2.627	1.674	5.395	-9.883	-5.163
#3	-.2906	10.75	-5.443	-2.598	4.234	-18.67	-2.643
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.322	7.377	.0105	-8.934
SDev	3.600	1.924	.5847	37.645
%RSD	272.3	26.08	5554.	421.3
#1	-2.660	7.365	.5125	34.44
#2	-4.062	5.459	-.6314	-28.15
#3	2.756	9.307	.1505	-33.10
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000282

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.hod: CLP3I Sample Name: ICSAB Operator:
Time: 02/12/99 12:04:37
Co nt:
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	201.1	538500.	557.6	493.6	518100.	962.8	504.0
SDev	.6	1040.	7.2	3.1	3533.	5.3	4.4
%RSD	.2994	.1931	1.287	.6330	.6819	.5522	.8657
#1	201.7	537400.	549.4	490.6	515200.	958.3	499.6
#2	201.0	539500.	561.6	496.9	522000.	968.7	508.3
#3	200.6	538700.	562.0	493.4	516900.	961.4	503.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	497.4	526.6	203000.	9.302	547200.	505.6	101.4
SDev	3.2	2.0	1493.	19.95	4770.	3.6	151.4
%RSD	.6520	.3788	.7356	214.4	.8716	.7115	149.3
#1	494.1	524.3	201300.	22.70	541900.	501.8	151.6
#2	500.6	527.7	204300.	18.83	551100.	509.0	221.4
#3	497.5	527.9	203300.	-13.62	548600.	505.8	-68.70
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

lem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
e	994.4	95.14	513.4	1027.	50.45	46.14	640.0
	5.5	1.62	4.7	8.	1.57	5.06	5.9
D	.5497	1.705	.9241	.7906	3.119	10.98	.9221
#1	989.0	93.32	508.1	1019.	49.09	45.84	633.5
#2	999.9	96.44	517.4	1035.	52.18	51.35	641.7
#3	994.2	95.66	514.6	1029.	50.10	41.23	644.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	105.9	56.16	47.59	652.2	633.9	35.13	51.63
SDev	2.9	1.79	3.12	12.9	2.4	3.72	7.16
%RSD	2.709	3.181	6.550	1.975	.3849	10.59	13.87
#1	108.1	58.22	44.52	638.1	631.1	39.08	49.21
#2	106.9	55.00	50.75	655.2	634.9	34.63	59.68
#3	102.7	55.26	47.51	663.3	635.7	31.69	45.99
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1021.	1122.	1018.	1023.
SDev	12.	12.	8.	18.
%RSD	1.127	1.057	.7913	1.793
1	1008.	1109.	1010.	1043.
#2	1031.	1130.	1026.	1009.
	1024.	1128.	1019.	1015.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 12:11:31
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.8	2110.	1079.	1032.	51370.	1025.	1036.
SDev	.7	19.	29.	21.	1047.	21.	21.
%RSD	.6821	.9033	2.666	2.069	2.037	2.062	2.031
#1	101.1	2123.	1089.	1030.	51240.	1022.	1035.
#2	101.9	2120.	Q1101.	1054.	52480.	1048.	1057.
#3	102.5	2088.	1046.	1011.	50400.	1006.	1015.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1036.	1031.	2085.	49370.	52510.	1035.	49710.
SDev	22.	6.	52.	1337.	1140.	22.	1118.
%RSD	2.134	.6045	2.484	2.709	2.172	2.136	2.250
#1	1034.	1026.	2109.	49830.	52590.	1034.	50070.
#2	1059.	1038.	2122.	50420.	53610.	1058.	50600.
#3	1015.	1028.	2026.	47870.	51330.	1014.	48450.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1037.	1084.	1049.	1040.	1048.	1062.	1066.
SDev	23.	19.	23.	22.	16.	23.	21.
%RSD	2.176	1.730	2.231	2.114	1.545	2.181	1.947
#1	1037.	1084.	1051.	1042.	1043.	1063.	1073.
#2	1060.	Q1103.	1072.	1061.	1067.	1085.	1082.
#3	1015.	1066.	1025.	1018.	1036.	1039.	1042.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1049.	1052.	1047.	1072.	1062.	1053.	1066.
SDev	19.	18.	15.	20.	21.	19.	25.
%RSD	1.827	1.738	1.451	1.889	1.980	1.786	2.376
#1	1049.	1047.	1041.	1077.	1070.	1054.	1067.
#2	1067.	1072.	1064.	1089.	1078.	1072.	1091.
#3	1029.	1036.	1035.	1050.	1038.	1034.	1041.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1054.	1081.	1044.	1063.
SDev	27.	26.	23.	41.
%RSD	2.559	2.407	2.184	3.895
#1	1057.	1090.	1045.	1087.
#2	1079.	Q1101.	1066.	1086.
#3	1026.	1051.	1020.	1015.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/12/99 12:18:26 2294
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0243	5.106	.1362	.0743	-46.69	.0312	.2749
SDev	.3977	3.516	.1579	.1597	3.59	.2467	.3929
%RSD	1637.	68.87	115.9	215.0	7.685	789.5	142.9
#1	.4158	9.164	.3181	.2466	-44.68	.2045	-.0326
#2	-.1305	2.964	.0553	.0450	-44.56	-.2512	.7175
#3	-.3581	3.190	.0352	-.0687	-50.83	.1405	.1397
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1815	.1807	8.122	11.97	17.32	.1541	302.3
SDev	.5239	.1612	5.227	23.88	4.59	.0413	126.2
%RSD	288.7	89.22	64.36	199.6	26.52	26.82	41.74
#1	.6901	.0516	6.569	39.44	21.49	.2017	424.9
#2	-.3565	.3613	13.95	.2524	18.06	.1284	309.2
#3	.2108	.1291	3.848	-3.801	12.40	.1320	172.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5342	-.2042	.4849	-4.637	.7417	.5233	.3271
SDev	.8120	1.6612	.3411	.143	1.254	2.250	1.303
%RSD	152.0	813.6	70.34	3.091	169.1	430.0	398.5
#1	.3944	-.4980	.1134	-4.586	-.2096	2.995	-.4270
#2	-1.111	-1.699	.7840	-4.526	.2721	-1.406	1.832
#3	-.8861	1.584	.5573	-4.799	Q2.163	-.0198	-.4238
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8738	-2.067	2.132	3.168	-1.103	.4175	.5640
SDev	.4071	1.057	1.983	1.974	1.306	1.879	3.031
%RSD	46.60	51.16	93.03	62.29	118.4	450.1	537.3
#1	-.8427	-1.099	.2226	3.436	-2.368	.8371	4.061
#2	-.4830	-3.195	1.991	4.995	.2413	-1.636	-1.303
#3	-1.296	-1.905	4.181	1.075	-1.184	2.051	-1.066
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.202	-3.167	-.0231	-2.665
SDev	.489	1.442	.9610	19.428
%RSD	40.64	45.55	4161.	729.1
#1	-1.115	-1.541	1.084	19.54
#2	-.7635	-4.294	-.6465	-16.56
#3	-1.729	-3.664	-.5064	-10.97
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I
Run Time: 02/12/99 12:50:41
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Sample Name: CCV

Operator: 2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.5	2050.	1072.	1014.	50250.	1005.	1018.
SDev	.5	5.	8.	7.	360.	7.	7.
%RSD	.5017	.2573	.7593	.7150	.7172	.6863	.6400
#1	99.95	2044.	1081.	1023.	50670.	1013.	1026.
#2	100.6	2049.	1067.	1010.	50090.	1001.	1015.
#3	100.9	2055.	1068.	1010.	50000.	1000.	1014.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1018.	1023.	2044.	48920.	51790.	1017.	49420.
SDev	8.	2.	15.	419.	389.	7.	383.
%RSD	.8170	.2410	.7305	.8571	.7518	.6981	.7758
#1	1028.	1021.	2061.	49400.	52240.	1026.	49860.
#2	1014.	1021.	2037.	48670.	51590.	1014.	49230.
#3	1013.	1025.	2034.	48690.	51550.	1013.	49170.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1014.	1074.	1035.	1024.	1027.	1053.	1060.
SDev	8.	4.	7.	9.	7.	4.	6.
%RSD	.7562	.3419	.6751	.8347	.6481	.3792	.5452
#1	1023.	1078.	1043.	1034.	1035.	1057.	1066.
#2	1009.	1071.	1032.	1019.	1023.	1051.	1057.
#3	1011.	1074.	1030.	1019.	1025.	1050.	1056.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1032.	1029.	1027.	1073.	1053.	1039.	1059.
SDev	10.	5.	8.	3.	7.	4.	4.
%RSD	.9449	.4648	.7473	.2602	.6907	.3589	.3982
#1	1043.	1034.	1035.	1076.	1061.	1044.	1064.
#2	1025.	1026.	1021.	1072.	1050.	1037.	1058.
#3	1028.	1026.	1024.	1071.	1048.	1038.	1056.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1036.	1069.	1028.	1035.
SDev	12.	7.	7.	10.
%RSD	1.172	.6601	.6338	.9298
#1	1050.	1077.	1035.	1046.
#2	1028.	1067.	1022.	1027.
#3	1031.	1063.	1026.	1033.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

~~02~~

Method: CLP3I Sample Name: CCB Operator:
Analysis Time: 02/12/99 12:57:36
Comment: CCB
Method CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0486	37.37	.1198	.2469	-55.34	.1759	-.1569
SDev	.1225	10.89	.0640	.0796	3.87	.1493	.3504
%RSD	252.2	29.13	53.41	32.23	6.990	84.89	223.2
#1	-.0122	49.22	.1877	.3328	-57.57	.3288	-.5025
#2	.0516	35.08	.1113	.2324	-50.88	.1685	-.1664
#3	-.1851	27.81	.0605	.1756	-57.59	.0304	.1981
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3405	-.3768	-3.011	-1.139	6.191	.1572	217.0
SDev	.3934	.3717	5.705	3.063	1.602	.0218	21.3
%RSD	115.5	98.65	189.5	269.0	25.88	13.88	9.835
#1	.7143	-.7536	-9.239	-4.661	7.649	.1701	239.7
#2	.3771	-.3665	-1.757	.3555	6.448	.1694	197.3
#3	-.0699	-.0103	1.963	.8900	4.476	.1320	214.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1883	-.7445	-.0089	-4.520	-.1117	1.989	1.247
SDev	.3841	1.2717	.1136	.161	.5443	1.092	.066
%RSD	204.0	170.8	1271.	3.560	487.4	54.90	5.291
#1	.2537	-1.885	-.1227	-4.350	-.7268	3.035	1.172
#2	-.3774	-.9749	-.0085	-4.541	.3073	2.077	1.298
#3	-.4411	.6266	.1045	-4.670	.0846	.8559	1.270
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4874	-.7677	.2037	2.140	.7884	2.626	1.659
SDev	.4655	.6310	1.047	.965	.4103	1.477	1.418
%RSD	95.51	82.20	513.9	45.07	52.04	56.25	85.46
#1	.5573	-.1946	-1.005	1.153	1.170	2.512	3.283
#2	-.0091	-.6645	.7803	2.187	.8415	4.157	1.027
#3	.9140	-1.444	.8356	3.081	.3541	1.209	.6673
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5609	-1.022	1.166	2.776
SDev	2.4943	3.530	.983	4.874
%RSD	444.7	345.5	84.34	175.6
#1	-2.004	3.027	2.219	7.956
#2	-1.998	-2.633	.2724	2.090
#3	2.319	-3.459	1.006	-1.719
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 927848 #16 Operator:
Run Time: 02/12/99 13:04:30
Segment: SDG:0001S ClientID:PBS 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4128	6.968	-.0023	-.0485	-62.58	-.0705	-.1188
SDev	.2225	2.057	.0527	.0433	3.94	.0825	.3176
%RSD	53.90	29.52	2269.	89.32	6.302	117.1	267.4
#1	-.5129	8.320	.0546	-.0058	-58.03	-.1576	.1118
#2	-.5675	4.601	-.0494	-.0925	-64.92	-.0606	-.4811
#3	-.1578	7.983	-.0122	-.0472	-64.81	.0066	.0129
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2363	-.6038	-5.726	-5.230	.6161	.0657	-486.0
SDev	.3609	.1794	5.177	13.747	1.511	.0429	235.9
%RSD	152.8	29.72	90.40	262.9	245.2	65.32	48.53
#1	.1345	-.3974	-7.319	3.286	2.349	.0915	-262.0
#2	-.5865	-.6916	-9.919	-21.09	-.0764	.0162	-732.1
#3	-.2568	-.7226	.0594	2.114	-.4245	.0893	-464.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7679	1.702	-.1741	-2.979	-.5666	-.4228	1.072
SDev	.0573	.616	.1270	.130	.5555	1.4167	1.195
%RSD	7.457	36.20	72.91	4.357	98.05	335.1	111.4
#1	-.7841	.9909	-.1071	-3.125	.0393	.3234	1.936
#2	-.8153	2.077	-.0948	-2.876	-.6870	.4649	1.573
#3	-.7043	2.039	-.3206	-2.937	-1.052	-2.057	-.2915
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8837	-4.219	1.245	3.942	-.3724	-.8697	-.2115
SDev	1.053	1.470	1.562	.925	1.8090	5.7296	4.3435
%RSD	119.1	34.84	125.4	23.47	485.7	658.8	2054.
#1	.1280	-5.714	2.900	4.833	.4772	-7.474	4.204
#2	2.086	-4.167	1.038	2.986	.8553	2.093	-.3599
#3	.4370	-2.776	-.2032	4.008	-2.450	2.772	-4.479
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	15.43	-1.080	.2723	-12.99
SDev	1.23	.713	.5047	10.93
%RSD	7.994	65.97	185.3	84.15
#1	14.08	-1.042	.8157	-5.303
#2	15.72	-1.812	.1831	-25.50
#3	16.50	-.3876	-.1818	-8.162
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

Method: CLP3I Sample Name: PLCSS927464 #17 Operator:
Run Time: 02/12/99 13:11:25
Segment: SDG:0001S ClientID:LCSS 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	321.9	25240.	1076.	422.8	6028.	610.7	385.2
SDev	1.7	72.	11.	7.9	117.	11.5	7.7
%RSD	.5182	.2871	1.048	1.857	1.936	1.875	2.011
#1	320.1	25160.	1063.	413.8	5896.	597.7	376.5
#2	322.0	25290.	1082.	426.0	6067.	615.3	387.9
#3	323.5	25270.	1083.	428.5	6119.	619.2	391.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	367.5	38450.	1305.	5050.	8300.	710.0	478.0
Low	204.0	18800.	640.0	282.5	4515.	424.5	259.0

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	955.7	516.2	40150.	6473.	6012.	1381.	6812.
SDev	17.7	.8	701.	51.	97.	25.	99.
%RSD	1.855	.1600	1.747	.7817	1.609	1.839	1.454
#1	935.6	515.3	39350.	6414.	5902.	1352.	6716.
#2	962.2	516.9	40450.	6499.	6055.	1391.	6806.
#3	969.2	516.4	40650.	6505.	6080.	1400.	6914.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1145.	585.0	66500.	10200.	7650.	1595.	9150.
Low	605.0	323.0	24150.	4785.	4440.	1020.	4695.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	349.9	500.8	501.9	1036.	368.7	741.1	157.8
SDev	5.4	9.6	8.3	19.	6.2	8.2	2.0
%RSD	1.534	1.908	1.662	1.861	1.694	1.113	1.265
#1	343.7	489.8	492.3	1014.	361.5	731.8	155.6
#2	352.3	506.8	506.0	1043.	371.6	747.5	159.3
#3	353.5	505.8	507.5	1050.	372.9	743.9	158.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	493.0	570.0	630.0	1180.	436.5	775.0	248.0
Low	190.5	229.0	325.5	720.0	223.5	457.0	17.45

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	976.7	370.0	368.0	159.4	157.0	733.9	744.7
SDev	16.6	5.4	6.8	3.2	1.5	3.4	10.9
%RSD	1.697	1.453	1.839	1.980	.9559	.4591	1.466
#1	958.0	364.1	360.2	156.1	155.3	730.9	732.2
#2	982.7	371.2	371.7	162.3	157.8	737.6	752.5
#3	989.5	374.7	372.0	159.9	158.0	733.1	749.3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1125.						
Low	510.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	962.4	-2.083	625.5	1154.
SDev	19.5	2.478	10.8	6.
%RSD	2.026	119.0	1.724	.5065
#1	940.3	.7014	613.0	1152.
#2	969.8	-4.048	631.7	1150.
#3	977.1	-2.902	631.7	1161.
Errors	LC Pass	NOCHECK	LC Pass	LC Pass
High	1120.		720.0	2790.
Low	620.0		394.5	555.0

Method: CLP3I Sample Name: 927461 #18 Operator:
Run Time: 02/12/99 13:18:19
Segment: SDG:0001S ClientID:0322 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	152.3	47950.	1491.	1.604	135100.	107.0	32.80
SDev	.7	123.	11.	.094	82.	.1	.66
%RSD	.4607	.2558	.7261	5.852	.0605	.0824	2.006
#1	153.1	48090.	1481.	1.712	135200.	107.1	32.83
#2	152.1	47900.	1489.	1.561	135100.	107.0	33.45
#3	151.7	47860.	1502.	1.540	135100.	106.9	32.13
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	476.6	5837.	100000.	12730.	24710.	2179.	9460.
SDev	.9	9.	208.	69.	63.	4.	26.
%RSD	.1986	.1614	.2080	.5402	.2541	.1927	.2717
#1	476.6	5847.	99850.	12680.	24650.	2177.	9487.
#2	475.6	5828.	99940.	12710.	24690.	2176.	9457.
#3	477.5	5836.	100200.	12810.	24780.	2184.	9436.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3165.	10.65	70.27	8662.	1625.	217.0	497.5
SDev	3.	1.78	.43	10.	2.	.2	5.5
%RSD	.0904	16.74	.6131	.1129	.1359	.0966	1.106
#1	3166.	10.89	69.81	8657.	1627.	216.8	491.2
#2	3161.	12.30	70.66	8655.	1623.	216.9	500.4
#3	3167.	8.762	70.33	8673.	1626.	217.2	501.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	901.9	1631.	1623.	503.0	494.8	221.7	214.7
SDev	3.0	9.	4.	6.1	5.4	3.7	2.1
%RSD	.3280	.5243	.2477	1.211	1.085	1.668	.9609
#1	905.2	1629.	1626.	496.3	488.6	225.9	212.3
#2	899.4	1623.	1623.	504.4	498.4	219.3	215.8
#3	901.2	1640.	1618.	508.2	497.4	219.8	216.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	195.1	40.42	17.14	993.7
SDev	7.6	1.41	.92	10.6
%RSD	3.920	3.489	5.359	1.062
#1	192.2	39.10	17.20	983.8
#2	203.8	41.91	18.02	992.6
#3	189.3	40.25	16.19	1005.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 927463 #19 Operator:
n Time: 02/12/99 13:25:13
ment: SDG:0001S ClientID:0322D 1:1
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	154.7	44350.	1471.	1.761	133600.	105.2	33.08
SDev	1.1	154.	4.	.010	1771.	1.0	.21
%RSD	.6907	.3469	.2783	.5759	1.325	.9871	.6451
#1	153.5	44180.	1469.	1.751	131800.	104.2	32.85
#2	155.4	44380.	1469.	1.771	133800.	105.0	33.28
#3	155.3	44480.	1476.	1.762	135300.	106.3	33.10
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	426.8	5429.	100200.	12340.	24460.	2129.	9237.
SDev	4.6	15.	1014.	30.	212.	24.	287.
%RSD	1.078	.2851	1.013	.2427	.8647	1.131	3.103
#1	422.0	5414.	99150.	12320.	24260.	2104.	8940.
#2	427.2	5430.	100200.	12310.	24450.	2130.	9259.
#3	431.2	5445.	101200.	12370.	24680.	2152.	9512.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3119.	12.49	66.48	8581.	1663.	211.1	480.8
SDev	31.	2.60	.24	105.	19.	4.4	3.5
%RSD	.9941	20.80	.3552	1.223	1.165	2.075	.7353
#1	3088.	11.42	66.22	8474.	1642.	206.3	479.6
#2	3119.	15.45	66.55	8584.	1665.	214.9	477.9
#3	3150.	10.59	66.67	8684.	1681.	212.0	484.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	878.6	1677.	1655.	478.2	482.0	216.2	208.5
SDev	9.0	16.	21.	3.1	3.9	2.4	6.1
%RSD	1.019	.9709	1.267	.6492	.8026	1.095	2.918
#1	868.8	1661.	1633.	476.2	481.3	215.8	201.6
#2	880.4	1677.	1659.	476.8	478.5	218.8	213.0
#3	886.4	1694.	1674.	481.8	486.2	214.1	210.9
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	344.3	44.91	15.50	942.2
SDev	1.0	.32	.42	5.0
%RSD	.2797	.7077	2.712	.5276
#1	343.6	44.78	15.63	946.1
#2	344.0	45.27	15.84	936.6
#3	345.4	44.67	15.03	943.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 927462 #20 Operator:
n Time: 02/12/99 13:32:07
ment: SDG:0001S ClientID:0322S 1:1
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	205.7	48400.	3458.	50.66	137300.	161.6	528.3
SDev	1.8	296.	42.	1.12	2866.	3.2	9.8
%RSD	.8566	.6118	1.202	2.219	2.087	1.986	1.856
#1	207.7	48730.	3503.	51.96	140600.	165.3	539.6
#2	204.7	48300.	3421.	50.05	135800.	159.5	523.1
#3	204.6	48170.	3451.	49.98	135500.	160.0	522.1
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	646.3	5450.	102600.	12950.	25030.	2666.	9342.
SDev	12.3	26.	1833.	206.	405.	49.	552.
%RSD	1.909	.4796	1.786	1.587	1.617	1.846	5.914
#1	660.5	5480.	104800.	13180.	25500.	2723.	9948.
#2	639.0	5436.	101600.	12780.	24770.	2637.	9210.
#3	639.3	5434.	101600.	12890.	24830.	2637.	8867.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3672.	62.58	563.2	9266.	1780.	260.3	905.9
SDev	72.	2.58	9.1	188.	36.	3.2	11.0
%RSD	1.965	4.128	1.620	2.029	2.041	1.214	1.215
#1	3755.	64.81	573.7	9483.	1822.	260.1	918.6
#2	3630.	59.75	557.2	9160.	1763.	256.9	898.3
#3	3631.	63.19	558.8	9154.	1755.	260.9	900.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	957.8	1781.	1779.	916.9	900.4	256.6	262.1
SDev	16.0	42.	34.	3.8	14.8	6.3	1.6
%RSD	1.669	2.344	1.896	.4140	1.649	2.457	.6215
#1	976.1	1830.	1818.	920.5	917.6	262.7	263.4
#2	946.7	1758.	1765.	912.9	891.0	250.1	260.3
#3	950.6	1756.	1755.	917.2	892.7	257.1	262.8
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1147.	1099.	989.9	1911.
SDev	18.	13.	15.7	60.
%RSD	1.613	1.214	1.588	3.142
#1	1168.	1113.	1008.	1977.
#2	1139.	1086.	980.9	1860.
#3	1134.	1098.	980.7	1895.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: SDI927461 #21 Operator:
n Time: 02/12/99 13:39:01
ment: SDG:0001S ClientID:0322L 1:5
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	30.70	9348.	302.6	.4421	27270.	22.42	6.291
SDev	.34	62.	4.3	.0075	478.	.46	.344
%RSD	1.123	.6608	1.433	1.694	1.752	2.053	5.460
#1	30.33	9288.	305.5	.4338	27280.	22.26	6.571
#2	31.01	9344.	297.6	.4442	26790.	22.07	5.908
#3	30.75	9412.	304.8	.4483	27740.	22.94	6.394
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	98.86	1178.	20650.	2032.	4927.	452.9	1904.
SDev	1.75	7.	313.	38.	73.	7.3	86.
%RSD	1.773	.5775	1.514	1.857	1.491	1.607	4.528
#1	99.33	1172.	20690.	2063.	4946.	453.3	1830.
#2	96.92	1178.	20320.	1990.	4846.	445.4	1884.
#3	100.3	1185.	20950.	2045.	4989.	459.9	1999.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	658.6	4.687	14.43	1746.	333.2	44.39	101.0
SDev	10.5	1.677	.24	28.	5.3	2.77	.4
%RSD	1.590	35.79	1.697	1.618	1.602	6.246	.3654
#1	660.2	6.492	14.40	1751.	332.7	42.01	101.3
#2	647.5	4.391	14.21	1716.	328.2	43.73	100.6
#3	668.2	3.177	14.69	1772.	338.8	47.44	101.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	184.2	335.0	332.4	98.62	102.2	45.60	43.78
SDev	1.4	3.8	6.1	1.46	.2	.83	3.75
%RSD	.7602	1.141	1.845	1.480	.1782	1.812	8.566
#1	183.3	333.9	332.1	99.96	102.0	44.80	40.60
#2	183.5	331.9	326.4	97.07	102.4	45.55	42.81
#3	185.9	339.3	338.6	98.82	102.1	46.45	47.91
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	39.92	7.684	4.640	209.6
SDev	3.72	.489	.749	5.7
%RSD	9.330	6.362	16.15	2.741
#1	42.47	7.534	5.356	216.1
#2	35.65	7.289	3.861	205.1
#3	41.65	8.231	4.703	207.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS927461 #22 Operator:
n Time: 02/12/99 13:45:54
ment: SDG:0001S ClientID:0322A 1:1
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4583	15.32	.0328	-.0400	-57.82	.6412	.5157
SDev	.2287	.82	.1137	.1062	.14	.2004	.1745
%RSD	49.90	5.357	346.8	265.5	.2425	31.26	33.83
#1	-.1943	14.40	.1637	.0762	-57.92	.7815	.4137
#2	-.5949	15.58	-.0243	-.0641	-57.88	.7304	.7172
#3	-.5858	15.98	-.0410	-.1322	-57.66	.4116	.4163
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7084	.8929	3.101	1.426	4.773	.1171	-1504.
SDev	.8316	.1706	10.90	19.05	.793	.0756	322.
%RSD	117.4	19.10	351.5	1336.	16.61	64.51	21.39
#1	.2496	.8103	11.16	22.89	3.949	.2021	-1159.
#2	-1.131	1.089	7.443	-5.148	5.530	.0919	-1555.
#3	-1.244	.7794	-9.300	-13.46	4.840	.0574	-1797.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1151	6.505	.6344	-2.465	-1.544	-1.045	.5634
SDev	.9168	.904	.0642	.520	.160	1.335	3.051
%RSD	796.6	13.90	10.12	21.11	10.36	127.8	541.6
#1	1.018	7.546	.5603	-3.062	-1.528	.4335	4.084
#2	.1417	6.054	.6720	-2.106	-1.711	-1.406	-1.093
#3	-.8147	5.915	.6710	-2.226	-1.392	-2.162	-1.301
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.810	-9.709	2.521	3.682	-1.006	7.349	-5.247
SDev	1.178	.674	.453	6.210	1.490	4.454	.390
%RSD	24.49	6.938	17.98	168.6	148.2	60.61	7.430
#1	6.170	-10.48	2.929	10.85	.6943	12.45	-5.575
#2	4.107	-9.234	2.033	-.0527	-1.624	5.402	-4.816
#3	4.153	-9.413	2.601	.2489	-2.087	4.200	-5.350
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.870	-3.503	.0465	-12.82
SDev	2.010	4.303	.8398	13.39
%RSD	70.02	122.8	1805.	104.4
#1	5.144	1.330	.8922	2.450
#2	1.329	-4.920	.0348	-18.37
#3	2.138	-6.919	-.7873	-22.54
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000294

~~100~~

Method: CLP3I Sample Name: CRI Operator:
Analysis Time: 02/12/99 13:56:54
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.26	15.52	.0646	10.34	-66.38	10.19	102.6
SDev	.38	10.39	.0579	.09	3.99	.16	.3
%RSD	1.993	66.96	89.65	.8468	6.017	1.545	.3376
#1	19.70	26.31	.1312	10.44	-63.96	10.31	102.3
#2	19.11	14.65	.0356	10.32	-64.19	10.01	102.5
#3	18.98	5.585	.0269	10.27	-70.99	10.25	102.9
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.57	50.70	-3.524	-2.628	-.4226	31.06	257.6
SDev	.55	.43	3.213	14.521	.9710	.05	82.5
%RSD	2.664	.8563	91.16	552.5	229.7	.1453	32.02
#1	21.19	50.23	-7.234	13.58	-1.441	31.11	207.8
#2	20.38	50.80	-1.633	-14.46	.4930	31.02	212.2
#3	20.14	51.08	-1.706	-7.005	-.3201	31.04	352.8
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	82.25	21.12	104.6	33.92	6.891	10.42	125.1
SDev	.77	1.12	.4	.16	.348	3.42	.1
%RSD	.9387	5.294	.3357	.4698	5.050	32.82	.1128
#1	83.02	22.24	105.0	33.75	7.215	14.07	125.0
#2	81.48	20.00	104.5	33.96	6.935	7.302	125.3
#3	82.24	21.11	104.3	34.06	6.523	9.875	125.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.40	4.985	7.828	125.1	125.1	8.779	11.22
SDev	1.14	1.489	.223	2.2	.9	6.709	2.44
%RSD	5.604	29.88	2.853	1.788	.7265	76.42	21.78
#1	21.68	6.330	7.642	122.9	126.0	16.52	12.84
#2	20.02	5.240	7.765	127.4	124.2	5.058	8.410
#3	19.49	3.384	8.075	125.0	125.1	4.756	12.42
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	43.40	40.03	21.03	64.99
SDev	1.09	2.82	.31	10.23
%RSD	2.518	7.039	1.477	15.74
#1	44.17	42.66	20.70	76.57
#2	42.15	37.06	21.31	57.19
#3	43.87	40.37	21.08	61.21
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

Method: CLP3I Sample Name: ICSA Operator:
Run Time: 02/12/99 14:03:48
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1760	536300.	1.272	-.1269	528400.	-1.577	.0705
SDev	.1841	1604.	.081	.0832	5406.	.258	.1828
%RSD	104.6	.2991	6.390	65.60	1.023	16.35	259.5
#1	-.0394	534600.	1.351	-.0339	534000.	-1.304	.1994
#2	-.1032	536800.	1.189	-.1946	528000.	-1.817	.1507
#3	-.3854	537700.	1.277	-.1521	523200.	-1.611	-.1388
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.040	3.603	208100.	1.798	559600.	-.2321	308.0
SDev	.722	.103	1302.	18.55	3368.	.0533	150.2
%RSD	69.45	2.861	.6255	1032.	.6018	22.97	48.77
#1	-.2088	3.551	209500.	22.35	563000.	-.1970	467.0
#2	-1.395	3.536	208000.	-13.71	559600.	-.2059	288.4
#3	-1.515	3.722	206900.	-3.243	556300.	-.2935	168.5
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5012	-7.792	4.687	-3.419	-1.556	-6.494	4.512
SDev	.3381	1.719	.239	.178	.402	3.234	3.295
%RSD	67.46	22.06	5.108	5.194	25.80	49.80	73.02
#1	.1200	-9.775	4.963	-3.258	-2.010	-10.07	6.296
#2	.6190	-6.877	4.564	-3.609	-1.414	-3.763	6.531
#3	.7647	-6.724	4.534	-3.390	-1.246	-5.655	.7100
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5634	7.322	-6.006	1.698	5.904	-11.15	-4.186
SDev	1.4684	2.921	1.602	7.287	3.261	3.03	5.587
%RSD	260.6	39.89	26.68	429.1	55.23	27.18	133.5
#1	-.5566	8.174	-7.111	-.2441	9.547	-8.959	-10.63
#2	.9015	4.070	-4.168	9.759	4.906	-9.875	-.7250
#3	-2.035	9.723	-6.739	-4.421	3.258	-14.60	-1.201
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2939	5.952	-1.567	-16.23
SDev	4.9665	2.563	1.641	37.69
%RSD	1690.	43.06	104.7	232.3
#1	4.779	8.278	-.8231	26.83
#2	-5.146	3.205	-3.449	-43.22
#3	-.5150	6.373	-.4301	-32.28
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Analysis Report QC Standard 02/12/99 02:17:33 PM page 1

Method: CLP3I Sample Name: ICSAB Operator:
n Time: 02/12/99 14:10:42
ent:
M : CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	202.0	541500.	586.2	516.7	543200.	1008.	525.1
SDev	1.5	3026.	2.5	5.2	6952.	9.	5.6
%RSD	.7300	.5588	.4188	1.010	1.280	.9115	1.070
#1	200.4	538200.	586.1	512.2	537000.	999.6	519.9
#2	202.5	542300.	583.8	515.4	541900.	1006.	524.2
#3	203.2	544100.	588.7	522.4	550700.	1018.	531.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	520.3	539.0	213300.	15.20	572500.	528.2	167.1
SDev	4.4	2.6	1929.	9.20	5348.	5.3	98.1
%RSD	.8452	.4767	.9046	60.55	.9342	.9998	58.71
#1	517.0	536.3	211700.	25.82	568100.	523.6	153.7
#2	518.6	539.3	212700.	9.604	570900.	527.1	76.36
#3	525.3	541.4	215500.	10.17	578400.	533.9	271.2
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1045.	100.5	535.7	1074.	51.40	50.73	668.4
SDev	8.	2.4	4.3	11.	1.05	.84	3.9
%RSD	.7935	2.351	.8073	1.068	2.041	1.665	.5871
#1	1039.	98.80	531.5	1063.	50.58	50.90	668.5
#2	1041.	103.2	535.3	1072.	51.05	49.81	664.4
#3	1054.	99.41	540.2	1086.	52.58	51.47	672.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	108.5	77.16	38.53	669.3	667.9	41.67	55.23
SDev	3.2	3.51	2.32	12.5	5.6	5.61	3.07
%RSD	2.906	4.554	6.011	1.870	.8434	13.46	5.567
#1	109.3	80.03	35.85	657.6	673.9	35.30	58.68
#2	105.0	73.24	39.95	667.8	662.7	43.85	52.77
#3	111.1	78.21	39.77	682.5	667.2	45.86	54.26
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1070.	1175.	1065.	1086.
SDev	8.	6.	9.	38.
%RSD	.7783	.4734	.8463	3.506
#1	1063.	1174.	1056.	1129.
#2	1067.	1169.	1064.	1059.
#3	1079.	1180.	1074.	1068.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 14:17:36
Segment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	99.80	2077.	1092.	1027.	50900.	1015.	1030.
SDev	.05	17.	4.	9.	507.	10.	8.
%RSD	.0525	.8279	.3881	.8354	.9958	1.012	.8078
#1	99.83	2095.	1097.	1036.	51450.	1026.	1040.
#2	99.74	2075.	1088.	1023.	50800.	1012.	1027.
#3	99.83	2061.	1092.	1020.	50450.	1006.	1024.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1031.	1037.	2091.	49650.	52640.	1030.	50310.
SDev	8.	1.	22.	247.	318.	8.	150.
%RSD	.7997	.0490	1.032	.4964	.6043	.8147	.2983
#1	1040.	1037.	2115.	49930.	53000.	1040.	50480.
#2	1028.	1036.	2086.	49470.	52490.	1027.	50240.
#3	1025.	1037.	2073.	49560.	52420.	1024.	50210.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1025.	1081.	1051.	1038.	1038.	1063.	1073.
SDev	8.	4.	6.	8.	11.	5.	2.
%RSD	.7815	.4015	.5892	.7945	1.022	.4574	.1723
#1	1034.	1085.	1058.	1047.	1049.	1068.	1075.
#2	1021.	1080.	1047.	1034.	1034.	1058.	1071.
#3	1020.	1077.	1047.	1032.	1029.	1062.	1072.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1043.	1037.	1038.	1088.	1065.	1046.	1071.
SDev	6.	8.	12.	2.	2.	3.	8.
%RSD	.5433	.8085	1.139	.1546	.2073	.2944	.7194
#1	1049.	1046.	1051.	1089.	1068.	1047.	1078.
#2	1043.	1032.	1035.	1088.	1063.	1049.	1063.
#3	1038.	1031.	1028.	1086.	1065.	1043.	1071.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1049.	1081.	1040.	1044.
SDev	10.	4.	8.	11.
%RSD	.9097	.3328	.8122	1.015
#1	1057.	1084.	1049.	1056.
#2	1053.	1077.	1038.	1037.
#3	1039.	1080.	1032.	1039.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/12/99 14:24:31
Segment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4097	50.29	.2152	.2593	-45.40	.1757	-.1555
SDev	.2201	11.02	.1216	.0733	7.98	.0393	.1510
%RSD	53.72	21.91	56.50	28.28	17.58	22.37	97.13
#1	.3794	61.78	.3370	.3415	-36.19	.2211	-.2357
#2	.6434	49.28	.2147	.2359	-50.06	.1538	-.2495
#3	.2064	39.81	.0938	.2005	-49.96	.1522	.0187
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5472	-.2529	-.7944	7.707	15.17	.1514	377.5
SDev	.3158	.2602	4.1883	10.41	5.78	.0441	75.8
%RSD	57.72	102.9	527.2	135.0	38.12	29.11	20.08
#1	.8734	-.5368	-5.600	19.05	21.81	.1773	348.4
#2	.5253	-.1962	1.134	5.458	11.22	.1764	320.6
#3	.2428	-.0258	2.082	-1.392	12.49	.1005	463.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2494	.2399	.0483	-4.599	.1755	-1.182	1.088
SDev	.2268	2.283	.0659	.099	.5268	2.337	1.629
%RSD	90.94	951.6	136.2	2.145	300.1	197.7	149.7
#1	-.0325	.8765	.0866	-4.579	.1385	-2.295	2.877
#2	-.4849	-2.294	-.0277	-4.706	.7198	-2.755	.6998
#3	-.2308	2.137	.0862	-4.512	-.3318	1.504	-.3118
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.246	1.260	-.3785	-.8108	2.024	-4.539	.4814
SDev	2.255	.695	.5705	2.4435	1.398	2.176	2.898
%RSD	181.0	55.17	150.7	301.4	69.08	47.95	602.1
#1	-3.850	1.740	-.6736	2.002	3.302	-3.516	-1.697
#2	.0123	1.578	.2790	-2.411	2.240	-7.038	-.6294
#3	.0995	.4630	-.7410	-2.024	.5303	-3.062	3.771
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.793	-.0583	.8626	7.976
SDev	2.002	1.5629	.3843	9.662
%RSD	111.7	2682.	44.55	121.1
#1	-.4401	1.377	1.257	19.05
#2	2.391	-1.723	.8411	3.594
#3	3.427	.1711	.4896	1.282
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 928579 #28 Operator:
In Time: 02/12/99 14:31:25
ment: SDG:00001 ClientID:PBW 1:1 2294
: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3799	25.27	H19.79	-.0563	H7628.	-.1363	.2334
SDev	.2430	2.51	.09	.1148	76.	.2335	.3828
%RSD	63.96	9.952	.4694	204.0	1.002	171.3	164.0
#1	-.1220	27.07	H19.68	.0758	H7698.	.0416	.2089
#2	-.4133	22.40	H19.82	-.1122	H7640.	-.0497	.6279
#3	-.6045	26.34	H19.86	-.1324	H7547.	-.4006	-.1365
Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3904	H348.8	71.56	H2283.	H2113.	7.876	H18470.
SDev	.1960	.3	2.43	6.	8.	.101	74.
%RSD	50.21	.0975	3.391	.2436	.3802	1.286	.3993
#1	-.2796	H349.2	68.88	H2288.	H2118.	7.828	H18390.
#2	-.2749	H348.6	72.17	H2284.	H2116.	7.992	H18540.
#3	-.6168	H348.6	73.62	H2277.	H2103.	7.808	H18460.
Errors	LC Pass	LC High	LC Pass	LC High	LC High	LC Pass	LC High
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	H8.483	.1856	.8997	H51.78	.6450	.1959	.8062
SDev	1.014	2.114	.1155	.44	.5671	1.181	.6635
%RSD	11.96	1139.	12.83	.8430	87.93	602.9	82.30
#1	H8.873	.9045	1.015	H52.17	.1954	1.325	1.115
#2	H9.244	-2.194	.9002	H51.86	1.282	-1.030	.0445
#3	H7.331	1.846	.7840	H51.31	.4575	.2927	1.259
Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6241	-4.257	3.077	4.954	-1.277	-2.368	1.464
SDev	2.429	.590	1.103	.679	1.305	3.062	1.367
%RSD	389.2	13.87	35.85	13.70	102.2	129.3	93.37
#1	-1.557	-4.167	2.358	5.004	-.8384	-1.896	2.921
#2	3.242	-4.887	4.347	5.607	-2.745	-5.639	1.258
#3	.1881	-3.717	2.526	4.252	-.2482	.4303	.2115
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.267	-2.903	.3656	-15.45
SDev	1.824	3.349	.2207	5.62
%RSD	80.45	115.4	60.38	36.38
#1	-.4157	-3.592	.5485	-10.34
#2	-2.324	.7375	.4279	-14.54
#3	-4.062	-5.853	.1204	-21.47
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

Method: CLP3I Sample Name: PLCSW928433 #29 Operator:
n Time: 02/12/99 14:38:24
ment: SDG:00001 ClientID:LCSW 1:1
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	974.0	19310.	21520.	507.0	51460.	503.9	5070.
SDev	7.9	106.	104.	6.8	813.	6.8	65.
%RSD	.8085	.5480	.4846	1.349	1.580	1.347	1.278
#1	965.1	19190.	21400.	499.2	50540.	496.1	4996.
#2	976.6	19350.	21550.	509.6	51750.	506.6	5094.
#3	980.2	19390.	21600.	512.1	52090.	508.8	5118.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1005.	2485.	10520.	50350.	52250.	1526.	49960.
SDev	13.	10.	135.	143.	529.	19.	257.
%RSD	1.259	.4208	1.280	.2834	1.013	1.275	.5151
#1	990.6	2473.	10370.	50190.	51650.	1504.	49670.
#2	1009.	2489.	10580.	50410.	52450.	1532.	50050.
#3	1015.	2493.	10630.	50460.	52660.	1542.	50160.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4000.	1034.	5228.	2080.	305.9	518.1	6179.
SDev	45.	7.	55.	26.	4.7	5.4	40.
%RSD	1.126	.7050	1.048	1.259	1.538	1.041	.6487
#1	3948.	1027.	5166.	2050.	300.6	512.9	6134.
#2	4018.	1042.	5245.	2089.	307.9	517.7	6193.
#3	4033.	1033.	5271.	2100.	309.3	523.7	6211.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1030.	310.2	303.8	6208.	6164.	512.0	521.2
SDev	14.	5.0	4.6	55.	33.	6.3	4.9
%RSD	1.331	1.601	1.527	.8858	.5319	1.238	.9452
#1	1015.	304.5	298.6	6148.	6127.	505.8	516.5
#2	1034.	313.3	305.3	6222.	6178.	511.7	520.7
#3	1041.	312.9	307.5	6255.	6188.	518.4	526.3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1013.	1071.	1033.	1043.
SDev	11.	5.	12.	14.
%RSD	1.108	.4904	1.131	1.364
#1	999.9	1065.	1019.	1058.
#2	1019.	1073.	1036.	1040.
#3	1020.	1075.	1042.	1030.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	1205.	1205.	1205.	1205.
Low	795.0	795.0	795.0	795.0

000301

Method: CLP3I Sample Name: 928430 #30 Operator:
Run Time: 02/12/99 14:45:18
Segment: SDG:00001 ClientID:17-01-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.3097	k136.4	465.6	-.0236	C.0000	k-.0912	k1.070
SDev	.5152	4.9	3.3	.1697	.0000	.1167	.544
%RSD	166.3	3.586	.7079	717.4	.0000	127.9	50.88
#1	k.1880	k142.1	468.3	.1644	C.0000	k.0125	k1.252
#2	k-.2764	k134.0	461.9	-.0701	C.0000	k-.0685	k1.499
#3	k-.8409	k133.2	466.5	-.1653	C.0000	k-.2175	k.4576
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1001.	184.6	k21.40	50470.	k44510.	k2.432	k57320.
SDev	13.	.7	10.12	496.	473.	.074	316.
%RSD	1.338	.3566	47.27	.9834	1.064	3.053	.5521
#1	1016.	185.3	k30.67	50960.	k45050.	k2.502	k57580.
#2	993.9	184.6	k22.92	49970.	k44180.	k2.440	k56970.
#3	991.9	184.0	k10.61	50490.	k44290.	k2.354	k57420.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.330	k-8.598	55.85	k165.0	k247.8	k362.3	k13.44
SDev	1.210	2.143	.66	2.4	2.8	2.8	1.95
%RSD	51.95	24.92	1.190	1.427	1.119	.7627	14.54
#1	3.440	k-9.999	56.53	k167.7	k250.9	k365.5	k15.57
#2	2.510	k-6.131	55.81	k163.8	k245.6	k360.2	k13.01
#3	1.040	k-9.664	55.20	k163.5	k246.8	k361.4	k11.73
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	74.53	k245.6	k248.8	k20.59	9.852	k375.7	k355.7
SDev	1.57	6.3	1.3	2.67	1.649	7.2	.7
%RSD	2.104	2.571	.5365	12.95	16.74	1.909	.1834
#1	73.43	k252.9	k249.9	k23.23	11.73	k383.6	k356.4
#2	76.33	k242.2	k247.3	k20.64	9.184	k369.6	k355.5
#3	73.84	k241.7	k249.3	k17.90	8.642	k373.9	k355.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-49.05	-.9857	13.19	k-12.59
SDev	6.50	4.0404	.45	19.85
%RSD	13.25	409.9	3.442	157.7
#1	L-56.45	3.638	13.71	k10.11
#2	L-46.38	-2.755	12.99	k-21.20
#3	L-44.31	-3.839	12.87	k-26.67
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928434 #31 Operator:
In Time: 02/12/99 14:52:12
ment: SDG:00001 ClientID:17-01-002D 1:1
e: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.0760	k146.9	436.0	.0706	C1651000.	k16.42	k-.3253
SDev	.1976	6.0	3.4	.0264	1430732.	14.31	.4311
%RSD	259.9	4.078	.7848	37.35	86.67	87.14	132.5
#1	.0514	153.8	439.5	.0527	H2422000.	24.18	-.1967
#2	-.3036	143.7	435.8	.0582	H2531000.	25.17	-.8061
#3	k.0241	k143.2	432.7	.1009	C.0000	k-.0919	k.0268
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	943.3	176.1	k18.11	47640.	k41810.	k2.132	k53700.
SDev	3.8	.9	9.17	341.	57.	.044	315.
%RSD	.3976	.5292	50.61	.7164	.1367	2.067	.5866
#1	939.3	175.1	28.45	47980.	41880.	2.173	54000.
#2	944.0	176.1	10.97	47630.	41780.	2.085	53710.
#3	946.7	176.9	k14.91	47300.	k41780.	k2.138	k53370.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.907	k-7.851	51.59	k155.4	k235.4	k344.5	k10.02
SDev	.539	2.425	.33	.4	1.1	3.6	1.13
%RSD	13.81	30.89	.6460	.2875	.4688	1.048	11.28
#1	4.516	-5.084	51.98	154.9	234.6	341.0	9.042
#2	3.714	-8.859	51.39	155.8	234.9	348.2	11.26
#3	3.490	k-9.609	51.41	k155.4	k236.6	k344.3	k9.768
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	68.84	k239.8	k233.2	k12.87	8.591	k360.4	k336.6
SDev	2.61	1.5	2.4	1.54	2.297	8.0	1.7
%RSD	3.795	.6179	1.015	12.01	26.73	2.215	.4906
#1	66.62	240.4	231.7	12.94	7.081	353.7	334.7
#2	68.18	240.9	232.0	11.28	11.23	369.3	337.7
#3	71.72	k238.1	k235.9	k14.37	7.457	k358.3	k337.3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-47.81	.8227	12.16	k-1.633
SDev	4.78	1.350	.59	5.656
%RSD	10.00	164.1	4.847	346.3
#1	L-47.17	1.879	12.53	3.198
#2	L-43.37	-.6979	12.47	-.2434
#3	L-52.87	1.287	11.48	k-7.854
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000303

Method: CLP3I Sample Name: 928431 #32 Operator:
Run Time: 02/12/99 14:59:06
Segment: SDG:00001 ClientID:17-01-002S 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k47.43	k2091.	2598.	45.92	C.0000	k46.26	k481.2
SDev	.63	13.	96.	2.03	.0000	2.19	20.0
%RSD	1.334	.6292	3.706	4.424	.0000	4.730	4.157
#1	k47.71	k2097.	2574.	45.89	C.0000	k46.13	k478.2
#2	k47.88	k2100.	2703.	47.97	C.0000	k48.51	k502.5
#3	k46.71	k2076.	2515.	43.90	C.0000	k44.14	k462.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1185.	422.2	k1014.	49530.	k43870.	k486.4	k55960.
SDev	50.	2.3	43.	1870.	1750.	21.0	1859.
%RSD	4.254	.5386	4.273	3.776	3.990	4.319	3.322
#1	1180.	422.0	k1003.	49280.	k43570.	k484.2	k55510.
#2	1238.	424.5	k1062.	51520.	k45740.	k508.4	k58010.
#3	1137.	420.0	k977.5	47800.	k42280.	k466.6	k54370.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	475.1	k40.44	545.9	k660.2	k266.6	k368.1	k520.8
SDev	19.9	1.95	22.8	28.2	11.3	15.8	18.7
%RSD	4.185	4.828	4.169	4.274	4.255	4.279	3.582
#1	473.2	k40.84	541.2	k655.1	k265.5	k367.5	k515.2
#2	495.9	k42.17	570.6	k690.6	k278.4	k384.2	k541.6
#3	456.3	k38.32	525.8	k634.9	k255.8	k352.7	k505.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	115.6	k266.4	k266.6	k536.8	512.8	k383.2	k360.6
SDev	4.8	11.4	11.7	19.2	18.7	21.7	12.9
%RSD	4.151	4.298	4.402	3.571	3.647	5.655	3.567
#1	113.2	k269.6	k263.5	k526.8	509.3	k384.3	k359.1
#2	121.2	k275.9	k279.7	k558.9	533.0	k404.3	k374.1
#3	112.6	k253.7	k256.8	k524.8	496.0	k361.0	k348.5
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	938.4	1140.	996.9	k997.9
SDev	40.0	41.	39.6	45.4
%RSD	4.268	3.580	3.977	4.552
#1	927.5	1134.	990.9	k1016.
#2	982.8	1184.	1039.	k1031.
#3	905.0	1103.	960.6	k946.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928432 #33 Operator:
n Time: 02/12/99 15:06:00
ent: SDG:00001 ClientID:17-01-002M 1:1
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	44.14	1990.	2403.	42.08	H2234000.	64.55	437.6
SDev	.51	7.	20.	.27	65465.	1.05	2.9
%RSD	1.154	.3461	.8522	.6345	2.931	1.629	.6696
#1	43.75	1983.	2426.	42.15	H2253000.	64.90	438.3
#2	43.95	1994.	2395.	41.78	H2161000.	63.37	434.4
#3	44.72	1995.	2388.	42.30	H2287000.	65.38	440.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1086.	401.2	908.0	46300.	40720.	442.6	52260.
SDev	7.	1.6	14.6	365.	256.	2.2	418.
%RSD	.6283	.4057	1.608	.7878	.6282	.5083	.7995
#1	1089.	399.3	912.5	46710.	40980.	443.4	52740.
#2	1078.	402.2	891.6	46190.	40470.	440.0	52080.
#3	1091.	402.1	919.8	46010.	40710.	444.2	51970.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	435.2	36.22	497.8	602.6	243.7	344.6	478.0
SDev	2.2	1.62	2.5	3.1	1.4	1.0	3.9
%RSD	.5055	4.483	.5048	.5079	.5557	.2959	.8210
#1	436.5	35.96	499.4	605.0	243.6	345.0	482.3
#2	432.6	37.95	494.9	599.2	242.3	343.4	474.6
#3	436.3	34.73	499.1	603.7	245.1	345.3	477.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	106.2	248.9	241.0	487.8	473.1	358.6	337.6
SDev	1.8	3.3	.9	5.2	3.6	5.9	1.7
%RSD	1.661	1.316	.3907	1.072	.7658	1.648	.4924
#1	108.2	247.0	241.8	493.8	476.5	358.5	338.3
#2	104.8	247.1	240.0	485.3	469.3	352.7	338.8
#3	105.6	252.7	241.2	484.3	473.3	364.6	335.7
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	848.9	1038.	908.7	933.2
SDev	7.1	7.	2.7	22.9
%RSD	.8383	.7144	.2918	2.458
#1	853.9	1045.	910.4	959.3
2	840.7	1031.	905.6	916.1
	851.9	1038.	910.1	924.1
ors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: SDI928430 #34 Operator:
Run Time: 02/12/99 15:12:54
Segment: SDG:00001 ClientID:17-01-002L 1:5
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3734	38.27	93.54	-.0202	419300.	4.018	-.0032
SDev	.1876	7.00	.67	.1356	3155.	.184	.4194
%RSD	50.24	18.28	.7111	673.1	.7525	4.579	12990.
#1	-.2307	46.35	94.26	.1087	421700.	4.227	-.4710
#2	-.5858	34.34	93.42	-.0075	420500.	3.882	.1221
#3	-.3035	34.12	92.94	-.1617	415700.	3.945	.3391
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	211.3	40.74	-6.425	7790.	9217.	.6145	11040.
SDev	2.1	.67	10.029	71.	53.	.0060	47.
%RSD	1.003	1.634	156.1	.9120	.5748	.9737	.4254
#1	213.4	40.08	-15.76	7853.	9261.	.6198	11090.
#2	211.3	41.41	-7.689	7803.	9231.	.6080	11040.
#3	209.1	40.74	4.176	7713.	9158.	.6157	11000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5309	-3.348	11.89	32.60	52.42	70.70	3.279
SDev	.5760	.464	.42	.15	.86	3.95	1.452
%RSD	108.5	13.85	3.502	.4498	1.633	5.591	44.27
#1	.1084	-2.813	11.44	32.70	51.82	74.53	1.829
#2	-1.009	-3.606	12.26	32.67	53.40	70.92	3.275
#3	-.6917	-3.626	11.98	32.43	52.03	66.64	4.732
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.89	50.12	53.55	6.790	1.513	72.70	69.69
SDev	1.11	2.77	1.83	3.232	.630	7.69	2.37
%RSD	7.451	5.529	3.411	47.59	41.66	10.58	3.403
#1	14.06	52.55	51.45	3.317	1.074	78.83	72.38
#2	14.47	50.70	54.73	7.346	1.230	75.20	68.77
#3	16.16	47.10	54.48	9.708	2.235	64.07	67.91
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-9.042	-.7124	3.475	-10.20
SDev	2.637	4.1571	1.033	12.17
%RSD	29.17	583.5	29.72	119.4
#1	-11.10	3.934	4.548	3.534
#2	-6.070	-4.080	3.387	-19.67
#3	-9.952	-1.991	2.489	-14.46
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928435 #35 Operator: 2294
Run Time: 02/12/99 15:19:49
Segment: SDG:00001 ClientID:18-02-002 1:1
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.0824	k153.4	431.8	-.0748	C.0000	k-.1001	k-.2402
SDev	.2186	2.9	3.6	.0705	.0000	.0753	.3316
%RSD	265.1	1.906	.8292	94.34	.0000	75.24	138.1
#1	k.1695	k156.8	434.4	-.1130	C.0000	k-.0154	k.1282
#2	k-.1947	k151.4	427.7	-.1179	C.0000	k-.1594	k-.3340
#3	k-.2221	k152.1	433.2	.0066	C.0000	k-.1256	k-.5147
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	471.6	117.9	k45.09	62510.	k42080.	k6.893	k60980.
SDev	6.2	.5	5.35	492.	415.	.081	518.
%RSD	1.310	.4211	11.86	.7865	.9865	1.171	.8494
#1	471.8	117.5	k51.10	62730.	k42240.	k6.826	k61420.
#2	465.3	117.8	k40.84	61940.	k41600.	k6.870	k60410.
#3	477.6	118.5	k43.34	62840.	k42380.	k6.983	k61120.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.416	k-7.050	52.66	k108.7	k2319.	k416.1	k8.381
SDev	.405	2.140	.86	1.2	26.	2.7	.302
%RSD	11.87	30.36	1.626	1.145	1.106	.6481	3.598
#1	2.950	k-5.553	53.38	k108.9	k2315.	k415.9	k8.100
#2	3.608	k-9.501	51.71	k107.3	k2295.	k413.5	k8.700
#3	3.690	k-6.096	52.88	k109.8	k2346.	k418.9	k8.344
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	90.75	k2356.	k2300.	k11.87	6.626	k428.7	k409.8
SDev	2.31	30.	24.	2.74	1.068	4.4	2.9
%RSD	2.550	1.274	1.026	23.09	16.12	1.019	.6975
#1	92.51	k2349.	k2298.	k11.16	6.559	k431.9	k407.9
#2	91.61	k2331.	k2277.	k14.90	5.593	k423.7	k408.4
#3	88.13	k2390.	k2324.	k9.555	7.726	k430.4	k413.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-52.47	.3037	13.52	k3.173
SDev	3.00	1.661	.77	8.117
%RSD	5.714	546.8	5.686	255.8
#1	L-50.03	1.538	14.40	k11.10
#2	L-51.56	-1.584	12.95	k-5.124
#3	L-55.82	.9572	13.22	k3.544
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928436 #36 Operator:
Run Time: 02/12/99 15:26:43
Client: SDG:00001 ClientID:19-03-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.4644	k86.17	275.4	-.0205	C.0000	k-.1455	k.3519
SDev	.4113	4.78	2.3	.1367	.0000	.2306	.7467
%RSD	88.56	5.548	.8218	666.3	.0000	158.5	212.2
#1	k-.1579	k91.58	278.0	.0888	C.0000	k.0361	k-.4861
#2	k-.3035	k82.51	274.6	.0234	C.0000	k-.0676	k.9466
#3	-.9318	k84.43	273.7	-.1738	C.0000	k-.4049	k.5953
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	754.8	85.95	k6.397	51190.	k31360.	k.6391	k56680.
SDev	5.2	.16	9.517	650.	218.	.0430	244.
%RSD	.6937	.1910	148.8	1.269	.6952	6.732	.4311
#1	759.1	85.77	k-.0475	51930.	k31570.	k.6184	k56950.
#2	756.2	86.09	k1.910	50940.	k31380.	k.6886	k56620.
#3	749.0	85.97	k17.33	50710.	k31140.	k.6103	k56470.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.676	k-3.758	56.98	k53.52	k25.68	k366.2	k6.391
SDev	1.050	3.330	.13	.53	1.21	1.6	1.567
%RSD	62.64	88.62	.2319	.9945	4.704	.4312	24.52
#1	2.728	k-2.268	56.91	k53.74	k27.06	k364.7	k4.609
#2	1.671	k-7.573	57.13	k53.91	k24.80	k367.9	k7.007
#3	.6288	k-1.433	56.89	k52.92	k25.19	k365.8	k7.557
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	56.62	k23.00	k27.01	k11.00	4.075	k375.6	k361.4
SDev	1.72	5.56	2.06	4.46	.534	8.2	5.2
%RSD	3.033	24.15	7.622	40.54	13.11	2.176	1.430
#1	55.41	k28.03	k26.56	k5.859	3.972	k383.1	k355.6
#2	58.58	k23.94	k25.21	k13.80	3.600	k376.7	k363.4
#3	55.87	k17.04	k29.25	k13.35	4.654	k366.9	k365.3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-47.61	-.3235	16.61	k-3.305
SDev	3.74	2.5698	.92	18.096
%RSD	7.866	794.5	5.535	547.5
#1	L-50.58	2.419	17.17	k15.32
#2	L-48.84	-2.676	17.11	k-4.418
#3	L-43.40	-.7130	15.55	k-20.82
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CCV Operator:
n Time: 02/12/99 15:33:38
ment: CCV CVS1
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2288	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	98.20	2036.	1009.	1019.	50530.	1005.	1021.
SDev	.49	7.	1.	4.	196.	4.	3.
%RSD	.4998	.3619	.0991	.3913	.3888	.4333	.3399
#1	97.66	2028.	1008.	1015.	50360.	1001.	1018.
#2	98.33	2043.	1011.	1019.	50490.	1004.	1021.
#3	98.61	2036.	1008.	1023.	50750.	1010.	1025.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1025.	1023.	2058.	49980.	52250.	1023.	50260.
SDev	3.	5.	1.	181.	144.	5.	153.
%RSD	.2479	.4919	.0510	.3613	.2747	.5147	.3052
#1	1023.	1017.	2058.	49820.	52090.	1018.	50200.
#2	1025.	1026.	2057.	49930.	52260.	1022.	50430.
#3	1028.	1026.	2059.	50170.	52380.	1028.	50150.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1021.	1077.	1049.	1029.	1028.	1059.	1074.
SDev	2.	6.	2.	3.	10.	6.	3.
%RSD	.2429	.5659	.2040	.2802	.9306	.5708	.2658
#1	1019.	1070.	1046.	1027.	1019.	1053.	1071.
#2	1022.	1082.	1050.	1029.	1026.	1060.	1077.
#3	1024.	1078.	1050.	1032.	1038.	1065.	1074.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1039.	1027.	1028.	1089.	1067.	1038.	1070.
SDev	4.	6.	11.	11.	2.	5.	7.
%RSD	.3397	.6253	1.088	1.000	.1520	.4945	.6175
#1	1038.	1022.	1018.	1077.	1069.	1033.	1063.
#2	1036.	1025.	1027.	1098.	1067.	1037.	1071.
#3	1043.	1034.	1040.	1091.	1066.	1043.	1076.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1038.	1084.	1033.	1064.
SDev	11.	.	5.	26.
%RSD	1.016	.0178	.4529	2.438
#1	1036.	1084.	1028.	1094.
2	1029.	1084.	1033.	1051.
3	1050.	1084.	1037.	1048.
ors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Analysis Time: 02/12/99 15:40:37
Comment: CCB
Method CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0213	30.14	.3076	.2792	-15.64	.2098	.0819
SDev	.3437	6.63	.1717	.1431	14.07	.1814	.5856
%RSD	1616.	21.99	55.82	51.26	89.97	86.47	715.4
#1	-.0668	37.79	.4417	.4061	-1.616	.3696	-.4609
#2	.3429	26.57	.3671	.3073	-15.55	.2473	.0038
#3	-.3399	26.06	.1141	.1241	-29.76	.0126	.7026
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6026	.1548	-2.125	13.69	15.38	.2911	334.1
SDev	.5235	.4185	10.547	7.67	2.15	.0393	39.7
%RSD	86.88	270.3	496.4	56.04	13.99	13.50	11.88
#1	1.105	-.3201	-14.26	7.555	12.90	.3318	378.7
#2	.6423	.3148	3.037	22.29	16.51	.2533	321.0
#3	.0604	.4697	4.846	11.22	16.74	.2883	302.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3148	.0736	.2416	-4.485	.7584	-.1369	.8686
SDev	.1809	1.085	.5504	.099	.3086	1.6389	1.394
%RSD	57.45	1475.	227.8	2.196	40.68	1198.	160.5
#1	.4184	1.085	-.3795	-4.380	.4329	.5355	1.699
#2	.4202	.2077	.4356	-4.576	.7959	1.059	-.7412
#3	.1060	-1.072	.6688	-4.500	1.047	-2.005	1.648
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.597	.4816	.8842	.6446	.9681	-3.706	1.632
SDev	.788	3.557	2.212	3.411	.8894	4.388	.527
%RSD	49.32	738.5	250.2	529.2	91.87	118.4	32.26
#1	.9506	3.355	-1.038	1.093	1.989	-2.863	2.220
#2	2.475	1.586	.3889	-2.968	.3582	.2005	1.475
#3	1.367	-3.496	3.302	3.809	.5574	-8.454	1.202
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5457	-.7103	.7345	.2138
SDev	1.351	2.8268	.2706	13.61
%RSD	247.6	398.0	36.84	6367.
#1	.5004	1.485	.9970	10.11
#2	1.919	.2840	.7500	5.838
#3	-.7823	-3.900	.4564	-15.31
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 928438 #39 Operator:
Analysis Time: 02/12/99 15:47:32
Segment: SDG:00001 ClientID:20-04-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.3281	k58.25	703.2	-.1309	C.0000	k-.1090	k.3581
SDev	.1924	5.77	.4	.0501	.0000	.0842	.3654
%RSD	58.63	9.898	.0521	38.25	.0000	77.23	102.0
#1	k-.1490	k64.54	703.5	-.1081	C.0000	k-.0389	k.3113
#2	k-.5314	k56.99	703.4	-.1883	C.0000	k-.2023	k.7447
#3	k-.3038	k53.21	702.8	-.0962	C.0000	k-.0856	k.0185
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	705.9	11.81	k113.2	49900.	k5734.	k4.520	k61030.
SDev	1.1	.30	9.2	46.	5.	.029	126.
%RSD	.1585	2.502	8.167	.0928	.0801	.6423	.2071
#1	705.1	11.78	k117.5	49890.	k5734.	k4.552	k60960.
#2	705.4	12.12	k119.6	49860.	k5738.	k4.513	k61170.
#3	707.2	11.53	k102.6	49950.	k5729.	k4.495	k60950.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.60	k-8.362	46.25	k36.36	k8.788	k326.2	k5.350
SDev	.70	1.104	.40	.04	.966	7.2	1.891
%RSD	6.612	13.20	.8740	.1217	10.99	2.214	35.34
#1	11.06	k-7.657	46.27	k36.34	k7.849	k318.1	k7.256
#2	9.791	k-9.634	46.65	k36.40	k8.736	k331.9	k3.475
#3	10.94	k-7.795	45.84	k36.32	k9.779	k328.7	k5.320
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	49.67	k7.881	k9.225	k7.064	4.482	k345.2	k316.7
SDev	1.34	4.155	1.693	1.883	2.922	5.1	9.2
%RSD	2.708	52.72	18.35	26.65	65.20	1.464	2.914
#1	48.13	k7.602	k7.957	k8.257	6.743	k340.3	k307.0
#2	50.25	k3.873	k11.15	k8.041	1.182	k345.0	k325.3
#3	50.63	k12.17	k8.571	k4.893	5.519	k350.4	k317.8
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-44.58	-1.817	15.48	k10.41
SDev	3.24	1.932	.45	8.02
%RSD	7.270	106.3	2.917	77.05
#1	L-45.45	.1642	15.54	k17.25
#2	L-40.99	-3.696	15.00	k1.582
#3	L-47.30	-1.918	15.90	k12.40
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000311

Method: CLP3I Sample Name: 928439 #40 Operator:
Analysis Time: 02/12/99 15:54:26
Segment: SDG:00001 ClientID:21-05-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.4918	k104.5	535.1	.0006	C.0000	k-.2547	k.6272
SDev	.4729	6.8	5.4	.0861	.0000	.3222	.3120
%RSD	96.16	6.507	1.018	14560.	.0000	126.5	49.74
#1	k.0242	k112.3	540.5	.0859	C.0000	k-.2090	k.4750
#2	k-.5950	k100.7	529.6	.0022	C.0000	k.0422	k.4205
#3	k-.9045	k100.4	535.1	-.0863	C.0000	k-.5974	k.9861
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	608.4	108.9	k41.22	64120.	k17750.	k1.535	k60010.
SDev	2.9	.3	7.54	824.	123.	.032	491.
%RSD	.4830	.2349	18.30	1.284	.6954	2.063	.8183
#1	611.0	108.7	k39.57	65030.	k17850.	k1.500	k60410.
#2	605.2	108.9	k34.64	63410.	k17610.	k1.545	k59460.
#3	608.8	109.2	k49.45	63920.	k17800.	k1.561	k60170.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.836	k-8.038	73.33	k86.37	k32.57	k278.9	k6.305
SDev	.296	1.976	.70	.64	.25	4.5	.858
%RSD	10.44	24.59	.9542	.7388	.7526	1.606	13.61
#1	3.087	k-10.23	73.57	k86.70	k32.78	k282.9	k7.242
#2	2.913	k-7.495	72.54	k85.63	k32.30	k274.1	k6.113
#3	2.510	k-6.389	73.88	k86.77	k32.63	k279.6	k5.558
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	41.54	k31.85	k32.91	k11.44	3.727	k294.2	k271.2
SDev	1.53	5.20	2.67	3.74	3.139	11.2	5.6
%RSD	3.684	16.33	8.123	32.73	84.22	3.793	2.081
#1	40.58	k35.14	k31.59	k7.723	6.989	k306.6	k271.1
#2	40.74	k34.56	k31.16	k11.39	3.467	k290.9	k265.7
#3	43.31	k25.86	k35.99	k15.21	.7262	k285.0	k276.9
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-52.13	-1.343	15.63	k8.764
SDev	4.09	2.602	.22	19.61
%RSD	7.837	193.8	1.437	223.7
#1	L-56.84	1.212	15.87	k28.24
#2	L-49.97	-1.251	15.43	k9.026
#3	L-49.58	-3.990	15.58	k-10.97
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

M^thod: CLP3I Sample Name: 928440 #41 Operator:
1 Time: 02/12/99 16:01:20
ent: SDG:00001 ClientID:22-06-002 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.4041	k328.0	591.5	-.1759	C.0000	k-.2499	k.4770
SDev	.3939	3.2	5.4	.0641	.0000	.1536	.3640
%RSD	97.48	.9736	.9087	36.47	.0000	61.45	76.32
#1	k.0329	k328.7	585.3	-.1432	C.0000	k-.1564	k.4823
#2	k-.7319	k324.5	594.4	-.2498	C.0000	k-.1663	k.8383
#3	k-.5134	k330.7	594.9	-.1347	C.0000	k-.4272	k.1103
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	572.4	96.05	k204.0	54450.	k30160.	k6.693	k58660.
SDev	5.9	.71	11.2	576.	284.	.081	558.
%RSD	1.035	.7360	5.487	1.058	.9417	1.216	.9514
#1	565.6	95.31	k194.2	53800.	k29840.	k6.602	k58020.
#2	574.9	96.11	k216.2	54620.	k30330.	k6.717	k59050.
#3	576.6	96.72	k201.7	54910.	k30330.	k6.759	k58910.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
vge	5.889	k-10.24	60.79	k105.8	k2913.	k333.9	k8.936
v	.476	3.39	1.00	1.2	37.	3.2	1.130
D	8.082	33.07	1.646	1.161	1.282	.9709	12.65
#1	5.995	k-11.44	59.71	k104.4	k2870.	k330.1	k10.19
#2	6.302	k-6.414	61.69	k106.4	k2928.	k336.0	k8.002
#3	5.369	k-12.86	60.98	k106.7	k2940.	k335.5	k8.613
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.94	k2954.	k2892.	k13.73	6.531	k347.5	k327.0
SDev	2.31	39.	37.	.92	1.244	3.1	4.4
%RSD	2.850	1.314	1.269	6.699	19.04	.8993	1.353
#1	78.34	k2910.	k2850.	k14.69	7.934	k345.7	k322.3
#2	82.76	k2966.	k2909.	k12.86	5.564	k345.7	k331.1
#3	81.72	k2985.	k2918.	k13.63	6.095	k351.1	k327.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-44.68	-2.516	15.96	k.9877
SDev	5.90	1.192	.36	8.926
%RSD	13.20	47.36	2.273	903.8
#1	L-37.89	-1.444	16.26	k10.13
2	L-47.61	-3.800	16.06	k.5371
#3	L-48.54	-2.305	15.56	k-7.705
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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M-thod: CLP3I Sample Name: 928442 #42 Operator:
I Time: 02/12/99 16:08:14
C[illegible]nt: SDG:00001 ClientID:23-07-002 1:1 **2294**
Mo[illegible] CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.3522	k80.76	578.0	.0250	C.0000	k-.0888	k.7907
SDev	.2246	8.04	.9	.0612	.0000	.2724	.3840
%RSD	63.77	9.956	.1505	245.0	.0000	306.9	48.56
#1	k-.0942	k89.03	577.5	.0940	C.0000	k.2153	k.3572
#2	k-.4584	k80.29	577.6	.0041	C.0000	k-.1710	k.9267
#3	k-.5039	k72.97	579.0	-.0231	C.0000	k-.3106	k1.088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	518.0	66.25	k49.12	52560.	k2155.	k1.365	k63430.
SDev	4.3	.64	9.40	84.	15.	.051	258.
%RSD	.8211	.9700	19.13	.1597	.6951	3.724	.4063
#1	513.4	65.61	k38.35	52650.	k2141.	k1.423	k63200.
#2	518.7	66.24	k53.41	52540.	k2153.	k1.333	k63370.
#3	521.8	66.89	k55.61	52480.	k2171.	k1.337	k63710.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
[illegible]its	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
[illegible]vge	1.784	k-8.018	38.86	k26.19	k88.34	k273.6	k4.433
[illegible]	.210	1.557	.47	.33	1.67	3.3	1.881
[illegible]	11.77	19.42	1.205	1.258	1.888	1.213	42.43
#1	1.739	k-6.401	38.45	k25.83	k87.00	k270.1	k5.434
#2	2.013	k-8.144	38.76	k26.29	k90.21	k274.1	k2.263
#3	1.600	k-9.508	39.37	k26.46	k87.80	k276.7	k5.601
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	42.24	k88.33	k88.33	k8.008	2.634	k292.4	k264.3
SDev	.79	2.72	2.54	3.327	2.256	4.4	6.1
%RSD	1.860	3.074	2.878	41.55	85.65	1.511	2.290
#1	41.78	k90.01	k85.49	k6.342	4.967	k295.8	k257.3
#2	41.79	k89.79	k90.40	k5.842	.4628	k287.4	k267.5
#3	43.14	k85.20	k89.09	k11.84	2.473	k294.0	k268.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-48.22	.2266	14.23	k14.47
SDev	6.33	2.195	.63	10.86
%RSD	13.13	968.5	4.463	75.03
#1	L-55.46	2.215	14.09	k26.81
#2	L-45.48	.5938	13.67	k10.24
#3	L-43.72	-2.129	14.92	k6.364
[illegible]rs	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928443 #43 Operator:
Run Time: 02/12/99 16:15:08
Segment: SDG:00001 ClientID:24-08-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.3066	k87.46	348.5	-.2247	C.0000	k-.4050	k.6130
SDev	.2598	4.76	6.3	.0655	.0000	.0760	.2179
%RSD	84.75	5.442	1.805	29.16	.0000	18.76	35.55
#1	k-.0395	k92.95	351.9	-.1549	C.0000	k-.3686	k.7781
#2	k-.3218	k84.38	352.3	-.2848	C.0000	k-.4923	k.6948
#3	k-.5585	k85.07	341.2	-.2342	C.0000	k-.3541	k.3660
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	637.0	50.04	k12.78	59790.	k16950.	k.6707	k68810.
SDev	12.5	.27	7.07	1083.	337.	.0323	1131.
%RSD	1.962	.5371	55.29	1.811	1.987	4.813	1.644
#1	644.4	50.21	k17.39	60550.	k17150.	k.6796	k69430.
#2	644.1	50.18	k16.30	60270.	k17140.	k.6349	k69500.
#3	622.6	49.73	k4.644	58550.	k16560.	k.6976	k67500.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.300	k-8.403	54.26	k29.33	k16.39	k308.6	k6.024
SDev	.108	2.362	1.24	.57	.65	5.3	.838
%RSD	8.311	28.11	2.280	1.949	3.981	1.724	13.92
#1	1.181	k-11.12	54.73	k29.78	k17.03	k312.5	k5.060
#2	1.393	k-6.833	55.20	k29.52	k16.40	k310.7	k6.430
#3	1.325	k-7.256	52.86	k28.69	k15.73	k302.5	k6.582
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	43.93	k15.16	k16.99	k11.06	3.497	k326.5	k299.6
SDev	2.18	.74	.73	3.30	1.306	9.0	3.9
%RSD	4.956	4.854	4.291	29.84	37.35	2.750	1.316
#1	44.53	k15.45	k17.81	k8.417	3.370	k335.2	k301.1
#2	45.75	k15.70	k16.74	k14.76	2.260	k327.0	k302.6
#3	41.52	k14.32	k16.41	k9.998	4.863	k317.2	k295.2
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-47.32	-.6961	15.10	k.1877
SDev	2.43	1.7050	.16	6.867
%RSD	5.135	244.9	1.090	3657.
#1	L-46.17	1.098	15.19	k7.808
#2	L-50.11	-2.296	15.21	k-5.519
#3	L-45.67	-.8907	14.91	k-1.725
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928445 #44 Operator:
Analysis Time: 02/12/99 16:22:02
Client: SDG:00001 ClientID:25-09-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.1702	k109.0	395.9	.0144	C.0000	k-.0871	k1.029
SDev	.3466	7.4	.9	.0523	.0000	.0363	.305
%RSD	203.7	6.747	.2313	362.2	.0000	41.68	29.60
#1	k.1880	k116.3	396.8	.0676	C.0000	k-.0518	k.7980
#2	k-.1944	k109.1	394.9	.0126	C.0000	k-.1243	k.9150
#3	k-.5040	k101.6	395.8	-.0369	C.0000	k-.0852	k1.374
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	616.1	321.2	k56.48	51350.	k5700.	k2.744	k56190.
SDev	3.2	2.5	6.24	159.	21.	.024	150.
%RSD	.5189	.7688	11.05	.3104	.3691	.8636	.2675
#1	613.4	318.5	k53.28	51510.	k5684.	k2.732	k56090.
#2	615.3	321.8	k52.49	51190.	k5693.	k2.772	k56120.
#3	619.7	323.3	k63.67	51350.	k5724.	k2.729	k56360.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.099	k-5.967	39.74	k163.5	k72.95	k283.8	k5.150
SDev	.473	1.128	.22	.6	.99	3.2	.788
%RSD	15.26	18.91	.5490	.3774	1.355	1.125	15.30
#1	3.278	k-7.270	39.53	k162.9	k71.81	k286.7	k5.559
#2	2.563	k-5.305	39.72	k163.5	k73.42	k280.4	k4.242
#3	3.457	k-5.325	39.96	k164.2	k73.61	k284.4	k5.650
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	31.58	k73.44	k72.69	k8.662	3.384	k297.7	k276.9
SDev	1.09	1.81	2.38	.729	1.411	8.1	2.6
%RSD	3.449	2.460	3.268	8.420	41.71	2.723	.9439
#1	30.50	k75.52	k69.94	k7.824	4.415	k307.0	k276.5
#2	32.68	k72.27	k73.98	k9.157	1.775	k292.3	k274.4
#3	31.56	k72.53	k74.14	k9.004	3.963	k293.8	k279.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-50.61	3.334	14.87	k18.49
SDev	2.10	3.865	.69	14.84
%RSD	4.149	115.9	4.642	80.29
#1	L-52.64	6.970	15.27	k35.23
#2	L-50.75	3.756	14.07	k13.28
#3	L-48.44	-.7249	15.25	k6.949
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000316

hod: CLP3I Sample Name: 928447 #45 Operator:
Time: 02/12/99 16:28:56
nt: SDG:00001 ClientID:26-10-002 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.3461	k144.6	427.7	-.2579	C.0000	k-.3432	k1.009
SDev	.2726	3.6	1.0	.0649	.0000	.1329	.239
%RSD	78.75	2.514	.2279	25.16	.0000	38.72	23.67
#1	k-.1580	k148.5	426.6	-.1830	C.0000	k-.3256	k.7357
#2	k-.2217	k144.1	428.1	-.2967	C.0000	k-.4840	k1.178
#3	k-.6587	k141.2	428.4	-.2940	C.0000	k-.2200	k1.112
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	680.4	60.39	k56.76	52850.	k8057.	k2.140	k60870.
SDev	.8	.18	5.81	88.	7.	.025	158.
%RSD	.1134	.3023	10.24	.1670	.0853	1.156	.2593
#1	681.3	60.24	k62.41	52860.	k8061.	k2.112	k60710.
#2	680.0	60.59	k50.79	52750.	k8062.	k2.155	k61030.
#3	680.0	60.35	k57.09	52930.	k8049.	k2.154	k60870.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.198	k-6.311	41.03	k38.55	k176.9	k265.2	k4.999
SDev	.287	3.212	.20	.11	.9	1.0	.398
%RSD	13.06	50.90	.4984	.2842	.5238	.3805	7.961
#1	2.530	k-4.645	40.86	k38.52	k177.9	k264.0	k4.678
#2	2.033	k-10.01	41.26	k38.46	k176.9	k265.9	k5.444
#3	2.032	k-4.274	40.98	k38.67	k176.1	k265.7	k4.875
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.83	k174.9	k177.9	k11.63	1.676	k278.1	k258.8
SDev	1.50	1.3	1.2	2.90	1.013	3.2	3.1
%RSD	4.186	.7497	.6733	24.92	60.43	1.151	1.202
#1	34.11	k175.1	k179.3	k8.346	2.833	k281.8	k255.2
#2	36.56	k176.2	k177.2	k13.83	1.243	k276.0	k260.8
#3	36.82	k173.6	k177.3	k12.71	.9515	k276.5	k260.3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-38.47	-2.044	14.96	k3.299
SDev	3.02	2.619	1.16	4.837
%RSD	7.851	128.1	7.737	146.6
#1	L-41.87	-.9647	16.10	k8.879
#2	L-36.11	-.1379	13.79	k.3038
#3	L-37.43	-5.031	14.99	k.7132
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928449 #46 Operator:
Run Time: 02/12/99 16:35:51
Comment: SDG:00001 ClientID:28-11-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	k-.4067	k23.78	418.8	-.0221	C.0000	k.0229	k.5454
SDev	.1780	10.72	1.4	.0525	.0000	.0874	.4114
%RSD	43.77	45.07	.3230	237.3	.0000	382.4	75.43
#1	k-.2580	k35.31	419.0	.0362	C.0000	k.0171	k.0710
#2	-.6040	k21.90	420.0	-.0369	C.0000	k-.0615	k.7609
#3	k-.3582	k14.13	417.4	-.0656	C.0000	k.1130	k.8042
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	614.7	32.11	k16.57	43790.	k4523.	k.5402	k59720.
SDev	5.2	.47	10.18	239.	22.	.0620	227.
%RSD	.8409	1.448	61.41	.5458	.4906	11.48	.3807
#1	608.8	31.58	k6.378	43960.	k4499.	k.4896	k59640.
#2	618.3	32.37	k16.61	43890.	k4542.	k.6094	k59980.
#3	617.1	32.40	k26.73	43510.	k4529.	k.5215	k59540.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.112	k-5.910	32.72	k14.83	k14.83	k315.6	k4.734
SDev	.624	3.188	.56	.30	1.73	5.1	.980
%RSD	29.54	53.94	1.707	2.027	11.67	1.608	20.69
#1	2.512	k-7.630	32.08	k14.49	k15.05	k309.8	k4.383
#2	1.393	k-7.870	33.10	k15.04	k13.00	k319.2	k5.841
#3	2.431	k-2.231	32.99	k14.98	k16.44	k317.9	k3.979
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	32.54	k14.55	k14.96	k7.768	3.206	k333.5	k306.7
SDev	2.37	5.14	2.41	4.788	1.267	5.2	10.1
%RSD	7.293	35.29	16.12	61.64	39.50	1.551	3.289
#1	29.83	k19.79	k12.67	k3.866	4.628	k339.3	k295.1
#2	34.23	k9.530	k14.72	k13.11	2.198	k331.6	k313.0
#3	33.55	k14.33	k17.48	k6.326	2.793	k329.5	k312.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-47.09	-.8856	13.69	k14.31
SDev	4.52	1.1237	.68	10.71
%RSD	9.597	126.9	4.937	74.83
#1	L-50.59	-.1427	13.33	k26.50
#2	L-48.69	-.3358	14.47	k10.03
#3	L-41.99	-2.178	13.27	k6.404
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928457 #47 Operator:
Analyzed Time: 02/12/99 16:42:45
Client: SDG:00001 ClientID:LEACH BLANK 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1791	29.78	.9434	-.2149	427.7	-.3883	-.0476
SDev	.2277	5.01	.0483	.0509	76.0	.1346	.1649
%RSD	127.1	16.84	5.120	23.66	17.77	34.66	346.2
#1	.0516	34.74	.9951	-.1606	506.4	-.4715	-.2373
#2	-.4037	24.71	.8995	-.2614	421.8	-.4603	.0322
#3	-.1851	29.89	.9355	-.2227	354.8	-.2330	.0621
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0755	1.683	9.630	.5387	17.17	.2095	322.2
SDev	.4022	.274	7.252	8.441	1.24	.0260	50.2
%RSD	532.9	16.26	75.30	1567.	7.250	12.41	15.57
#1	.2344	1.368	1.257	4.766	17.07	.2297	366.9
#2	-.3819	1.817	13.81	-9.181	15.98	.2188	268.0
#3	.3739	1.863	13.82	6.031	18.46	.1802	331.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.568	-8.369	.4277	.4703	2.305	18.26	2.070
SDev	.887	.844	.0059	.1075	1.400	1.34	.530
%RSD	56.55	10.08	1.381	22.85	60.73	7.317	25.60
#1	-1.514	8.793	.4209	.5177	2.389	16.78	2.666
#2	-2.481	-8.916	.4312	.5459	.8655	18.64	1.653
#3	-.7099	-7.397	.4309	.3473	3.662	19.37	1.890
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.969	3.384	1.754	4.069	1.059	32.96	10.91
SDev	1.261	2.750	2.129	.755	1.165	2.31	1.80
%RSD	64.05	81.27	121.3	18.56	110.0	7.020	16.51
#1	3.020	6.454	.3468	3.280	2.347	32.45	8.945
#2	.5706	1.146	.7129	4.785	.0770	30.95	12.48
#3	2.317	2.552	4.204	4.141	.7538	35.49	11.31
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-23.83	-3.377	-1.695	-6.592
SDev	2.89	1.822	.851	3.634
%RSD	12.12	53.94	50.17	55.12
#1	L-26.91	-1.544	-1.162	-5.036
#2	L-21.18	-3.400	-2.676	-10.74
#3	L-23.40	-5.187	-1.248	-3.996
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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Method: CLP3I Sample Name: ~~PDS928430~~ #48 Operator:
Analysis Time: 02/12/99 16:49:39
Client: SDG:00001 ClientID:17-01-002A
Matrix CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2640	14.63	.0208	.0252	-41.16	.6333	-.2419
SDev	.1840	7.87	.0511	.0393	10.49	.1038	.3428
%RSD	69.68	53.83	245.8	156.0	25.50	16.39	141.7
#1	-.4765	21.45	.0797	.0677	-29.73	.7517	-.6332
#2	-.1578	16.43	-.0108	.0180	-43.38	.5903	.0053
#3	-.1578	6.010	-.0066	-.0100	-50.36	.5579	-.0978
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1672	.3509	-16.70	-9.087	-2.440	-.1030	-1601.
SDev	.1487	.4860	7.97	5.079	2.586	.0218	109.
%RSD	88.90	138.5	47.75	55.90	106.0	21.11	6.826
#1	-.2233	-.1962	-20.82	-11.02	-5.388	-.0901	-1547.
#2	-.2797	.5161	-7.509	-12.92	-.5526	-.0909	-1530.
#3	.0013	.7328	-21.77	-3.325	-1.378	-.1282	-1727.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2775	4.473	-.1762	-2.948	-1.923	-.8294	-.3122
SDev	1.032	.887	.0672	.701	.753	.3806	1.1295
%RSD	371.8	19.83	38.13	23.77	39.17	45.89	361.8
#1	1.329	4.468	-.2538	-3.713	-1.910	-.5342	.0975
#2	-.7337	5.362	-.1392	-2.336	-1.176	-.6951	.5552
#3	.2374	3.588	-.1357	-2.796	L-2.682	-1.259	-1.589
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.112	-6.323	.2621	.0224	-.4916	7.512	-5.006
SDev	1.807	.689	1.426	1.227	1.2084	3.410	2.169
%RSD	58.06	10.90	544.1	5482.	245.8	45.39	43.32
#1	3.032	-5.882	.0609	-.2835	.2754	7.384	-4.500
#2	1.347	-7.117	1.778	1.374	.1343	4.167	-3.135
#3	4.957	-5.970	-1.053	-1.023	-1.885	10.98	-7.383
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.401	1.173	.2688	-.7572
SDev	2.104	1.261	.4421	3.6845
%RSD	150.2	107.5	164.5	486.6
#1	-.1301	2.261	.7765	3.479
#2	3.800	1.469	-.0311	-3.213
#3	.5330	-.2093	.0609	-2.538
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 16:56:33 2294
Current: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	97.68	2006.	1003.	1017.	50140.	1002.	1021.
SDev	.29	2.	9.	10.	478.	11.	10.
%RSD	.2991	.0889	.8774	1.021	.9532	1.140	1.011
#1	97.80	2006.	1013.	1028.	50620.	1014.	1031.
#2	97.89	2007.	1002.	1016.	50130.	1001.	1020.
#3	97.35	2004.	995.6	1007.	49660.	991.0	1011.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1024.	1010.	2051.	49520.	51980.	1020.	50320.
SDev	11.	2.	17.	556.	493.	10.	399.
%RSD	1.048	.1874	.8395	1.123	.9481	1.020	.7931
#1	1035.	1009.	2067.	50090.	52500.	1031.	50680.
#2	1022.	1012.	2053.	49490.	51940.	1019.	50400.
#3	1014.	1009.	2033.	48980.	51520.	1011.	49890.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1017.	1069.	1048.	1029.	1021.	1060.	1078.
SDev	11.	11.	9.	11.	10.	10.	10.
%RSD	1.096	1.010	.8599	1.037	1.010	.9712	.9674
#1	1029.	1081.	1057.	1039.	1031.	1069.	1087.
#2	1014.	1065.	1047.	1028.	1022.	1063.	1082.
#3	1007.	1061.	1039.	1018.	1010.	1049.	1067.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1039.	1023.	1020.	1098.	1069.	1035.	1073.
SDev	11.	15.	8.	7.	13.	12.	10.
%RSD	1.017	1.477	.8125	.6326	1.255	1.171	.9564
#1	1049.	1039.	1027.	1098.	1081.	1049.	1079.
#2	1042.	1021.	1023.	1105.	1070.	1032.	1078.
#3	1028.	1009.	1011.	1091.	1055.	1025.	1061.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1038.	1080.	1030.	1060.
SDev	13.	13.	9.	23.
%RSD	1.289	1.178	.8440	2.148
#1	1053.	1094.	1038.	1085.
#2	1033.	1077.	1030.	1041.
#3	1028.	1069.	1021.	1055.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Time: 02/12/99 17:03:33
Comment: CCB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1669	12.58	.2915	.2259	-56.84	.2705	-.1206
SDev	.5393	8.65	.1119	.0621	.16	.0988	.1648
%RSD	323.1	68.73	38.39	27.50	.2858	36.51	136.6
#1	.7891	21.22	.4179	.2934	-56.72	.2723	.0027
#2	-.1214	12.60	.2511	.2130	-56.79	.3683	-.0568
#3	-.1669	3.925	.2053	.1712	-57.03	.1709	-.3078
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6109	-.3665	-10.45	10.21	9.523	.2295	265.9
SDev	.8729	.3332	1.99	15.87	1.040	.0598	17.9
%RSD	142.9	90.91	19.07	155.5	10.92	26.04	6.744
#1	1.520	-.6916	-12.43	28.53	10.55	.2954	259.6
#2	.5343	-.3820	-10.46	1.259	8.469	.1789	252.0
#3	-.2213	-.0258	-8.447	.8254	9.549	.2142	286.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2331	.3115	-.0306	-4.357	-.2256	.4232	.8861
SDev	.3962	1.828	.1158	.037	.6537	.5611	1.542
%RSD	170.0	586.8	378.2	.8459	289.7	132.6	174.0
#1	-.2394	-.0900	.0825	-4.385	.0136	.1454	2.030
#2	-.6261	-1.282	-.1490	-4.316	.2748	1.069	1.496
#3	.1663	2.307	-.0253	-4.371	-.9653	.0552	-.8676
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.067	1.294	-.9970	.5565	1.038	2.240	-.4965
SDev	1.600	1.933	1.4525	3.022	3.388	.783	1.0907
%RSD	150.0	149.3	145.7	543.0	326.3	34.93	219.7
#1	-2.548	3.315	-1.647	-2.911	4.484	3.141	-1.363
#2	-1.282	-.5358	.6670	2.627	.9197	1.726	.7284
#3	.6307	1.104	-2.011	1.954	-2.289	1.854	-.8551
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.510	-.7983	.4253	7.760
SDev	.952	4.4821	.6940	14.68
%RSD	63.02	561.5	163.2	189.2
#1	1.910	3.954	1.217	24.69
#2	2.197	-4.949	.1360	-.0365
#3	.4238	-1.400	-.0774	-1.375
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 17:19:54
Comment: CCV CVS1
Method CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	98.42	2005.	1079.	1014.	50200.	1001.	1017.
SDev	.79	4.	2.	4.	337.	4.	6.
%RSD	.8059	.1891	.1913	.4426	.6705	.4321	.5426
#1	97.60	2001.	1081.	1009.	49820.	996.9	1010.
#2	99.19	2005.	1077.	1017.	50450.	1006.	1020.
#3	98.48	2009.	1080.	1015.	50330.	1001.	1020.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1020.	1010.	2027.	48910.	51390.	1018.	49470.
SDev	4.	4.	24.	142.	163.	4.	185.
%RSD	.3728	.4411	1.178	.2894	.3164	.4382	.3748
#1	1016.	1005.	2001.	49070.	51200.	1013.	49260.
#2	1024.	1010.	2032.	48850.	51490.	1022.	49530.
#3	1021.	1014.	2048.	48810.	51480.	1019.	49620.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1012.	1064.	1036.	1021.	1026.	1052.	1056.
SDev	1.	2.	4.	4.	6.	3.	3.
%RSD	.0875	.1970	.3628	.3736	.5913	.2526	.3210
#1	1011.	1065.	1032.	1017.	1020.	1053.	1059.
#2	1013.	1066.	1038.	1024.	1032.	1054.	1052.
#3	1012.	1062.	1039.	1023.	1026.	1049.	1058.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1029.	1030.	1024.	1065.	1052.	1038.	1059.
SDev	2.	10.	8.	12.	7.	9.	1.
%RSD	.1794	1.006	.7990	1.092	.6659	.8826	.0630
#1	1027.	1031.	1015.	1056.	1060.	1042.	1059.
#2	1029.	1040.	1029.	1062.	1048.	1045.	1058.
#3	1030.	1019.	1030.	1079.	1047.	1028.	1060.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1033.	1064.	1024.	1046.
SDev	3.	1.	6.	34.
%RSD	.3274	.1285	.5635	3.246
#1	1031.	1064.	1018.	1082.
#2	1032.	1066.	1025.	1041.
#3	1037.	1064.	1029.	1014.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/12/99 17:26:49
Comment: CCB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2246	24.58	.2448	-.0015	-51.25	.2856	.2255
SDev	.2891	7.05	.1255	.1112	4.27	.2312	.4062
%RSD	128.7	28.67	51.27	7216.	8.336	80.96	180.1
#1	.0060	31.02	.3388	.1257	-48.59	.2905	.3080
#2	.1153	25.67	.1023	-.0502	-48.98	.0520	.5841
#3	.5524	17.05	.2933	-.0801	-56.18	.5144	-.2156
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3805	-.5728	-7.401	8.734	14.36	.3195	254.0
SDev	.3029	.1991	7.999	5.553	5.76	.0846	85.6
%RSD	79.60	34.76	108.1	63.58	40.12	26.48	33.70
#1	.4718	-.4902	-3.808	12.82	19.15	.3891	344.3
#2	.0425	-.4283	-1.828	2.410	15.96	.3441	174.0
#3	.6273	-.7999	-16.57	10.97	7.968	.2253	243.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8405	1.902	.5859	-4.484	1.171	1.975	1.700
SDev	1.0057	2.015	.4518	.172	.730	2.335	1.370
%RSD	119.7	105.9	77.12	3.828	62.35	118.2	80.60
#1	-.9028	4.223	.9049	-4.358	.6235	1.265	3.236
#2	-1.814	.5954	.7840	-4.413	.8892	.0766	1.257
#3	.1949	.8891	.0688	-4.679	2.000	4.583	.6058
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6177	-.4160	1.950	1.773	1.650	3.366	1.268
SDev	2.2195	2.6206	.786	2.840	1.048	3.556	2.874
%RSD	359.3	629.9	40.33	160.2	63.50	105.7	226.7
#1	.1372	-.6069	1.225	4.210	2.737	-.4962	2.132
#2	1.126	-2.936	2.786	2.454	.6462	4.089	-1.939
#3	-3.116	2.295	1.839	-1.346	1.567	6.505	3.611
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.918	-2.965	-.1812	-.2293
SDev	5.088	1.352	.3091	9.3944
%RSD	265.2	45.61	170.6	4097.
#1	-3.825	-1.629	.1018	1.628
#2	5.859	-4.333	-.1343	-10.41
#3	3.722	-2.931	-.5110	8.098
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 928579 #28 Operator:
Analysis Time: 02/12/99 17:33:43
Client: SDG:00001 ClientID:PBW 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1457	6.609	1.173	.0771	-51.43	-.0146	.0753
SDev	.2126	8.906	.071	.0406	4.09	.1424	.4938
%RSD	145.9	134.8	6.084	52.60	7.961	977.4	656.1
#1	.0425	16.83	1.256	.1239	-48.97	.0854	.0137
#2	-.1032	.4883	1.131	.0563	-56.16	.0486	-.3848
#3	-.3764	2.513	1.133	.0512	-49.17	-.1776	.5969
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3353	-.1755	-4.429	12.37	8.945	.2379	442.2
SDev	.6246	.3838	7.159	10.09	4.892	.0896	53.5
%RSD	186.3	218.7	161.7	81.54	54.69	37.67	12.10
#1	.9878	-.5213	-12.68	21.98	6.353	.1870	464.0
#2	.2750	-.2426	-.7492	13.26	5.895	.1853	381.3
#3	-.2570	.2375	.1424	1.868	14.59	.3414	481.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2935	-1.119	.2664	-2.986	1.566	.8054	1.036
SDev	.6248	.934	.4520	.271	.845	1.501	1.590
%RSD	212.8	83.46	169.6	9.071	53.94	186.4	153.5
#1	.1904	-.5036	.0662	-3.257	1.015	.1829	1.982
#2	-.0722	-.6599	-.0508	-2.985	1.144	2.517	1.926
#3	-.9988	-2.194	.7840	-2.715	H2.538	-.2841	-.7996
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6310	2.217	1.228	.1890	1.446	-1.660	2.024
SDev	.9864	1.942	2.095	1.869	3.286	3.627	3.017
%RSD	156.3	87.61	170.6	989.2	227.2	218.5	149.1
#1	-1.398	4.390	-.6822	-1.428	3.672	2.372	-.9226
#2	-.9767	1.610	.8980	-.2413	2.995	-2.694	5.106
#3	.4817	.6503	3.468	2.236	-2.328	-4.659	1.887
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3776	-.7208	.1925	1.819
SDev	1.3260	.6449	.4527	15.99
%RSD	351.2	89.46	235.2	878.9
#1	-1.421	-1.429	.0395	16.08
#2	-.8260	-.1683	.7018	4.843
#3	1.114	-.5648	-.1639	-15.47
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

thod: CLP3I Sample Name: PLCSW928433 #29 Operator:
Time: 02/12/99 17:40:37
C ent: SDG:00001 ClientID:LCSW 1:1
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	939.0	18940.	21390.	487.2	49240.	480.4	4883.
SDev	.7	26.	49.	2.1	199.	2.2	17.
%RSD	.0699	.1388	.2282	.4323	.4046	.4574	.3500
#1	939.7	18920.	21420.	488.9	49360.	482.6	4893.
#2	938.4	18930.	21410.	487.8	49350.	480.5	4893.
#3	939.0	18970.	21330.	484.8	49010.	478.2	4864.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	970.3	2424.	10080.	49250.	50410.	1466.	49530.
SDev	4.1	4.	40.	230.	186.	4.	151.
%RSD	.4264	.1460	.3945	.4671	.3697	.2411	.3057
#1	973.3	2422.	10100.	49500.	50520.	1469.	49490.
#2	972.0	2423.	10110.	49190.	50510.	1468.	49700.
#3	965.5	2428.	10030.	49050.	50190.	1462.	49400.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3844.	999.7	5088.	2010.	289.9	499.7	6079.
SDev	11.	5.8	15.	9.	1.8	2.0	26.
%RSD	.2874	.5819	.3039	.4283	.6188	.3908	.4323
#1	3853.	1006.	5097.	2017.	290.1	499.2	6055.
#2	3846.	997.2	5097.	2014.	291.6	498.0	6107.
#3	3832.	995.6	5070.	2001.	288.0	501.9	6075.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	999.0	291.6	289.0	6213.	6012.	483.5	507.8
SDev	4.6	1.9	2.9	29.	26.	7.7	1.8
%RSD	.4570	.6524	.9940	.4672	.4301	1.584	.3518
#1	999.3	289.4	290.4	6194.	5986.	477.9	509.8
#2	1003.	292.8	290.9	6247.	6037.	480.5	506.8
#3	994.3	292.5	285.7	6200.	6013.	492.2	506.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	975.5	1044.	998.3	1029.
SDev	6.7	3.	.9	11.
%RSD	.6891	.2657	.0925	1.025
1	979.5	1044.	999.0	1041.
2	979.2	1047.	998.7	1021.
#	967.7	1042.	997.2	1024.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	1205.	1205.	1205.	1205.
Low	795.0	795.0	795.0	795.0

Method: CLP3I Sample Name: 928430 5X #30 Operator:
n Time: 02/12/99 17:51:46
ment: SDG:00001 ClientID:17-01-002 1:1
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0304	63.24	94.54	-.1571	399600.	3.863	.7722
SDev	.0631	3.95	.72	.1401	3727.	.196	.1433
%RSD	207.5	6.251	.7666	89.17	.9326	5.078	18.56
#1	-.1032	67.64	94.87	-.0070	400500.	4.063	.6970
#2	.0060	59.98	95.03	-.1801	402800.	3.853	.9375
#3	.0060	62.12	93.70	-.2843	395500.	3.671	.6822
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	203.5	36.56	-.6125	7620.	8871.	.7064	10840.
SDev	1.5	.24	8.1591	49.	59.	.1067	92.
%RSD	.7416	.6567	1332.	.6398	.6616	15.10	.8469
#1	204.1	36.31	-9.959	7634.	8857.	.7833	10810.
#2	204.6	36.79	5.086	7660.	8936.	.7512	10950.
#3	201.8	36.56	3.035	7566.	8821.	.5846	10770.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8834	-1.121	12.25	29.58	50.02	67.68	5.365
SDev	.3811	.579	.11	.38	1.51	1.98	1.977
%RSD	43.14	51.64	.9211	1.278	3.014	2.920	36.85
#1	-.5616	-1.548	12.25	29.90	51.41	65.54	7.284
#2	-.7845	-.4621	12.36	29.69	50.23	68.08	5.478
#3	-1.304	-1.353	12.13	29.16	48.42	69.43	3.334
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.75	46.97	51.53	8.652	3.712	68.68	67.17
SDev	2.09	2.27	1.78	3.018	1.690	5.10	2.52
%RSD	14.14	4.842	3.450	34.88	45.53	7.425	3.746
#1	13.93	49.51	52.34	10.59	5.619	67.02	64.78
#2	17.12	45.14	52.75	10.19	3.113	64.61	69.80
#3	13.20	46.24	49.49	5.174	2.402	74.40	66.93
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-9.595	-2.225	1.949	-11.99
SDev	1.952	2.654	.977	6.12
%RSD	20.34	119.2	50.13	51.08
#1	-11.74	-4.836	2.924	-4.957
#2	-7.934	-2.308	.9704	-16.16
#3	-9.106	.4689	1.952	-14.85
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928434 5X #31 Operator:
Run Time: 02/12/99 17:58:40
Document: SDG:00001 ClientID:17-01-002D 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2761	61.94	87.20	-.0834	377100.	3.873	-.3494
SDev	.1188	10.84	.97	.0226	3117.	.143	.1081
%RSD	43.03	17.50	1.118	27.14	.8265	3.704	30.94
#1	.3702	73.90	88.31	-.0769	374500.	4.028	-.4187
#2	.3156	59.14	86.77	-.1085	376200.	3.745	-.2248
#3	.1426	52.77	86.51	-.0647	380600.	3.845	-.4046
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	193.6	34.65	-12.19	7127.	8339.	.5134	10160.
SDev	.9	.29	7.37	70.	23.	.0355	116.
%RSD	.4692	.8316	60.45	.9835	.2778	6.907	1.146
#1	193.5	34.35	-17.97	7208.	8359.	.4726	10260.
#2	192.8	34.69	-14.70	7087.	8313.	.5365	10030.
#3	194.6	34.92	-3.892	7086.	8343.	.5312	10170.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8619	-2.206	10.67	27.98	47.32	65.50	2.534
SDev	.3686	1.702	.12	.30	1.74	3.17	1.765
%RSD	42.77	77.15	1.118	1.081	3.675	4.847	69.66
#1	.7879	-.4185	10.54	27.67	48.52	61.98	2.062
#2	.5359	-2.393	10.70	28.00	45.32	68.15	1.052
#3	1.262	-3.807	10.77	28.27	48.11	66.36	4.487
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.35	49.48	46.22	2.837	2.369	70.00	63.24
SDev	.31	3.36	2.02	2.829	1.293	3.92	4.01
%RSD	2.487	6.797	4.379	99.70	54.55	5.594	6.347
#1	12.61	53.36	46.09	1.466	2.347	68.65	58.64
#2	12.01	47.41	44.27	.9555	1.088	74.41	65.01
#3	12.44	47.68	48.31	6.091	3.673	66.94	66.05
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-10.00	.9685	2.515	10.25
SDev	1.76	1.239	.259	9.74
%RSD	17.57	127.9	10.31	95.10
#1	-8.290	1.328	2.218	20.53
#2	-11.80	-.4101	2.631	1.157
#3	-9.915	1.987	2.696	9.049
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928431 5X #32 Operator:
Time: 02/12/99 18:05:34
Client: SDG:00001 ClientID:17-01-002S 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	9.508	439.3	520.8	9.319	397000.	13.40	96.97
SDev	.410	.4	1.1	.190	2267.	.17	.29
%RSD	4.308	.0898	.2073	2.040	.5712	1.284	.2960
#1	9.878	439.4	519.6	9.531	399200.	13.60	97.06
#2	9.577	438.8	521.0	9.264	397000.	13.30	97.19
#3	9.068	439.6	521.7	9.163	394700.	13.30	96.64
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	240.8	84.75	201.8	7415.	8755.	98.05	10640.
SDev	1.4	.16	2.6	24.	11.	.56	36.
%RSD	.5796	.1898	1.264	.3280	.1311	.5690	.3382
#1	242.4	84.85	199.5	7440.	8765.	98.62	10620.
#2	240.6	84.85	201.3	7391.	8758.	98.01	10610.
#3	239.6	84.57	204.6	7414.	8743.	97.51	10680.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	95.50	8.147	111.0	125.5	53.15	69.71	103.8
SDev	1.07	2.300	.1	.6	.38	1.96	.9
%RSD	1.123	28.22	.0999	.4673	.7059	2.814	.8898
#1	96.72	6.089	110.8	126.1	53.58	71.92	102.8
#2	94.73	7.723	111.0	125.4	53.00	68.16	104.0
#3	95.04	10.63	111.0	124.9	52.88	69.07	104.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	23.86	49.20	55.11	110.0	100.7	70.85	69.14
SDev	.75	2.36	.64	3.8	1.2	4.88	.96
%RSD	3.137	4.804	1.167	3.432	1.151	6.892	1.382
#1	23.13	51.93	54.39	105.9	101.3	76.47	69.63
#2	24.63	47.70	55.63	113.3	99.38	68.37	68.04
#3	23.80	47.98	55.31	110.8	101.5	67.69	69.74
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	189.1	219.2	199.8	195.8
SDev	2.1	2.0	1.6	6.6
%RSD	1.119	.9029	.7986	3.346
#1	190.9	221.5	201.0	203.3
#2	186.8	218.4	200.3	193.0
#3	189.5	217.8	198.0	191.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928432 5X #33 Operator:
Run Time: 02/12/99 18:12:28
Comment: SDG:00001 ClientID:17-01-002M 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	9.050	419.6	488.5	8.751	373100.	12.61	89.72
SDev	.178	7.1	4.7	.103	3337.	.10	.79
%RSD	1.963	1.690	.9638	1.174	.8942	.7938	.8784
#1	8.877	427.7	493.3	8.639	369400.	12.55	89.23
#2	9.041	416.3	488.3	8.774	374100.	12.72	89.31
#3	9.232	414.7	483.9	8.841	375900.	12.55	90.63
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	226.9	79.44	170.7	7061.	8270.	91.50	10000.
SDev	1.0	.92	2.3	57.	14.	.61	94.
%RSD	.4213	1.162	1.331	.8055	.1715	.6668	.9428
#1	225.8	78.42	173.2	7119.	8260.	90.83	9898.
#2	227.7	79.69	170.0	7060.	8286.	91.67	10040.
#3	227.3	80.21	168.8	7005.	8265.	92.01	10080.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	90.19	6.234	102.3	116.8	50.21	65.54	97.57
SDev	.49	3.835	.2	.7	1.04	1.68	.99
%RSD	.5464	61.51	.2438	.5793	2.065	2.559	1.011
#1	89.67	2.918	102.1	116.1	51.22	63.86	98.67
#2	90.25	5.351	102.6	116.9	49.15	67.21	97.26
#3	90.65	10.43	102.2	117.4	50.26	65.54	96.77
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.34	52.94	48.84	99.25	96.72	70.29	63.15
SDev	.56	2.09	1.62	1.44	1.32	2.99	1.21
%RSD	2.911	3.956	3.311	1.451	1.366	4.256	1.914
#1	19.98	54.75	49.45	100.3	97.83	66.90	62.33
#2	19.16	53.42	47.01	97.62	97.07	72.54	64.54
#3	18.90	50.64	50.06	99.78	95.26	71.44	62.59
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	174.2	206.2	186.6	197.9
SDev	1.1	4.1	.2	9.5
%RSD	.6062	2.008	.1248	4.806
#1	173.9	207.9	186.4	208.1
#2	175.3	209.2	186.8	196.4
#3	173.3	201.5	186.8	189.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: SDI928430 25X #34 Operator:
n Time: 02/12/99 18:19:22
ment: SDG:00001 ClientID:17-01-002L 1:5
M: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0668	38.11	18.78	-.1936	81250.	.5716	.4317
SDev	.1930	4.08	.17	.1651	1244.	.0630	.2577
%RSD	289.1	10.70	.9077	85.28	1.531	11.03	59.70
#1	.2428	42.78	18.97	-.0103	82670.	.6423	.6928
#2	-.1396	36.25	18.64	-.2397	80760.	.5514	.4249
#3	.0971	35.29	18.74	-.3308	80330.	.5211	.1775
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	42.68	7.350	5.468	1207.	1791.	.1831	2360.
SDev	1.04	.264	8.112	31.	21.	.0444	75.
%RSD	2.426	3.589	148.4	2.586	1.161	24.22	3.158
#1	43.86	7.654	12.82	1243.	1815.	.1569	2447.
#2	42.26	7.190	-3.237	1188.	1779.	.2343	2319.
#3	41.92	7.205	6.824	1190.	1779.	.1582	2316.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.354	.7288	3.446	13.50	10.21	13.00	1.937
SDev	.445	2.129	.136	.52	1.25	.63	.478
%RSD	32.85	292.1	3.947	3.855	12.27	4.816	24.67
#1	-.8436	-1.288	3.454	14.10	11.59	13.51	1.958
#2	-1.558	2.955	3.306	13.26	9.141	13.19	1.449
#3	-1.659	.5194	3.578	13.15	9.897	12.30	2.404
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.013	7.517	11.54	6.812	-.5100	9.425	14.77
SDev	2.815	2.039	.91	2.025	1.4557	4.695	3.19
%RSD	70.15	27.12	7.910	29.73	285.4	49.82	21.58
#1	5.974	9.550	12.59	4.637	.6080	8.117	16.19
#2	5.277	5.472	10.96	8.644	-2.156	5.522	17.01
#3	.7873	7.529	11.06	7.156	.0181	14.64	11.12
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.415	-4.282	.3801	-7.425
SDev	1.794	.277	.4854	6.398
%RSD	126.8	6.473	127.7	86.17
#1	-1.292	-4.307	.1655	-.1815
#2	.3147	-4.546	.0389	-12.30
#3	-3.267	-3.994	.9358	-9.788
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928435 5X #35 Operator:
Run Time: 02/12/99 18:26:17
Client: SDG:00001 ClientID:18-02-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1699	53.56	89.01	-.1279	417000.	4.282	-.4672
SDev	.1901	10.47	.36	.0534	5514.	.202	.4505
%RSD	111.9	19.56	.4100	41.76	1.322	4.709	96.43
#1	.2973	65.61	89.18	-.1568	411400.	4.049	-.0443
#2	.2609	48.38	89.26	-.1608	417300.	4.392	-.9410
#3	-.0487	46.68	88.59	-.0663	422400.	4.404	-.4163
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.4	23.39	-3.703	9982.	8753.	1.500	11850.
SDev	1.2	.59	3.657	7.	39.	.047	16.
%RSD	1.188	2.505	98.76	.0732	.4456	3.131	.1357
#1	99.00	23.08	-4.806	9982.	8710.	1.461	11840.
#2	101.1	23.03	-6.681	9989.	8762.	1.486	11840.
#3	101.0	24.07	.3786	9974.	8787.	1.552	11870.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1866	-.3192	11.51	19.20	484.8	80.26	2.198
SDev	.2866	3.2224	.50	.22	5.2	3.06	.682
%RSD	153.6	1009.	4.310	1.123	1.066	3.814	31.02
#1	-.0518	1.699	11.76	19.14	479.1	83.15	2.314
#2	.5045	-4.036	10.94	19.03	485.9	77.06	1.466
#3	.1070	1.379	11.83	19.45	489.2	80.56	2.815
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	17.62	487.9	483.2	2.287	2.141	84.22	78.27
SDev	2.06	8.9	3.4	2.224	.526	1.71	3.92
%RSD	11.68	1.828	.7048	97.25	24.58	2.035	5.003
#1	18.81	477.8	479.8	3.819	1.549	86.20	81.62
#2	15.24	491.3	483.2	-.2641	2.317	83.23	73.96
#3	18.79	494.6	486.6	3.306	2.557	83.24	79.21
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-11.47	-3.032	2.220	6.481
SDev	1.65	.809	.419	6.184
%RSD	14.35	26.68	18.86	95.42
#1	-13.28	-2.732	2.219	1.679
#2	-10.07	-3.948	2.639	13.46
#3	-11.05	-2.416	1.802	4.306
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928436 5X #36 Operator:
Run Time: 02/12/99 18:33:12
Client: SDG:00001 ClientID:19-03-002 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3126	29.80	57.48	-.1730	391600.	3.797	.1885
SDev	.1841	3.13	.17	.1601	2294.	.129	.1109
%RSD	58.90	10.50	.3021	92.55	.5859	3.389	58.80
#1	-.1760	32.99	57.47	.0042	393700.	3.942	.0686
#2	-.5220	26.73	57.32	-.2158	391800.	3.754	.2872
#3	-.2398	29.66	57.66	-.3073	389200.	3.695	.2098
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	160.1	17.80	-.7375	8119.	6553.	.2048	11260.
SDev	1.0	.21	1.7386	20.	4.	.0261	57.
%RSD	.6014	1.175	235.7	.2465	.0540	12.74	.5086
#1	161.1	17.59	-1.721	8140.	6555.	.1900	11260.
#2	159.8	18.01	1.270	8114.	6554.	.1895	11200.
#3	159.3	17.80	-1.761	8101.	6549.	.2349	11320.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6906	-2.104	12.70	8.997	5.759	70.18	2.575
SDev	.7538	.818	.43	.235	.248	1.85	.540
%RSD	109.2	38.87	3.363	2.608	4.310	2.632	20.95
#1	.1747	-1.482	12.30	9.252	6.041	71.92	1.958
#2	-1.042	-1.799	12.65	8.949	5.664	68.24	2.955
#3	-1.205	-3.030	13.15	8.790	5.572	70.38	2.814
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.09	2.054	7.595	5.465	1.120	66.18	72.17
SDev	.64	2.518	.920	1.703	.536	4.40	1.09
%RSD	5.752	122.6	12.11	31.17	47.88	6.654	1.512
#1	11.39	4.916	6.588	4.077	.8867	68.95	73.40
#2	11.52	.1784	8.390	7.365	.7396	61.10	71.80
#3	10.36	1.067	7.808	4.952	1.733	68.49	71.31
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-8.754	-2.261	2.841	-7.832
SDev	2.664	4.110	.369	16.796
%RSD	30.43	181.8	12.98	214.5
#1	-11.32	1.773	2.728	10.98
#2	-8.947	-6.443	3.254	-21.32
#3	-5.999	-2.114	2.543	-13.15
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 18:40:06
Comment: CCV CVS1
Type: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	97.83	2019.	1013.	1013.	50170.	1001.	1019.
SDev	.92	4.	7.	3.	173.	4.	3.
%RSD	.9423	.2024	.6720	.3392	.3457	.3539	.2507
#1	96.82	2014.	1018.	1009.	49980.	997.4	1016.
#2	98.06	2021.	1015.	1014.	50210.	1002.	1020.
#3	98.62	2022.	1005.	1016.	50320.	1004.	1020.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1023.	1012.	2034.	49750.	51650.	1018.	50210.
SDev	3.	5.	8.	175.	75.	4.	196.
%RSD	.3021	.4867	.3875	.3520	.1453	.3900	.3898
#1	1020.	1007.	2025.	49920.	51620.	1014.	50320.
#2	1025.	1013.	2037.	49740.	51730.	1019.	50320.
#3	1026.	1016.	2040.	49570.	51590.	1022.	49980.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1019.	1070.	1048.	1027.	1021.	1058.	1076.
SDev	2.	5.	2.	2.	5.	2.	4.
%RSD	.1981	.4624	.1887	.2194	.5306	.2016	.3456
#1	1017.	1065.	1046.	1025.	1016.	1056.	1075.
#2	1020.	1075.	1050.	1029.	1022.	1059.	1080.
#3	1021.	1070.	1047.	1027.	1026.	1060.	1073.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1034.	1024.	1020.	1093.	1067.	1035.	1070.
SDev	.	11.	3.	4.	4.	11.	4.
%RSD	.0476	1.073	.2614	.3812	.3619	1.067	.3772
#1	1034.	1013.	1017.	1094.	1065.	1027.	1070.
#2	1034.	1024.	1020.	1096.	1071.	1029.	1074.
#3	1035.	1035.	1022.	1088.	1065.	1047.	1066.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1033.	1088.	1033.	1069.
SDev	3.	6.	4.	14.
%RSD	.2498	.5540	.3588	1.324
#1	1030.	1091.	1030.	1085.
#2	1034.	1092.	1037.	1062.
#3	1035.	1081.	1033.	1060.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000334

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/12/99 18:47:06
Comment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2003	3.058	.2722	.1571	-33.24	.0688	.4720
SDev	.2494	4.511	.2141	.1914	10.25	.1711	.1851
%RSD	124.5	147.5	78.67	121.8	30.84	248.5	39.22
#1	.0698	8.262	.5137	.3635	-22.06	.2628	.3487
#2	-.2489	.2586	.1973	.1225	-35.46	.0043	.6848
#3	-.4219	.6535	.1056	-.0146	-42.20	-.0606	.3824
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0595	.0568	2.775	14.11	17.82	.3236	268.8
SDev	1.128	.0698	7.379	15.00	.99	.0418	76.7
%RSD	1894.	122.9	265.9	106.3	5.574	12.91	28.55
#1	1.230	.0516	-5.676	31.25	17.07	.3718	331.4
#2	-.0303	.1291	7.939	7.717	18.94	.2981	183.2
#3	-1.021	-.0102	6.062	3.367	17.44	.3009	291.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8932	1.492	.6286	-4.149	-.1547	1.600	1.290
SDev	.9234	2.537	.3760	.110	.9898	.381	.510
%RSD	103.4	170.1	59.82	2.642	639.8	23.79	39.53
#1	.1540	4.402	.1997	-4.052	-.0257	1.228	.9142
#2	-1.243	.3309	.9020	-4.127	.7643	1.584	1.085
#3	-1.591	-.2573	.7840	-4.268	-1.203	1.988	1.870
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6868	-1.890	.6992	3.523	.1624	.1487	2.312
SDev	.8903	1.976	.8217	2.689	.6407	4.294	2.714
%RSD	129.6	104.5	117.5	76.34	394.5	2887.	117.4
#1	-1.165	-.4905	.1939	.9700	.8738	4.409	-.3729
#2	.3404	-1.030	1.647	3.268	-.0173	.2154	2.254
#3	-1.235	-4.151	.2563	6.331	-.3692	-4.178	5.054
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.341	-2.282	.8672	-4.996
SDev	2.372	1.726	1.055	18.550
%RSD	101.4	75.61	121.6	371.3
#1	4.281	-.5426	1.695	16.32
#2	-.3042	-3.994	1.227	-13.80
#3	3.045	-2.311	-.3200	-17.51
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 928438 5X #39 Operator:
Run Time: 02/12/99 18:54:00
Document: SDG:00001 ClientID:20-04-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0545	31.82	140.8	-.1556	416500.	4.086	-.1693
SDev	.2858	3.51	.4	.0344	3884.	.132	.3184
%RSD	524.0	11.04	.3012	22.09	.9326	3.238	188.1
#1	-.2672	35.88	140.3	-.1313	412400.	4.224	.0728
#2	.1517	29.73	140.9	-.1949	416900.	4.074	-.0507
#3	.2791	29.85	141.2	-.1406	420100.	3.960	-.5299
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	145.9	2.096	13.16	7643.	1175.	1.184	11560.
SDev	1.1	.102	6.96	25.	5.	.025	32.
%RSD	.7805	4.844	52.93	.3289	.4341	2.119	.2792
#1	144.6	2.004	5.196	7618.	1170.	1.201	11530.
#2	146.1	2.205	18.12	7642.	1177.	1.195	11550.
#3	146.9	2.081	16.16	7668.	1179.	1.155	11590.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.244	-1.453	9.842	5.522	1.378	62.19	.9953
SDev	.636	.483	.183	.094	.698	2.69	.6721
%RSD	28.33	33.23	1.862	1.698	50.65	4.326	67.52
#1	2.740	-1.297	9.826	5.449	1.950	59.10	.6463
#2	1.527	-1.994	10.03	5.489	1.582	64.02	1.770
#3	2.466	-1.067	9.668	5.627	.6004	63.46	.5696
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.738	1.591	1.258	2.772	.0953	65.78	60.39
SDev	1.895	1.437	1.712	2.501	.6591	2.30	3.89
%RSD	24.49	90.32	136.1	90.21	691.3	3.492	6.442
#1	6.433	1.107	2.358	3.025	-.5540	64.81	56.24
#2	9.912	.4589	2.130	5.137	.0762	64.12	63.95
#3	6.869	3.208	-.7144	.1547	.7639	68.40	60.98
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-8.143	-3.813	2.761	1.485
SDev	1.574	2.640	1.014	5.245
%RSD	19.33	69.23	36.74	353.3
#1	-7.619	-1.040	3.431	6.164
#2	-6.898	-4.103	1.594	-4.185
#3	-9.912	-6.296	3.259	2.475
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

M^thod: CLP3I Sample Name: 928439 5X #40 Operator:
) Time: 02/12/99 19:00:55
C ent: SDG:00001 ClientID:21-05-002 1:1
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1062	25.95	106.5	-.0398	422400.	3.924	-.0052
SDev	.1188	7.65	.3	.1244	3704.	.240	.3217
%RSD	111.8	29.47	.3000	312.7	.8769	6.128	6242.
#1	-.0122	34.78	106.2	.0825	418100.	3.699	-.3318
#2	-.2398	21.65	106.4	-.0356	424600.	4.178	.0049
#3	-.0668	21.42	106.8	-.1663	424400.	3.896	.3114
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	125.3	21.91	3.153	9972.	3592.	.3409	11360.
SDev	.5	.38	15.78	14.	24.	.0831	169.
%RSD	.3634	1.735	500.6	.1399	.6746	24.36	1.492
#1	124.9	21.50	-12.60	9982.	3567.	.2758	11210.
#2	125.3	22.01	3.101	9956.	3593.	.3125	11310.
#3	125.8	22.24	18.96	9979.	3615.	.4345	11540.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
nits	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
vge	.3276	-1.751	14.90	14.84	6.808	52.77	1.962
v	.8154	.950	.78	.23	.594	1.86	.713
D	248.9	54.25	5.202	1.579	8.728	3.523	36.31
#1	.7299	-2.179	14.20	14.59	6.337	51.30	1.144
#2	.8638	-.6623	14.76	15.06	7.476	52.15	2.444
#3	-.6107	-2.411	15.73	14.87	6.612	54.86	2.299
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.731	6.576	6.910	4.885	.4903	56.54	50.87
SDev	.412	5.081	2.593	3.390	1.029	4.42	4.73
%RSD	4.722	77.27	37.53	69.39	209.9	7.820	9.304
#1	9.024	10.36	4.312	1.481	.9631	57.05	48.41
#2	8.909	8.563	6.919	4.915	1.198	60.69	47.87
#3	8.259	.8016	9.499	8.260	-.6902	51.89	56.33
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-9.058	-2.690	2.810	-.9018
SDev	2.549	2.221	1.151	9.1969
%RSD	28.15	82.56	40.95	1020.
#1	-6.975	-.7928	1.876	7.479
2	-8.297	-2.144	4.095	.5561
	-11.90	-5.133	2.457	-10.74
ors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928440 5X #41 Operator:
Run Time: 02/12/99 19:07:49
Comment: SDG:00001 ClientID:22-06-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1427	76.57	118.8	-.2148	394200.	3.918	-.2105
SDev	.1958	4.06	.4	.0559	852.	.160	.1777
%RSD	137.1	5.302	.3441	26.02	.2161	4.084	84.43
#1	-.1397	80.31	119.2	-.1903	394500.	4.061	-.3584
#2	-.3400	72.25	118.6	-.2788	393200.	3.745	-.2598
#3	.0515	77.16	118.5	-.1754	394800.	3.947	-.0133
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	118.5	19.00	32.08	8407.	6148.	1.380	11150.
SDev	.6	.06	3.38	40.	13.	.040	42.
%RSD	.4957	.3293	10.53	.4715	.2142	2.905	.3785
#1	119.0	18.94	28.36	8448.	6161.	1.394	11180.
#2	117.9	18.99	34.96	8369.	6135.	1.335	11100.
#3	118.8	19.07	32.92	8404.	6147.	1.412	11170.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4090	.4078	12.71	18.59	598.7	63.57	1.914
SDev	.7948	2.539	.08	.15	2.9	3.32	1.514
%RSD	194.3	622.7	.6564	.7833	.4863	5.219	79.10
#1	-.0238	.3707	12.77	18.50	598.4	66.35	3.416
#2	-.0755	2.965	12.75	18.76	595.9	64.45	1.938
#3	1.326	-2.113	12.62	18.51	601.7	59.90	.3883
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.05	602.3	596.9	2.403	1.657	67.28	61.70
SDev	.97	2.0	3.6	1.919	1.312	4.32	3.19
%RSD	6.914	.3255	.6097	79.88	79.17	6.414	5.168
#1	13.93	603.5	595.8	4.286	2.969	69.01	65.01
#2	13.14	600.0	593.8	2.474	1.657	70.46	61.44
#3	15.07	603.3	600.9	.4489	.3452	62.36	58.65
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-8.544	-.9857	3.251	-4.148
SDev	1.781	3.2153	.558	3.585
%RSD	20.84	326.2	17.17	86.43
#1	-6.488	2.265	3.653	-.0105
#2	-9.579	-1.059	3.486	-6.103
#3	-9.564	-4.164	2.614	-6.331
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928442 5X #42 Operator:
Run Time: 02/12/99 19:14:43
Segment: SDG:00001 ClientID:23-07-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2306	25.74	115.6	.0010	426400.	4.112	-.0900
SDev	.1799	11.05	.2	.0527	4382.	.096	.2875
%RSD	77.99	42.92	.1831	5303.	1.028	2.345	319.3
#1	.1973	37.74	115.9	.0540	421500.	4.178	-.4192
#2	.4249	23.49	115.5	.0004	427700.	4.001	.0368
#3	.0698	16.00	115.5	-.0514	430000.	4.156	.1123
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	106.8	13.41	5.494	8062.	439.8	.2754	12140.
SDev	.8	.41	4.340	22.	3.1	.0579	108.
%RSD	.7258	3.075	79.00	.2774	.7042	21.03	.8906
#1	106.3	13.06	1.006	8085.	436.6	.2126	12030.
#2	106.4	13.31	5.806	8058.	440.1	.3267	12240.
#3	107.7	13.86	9.669	8041.	442.7	.2871	12160.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2462	-3.730	8.065	3.397	17.49	50.10	1.207
SDev	.2317	2.654	.289	.184	.47	1.32	.585
%RSD	94.11	71.14	3.587	5.419	2.714	2.636	48.48
#1	-.0553	-5.008	7.739	3.445	17.20	50.27	.8831
#2	-.1793	-.6793	8.292	3.552	18.04	48.71	1.883
#3	-.5040	-5.504	8.163	3.193	17.23	51.33	.8561
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.742	17.45	17.50	-.3901	1.992	52.35	48.97
SDev	1.628	3.02	1.58	2.3253	.642	1.63	1.18
%RSD	18.62	17.31	9.008	596.1	32.24	3.117	2.406
#1	9.098	20.12	15.73	-2.758	2.688	52.31	49.25
#2	6.966	18.07	18.01	1.890	1.867	50.74	47.68
#3	10.16	14.17	18.75	-.3027	1.422	54.01	49.98
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-10.55	.2922	3.352	4.885
SDev	.18	1.490	.411	7.547
%RSD	1.700	510.1	12.25	154.5
#1	-10.44	1.436	3.001	13.01
#2	-10.75	.8339	3.251	3.539
#3	-10.45	-1.393	3.803	-1.898
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928443 5X #43 Operator:
Run Time: 02/12/99 19:21:37
Comment: SDG:00001 ClientID:24-08-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2125	24.02	72.37	-.2386	412600.	4.015	.1094
SDev	.2706	3.59	.09	.0540	924.	.080	.1486
%RSD	127.3	14.94	.1286	22.63	.2240	1.985	135.8
#1	-.0941	27.98	72.38	-.1811	413500.	3.931	.1618
#2	-.5220	20.99	72.27	-.2882	411600.	4.089	-.0582
#3	-.0213	23.08	72.46	-.2464	412700.	4.026	.2247
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	137.3	10.33	-4.208	9625.	3592.	.1819	13560.
SDev	.4	.22	4.218	15.	5.	.0247	89.
%RSD	.3196	2.101	100.3	.1525	.1258	13.57	.6550
#1	137.7	10.09	-.8373	9636.	3593.	.2104	13620.
#2	136.8	10.40	-2.848	9609.	3587.	.1677	13600.
#3	137.5	10.50	-8.938	9632.	3595.	.1676	13460.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7263	-2.986	11.84	4.158	2.439	60.32	1.935
SDev	.2950	1.314	.21	.085	.625	2.39	.751
%RSD	40.62	44.02	1.808	2.042	25.61	3.967	38.82
#1	-.5988	-4.456	11.61	4.071	2.606	62.96	2.383
#2	-1.064	-2.579	12.03	4.241	2.963	58.30	1.068
#3	-.5164	-1.923	11.90	4.162	1.748	59.70	2.354
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.506	1.035	3.126	3.139	1.321	61.63	59.66
SDev	1.533	1.461	1.658	1.617	1.477	3.87	2.20
%RSD	18.02	141.1	53.04	51.51	111.8	6.284	3.688
#1	6.906	.9651	3.412	1.418	2.852	65.95	61.46
#2	8.650	-.3895	4.623	3.373	-.0960	60.46	57.21
#3	9.962	2.530	1.344	4.627	1.207	58.47	60.31
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-11.37	-2.751	2.624	-4.421
SDev	2.65	2.205	.562	2.517
%RSD	23.32	80.14	21.41	56.92
#1	-14.43	-2.865	2.716	-1.969
#2	-9.651	-4.897	2.022	-6.997
#3	-10.04	-.4918	3.134	-4.297
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928445 5X #44 Operator:
n Time: 02/12/99 19:28:31
ment: SDG:00001 ClientID:25-09-002 1:1
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1669	31.81	79.93	.0299	404300.	4.115	-.1740
SDev	.2049	9.82	.30	.0556	6104.	.071	.1712
%RSD	122.8	30.87	.3708	185.6	1.510	1.732	98.43
#1	.2518	42.82	79.85	.0938	398400.	4.076	-.2658
#2	.3155	28.67	79.68	-.0075	404000.	4.197	-.2797
#3	-.0668	23.94	80.26	.0035	410600.	4.071	.0236
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	128.5	64.99	1.244	7991.	1169.	1.034	10830.
SDev	1.4	.54	8.556	25.	10.	.290	98.
%RSD	1.087	.8268	687.8	.3159	.8549	28.08	.9025
#1	126.9	64.49	-2.684	8004.	1161.	.8659	10780.
#2	128.8	64.92	-4.643	7962.	1165.	1.369	10770.
#3	129.7	65.56	11.06	8007.	1180.	.8670	10940.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0488	-1.868	8.010	29.94	15.85	53.94	2.117
SDev	.4385	.672	.245	.33	.35	4.46	.380
%RSD	899.5	35.97	3.064	1.118	2.188	8.277	17.96
#1	.5327	-2.449	7.776	29.56	15.49	48.85	2.550
#2	-.3223	-2.023	7.990	30.19	15.87	57.20	1.841
#3	-.0642	-1.132	8.265	30.07	16.19	55.77	1.959
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.312	17.27	15.13	1.304	2.510	56.49	52.66
SDev	.516	1.52	1.12	.874	.786	8.29	2.59
%RSD	11.97	8.816	7.437	66.98	31.33	14.68	4.909
#1	4.425	18.78	13.84	.9440	3.340	46.94	49.79
#2	3.749	15.74	15.91	.6684	2.414	61.95	54.81
#3	4.763	17.28	15.63	2.300	1.776	60.56	53.37
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-9.292	-.4119	2.660	13.10
SDev	5.432	2.8094	.248	8.92
%RSD	58.46	682.0	9.310	68.11
#1	-15.51	1.916	2.891	22.95
#2	-5.484	.3813	2.398	10.80
#3	-6.879	-3.533	2.692	5.552
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000341

Method: CLP3I Sample Name: 928447 5X #45 Operator:
Run Time: 02/12/99 19:35:25
Comment: SDG:00001 ClientID:26-10-002 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0273	27.64	85.35	-.2176	396600.	3.805	.3305
SDev	.1660	4.20	.76	.0629	2466.	.195	.1091
%RSD	608.6	15.19	.8853	28.89	.6218	5.121	33.02
#1	-.1214	32.39	84.54	-.1463	394000.	3.640	.2059
#2	.2063	24.44	85.49	-.2652	396900.	3.755	.3765
#3	-.0031	26.08	86.03	-.2411	398900.	4.020	.4091
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	143.2	12.54	12.36	7989.	1648.	.5556	11590.
SDev	1.0	.26	.95	68.	12.	.0425	99.
%RSD	.6653	2.104	7.714	.8526	.7336	7.643	.8540
#1	142.2	12.27	12.30	7925.	1636.	.5519	11570.
#2	143.2	12.79	13.34	7983.	1648.	.5151	11510.
#3	144.1	12.56	11.44	8060.	1660.	.5998	11700.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7383	-.0517	9.022	5.719	36.82	49.15	1.963
SDev	.3683	1.7296	.386	.092	1.27	.97	.280
%RSD	49.88	3344.	4.283	1.605	3.446	1.977	14.27
#1	-.5486	-.4902	8.577	5.814	38.03	50.04	1.885
#2	-1.163	-1.520	9.214	5.712	35.50	48.11	1.729
#3	-.5035	1.855	9.274	5.631	36.93	49.31	2.273
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.409	34.69	37.88	6.135	-.1332	49.38	49.02
SDev	2.058	2.10	1.27	1.412	1.0673	4.45	.92
%RSD	32.11	6.046	3.361	23.02	801.2	9.013	1.875
#1	8.246	35.39	39.34	5.462	.0872	52.39	48.85
#2	6.795	32.33	37.08	7.757	-1.293	44.27	50.02
#3	4.185	36.34	37.21	5.185	.8066	51.49	48.20
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-7.288	-.5824	2.439	-3.090
SDev	1.022	2.3802	.441	6.821
%RSD	14.02	408.7	18.09	220.7
#1	-8.241	-3.261	1.940	-9.945
#2	-7.413	.2221	2.600	-3.021
#3	-6.209	1.291	2.778	3.696
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928449 5X #46 Operator:
n Time: 02/12/99 19:42:19
ment: SDG:00001 ClientID:28-11-002 1:1
M: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0971	20.23	87.02	.0318	417500.	4.187	-.0576
SDev	.1276	7.08	1.01	.0154	1968.	.154	.3266
%RSD	131.3	34.98	1.155	48.32	.4714	3.687	566.5
#1	-.2216	27.44	88.18	.0338	416800.	4.107	-.4308
#2	-.1032	19.95	86.39	.0461	416000.	4.088	.1756
#3	.0334	13.30	86.49	.0156	419700.	4.365	.0823
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	132.3	6.364	-5.168	6865.	957.6	.1481	11770.
SDev	.6	.232	1.516	101.	2.8	.0209	126.
%RSD	.4260	3.652	29.34	1.467	.2952	14.09	1.067
#1	132.7	6.137	-4.850	6981.	960.5	.1395	11910.
#2	131.7	6.354	-3.836	6813.	954.8	.1329	11740.
#3	132.7	6.602	-6.817	6801.	957.5	.1719	11660.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3728	-.7941	6.835	1.310	3.025	60.73	.8720
SDev	.2293	2.2686	.358	.224	1.420	1.81	.1357
%RSD	61.52	285.7	5.232	17.08	46.93	2.983	15.56
#1	.4930	-3.282	6.486	1.077	2.544	58.98	.9093
#2	.1083	-.2599	7.201	1.328	1.908	62.60	.9852
#3	.5170	1.160	6.818	1.524	4.623	60.61	.7216
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.520	4.812	2.120	.4800	1.055	61.91	60.13
SDev	1.505	.453	2.171	1.924	1.010	4.65	1.98
%RSD	23.08	9.408	102.4	401.0	95.75	7.516	3.294
#1	4.805	5.328	1.140	2.542	.0809	60.85	58.03
#2	7.134	4.481	.6112	-1.268	2.097	67.00	60.38
#3	7.620	4.628	4.607	.1659	.9861	57.88	61.97
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-11.40	-1.714	2.674	10.20
SDev	3.03	1.329	.256	3.09
%RSD	26.59	77.52	9.569	30.27
#1	-8.027	-2.798	2.933	10.38
#2	-12.28	-2.113	2.421	13.19
#3	-13.90	-.2317	2.669	7.023
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000343

Method: CLP3I Sample Name: 928457 #47 Operator:
n Time: 02/12/99 19:49:13
ment: SDG:00001 ClientID:LEACH BLANK 1:1
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0971	6.571	.8338	-.1372	252.2	-.4219	.4969
SDev	.2472	5.714	.0325	.1169	27.2	.1234	.0128
%RSD	254.5	86.96	3.897	85.24	10.78	29.26	2.583
#1	.1882	13.16	.8705	-.0024	282.8	-.2854	.5062
#2	-.2307	3.529	.8089	-.1968	243.2	-.4545	.5021
#3	-.2489	3.021	.8219	-.2122	230.7	-.5257	.4822
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0884	1.997	21.52	4.795	17.55	.2515	455.1
SDev	.2575	.344	3.51	12.49	.60	.0361	29.8
%RSD	291.3	17.20	16.31	260.6	3.430	14.35	6.549
#1	.1050	2.095	25.57	19.21	17.68	.2450	479.2
#2	-.3807	2.281	19.66	-2.912	18.08	.2191	421.8
#3	.0106	1.615	19.33	-1.913	16.90	.2904	464.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.829	-7.172	.3982	.5387	2.936	14.27	1.221
SDev	.668	.761	.0608	.0978	.667	1.06	.333
%RSD	36.51	10.62	15.26	18.15	22.72	7.454	27.29
#1	-1.153	-6.318	.3281	.4310	3.667	13.33	1.597
#2	-2.489	-7.781	.4306	.6218	2.783	15.42	1.100
#3	-1.847	-7.416	.4359	.5633	2.359	14.05	.9650
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2634	1.018	3.881	4.312	-.3352	25.67	8.562
SDev	1.461	.979	.682	1.264	.9851	5.73	4.024
%RSD	554.5	96.19	17.56	29.31	293.9	22.30	47.00
#1	.0970	2.087	4.443	3.328	.7213	32.12	3.936
#2	1.800	.1631	4.078	5.738	-1.229	23.74	11.26
#3	-1.107	.8048	3.123	3.871	-.4982	21.17	10.49
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-21.04	-2.503	-1.646	-14.74
SDev	2.18	1.944	.667	5.71
%RSD	10.36	77.68	40.51	38.75
#1	-18.77	-.2583	-1.896	-9.456
#2	L-21.23	-3.661	-2.153	-20.80
#3	L-23.12	-3.589	-.8907	-13.95
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS928430 #48 Operator:
Run Time: 02/12/99 19:56:07
Segment: SDG:00001 ClientID:17-01-002A 1:1 **2294**
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0061	11.87	-.0021	.0142	-54.06	.7039	-.1485
SDev	.1367	1.72	.0478	.0317	7.94	.1247	.3082
%RSD	2253.	14.52	2244.	222.5	14.69	17.72	207.6
#1	-.1396	10.07	-.0411	-.0070	-44.90	.6001	-.2029
#2	-.0121	12.04	-.0164	-.0009	-58.32	.6693	.1834
#3	.1335	13.50	.0512	.0507	-58.95	.8422	-.4258
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1467	-.3200	-15.98	-4.385	-3.656	-.0564	-1715.
SDev	.4610	.1267	2.25	13.871	.621	.0350	62.
%RSD	314.2	39.61	14.07	316.3	16.99	62.07	3.629
#1	-.1423	-.2890	-13.72	-1.186	-3.491	-.0552	-1780.
#2	-.0958	-.2116	-18.22	7.607	-3.134	-.0920	-1657.
#3	.6783	-.4593	-15.99	-19.58	-4.343	-.0220	-1707.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8588	6.051	-.0935	-3.377	L-2.558	-.5154	-.0075
SDev	.3448	2.020	.2258	.166	1.238	.4754	.3712
%RSD	40.15	33.38	241.4	4.917	48.40	92.24	4926.
#1	.5241	6.677	-.3275	-3.441	L-2.266	-.3737	-.4322
#2	.8394	3.792	.1230	-3.501	-1.492	-.1269	.2548
#3	1.213	7.683	-.0762	-3.188	L-3.916	-1.045	.1548
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.858	-8.048	.1709	-.3313	.1423	11.36	-6.456
SDev	.807	.184	1.877	1.2468	.5662	1.86	1.315
%RSD	28.25	2.286	1098.	376.4	397.7	16.37	20.37
#1	3.590	-7.854	.5121	-.9444	-.1884	13.21	-7.165
#2	1.992	-8.219	1.854	1.103	-.1806	9.487	-4.938
#3	2.991	-8.072	-1.853	-1.153	.7961	11.39	-7.264
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.008	.0271	.2729	-.5479
SDev	2.895	1.891	.1725	3.3733
%RSD	144.2	6976.	63.18	615.7
#1	.8933	-2.154	.0948	-3.034
#2	5.294	1.215	.2849	-1.901
#3	-.1642	1.021	.4391	3.292
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/12/99 20:03:02
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.7	2025.	1084.	1035.	51570.	1026.	1041.
SDev	.4	7.	3.	3.	220.	5.	4.
%RSD	.4260	.3286	.3134	.2762	.4270	.4408	.3772
#1	100.7	2027.	1083.	1033.	51360.	1024.	1037.
#2	101.2	2031.	1081.	1038.	51800.	1031.	1045.
#3	100.4	2018.	1088.	1034.	51540.	1022.	1040.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1042.	1023.	2068.	48910.	51850.	1041.	49920.
SDev	2.	2.	21.	69.	139.	2.	317.
%RSD	.2161	.1945	.9973	.1413	.2681	.2233	.6342
#1	1040.	1021.	2044.	48950.	51690.	1039.	49610.
#2	1044.	1025.	2084.	48830.	51940.	1044.	49920.
#3	1042.	1023.	2075.	48940.	51910.	1041.	50240.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1032.	1078.	1055.	1043.	1051.	1061.	1068.
SDev	3.	7.	3.	3.	3.	4.	6.
%RSD	.2929	.6633	.2748	.2703	.3056	.3871	.5828
#1	1032.	1073.	1052.	1040.	1048.	1057.	1061.
#2	1035.	1086.	1056.	1044.	1055.	1060.	1070.
#3	1029.	1075.	1057.	1045.	1051.	1065.	1073.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1047.	1057.	1048.	1083.	1061.	1051.	1066.
SDev	3.	3.	5.	17.	1.	3.	5.
%RSD	.2477	.2716	.5244	1.556	.1014	.2428	.4866
#1	1046.	1060.	1043.	1065.	1060.	1050.	1061.
#2	1050.	1057.	1054.	1086.	1062.	1049.	1066.
#3	1045.	1054.	1049.	1098.	1061.	1054.	1071.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1058.	1073.	1047.	1050.
SDev	2.	4.	2.	25.
%RSD	.1548	.3434	.2332	2.407
#1	1057.	1077.	1044.	1079.
#2	1057.	1070.	1049.	1040.
#3	1060.	1071.	1048.	1031.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

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Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/12/99 20:09:56
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0395	.8070	.2576	.2078	-54.64	.1312	.0738
SDev	.5275	4.432	.1176	.0228	4.45	.1416	.0247
%RSD	1336.	549.2	45.66	10.96	8.150	107.9	33.51
#1	.5341	-2.216	.3908	.2288	-49.50	-.0303	.0467
#2	-.1487	-1.258	.2136	.1836	-57.06	.1905	.0794
#3	-.5038	5.895	.1682	.2109	-57.35	.2336	.0952
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1646	-.0568	-3.125	2.134	12.15	.2657	207.2
SDev	.2908	.2605	6.594	5.948	.72	.0592	60.2
%RSD	176.6	458.6	211.0	278.7	5.903	22.28	29.06
#1	.4926	-.3510	-10.56	8.975	12.33	.2598	275.9
#2	.0627	.1445	-.8192	-1.818	12.75	.3275	163.4
#3	-.0615	.0361	2.006	-.7545	11.36	.2096	182.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3500	.6995	.0872	-4.132	.1404	3.596	.4469
SDev	.4483	.6076	.2078	.038	.2641	1.282	.4124
%RSD	128.1	86.85	238.3	.9144	188.1	35.65	92.28
#1	.1424	-.0007	-.0411	-4.126	-.0056	3.965	.4177
#2	-.7348	1.013	-.0242	-4.173	.4452	2.170	.0499
#3	-.4575	1.086	.3269	-4.098	-.0185	4.654	.8731
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2428	.1335	.1314	1.475	-.0787	3.011	3.876
SDev	.1537	1.255	.8459	1.915	.3904	1.605	1.182
%RSD	63.29	939.6	643.8	129.9	496.2	53.32	30.49
#1	-.0670	1.564	-.8020	.7864	.2211	3.988	3.941
#2	-.3512	-.3853	.8474	-.0013	.0630	1.158	2.664
#3	-.3102	-.7785	.3487	3.639	-.5201	3.886	5.024
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.175	-1.781	.2276	-1.257
SDev	1.006	1.722	.0609	9.531
%RSD	85.59	96.69	26.74	758.3
#1	1.995	-1.543	.1665	9.581
#2	.0530	-.1903	.2281	-5.022
#3	1.477	-3.610	.2882	-8.330
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Analysis Report QC Standard 02/12/99 08:23:42 PM page 1

Method: CLP3I Sample Name: CRI Operator:
Run Time: 02/12/99 20:16:51
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.64	22.66	.1007	10.49	-59.57	10.50	104.3
SDev	.19	10.82	.1238	.10	4.03	.30	.3
%RSD	.9905	47.74	122.9	.9099	6.770	2.861	.2966
#1	19.72	34.48	.2436	10.60	-57.08	10.84	104.0
#2	19.78	20.28	.0270	10.47	-64.22	10.28	104.7
#3	19.42	13.24	.0315	10.41	-57.40	10.38	104.3
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.07	50.61	2.313	16.34	6.251	31.72	309.0
SDev	.42	.45	5.723	14.17	.217	.06	101.3
%RSD	1.970	.8959	247.4	86.76	3.479	.1976	32.80
#1	21.45	50.19	-2.619	32.22	6.224	31.73	425.9
#2	20.63	50.53	.9698	4.989	6.049	31.65	255.9
#3	21.14	51.09	8.588	11.80	6.481	31.78	245.2
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	83.42	19.38	106.6	34.58	5.600	10.60	126.2
SDev	.54	.73	.4	.10	1.275	.38	1.0
%RSD	.6487	3.770	.3679	.2794	22.77	3.628	.7884
#1	83.80	18.98	106.7	34.67	4.285	10.54	125.1
#2	83.65	18.94	106.1	34.48	5.682	11.02	127.0
#3	82.80	20.22	106.9	34.58	6.832	10.26	126.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.83	4.657	6.056	126.7	126.0	9.875	10.96
SDev	.30	1.987	2.895	1.5	.8	1.411	.81
%RSD	1.416	42.67	47.81	1.150	.6475	14.29	7.400
#1	20.70	6.494	3.167	125.0	125.1	11.40	10.10
#2	20.63	4.930	6.043	127.5	126.8	9.617	11.71
#3	21.17	2.548	8.957	127.6	126.0	8.611	11.07
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	42.14	41.23	21.16	69.84
SDev	4.26	2.01	.56	16.66
%RSD	10.11	4.886	2.646	23.86
#1	37.22	41.51	21.78	88.86
#2	44.49	43.09	21.01	62.83
#3	44.70	39.09	20.69	57.83
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

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Method: CLP3I Sample Name: ICSA Operator:
Analysis Time: 02/12/99 20:23:45
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0364	541600.	1.313	-.0850	539800.	-.8165	-.3354
SDev	.2894	2571.	.059	.0321	2120.	.3516	.1790
%RSD	794.5	.4747	4.491	37.74	.3927	43.06	53.38
#1	.3612	538700.	1.380	-.0849	542100.	-.4137	-.1290
#2	-.1942	542500.	1.271	-.1172	539100.	-.9733	-.4483
#3	-.0577	543600.	1.287	-.0530	538100.	-1.062	-.4288
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6024	3.345	209900.	-.3252	561700.	-.0768	344.1
SDev	.7073	.141	560.	8.7995	1530.	.0776	59.4
%RSD	117.4	4.201	.2669	2706.	.2723	101.0	17.27
#1	.1751	3.195	210500.	9.367	563400.	-.1083	407.3
#2	-1.208	3.365	209600.	-2.529	561200.	.0116	289.4
#3	-.7746	3.474	209500.	-7.813	560500.	-.1337	335.5
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5955	-10.99	4.147	-2.910	-2.019	-6.073	2.270
SDev	.3447	2.95	.560	.206	1.043	3.614	1.747
%RSD	57.89	26.80	13.49	7.079	51.64	59.51	76.96
#1	.8232	-11.70	4.228	-2.784	-1.828	-2.222	3.926
#2	.1989	-13.52	3.551	-2.797	-1.085	-6.607	2.439
#3	.7644	-7.758	4.661	-3.147	-3.144	-9.391	.4447
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.315	18.06	-12.06	-4.315	5.544	-9.800	-4.226
SDev	1.812	4.52	2.25	2.542	2.990	7.928	2.828
%RSD	137.8	25.02	18.63	58.90	53.93	80.90	66.92
#1	-2.946	23.18	-14.33	-6.157	8.946	-.7276	-2.982
#2	-1.636	16.41	-9.836	-1.415	4.349	-15.39	-2.233
#3	.6365	14.60	-12.02	-5.373	3.336	-13.28	-7.463
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-4.253	5.523	-1.244	-6.196
SDev	3.592	2.648	.417	37.819
%RSD	84.47	47.95	33.50	610.4
#1	-2.868	8.097	-.7630	37.47
#2	-1.559	2.806	-1.498	-27.73
#3	-8.332	5.665	-1.472	-28.33
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: ICSAB Operator:
n Time: 02/12/99 20:30:39
ment:
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	202.0	539800.	580.4	515.8	544000.	1008.	525.2
SDev	.8	1544.	.5	3.4	5243.	6.	3.8
%RSD	.3763	.2861	.0898	.6495	.9638	.5784	.7308
#1	201.2	538000.	580.8	512.1	538100.	1001.	520.8
#2	202.0	540500.	580.6	516.9	545900.	1008.	526.6
#3	202.7	540800.	579.8	518.5	548100.	1013.	528.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	520.8	529.2	211600.	12.07	564900.	528.4	194.1
SDev	2.6	1.0	1219.	17.04	3730.	3.9	122.0
%RSD	.4916	.1859	.5762	141.3	.6602	.7289	62.87
#1	518.2	528.5	210200.	31.19	560700.	524.1	314.6
#2	520.8	528.8	212000.	6.524	566100.	529.6	197.0
#3	523.3	530.4	212500.	-1.519	567900.	531.5	70.62
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1039.	100.1	534.7	1072.	49.45	48.64	661.0
SDev	4.	1.0	3.2	7.	1.79	2.00	.7
%RSD	.3617	.9737	.5924	.6425	3.628	4.108	.1110
#1	1035.	101.2	531.1	1065.	47.38	50.69	661.6
#2	1043.	99.71	535.9	1074.	50.62	48.51	661.2
#3	1039.	99.37	537.0	1078.	50.35	46.70	660.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	108.0	78.46	34.95	662.5	660.2	43.56	51.16
SDev	1.4	5.87	5.60	11.8	6.7	8.92	2.67
%RSD	1.311	7.477	16.01	1.781	1.010	20.49	5.217
#1	107.6	85.20	28.49	648.9	667.9	53.74	49.16
#2	109.5	75.74	38.06	669.8	656.9	37.10	54.19
#3	106.8	74.46	38.30	668.7	655.8	39.83	50.12
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1069.	1161.	1062.	1074.
SDev	14.	4.	4.	55.
%RSD	1.337	.3760	.3578	5.094
#1	1054.	1162.	1058.	1135.
2	1073.	1156.	1064.	1031.
3	1082.	1165.	1064.	1055.
rors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I Sample Name: CCV Operator:
Time: 02/12/99 20:37:33
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.6	2135.	1086.	1028.	51200.	1016.	1033.
SDev	.3	18.	14.	14.	664.	11.	13.
%RSD	.3472	.8385	1.331	1.325	1.297	1.115	1.261
#1	100.3	2138.	1069.	1013.	50430.	1003.	1018.
#2	101.0	2116.	1095.	1037.	51630.	1023.	1041.
#3	100.4	2152.	1094.	1035.	51540.	1023.	1039.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1035.	1026.	2120.	49160.	52320.	1035.	49940.
SDev	13.	7.	20.	712.	694.	14.	628.
%RSD	1.231	.6823	.9412	1.449	1.326	1.317	1.257
#1	1021.	1018.	2097.	48340.	51520.	1020.	49220.
#2	1044.	1029.	2133.	49600.	52770.	1045.	50360.
#3	1041.	1032.	2131.	49550.	52670.	1041.	50240.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1025.	1072.	1051.	1036.	1046.	1058.	1065.
SDev	13.	11.	14.	14.	12.	9.	12.
%RSD	1.273	1.012	1.292	1.387	1.130	.8392	1.171
#1	1010.	1060.	1036.	1019.	1033.	1048.	1051.
#2	1032.	1081.	1060.	1045.	1053.	1064.	1073.
#3	1034.	1075.	1058.	1043.	1053.	1062.	1072.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1042.	1053.	1043.	1083.	1057.	1051.	1062.
SDev	13.	12.	12.	12.	13.	10.	8.
%RSD	1.213	1.157	1.124	1.082	1.217	.9986	.7680
#1	1028.	1039.	1029.	1069.	1042.	1038.	1052.
#2	1049.	1062.	1049.	1090.	1065.	1056.	1068.
#3	1050.	1059.	1051.	1090.	1063.	1057.	1065.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1055.	1074.	1042.	1043.
SDev	11.	13.	14.	3.
%RSD	1.050	1.236	1.322	.2463
#1	1044.	1059.	1027.	1045.
#2	1066.	1081.	1054.	1043.
#3	1055.	1083.	1045.	1040.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000351

Analysis Report QC Standard 02/12/99 08:51:20 PM page 1

Method: CLP3I Sample Name: CCB Operator: 2294
Run Time: 02/12/99 20:44:28
Comment: CCB
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1608	23.47	.3476	.4364	-25.28	.4225	.0105
SDev	.0568	14.11	.0882	.0797	8.13	.0398	.2750
%RSD	35.35	60.12	25.39	18.26	32.17	9.432	2614.
#1	.2063	38.06	.4428	.5108	-15.89	.4607	.1386
#2	.1790	22.46	.3315	.4461	-30.09	.4254	.1981
#3	.0971	9.897	.2685	.3523	-29.88	.3812	-.3052
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5328	-.1755	7.780	15.29	42.42	.3377	229.3
SDev	.2985	.1242	3.339	5.38	10.14	.0967	109.8
%RSD	56.02	70.75	42.92	35.21	23.90	28.65	47.87
#1	.8623	-.0568	11.64	21.11	53.91	.4409	352.1
#2	.2804	-.1652	5.815	14.27	38.59	.3231	140.7
#3	.4558	-.3046	5.889	10.49	34.75	.2491	195.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0658	1.299	.0939	-4.041	.0868	.7992	.3029
SDev	.1943	2.835	.1136	.070	.8053	2.282	.4796
%RSD	295.4	218.3	120.9	1.726	927.8	285.5	158.3
#1	.2319	4.428	.2062	-4.111	-.4734	1.832	.6504
#2	.1133	-1.098	.0967	-3.972	-.2758	2.382	-.2442
#3	-.1479	.5656	-.0210	-4.039	1.010	-1.816	.5026
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1216	-.1698	.2026	.2962	.2939	-1.212	1.791
SDev	1.1323	.5931	1.392	1.491	1.039	4.962	1.762
%RSD	931.2	349.2	687.2	503.3	353.4	409.5	98.39
#1	-1.338	.5136	-.9786	-1.052	1.488	-1.864	3.665
#2	.9025	-.5500	-.1512	.0434	-.4001	4.044	1.540
#3	.0703	-.4731	1.738	1.897	-.2061	-5.816	.1679
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4135	.3019	1.172	4.353
SDev	2.613	3.596	.687	4.172
%RSD	631.9	1191.	58.64	95.84
#1	3.426	2.374	1.908	8.969
#2	-.9446	2.382	1.060	3.243
#3	-1.241	-3.850	.5471	.8488
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

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000353

STANDARDS and REAGENTS TRACEABILITY

Date: 2-12-99

HNO3 [Baker Instra-analyzed Trace-Metals grade,	Ref#*: 1M2-153-4
HCl [Baker Instra-analyzed Trace-Metals grade,	Ref#: 1M2-152-17
XCL-11 multi-element standard mix	Ref#: 7M2-226-14
XCL-2 multi-element standard mix	Ref#: ↓ 15
XCL-3A multi-element standard mix	Ref#: ↓ 17
ICV1 multi-element standard mix	Ref#: 7M1-3-9
ICV2 multi-element standard mix	Ref#: ↓ 10
ICV3 multi-element standard mix	Ref#: ↓ 11
ICV4 multi-element standard mix	Ref#: ↓ 12
ICSA multi-element standard mix	Ref#: 7M1-4-27
ICSAB multi-element standard mix	Ref#: 7M1-3-24
LRS-1 multi-element standard mix	Ref#: 7M1-2-12
LRS-2 multi-element standard mix	Ref#: ↓ 13
Spex multi-element standard mix	Ref#: 7M1-1-13
COM Lab mix 5	Ref#: 7M1-3-4
CRDL-1 multi-element standard mix	Ref#: 7M1-1-9
ANTIMONY (Sb) 1,000 PPM single-element standard	Ref#: ↓ 5
BISMUTH (Bi) 1,000 PPM single-element standard	Ref#: 7M1-2-21
TITANIUM (Ti) 1,000 PPM single-element standard	Ref#: 7M1-1-6
TIN (Sn) 1,000 PPM single-element standard	Ref#: ↓ 8
IRON (Fe) 10,000 PPM single-element standard	Ref#: 7M1-4-22
ALUMINUM (Al) 10,000 PPM single-element standard	Ref#: ↓ 14
CALCIUM (Ca) 10,000 PPM single-element standard	Ref#: 7M1-1-1
MAGNESIUM (Mg) 10,000 PPM single-element standard	Ref#: ↓ 2
MOLYBDENUM (Mo) 1,000 PPM single-element standard	Ref#: 7M1-3-15
ARSENIC (As) 1, 000 PPM single-element standard	Ref#: 7M1-4-3

The following standard solutions are applicable only when dissolved samples are analyzed.

XCL-LCS multi-element standard mix Ref#: NA
XCL-20 multi-element standard mix Ref#:

Reviewed By: M Powell
Date: 2/12/99

The following spaces are provided for non-CLP metals standards not previously identified.

NA 1,000 PPM standard Ref# NA
NA 1,000 PPM standard Ref#

*Ref# = Logbook ID, Page number and item number. from Materials Receipt Log

Standards/QC Preparation for Trace ICAP

Standard Lot Number*	Preparation instructions
O/ICB/CCB- 021299PW	Place in a 500-ml volumetric flask: 100 ml of deionized water 30 ml concentrated HNO_3, and 25 ml concentrated HCl. Bring up to volume with deionized water. Prepare weekly.
CL-11- 021299-PW	Place in a 100-ml volumetric flask: PW 2-12-99 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml XCL-11 into flask. Bring up to volume with deionized water. Prepare weekly.
CL-2- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of XCL-2 into flask. Bring up to volume with deionized water. Prepare weekly.
CL-3A- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 1.0 ml of XCL-3A into flask. Bring up to volume with deionized water. Prepare weekly.
LSB2-2X- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml of concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of Sn, Bi, Ti, Sb, ___, ___, into flask. Bring up to volume with deionized water. Prepare weekly.
TD3- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 5 ml concentrated HCl 1.0 ml of 10,000-ppm Al, 0.5 ml of 10,000-ppm Fe, 1.0 ml of 10,000-ppm Mg 1.0 ml of 10,000-ppm Ca, Bring up to volume with deionized water. Prepare weekly.
VS1- 021299-PW	Place in a 500-ml volumetric flask: 400 ml of deionized water 30 ml concentrated HNO_3 25 ml of concentrated HCl 0.5ml of Sb, 0.5 ml of Sn, 0.5 ml of Bi, 0.5 ml of Ti, 0.05 ml of Al, 0.05 ml of Fe 0.500 ml of XCL-2. 0.500 ml of XCL-11, 2.5 ml of XCL-3A Bring to volume with deionized water. Prepare weekly.

Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: M Powell 2/12/99 Date: 2/12/99

2294

000354

Standard Lot Number*	Preparation instructions*
ICV1- 021299-pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml of concentrated HNO_3 10 ml concentrated HCl, Pipet 20.0 ml of ICV1 into flask. Bring up to volume with deionized water. Prepare as needed.
ICV3- 021299-pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated. HNO_3 10 ml concentrated HCl Pipet:20.0 ml of ICV3, 20.0 ml of ICV2, and 20.0 ml of ICV4 into flask. Bring to volume with deionized water. Prepare as needed.
SPEXAS- 021299-pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 0.2 ml of CompuChem SPEX into flask. Bring up to volume with deionized water. Prepare as needed.
ICSA- 021299-pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA into flask. Bring up to volume with deionized water. Prepare as needed.
ICSAB- 021299-pw	Place in a 200-ml volumetric flask: 50 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA and 20.0 ml ICSB into flask. Pipet: 0.20 ml Bi standard ___ ml Sn standard ___ ml Ti standard ___ ml Mo standard into flask. Bring up to volume with deionized water. Prepare as needed.
LRS- 021299-pw	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 and 5 ml concentrated HCl Pipet 0.10 ml LRS-1 and 0.10 ml LRS-2 into flask. Prepare as needed.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: N Powell Date: 2/12/99

2294

0003550

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Standard Lot Number*	Preparation instructions*
CRI - 021299-PW 2294	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet: 0.20 CRDL-1 into flask. 0.025 ml Bi into flask. 0.025 ml Sn into flask. 0.025 ml Mo into flask. 0.025 ml Ti into flask. NA ml NA 1000 standard into flask. — ml — 1000 standard into flask. — ml — 1000 standard into flask. Bring up to volume with deionized water. Prepare as needed.
Internal Standard- 021299-PW	Place in a 2000-ml volumetric flask: 1000 ml of deionized water 20 ml of concentrated HNO_3 Pipet: 10 mL of COM LAB MIX #5 internal standard. Bring up to volume with DI water. Prepare as needed. Yttrium, introduced into the sample stream yielding a final concentration in the plasma of 1 ppm, is used as an internal standard. Cesium, introduced into the sample stream yielding a final concentration in the plasma of 50ppm, is used as a reducing agent.
As- 021299-PW	Place 100 ml volumetric flask 50 ml DI water 1 ml concentrated HNO_3 0.1 ml 1000 ppm As Bring to volume. Prepare as needed.

	Prepared By	Date Prepared	Preparation Instructions
Dissolved Metals only: LCS	NA	NA	Add 1.0 ml of XCL-LCS solution to 9.0 ml of acidified water NA ml HNO_3 + NA ml HCl .
Prep Blank	↓	↓	Use acidified water (1% HNO_3 + 5% HCl NA ml HNO_3 + NA ml HCl
Sample Spike	↓	↓	Add 0.1 ml of XCL-20 to 10.0 ml of sample.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed by: N Powell Date: 2/12/99

000356

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COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 OOOO 22

Trace ICP Runlog (P3)

Part (A) of a two part form

Page 1 of 1

Method (Circle one.):
CLP ILM04.0
SW-846 6010B
MCAWW 200.7

Case: 34121 10001
34124 120601

Date: 2-15-99

Operator: P. Wang

File name: PW0215

WSL.NAME P320501

No.	Sample ID	Comments	Action needed	No.	Sample ID	Comments	Action Needed
	SO			1	925569		
	XCL-11			2	925570		
	STD3			3	PDS 925603	2xCKDL	
	XCL-2			4	PDS 925430	5xD.I 2xCKDL	
	SCL-3A			5	CRI		
	PLSBR			6	ICSA		
	ICV			7	ICSAB		
	ICB			8	CCV		
	CRI			9	CCB		
	ICSA			10		P.W 2-15-99	
	ICSAB				~~CCV~~		
	CCV				CCB		
	CCB			1			
1	LRS			2			
2	925574	PBS		3			
3	925543	LCSS		4		P.W 2-15-99	
	925603			5			
	925544	PW		6			
	925541	SIK		7			
	925592	IIKMM		8			
	MZ 925603	5XD.I 2xCKDL		9			
	925583			10			
0	925595				CCV		
	CCV				~~CCB~~		

COMMENTS

Reviewed By: M Powell

Date: 2/15/99

Method: CLP3I Standard: BLANK
Run Time: 02/15/99 10:44:08

2294

	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Avg	-.0350	6.768	.0046	.0813	.0044	-.5059	-.0183
SD	.0439	.041	.0034	.0060	.0001	.0133	.0152
%RSD	125.3	.6078	73.16	7.339	1.402	2.638	83.01
#1	.0030	6.732	.0065	.0882	.0043	-.4938	-.0159
#2	-.0830	6.760	.0066	.0775	.0044	-.5202	-.0044
#3	-.0250	6.813	.0007	.0783	.0043	-.5036	-.0345

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Avge	.0170	.8906	.0044	.5228	.0119	.0034	.3860
SDev	.0032	.0115	.0087	.0987	.0071	.0017	.0418
%RSD	18.80	1.296	195.4	18.88	59.40	49.74	10.84
#1	.0152	.8840	.0022	.4764	.0116	.0014	.3880
#2	.0207	.9040	.0140	.6362	.0192	.0044	.4268
#3	.0151	.8840	-.0029	.4559	.0050	.0043	.3432

Elem	Ni2316	Tl1908	V 2924	Zn2138	As1890	22031	22032
Avge	-.0167	-.1871	-.0070	-.0077	-.5466	1.362	-.1463
SDev	.0027	.0118	.0029	.0011	.0551	.236	.1088
%RSD	16.12	6.287	42.10	14.25	10.08	17.32	74.35
#1	-.0166	-.1899	-.0080	-.0065	-.6030	1.581	-.2711
#2	-.0140	-.1972	-.0037	-.0081	-.4929	1.112	-.0959
#3	-.0194	-.1742	-.0093	-.0086	-.5439	1.395	-.0718

Elem	20681	20682	19601	19602	Sn1899	Bi2230	Mo2020
Avge	-.1190	.0292	-.3637	.3906	-.0520	-.0241	.0330
SDev	.2183	.0678	.0034	.0035	.0394	.1625	.0508
%RSD	183.5	232.4	.9249	.8900	75.83	673.5	153.9
#1	-.2899	.1034	-.3673	.3868	-.0781	.1634	-.0195
#2	.1269	-.0295	-.3631	.3911	-.0066	-.1136	.0819
#3	-.1940	.0137	-.3607	.3937	-.0711	-.1221	.0366

Elem	Ti3349
Avge	.2552
SDev	.2104
%RSD	82.44
#1	.3095
#2	.4332
#3	.0230

Method: CLP3I Standard: XCL-11
Run Time: 02/15/99 10:51:02

2294

Elem	Ag3280	Cd2265	Cr2677	Cu3247	Ni2316	Tl1908	Zn2138
Avge	23.04	712.9	29.65	135.9	26.03	30.42	20.90
SDev	.03	.9	.04	.2	.03	.05	.03
%RSD	.1349	.1277	.1431	.1398	.1298	.1576	.1413
#1	23.03	713.9	29.70	135.7	26.06	30.45	20.93
#2	23.07	712.6	29.64	136.1	26.02	30.36	20.88
#3	23.01	712.2	29.62	135.9	26.00	30.43	20.88

Elem	22031	22032	19601	19602
Avge	207.4	172.0	30.12	59.49
SDev	.6	.4	.12	.19
%RSD	.2759	.2055	.4018	.3265
#1	208.0	172.1	30.16	59.68
#2	207.0	171.6	29.98	59.29
#3	207.1	172.3	30.21	59.51

Standardization Rpt. 02/15/99 11:03:14 AM page 1

Method: CLP3I Standard: STD3
Run Time: 02/15/99 10:57:56

	Al3082	Ca3179	Fe2714	Mg2790
A	1900.	11.29	45.43	207.4
SD	10.	.02	.08	.4
%RSD	.5036	.1899	.1668	.1754
#1	1889.	11.31	45.50	207.7
#2	1904.	11.31	45.44	207.5
#3	1907.	11.27	45.35	207.0

2294

Method: CLP3I Standard: XCL-2
Run Time: 02/15/99 11:03:16

2294

em	Ba4934	Be3130	Co2286	Mn2576	V 2924	As1890	Mo2020
e	378.2	1402.	111.7	43.78	14.25	130.7	107.7
v	1.9	10.	.7	.28	.08	.8	.5
%RSD	.4949	.6882	.6715	.6405	.5429	.5934	.5043
#1	378.3	1393.	111.1	43.57	14.19	130.3	107.3
#2	380.1	1412.	112.5	44.10	14.33	131.6	108.4
#3	376.3	1400.	111.4	43.68	14.21	130.3	107.5

Method: CLP3I Standard: XCL-3A
Run Time: 02/15/99 11:10:10

2294

em	K 7664	Na3302
e	630.0	34.70
v	11.7	.59
%RSD	1.855	1.712
#1	643.5	35.39
#2	622.7	34.33
#3	623.9	34.39

Method: CLP3I Standard: PLSBR
Run Time: 02/15/99 11:17:05

2294

	20681	20682	Sn1899	Bi2230	Ti3349
A	116.5	66.49	17.86	141.0	129.1
S	.3	.13	.03	.1	1.1
%RSD	.2654	.2025	.1873	.0828	.8266
#1	116.2	66.54	17.86	141.1	130.3
#2	116.8	66.59	17.90	140.9	128.8
#3	116.6	66.33	17.83	141.1	128.2

Method: CLP3I Sample Name: ICV1 Operator:
Run Time: 02/15/99 11:23:12
Comment: ICV ICV1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	492.8	1983.	2047.	475.1	47590.	482.2	532.8
SDev	1.4	6.	5.	1.8	226.	2.3	2.5
%RSD	.2901	.3093	.2334	.3815	.4757	.4668	.4651
#1	491.2	1979.	2045.	474.8	47540.	482.3	532.4
#2	493.7	1990.	2044.	473.4	47390.	479.9	530.5
#3	493.6	1980.	2053.	477.0	47830.	484.4	535.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	487.0	1956.	2009.	476.0	50710.	510.0	520.0
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	462.7	491.4	1878.	45350.	23290.	487.7	46680.
SDev	2.1	1.9	10.	116.	101.	2.1	253.
%RSD	.4506	.3800	.5120	.2553	.4326	.4394	.5419
#1	462.6	489.5	1884.	45330.	23270.	487.1	46630.
#2	460.6	493.2	1867.	45250.	23190.	485.8	46460.
#3	464.8	491.4	1883.	45480.	23390.	490.0	46960.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	471.0	497.0	1985.	49600.	24590.	491.0	48790.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	476.8	-.4158	497.5	2964.	4874.	1.982	2.373
SDev	1.7	.8241	1.6	12.	20.	2.813	2.212
%RSD	.3555	198.2	.3228	.4020	.4037	141.9	93.23
#1	476.3	.5035	497.6	2961.	4888.	3.015	4.597
#2	475.5	-1.088	495.8	2954.	4851.	4.132	.1736
#3	478.7	-.6626	499.0	2977.	4883.	-1.202	2.347
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	497.0		492.0	3012.			
Range	10.00		10.00	10.00			

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.227	4888.	4867.	.7698	3.164	3.390	1.270
SDev	1.808	22.	20.	2.791	1.923	2.835	3.638
%RSD	147.3	.4438	.4033	362.6	60.77	83.63	286.5
#1	.4969	4895.	4884.	3.565	5.104	1.368	3.829
#2	-.1010	4863.	4845.	-2.017	1.259	6.631	2.875
#3	3.286	4904.	4872.	.7616	3.130	2.172	-2.895
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.481	-.7880	-.2800	-1.510
SDev	3.674	2.8170	.1615	11.935
%RSD	81.98	357.5	57.65	790.3
#1	6.987	2.282	-.2444	11.43
#2	6.192	-1.392	-.4563	-12.08
#3	.2639	-3.254	-.1394	-3.884
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Analysis Report QC Standard 02/15/99 11:36:58 AM page 1

Method: CLP3I Sample Name: ICV3 Operator:
Run Time: 02/15/99 11:30:06
Segment: ICV ICV3
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	98.78	10.97	.3153	.1303	-53.29	98.62	.1067
SDev	.32	2.59	.0792	.0156	.14	.10	.0605
%RSD	.3285	23.65	25.13	11.97	.2691	.1048	56.74
#1	98.41	8.749	.4055	.1170	-53.14	98.65	.0707
#2	98.92	10.34	.2571	.1265	-53.30	98.70	.1766
#3	99.02	13.82	.2832	.1475	-53.42	98.50	.0727
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2669	-.4395	2.066	231.1	3.279	.0782	65.59
SDev	.4467	.2528	.951	23.0	1.572	.0586	65.26
%RSD	167.4	57.51	46.04	9.962	47.95	74.87	99.50
#1	.7821	-.1580	3.164	256.4	3.433	.1459	140.1
#2	-.0134	-.6470	1.525	211.3	1.636	.0448	38.34
#3	.0321	-.5136	1.508	225.6	4.769	.0441	18.37
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7357	99.69	.1282	-4.528	101.6	100.7	1039.
SDev	.4449	1.41	.4135	.101	.7	1.0	2.
%RSD	60.47	1.411	322.6	2.235	.7181	1.002	.2060
#1	-.2940	99.26	.3647	-4.470	100.9	99.68	1041.
#2	-1.184	101.3	-.3493	-4.468	101.8	101.7	1037.
#3	-.7294	98.55	.3692	-4.644	102.3	100.8	1040.
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		98.90			98.80	101.4	
Range		10.00			10.00	10.00	

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	99.97	101.9	101.5	1042.	1038.	101.7	100.2
SDev	.70	.9	.8	2.	3.	3.1	.2
%RSD	.6952	.9159	.8200	.1752	.2557	3.034	.1867
#1	100.8	100.9	100.8	1042.	1040.	98.32	100.3
#2	99.44	102.8	101.3	1040.	1035.	104.4	100.3
#3	99.71	102.0	102.4	1044.	1038.	102.4	100.0
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	101.8						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2632	.9688	-.7204	-3.995
SDev	1.466	2.485	.4341	8.908
%RSD	557.2	256.5	60.26	223.0
#1	1.956	3.250	-.3409	6.139
#2	-.5524	1.335	-.6265	-10.59
#3	-.6142	-1.679	-1.194	-7.539
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: SPEXASSE Operator:
Run Time: 02/15/99 11:37:00
Comment: ICV SPEXASSE
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2196	58.01	.2948	.1392	-60.13	.1363	.0155
SDev	.3390	2.73	.0715	.0218	3.36	.1401	.2292
%RSD	154.4	4.705	24.27	15.63	5.590	102.9	1475.
#1	.5721	56.46	.3772	.1215	-64.00	.1226	-.1929
#2	-.1040	56.41	.2583	.1326	-58.34	.0034	.2609
#3	.1907	61.16	.2488	.1635	-58.04	.2827	-.0214
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0311	-.4211	5.096	23.78	.7222	.0488	193.1
SDev	.1239	.2652	1.467	16.34	1.320	.0584	186.8
%RSD	398.3	62.97	28.79	68.73	182.8	119.7	96.74
#1	.1641	-.1298	4.280	41.67	1.071	.0828	400.9
#2	.0102	-.6483	4.218	9.626	-.7373	.0822	39.15
#3	-.0810	-.4853	6.789	20.05	1.833	-.0186	139.2
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7796	-1.674	-12.48	-5.051	-1.285	.4319	1032.
SDev	.5625	2.142	.17	.071	.366	1.315	9.
%RSD	72.15	127.9	1.345	1.415	28.50	304.5	.8519
#1	-.1485	-1.788	-12.39	-4.969	-1.700	-.9045	1024.
#2	-1.228	-3.757	-12.67	-5.087	-1.007	.4759	1030.
#3	-.9621	.5219	-12.37	-5.097	-1.149	1.724	1042.
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value							1000.
Range							10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.7345	-2.127	-.8740	1034.	1031.	.2785	.4995
SDev	.6395	1.155	.9373	10.	8.	3.443	.3938
%RSD	87.07	54.33	107.2	.9215	.8227	1236.	78.84
#1	1.328	-1.861	-1.629	1026.	1023.	-2.865	.0652
#2	.0569	-3.392	.1752	1030.	1030.	-.2580	.8333
#3	.8189	-1.127	-1.169	1044.	1040.	3.958	.5999
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1023.	1030.	1059.	1046.
SDev	10.	5.	9.	14.
%RSD	.9588	.4798	.8966	1.385
#1	1021.	1027.	1051.	1061.
#2	1014.	1028.	1057.	1033.
#3	1033.	1036.	1069.	1043.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000366

Analysis Report QC Standard 02/15/99 11:50:45 AM page 1

Method: CLP3I Sample Name: S0 Operator:
R Time: 02/15/99 11:43:54
Comment: ICB
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3178	43.35	.0810	.2484	-66.57	-.0825	.0199
SDev	.2573	1.46	.0532	.0158	3.00	.0822	.1458
%RSD	80.97	3.365	65.71	6.376	4.500	99.63	732.1
#1	.3814	41.71	.1313	.2643	-70.02	-.1093	.1822
#2	.0347	43.82	.0252	.2326	-64.85	.0098	-.0999
#3	.5374	44.51	.0865	.2483	-64.83	-.1478	-.0225
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1126	-1.170	-3.288	9.695	.2148	.0333	-73.75
SDev	.3802	.062	1.376	15.47	.6413	.0173	148.53
%RSD	337.7	5.271	41.85	159.6	298.5	52.01	201.4
#1	.2456	-1.151	-4.089	23.45	.6397	.0133	94.11
#2	-.5115	-1.240	-4.075	-7.060	-.5228	.0433	-188.1
#3	-.0718	-1.121	-1.699	12.70	.5276	.0433	-127.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1325	-.1174	.0289	-4.963	.3888	.8649	1.033
SDev	.2771	2.6494	.1531	.102	.7370	1.231	1.189
%RSD	209.2	2257.	530.7	2.055	189.6	142.3	115.1
#1	.0951	2.348	.0515	-5.076	-.4227	-.1838	1.621
#2	-.0515	.2189	-.1344	-4.877	1.017	.5585	-.3356
#3	-.4411	-2.919	.1694	-4.937	.5724	2.220	1.814
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.9975	.8823	.1336	.5548	1.263	.4918	1.042
SDev	.8589	2.010	1.695	1.642	1.884	2.561	.567
%RSD	86.11	227.8	1268.	296.0	149.1	520.8	54.37
#1	.9236	.8565	-1.070	-1.066	2.954	-1.696	.5622
#2	.1779	-1.114	2.072	.5128	-.7678	-.1380	.8975
#3	1.891	2.905	-.6008	2.218	1.604	3.309	1.668
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.857	.2679	.0894	3.340
SDev	.855	1.435	.0162	6.908
%RSD	17.60	535.7	18.12	206.8
#1	5.635	-1.234	.0707	10.27
	4.993	.4138	.0985	-3.550
	3.942	1.624	.0990	3.303
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: CRI Operator:
Run Time: 02/15/99 11:50:48
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.76	17.90	.0608	10.34	-58.80	10.24	104.0
SDev	.29	5.17	.0662	.01	.04	.30	.6
%RSD	1.480	28.90	108.9	.0795	.0661	2.925	.5626
#1	20.09	23.85	.1305	10.35	-58.81	10.56	103.5
#2	19.62	14.50	.0531	10.34	-58.76	9.973	103.8
#3	19.55	15.34	-.0012	10.33	-58.83	10.19	104.7
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.15	49.35	-2.367	2.576	-.1213	31.32	-144.8
SDev	.23	.49	4.028	3.907	2.3139	.17	91.5
%RSD	1.146	.9981	170.2	151.6	1908.	.5310	63.22
#1	20.38	48.83	-6.357	3.775	-2.243	31.13	-238.9
#2	19.91	49.42	1.698	-1.789	-.4669	31.45	-56.08
#3	20.16	49.81	-2.443	5.743	2.346	31.38	-139.4
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	81.40	20.30	104.8	33.09	5.519	12.28	123.8
SDev	.25	.93	.5	.08	1.435	1.08	.4
%RSD	.3042	4.583	.4309	.2285	25.99	8.781	.3281
#1	81.66	21.12	104.3	33.10	6.809	11.94	124.2
#2	81.16	20.49	105.0	33.16	5.774	11.41	123.6
#3	81.38	19.29	105.1	33.01	3.974	13.48	123.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.32	5.322	5.606	125.9	122.7	11.24	12.79
SDev	1.39	1.536	1.906	.8	.9	3.09	.89
%RSD	6.499	28.85	34.00	.6275	.7625	27.53	6.959
#1	21.19	5.008	7.697	125.2	123.8	8.570	13.61
#2	20.00	6.990	5.155	126.7	122.0	10.52	11.84
#3	22.76	3.968	3.966	125.8	122.3	14.63	12.90
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	41.76	43.87	20.45	62.39
SDev	.48	1.43	1.28	7.79
%RSD	1.157	3.261	6.273	12.49
#1	41.20	45.44	20.90	71.38
#2	42.00	43.53	21.44	57.59
	42.08	42.63	19.00	58.20
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

Method: CLP3I Sample Name: ICSA Operator:
R Time: 02/15/99 11:57:42
C ent: ICSA ICSA
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4132	541600.	1.314	.1623	505600.	-2.555	-.3934
SDev	.1852	2841.	.035	.0240	6923.	.696	.1809
%RSD	44.81	.5245	2.648	14.78	1.369	27.23	45.99
#1	-.6242	538400.	1.352	.1439	498500.	-1.753	-.5261
#2	-.2774	543800.	1.283	.1536	512300.	-2.923	-.4667
#3	-.3381	542600.	1.308	.1895	505900.	-2.990	-.1873
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2165	2.089	195700.	-.9921	526700.	.7309	-264.3
SDev	.6771	.124	2649.	10.673	7164.	.0399	159.3
%RSD	312.7	5.948	1.354	1076.	1.360	5.458	60.28
#1	.9954	2.153	192800.	9.896	519000.	.7328	-83.70
#2	-.1137	1.946	198000.	-11.44	533100.	.6900	-324.4
#3	-.2321	2.168	196200.	-1.435	528100.	.7697	-384.9
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.9918	-7.174	3.446	-4.103	-2.197	-5.551	3.132
SDev	.6175	.580	.325	.390	2.197	2.697	2.226
%RSD	62.26	8.080	9.428	9.498	100.0	48.58	71.08
#1	1.586	-7.269	3.431	-4.534	-4.600	-4.361	.6866
#2	.3533	-6.552	3.129	-3.777	-.2923	-3.654	5.041
#3	1.036	-7.700	3.778	-3.997	-1.697	-8.639	3.667
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.277	20.90	-13.74	.5589	4.406	-8.089	-4.294
SDev	.116	3.42	3.65	8.623	1.029	10.508	1.206
%RSD	9.047	16.35	26.60	1543.	23.36	129.9	28.09
#1	-1.284	22.03	-17.91	-9.156	5.591	-3.682	-4.710
#2	-1.159	23.61	-12.24	7.310	3.899	-.5031	-5.237
#3	-1.390	17.06	-11.07	3.523	3.730	-20.08	-2.935
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.195	8.561	-1.138	-27.26
SDev	4.127	3.836	1.132	27.90
%RSD	188.0	44.80	99.48	102.4
#1	-5.540	12.99	-.2888	4.468
	-3.463	6.270	-2.423	-38.27
	2.418	6.424	-.7018	-47.96
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: ICSAB Operator:
F Time: 02/15/99 12:04:36
C ment: ICSAB ICSAB
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	202.1	537700.	564.3	508.8	501800.	974.2	514.0
SDev	.5	1532.	2.6	1.4	1547.	3.2	1.9
%RSD	.2309	.2850	.4693	.2716	.3084	.3246	.3625
#1	201.6	535900.	567.2	510.3	503600.	977.8	516.0
#2	202.3	538500.	563.7	508.3	500900.	972.7	513.6
#3	202.5	538600.	562.0	507.7	500900.	972.1	512.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	501.9	517.8	196000.	14.51	527500.	517.8	-414.4
SDev	2.6	.9	508.	6.91	1121.	2.0	115.0
%RSD	.5100	.1688	.2593	47.61	.2125	.3921	27.74
#1	504.8	516.9	196600.	22.36	528700.	520.1	-362.7
#2	500.7	518.7	195700.	9.344	527000.	516.9	-546.2
#3	500.1	517.8	195700.	11.83	526700.	516.3	-334.4
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1005.	100.2	521.9	1039.	47.83	49.37	647.0
SDev	3.	2.4	2.0	3.	1.45	4.62	.4
%RSD	.2918	2.422	.3746	.2687	3.025	9.360	.0584
#1	1008.	101.4	524.1	1043.	47.48	51.22	646.6
#2	1003.	97.41	521.4	1038.	46.59	44.11	647.3
#3	1004.	101.8	520.3	1037.	49.42	52.79	647.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	110.9	73.25	35.13	649.2	645.8	47.38	50.36
SDev	.9	4.62	3.65	7.0	2.9	3.18	5.73
%RSD	.8471	6.314	10.39	1.071	.4502	6.715	11.39
#1	110.2	78.55	31.96	641.8	648.9	50.46	51.58
#2	111.9	71.16	34.31	655.6	643.1	44.11	44.11
#3	110.4	70.04	39.12	650.1	645.5	47.58	55.38
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1024.	1121.	1050.	1011.
SDev	2.	4.	4.	23.
%RSD	.1841	.3448	.4149	2.285
#1	1024.	1125.	1055.	1038.
#2	1027.	1122.	1049.	999.8
#3	1023.	1117.	1046.	996.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/15/99 12:11:31 2294
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	102.1	2055.	1058.	1032.	48790.	1009.	1035.
SDev	.2	8.	11.	9.	423.	7.	9.
%RSD	.2113	.3957	1.020	.8739	.8665	.7194	.8488
#1	102.0	2063.	1062.	1035.	48870.	1012.	1037.
#2	101.9	2047.	1046.	1023.	48330.	1001.	1026.
#3	102.4	2055.	1067.	1040.	49160.	1015.	1043.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1018.	1011.	1970.	48120.	49760.	1034.	49520.
SDev	8.	5.	14.	509.	440.	9.	400.
%RSD	.8310	.4494	.7156	1.058	.8839	.8679	.8077
#1	1020.	1009.	1978.	48300.	49860.	1037.	49550.
#2	1008.	1007.	1953.	47550.	49280.	1024.	49110.
#3	1025.	1016.	1978.	48520.	50150.	1041.	49900.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1014.	1056.	1043.	1023.	1030.	1046.	1048.
SDev	9.	8.	10.	8.	5.	9.	7.
%RSD	.8608	.7963	.9200	.8031	.4873	.8888	.6760
#1	1017.	1062.	1045.	1025.	1031.	1045.	1048.
#2	1004.	1046.	1032.	1014.	1024.	1037.	1041.
#3	1020.	1058.	1051.	1030.	1034.	1055.	1055.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1048.	1035.	1027.	1055.	1044.	1046.	1045.
SDev	8.	6.	5.	9.	6.	5.	12.
%RSD	.7463	.5319	.5336	.8871	.5733	.5057	1.106
#1	1049.	1039.	1027.	1056.	1044.	1049.	1043.
#2	1039.	1029.	1022.	1045.	1039.	1040.	1035.
#3	1055.	1036.	1033.	1064.	1051.	1050.	1058.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1025.	1041.	1046.	1009.
SDev	5.	10.	9.	12.
%RSD	.4962	1.001	.8307	1.200
#1	1026.	1047.	1049.	1020.
#2	1019.	1029.	1036.	995.9
#3	1029.	1047.	1053.	1011.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/15/99 12:18:25
Comment: CCB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0231	40.18	.1769	.3395	-51.03	.1093	.4543
SDev	.1831	1.07	.0768	.0322	3.43	.0912	.2376
%RSD	792.0	2.656	43.44	9.489	6.716	83.39	52.31
#1	.0953	38.96	.2569	.3763	-47.07	.1209	.1816
#2	.0693	40.97	.1701	.3164	-52.97	.1941	.6173
#3	-.2341	40.60	.1037	.3259	-53.05	.0129	.5640
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0028	-.8938	.2123	12.19	17.45	.1137	-113.8
SDev	.1832	.0855	4.880	5.10	5.07	.0343	180.5
%RSD	6634.	9.565	2298.	41.81	29.03	30.20	158.7
#1	.2005	-.7951	.7978	15.71	22.75	.1482	92.26
#2	-.0537	-.9432	4.773	14.52	16.95	.0796	-244.2
#3	-.1551	-.9432	-4.934	6.346	12.66	.1132	-189.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1133	1.265	.4643	-4.796	.6864	-.0076	.5019
SDev	.5788	.829	.2754	.070	.7278	1.6238	.7774
%RSD	510.9	65.55	59.32	1.460	106.0	21440.	154.9
#1	.6002	1.408	.1520	-4.839	.3838	.5449	.3304
#2	-.5267	2.014	.5686	-4.715	.1587	-1.836	1.351
#3	.2664	.3739	.6724	-4.833	1.517	1.268	-.1754
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.065	.6444	.6985	.8339	.3274	-.0350	-.0027
SDev	1.798	.9981	.7428	1.523	1.199	.8657	2.6769
%RSD	87.09	154.9	106.3	182.6	366.3	2476.	97940.
#1	.1660	.9275	.1035	-.9171	.9444	-1.009	1.312
#2	2.287	-.4647	.4611	1.851	1.093	.6449	-3.083
#3	3.742	1.470	1.531	1.568	-1.055	.2597	1.763
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.621	2.113	.0944	3.409
SDev	1.435	3.276	.5348	9.017
%RSD	54.74	155.0	566.4	264.5
#1	2.995	5.214	.5259	13.67
#2	1.036	2.439	.2613	-3.250
	3.833	-1.313	-.5039	-.1936
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: LRS #15 Operator:
Run Time: 02/15/99 12:25:20
Comment: SDG:20601 ClientID:PBS 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.082	140.5	10.91	5.369	903.5	5.617	5.373
SDev	.215	3.5	.11	.036	5.1	.067	.125
%RSD	4.228	2.505	.9644	.6683	.5623	1.186	2.328
#1	5.313	143.0	11.03	5.410	908.8	5.694	5.340
#2	5.044	142.1	10.88	5.348	898.7	5.580	5.512
#3	4.888	136.5	10.82	5.348	902.8	5.578	5.268
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	150.0	15.00	7.500	1500.	7.500	7.500
Low	2.500	50.00	5.000	2.500	500.0	2.500	2.500

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.380	3.592	96.69	739.2	972.5	10.41	2078.
SDev	.059	.097	3.16	17.2	6.3	.06	54.
%RSD	1.102	2.704	3.264	2.325	.6474	.5545	2.596
#1	5.427	3.488	93.95	756.8	979.8	10.47	2141.
#2	5.313	3.606	100.1	738.2	968.6	10.37	2049.
#3	5.399	3.680	95.97	722.5	969.1	10.38	2046.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	7.500	150.0	1500.	1500.	15.00	3000.
Low	2.500	2.500	50.00	500.0	500.0	5.000	1000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.603	9.801	21.24	14.93	2.947	6.034	11.36
SDev	.130	2.396	.31	.08	.415	2.949	.28
%RSD	2.320	24.44	1.444	.5624	14.06	48.87	2.475
#1	5.671	7.766	21.55	15.01	2.911	6.531	11.23
#2	5.684	12.44	20.94	14.94	3.379	2.868	11.69
#3	5.453	9.195	21.21	14.84	2.552	H8.702	11.17
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	15.00	30.00	30.00	4.500	7.500	15.00
Low	2.500	5.000	10.00	10.00	1.500	2.500	5.000

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.62	3.495	2.664	12.05	11.01	6.129	5.978
SDev	.99	2.413	1.204	1.62	.73	5.160	2.897
%RSD	8.482	69.05	45.20	13.47	6.621	84.20	48.46
#1	11.39	6.125	1.297	10.18	11.74	10.49	4.545
#2	12.70	2.979	3.569	13.04	11.00	.4317	4.076
#3	10.78	1.382	3.127	12.95	10.28	7.464	9.312
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	15.00						
Low	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.02	52.98	5.086	47.13
SDev	1.99	.71	.483	7.18
%RSD	9.447	1.342	9.489	15.23
#1	20.04	53.61	5.172	55.08
#2	23.30	53.12	5.519	45.19
#3	19.71	52.21	4.566	41.13
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	75.00	7.500	60.00
Low	10.00	25.00	2.500	20.00

Method: CLP3I Sample Name: 928874 #16 Operator: 2294
R Time: 02/15/99 12:32:15
Client: SDG:20601 ClientID:PBS 1:1
Mo CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0982	18.20	.0276	.1456	-58.57	.3154	.3840
SDev	.2081	2.41	.0294	.0182	.13	.1679	.2130
%RSD	211.8	13.26	106.3	12.52	.2304	53.24	55.46
#1	-.3034	15.67	.0264	.1248	-58.45	.2921	.2610
#2	-.1040	18.47	.0575	.1536	-58.54	.1604	.2611
#3	.1127	20.48	-.0011	.1585	-58.71	.4938	.6300
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2498	-.7012	-6.274	-7.822	1.120	-.0313	-832.4
SDev	.1794	.0684	2.028	3.566	2.860	.0509	83.3
%RSD	71.82	9.759	32.32	45.59	255.4	162.4	10.00
#1	-.3964	-.7803	-8.162	-10.29	-2.182	-.0870	-882.1
#2	-.0498	-.6617	-6.530	-3.734	2.792	-.0199	-878.9
#3	-.3031	-.6617	-4.131	-9.443	2.749	.0129	-736.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2054	-.8007	.1876	-3.031	-.3476	.6795	.5994
SDev	.3116	1.6165	.1221	.102	.3797	1.891	.9254
%RSD	151.7	201.9	65.11	3.356	109.2	278.3	154.4
#1	.2579	-1.544	.0466	-3.148	-.7534	-.5685	-.4469
#2	.4874	-1.912	.2563	-2.970	-.2883	-.2479	.9345
#3	-.1290	1.054	.2600	-2.974	-.0010	2.855	1.311
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.096	-2.359	.6478	.4898	.6453	3.670	-.8225
SDev	.626	1.381	.6430	1.776	1.450	4.386	1.3503
%RSD	29.87	58.52	99.25	362.5	224.7	119.5	164.2
#1	1.380	-2.559	.1392	.3965	-.8769	3.025	-2.372
#2	2.366	-3.629	1.371	-1.237	2.010	-.3577	-.2020
#3	2.542	-.8893	.4337	2.310	.8028	8.343	.1059
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.316	1.083	-.7673	-5.104
SDev	1.249	2.106	.5675	2.349
%RSD	28.94	194.4	73.96	46.02
#1	2.990	3.134	-.7917	-6.784
	5.470	1.190	-.1880	-2.420
	4.488	-1.074	-1.322	-6.109
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

Method: CLP3I Sample Name: PLCSS928593 #17 Operator:
R Time: 02/15/99 12:39:09
C ent: SDG:20601 ClientID:LCSS 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	578.9	40280.	1824.	773.9	10330.	1089.	694.0
SDev	.7	105.	2.	1.3	28.	1.	.4
%RSD	.1232	.2599	.1136	.1715	.2705	.0568	.0618
#1	578.1	40160.	1826.	772.5	10300.	1089.	693.9
#2	579.3	40320.	1824.	775.1	10360.	1090.	694.5
#3	579.4	40360.	1821.	774.2	10340.	1089.	693.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	735.0	76900.	2610.	1010.	16600.	1420.	956.0
Low	408.0	37600.	1280.	565.0	9030.	849.0	518.0

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1672.	962.2	51370.	10890.	9908.	2412.	12330.
SDev	2.	1.2	49.	14.	18.	1.	36.
%RSD	.1061	.1195	.0944	.1330	.1855	.0588	.2960
#1	1670.	960.9	51310.	10890.	9892.	2412.	12300.
#2	1674.	962.9	51400.	10900.	9928.	2414.	12370.
#3	1672.	962.9	51380.	10870.	9903.	2411.	12310.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2290.	1170.	133000.	20400.	15300.	3190.	18300.
Low	1210.	646.0	48300.	9570.	8880.	2040.	9390.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	624.7	862.5	858.1	2005.	656.0	1221.	144.6
SDev	1.2	3.4	.5	2.	2.4	1.	1.2
%RSD	.1931	.3987	.0613	.1004	.3601	.0795	.8478
#1	623.3	858.9	857.6	2003.	653.3	1220.	145.7
#2	625.5	862.6	858.6	2007.	657.1	1222.	143.3
#3	625.2	865.8	858.0	2004.	657.7	1220.	144.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	986.0	1140.	1260.	2360.	873.0	1550.	496.0
Low	381.0	458.0	651.0	1440.	447.0	914.0	34.90

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1701.	659.5	654.3	144.9	144.5	1214.	1224.
SDev	2.	.7	3.9	2.4	2.4	7.	3.
%RSD	.1255	.0989	.5908	1.626	1.640	.5742	.2522
#1	1699.	660.3	649.9	142.8	147.2	1219.	1221.
#2	1703.	659.1	656.1	144.4	142.7	1217.	1224.
#3	1700.	659.1	657.0	147.4	143.6	1206.	1227.
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	2250.						
Low	1020.						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1671.	.4495	1078.	1607.
SDev	2.	2.504	1.	25.
%RSD	.1308	557.0	.0664	1.530
#1	1668.	2.124	1078.	1635.
	1672.	1.653	1079.	1592.
	1671.	-2.429	1078.	1593.
Errors	LC Pass	NOCHECK	LC Pass	LC Pass
High	2240.		1460.	3580.
Low	1240.		789.0	1110.

Method: CLP3I Sample Name: 928583 #18 Operator:
R Time: 02/15/99 12:46:03
C ment: SDG:20601 ClientID:DP-102-3.5 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3536	122900.	932.2	7.095	22280.	L-9.673	118.3
SDev	.1313	184.	1.2	.033	111.	.356	.5
%RSD	37.12	.1497	.1269	.4596	.4963	3.680	.4313
#1	.3310	122900.	933.6	7.129	22150.	L-9.366	117.8
#2	.2352	123000.	931.3	7.094	22310.	L-10.06	118.3
#3	.4948	122700.	931.9	7.063	22370.	L-9.590	118.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	225.2	154.5	182800.	10730.	43550.	1675.	6769.
SDev	.2	.2	581.	22.	152.	7.	57.
%RSD	.0827	.1613	.3178	.2046	.3489	.3899	.8361
#1	225.0	154.8	182100.	10750.	43400.	1668.	6704.
#2	225.3	154.3	182800.	10710.	43550.	1675.	6797.
#3	225.3	154.4	183300.	10740.	43700.	1681.	6807.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	297.9	30.91	239.0	559.6	80.98	1.502	3.937
SDev	.9	1.86	.8	2.0	.59	2.059	1.221
%RSD	.3112	6.020	.3482	.3546	.7296	137.0	31.02
#1	297.8	29.37	238.1	557.5	81.39	3.116	4.967
#2	298.8	32.98	239.4	560.1	80.30	2.207	2.588
#3	296.9	30.39	239.5	561.4	81.25	-.8163	4.256
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.36	93.23	74.85	.9125	5.438	-9.390	6.932
SDev	.55	.75	.98	2.214	2.471	6.100	3.310
%RSD	2.839	.8022	1.316	242.6	45.44	64.97	47.76
#1	18.73	93.88	75.13	-1.411	8.142	-2.694	6.009
#2	19.60	93.39	73.75	1.151	3.296	-14.63	10.61
#3	19.75	92.41	75.66	2.997	4.876	-10.84	4.181
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.583	8.688	3.413	2056.
SDev	2.673	1.218	.304	20.
%RSD	35.24	14.02	8.909	.9770
#1	8.743	9.425	3.727	2079.
	4.527	9.358	3.120	2041.
	9.480	7.283	3.393	2048.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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Method: CLP3I Sample Name: 928594 #19 Operator:
Run Time: 02/15/99 12:52:57
Comment: SDG:20601 ClientID:DP-102-3.5D 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4655	108600.	710.5	6.917	25680.	L-10.70	113.5
SDev	.4829	556.	2.1	.006	53.	.30	.3
%RSD	103.7	.5118	.2893	.0835	.2055	2.784	.3046
#1	-.0933	108000.	712.8	6.921	25730.	L-10.35	113.8
#2	-.2921	108900.	709.6	6.919	25680.	L-10.90	113.2
#3	-1.011	108900.	708.9	6.910	25630.	L-10.83	113.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	186.0	209.7	212100.	10920.	40800.	2017.	7872.
SDev	.8	.7	438.	38.	112.	7.	155.
%RSD	.4450	.3574	.2066	.3514	.2747	.3510	1.974
#1	187.0	208.8	212500.	10960.	40920.	2024.	8048.
#2	185.5	210.1	212100.	10910.	40800.	2016.	7815.
#3	185.6	210.1	211700.	10880.	40690.	2010.	7753.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	280.3	35.47	272.1	655.9	94.72	-.1348	4.028
SDev	1.1	2.27	.5	1.9	.85	2.3554	.449
%RSD	.4003	6.401	.1661	.2874	.8930	1747.	11.15
#1	281.1	38.03	272.6	657.7	93.97	1.392	3.597
#2	280.7	33.70	271.9	656.1	95.63	1.051	4.493
#3	279.0	34.69	271.8	653.9	94.54	-2.847	3.994
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.50	106.1	89.03	2.480	4.792	-10.40	4.982
SDev	1.04	2.5	2.15	1.328	.682	.62	3.839
%RSD	2.943	2.379	2.420	53.54	14.23	5.979	77.05
#1	35.46	108.8	86.57	2.616	4.078	-10.89	7.513
#2	34.47	105.7	90.59	3.735	4.863	-10.62	6.869
#3	36.56	103.8	89.93	1.090	5.436	-9.700	.5651
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.142	7.583	7.266	2106.
SDev	1.200	2.053	.485	29.
%RSD	28.99	27.08	6.674	1.398
#1	3.021	9.942	7.826	2139.
#2	3.995	6.611	6.996	2094.
#3	5.408	6.197	6.976	2084.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

lethod: CLP3I Sample Name: 928591 #20 Operator:
Time: 02/15/99 12:59:51
ent: SDG:20601 ClientID:DP-102-3.5S 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	48.22	137400.	2975.	55.83	24790.	35.75	605.8
SDev	.29	707.	8.	.17	55.	.30	1.7
%RSD	.6102	.5145	.2574	.3077	.2216	.8380	.2853
#1	48.30	136700.	2980.	55.97	24830.	36.04	607.6
#2	47.89	137600.	2966.	55.64	24730.	35.44	604.2
#3	48.46	138100.	2979.	55.87	24820.	35.76	605.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	409.3	420.2	198400.	11710.	48060.	2294.	6723.
SDev	2.0	2.4	491.	49.	118.	5.	98.
%RSD	.4973	.5812	.2473	.4203	.2455	.2376	1.459
#1	411.3	417.6	198700.	11750.	48170.	2299.	6834.
#2	407.3	420.5	197800.	11660.	47930.	2288.	6685.
#3	409.4	422.4	198600.	11730.	48090.	2294.	6649.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	793.3	77.81	731.7	1092.	106.7	9.915	63.80
SDev	3.0	1.54	2.0	3.	.9	1.560	.76
%RSD	.3739	1.982	.2772	.2582	.8025	15.73	1.194
#1	796.2	76.71	732.9	1094.	105.8	11.71	64.67
#2	790.3	77.15	729.4	1089.	106.8	9.138	63.42
#3	793.4	79.57	732.8	1093.	107.5	8.897	63.29
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	55.26	119.3	100.5	62.82	64.27	2.013	13.85
SDev	1.40	3.3	2.8	2.53	2.21	7.618	1.71
%RSD	2.534	2.791	2.810	4.033	3.444	378.4	12.34
#1	56.59	123.0	97.23	60.63	66.68	10.60	12.26
#2	53.80	116.8	101.8	65.60	62.33	-3.935	15.66
#3	55.39	117.9	102.4	62.24	63.81	-.6244	13.64
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	846.7	1005.	851.2	2801.
SDev	1.2	1.	1.4	42.
%RSD	.1363	.1196	.1613	1.512
#1	846.2	1005.	851.6	2849.
	848.0	1005.	849.7	2770.
	845.8	1003.	852.3	2784.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928592 #21 Operator:
Run Time: 02/15/99 13:06:45
Client: SDG:20601 ClientID:DP-102-3.5M 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	48.71	122800.	2854.	55.68	26070.	37.38	574.4
SDev	.16	123.	14.	.30	123.	.19	2.2
%RSD	.3387	.1000	.4911	.5448	.4707	.5101	.3790
#1	48.88	122700.	2865.	55.87	26130.	37.59	575.1
#2	48.69	122800.	2859.	55.84	26160.	37.34	576.1
#3	48.55	122900.	2839.	55.33	25930.	37.21	571.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	384.1	419.9	182000.	9353.	39460.	2063.	6596.
SDev	1.9	.6	909.	52.	173.	9.	105.
%RSD	.5035	.1441	.4991	.5594	.4387	.4234	1.589
#1	385.2	419.4	182600.	9399.	39510.	2066.	6713.
#2	385.2	419.8	182600.	9365.	39610.	2070.	6565.
#3	381.9	420.6	181000.	9296.	39270.	2054.	6510.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	721.8	76.89	713.5	1003.	101.0	8.881	62.61
SDev	5.3	.86	3.4	5.	.7	1.745	1.53
%RSD	.7407	1.121	.4713	.4938	.7301	19.65	2.440
#1	725.0	76.24	715.0	1003.	101.0	9.524	62.79
#2	724.8	77.87	715.9	1007.	101.8	6.906	64.05
#3	715.6	76.57	709.7	997.3	100.3	10.21	61.01
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	57.78	113.0	95.08	62.07	62.88	-.9501	13.78
SDev	1.10	4.0	1.50	1.36	1.65	2.0650	1.97
%RSD	1.901	3.558	1.581	2.199	2.621	217.3	14.31
#1	57.00	116.4	93.37	61.77	63.28	-1.891	15.21
#2	59.03	114.0	95.68	63.55	64.29	-2.377	11.53
#3	57.29	108.5	96.20	60.87	61.07	1.418	14.60
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	829.7	979.1	848.9	2528.
SDev	4.5	8.5	5.1	35.
%RSD	.5473	.8644	.5969	1.394
#1	834.4	986.7	851.6	2567.
	829.3	980.7	852.0	2514.
	825.4	970.0	843.0	2501.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: SDI928583 #22 Operator:
Run Time: 02/15/99 13:13:39
Client: SDG:20601 ClientID:DP-102-3.5L 1:5
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0311	23560.	193.7	1.657	4554.	-2.287	24.93
SDev	.1623	68.	.3	.019	6.	.058	.39
%RSD	521.5	.2869	.1581	1.152	.1350	2.542	1.555
#1	-.2161	23490.	194.0	1.640	4549.	-2.226	24.49
#2	.0353	23580.	193.4	1.653	4561.	-2.342	25.15
#3	.0874	23630.	193.6	1.678	4553.	-2.292	25.16
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	47.19	29.57	38610.	1833.	8955.	352.9	1263.
SDev	.30	.13	5.	11.	1.	.3	15.
%RSD	.6408	.4261	.0136	.6005	.0133	.0802	1.179
#1	47.44	29.71	38600.	1846.	8954.	353.2	1262.
#2	47.28	29.48	38610.	1828.	8956.	352.8	1278.
#3	46.86	29.52	38610.	1826.	8955.	352.7	1248.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	61.60	10.48	49.87	112.9	17.63	.8321	1.112
SDev	.45	1.79	.14	.2	.26	1.662	1.133
%RSD	.7253	17.06	.2867	.2182	1.461	199.7	101.8
#1	62.10	10.89	49.87	113.1	17.36	.1523	.9459
#2	61.49	8.523	50.02	112.6	17.87	2.726	.0720
#3	61.22	12.03	49.73	113.0	17.66	-.3823	2.319
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.367	20.52	16.18	3.145	.0887	-1.192	1.834
SDev	1.365	1.38	.73	3.464	1.149	3.850	1.398
%RSD	25.44	6.723	4.537	110.2	1296.	322.9	76.22
#1	6.812	20.93	15.57	.2445	1.287	-.1796	.3092
#2	5.190	21.66	15.97	2.209	-1.004	2.050	3.055
#3	4.099	18.99	16.99	6.981	-.0175	-5.448	2.138
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.028	2.854	.3623	429.6
SDev	1.217	1.563	.4043	10.3
%RSD	59.99	54.77	111.6	2.398
#1	.9790	4.618	.7869	441.3
	3.362	2.303	-.0181	425.2
	1.743	1.641	.3183	422.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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Method: CLP3I Sample Name: 928595 #23 Operator:
Run Time: 02/15/99 13:20:33
Comment: SDG:20601 ClientID:DP-1010-12 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2645	38680.	412.7	3.563	322800.	3.062	48.38
SDev	.3497	102.	.5	.019	865.	.119	.25
%RSD	132.2	.2639	.1313	.5423	.2679	3.890	.5073
#1	.2748	38560.	413.1	3.571	322100.	3.171	48.53
#2	-.0902	38740.	412.9	3.577	322500.	2.935	48.51
#3	.6089	38740.	412.1	3.541	323800.	3.080	48.10
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	117.0	130.1	85640.	5675.	60230.	12980.	3190.
SDev	.1	.3	136.	15.	93.	28.	104.
%RSD	.0909	.1937	.1592	.2595	.1540	.2193	3.260
#1	117.1	129.9	85520.	5690.	60150.	12950.	3304.
#2	117.0	130.4	85610.	5673.	60210.	12970.	3101.
#3	116.9	130.0	85790.	5661.	60330.	13010.	3163.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	127.0	16.01	146.6	373.9	135.0	2.623	3.229
SDev	.3	2.75	.1	.7	.9	1.726	.829
%RSD	.1987	17.19	.0806	.1820	.6354	65.83	25.66
#1	127.0	17.37	146.8	373.1	135.4	.8329	3.800
#2	126.7	17.81	146.5	374.2	134.1	4.278	3.609
#3	127.2	12.84	146.6	374.4	135.7	2.757	2.279
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	63.35	140.2	132.5	3.680	2.996	1.349	3.249
SDev	1.32	1.5	.6	1.751	.819	2.944	1.165
%RSD	2.080	1.067	.4514	47.59	27.36	218.2	35.87
#1	62.48	141.1	132.5	5.656	2.865	-1.408	1.943
#2	62.70	138.5	131.9	3.063	3.872	4.450	4.183
#3	64.87	140.9	133.1	2.321	2.249	1.006	3.622
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.06	4.247	12.01	928.2
SDev	2.60	.062	.95	10.9
%RSD	23.51	1.470	7.950	1.172
#1	9.773	4.275	13.05	939.6
#2	9.346	4.291	11.17	918.0
#3	14.05	4.176	11.80	927.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

ethod: CLP3I Sample Name: 928603 #24 Operator:
u Time: 02/15/99 13:27:27
c nt: SDG:20601 ClientID:DP-115-8 1:1
oc CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2234	53010.	322.5	3.361	591800.	.1399	57.52
SDev	.2409	99.	4.0	.050	8807.	.1124	.89
%RSD	107.8	.1866	1.233	1.490	1.488	80.41	1.556
#1	.0250	52900.	327.1	3.415	H601900.	.1637	58.50
#2	-.4559	53050.	320.3	3.317	585900.	.2384	56.74
#3	-.2393	53090.	320.2	3.352	587400.	.0174	57.32
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	118.2	106.3	133700.	11700.	225100.	2749.	3435.
SDev	1.7	.3	1684.	154.	2733.	35.	144.
%RSD	1.470	.2715	1.259	1.320	1.214	1.287	4.186
#1	120.2	106.0	135700.	11870.	228200.	2790.	3592.
#2	117.3	106.3	132600.	11610.	223300.	2728.	3404.
#3	117.1	106.6	133000.	11600.	223700.	2730.	3310.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	138.2	9.803	181.2	301.1	41.96	1.537	3.769
SDev	1.9	2.299	2.5	4.1	.77	1.915	.862
%RSD	1.341	23.46	1.393	1.377	1.838	124.6	22.88
#1	140.2	11.85	184.1	305.9	42.05	-.5335	3.093
#2	136.7	7.316	179.7	298.4	42.68	1.898	4.740
#3	137.6	10.24	179.9	299.1	41.14	3.245	3.474
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	56.34	48.59	38.64	3.781	3.754	.0274	2.281
SDev	2.84	3.46	1.86	1.070	1.541	3.534	1.926
%RSD	5.033	7.127	4.812	28.30	41.06	12890.	84.44
#1	59.57	52.56	36.79	3.171	3.045	-3.798	1.087
#2	55.17	47.01	40.51	3.156	5.522	3.172	1.253
#3	54.28	46.19	38.62	5.017	2.695	.7079	4.503
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.769	4.275	9.233	1048.
SDev	2.901	.710	.623	34.
%RSD	164.0	16.60	6.744	3.285
#1	-1.175	4.969	9.901	1084.
	4.625	3.550	9.130	1044.
	1.856	4.307	8.668	1016.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CCV Operator:
Run Time: 02/15/99 13:34:21
Segment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	102.0	2080.	1067.	1031.	48510.	1010.	1030.
SDev	.2	2.	8.	6.	279.	5.	6.
%RSD	.2223	.1192	.7163	.5509	.5759	.5156	.5971
#1	102.3	2077.	1076.	1038.	48830.	1016.	1037.
#2	101.9	2080.	1063.	1028.	48330.	1007.	1026.
#3	101.8	2082.	1062.	1028.	48380.	1008.	1027.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1016.	1015.	1984.	48480.	49720.	1026.	49240.
SDev	6.	1.	5.	386.	286.	6.	336.
%RSD	.5445	.0866	.2590	.7972	.5744	.5905	.6829
#1	1022.	1015.	1983.	48920.	50050.	1033.	49620.
#2	1011.	1016.	1989.	48290.	49560.	1022.	49110.
#3	1013.	1014.	1979.	48230.	49560.	1023.	48980.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1017.	1059.	1043.	1026.	1025.	1052.	1048.
SDev	6.	8.	6.	7.	5.	4.	7.
%RSD	.5827	.7473	.5607	.6905	.5130	.3917	.6869
#1	1024.	1068.	1049.	1034.	1032.	1057.	1055.
#2	1012.	1053.	1038.	1023.	1022.	1050.	1041.
#3	1015.	1056.	1040.	1021.	1023.	1049.	1046.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1052.	1027.	1025.	1040.	1051.	1050.	1053.
SDev	5.	8.	4.	5.	8.	8.	5.
%RSD	.4828	.7792	.3837	.5174	.8080	.7679	.4831
#1	1058.	1036.	1029.	1046.	1060.	1055.	1058.
#2	1049.	1022.	1022.	1038.	1043.	1055.	1048.
#3	1049.	1022.	1023.	1036.	1051.	1041.	1054.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1021.	1051.	1045.	1012.
SDev	6.	7.	4.	20.
%RSD	.5725	.6433	.4300	2.014
#1	1028.	1059.	1049.	1036.
#2	1018.	1048.	1041.	999.9
#3	1017.	1046.	1044.	1001.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/15/99 13:41:16
Comment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0260	33.82	.1683	.3602	-47.07	.0317	.0935
SDev	.3263	9.10	.0677	.0850	5.61	.0982	.1897
%RSD	1254.	26.89	40.21	23.59	11.92	309.7	202.9
#1	.3294	44.09	.2448	.4568	-41.42	.0862	.2347
#2	-.3121	30.62	.1160	.3272	-47.14	-.0816	-.1221
#3	-.0954	26.76	.1442	.2967	-52.64	.0905	.1679
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0514	-1.121	-.8135	2.015	13.14	.2724	-152.5
SDev	.3486	.193	4.3175	8.870	2.14	.0696	64.6
%RSD	678.2	17.18	530.8	440.3	16.31	25.55	42.35
#1	.3980	-1.225	-4.087	11.79	15.60	.3505	-164.5
#2	-.2992	-1.240	-2.432	-5.510	11.68	.2494	-210.3
#3	.0555	-.8988	4.080	-.2410	12.13	.2172	-82.79
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3162	1.207	.1517	-4.779	.0899	1.834	1.203
SDev	.2069	2.438	.0024	.060	.9530	1.732	.330
%RSD	65.44	202.1	1.614	1.252	1060.	94.41	27.47
#1	.4877	-.0098	.1531	-4.718	-.8134	3.822	1.182
#2	.3744	-.3840	.1531	-4.837	-.0028	.6516	.8828
#3	.0864	4.013	.1488	-4.782	1.086	1.029	1.543
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.633	.4465	-.0970	1.910	.8407	3.485	1.001
SDev	.447	1.569	1.3986	2.810	1.299	4.399	1.200
%RSD	16.99	351.5	1442.	147.1	154.6	126.2	119.9
#1	2.953	.9653	-1.710	-1.156	2.341	8.223	1.616
#2	2.122	-1.317	.6443	2.522	.0556	2.704	-.3819
#3	2.824	1.691	.7750	4.362	.1260	-.4709	1.769
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.838	1.893	-.0406	.0321
SDev	.469	1.206	.2627	4.965
%RSD	25.51	63.69	647.1	15480.
#1	1.763	3.240	-.0511	4.627
	2.340	.9175	-.2978	-5.235
	1.411	1.520	.2272	.7048
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 928869 #27 Operator:
Run Time: 02/15/99 13:48:10
Client: SDG:20601 ClientID:DP-128-10 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3465	22210.	105.1	.8841	6286.	-.8362	7.894
SDev	.3429	124.	2.4	.0427	134.	.1994	.088
%RSD	98.97	.5564	2.272	4.834	2.132	23.84	1.116
#1	.6209	22150.	106.5	.8697	6338.	-.6208	7.833
#2	.4566	22130.	102.3	.8504	6134.	-.8736	7.995
#3	-.0379	22350.	106.5	.9322	6386.	-1.014	7.853
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	36.22	11.73	15750.	1173.	3784.	163.8	1073.
SDev	1.08	.23	331.	29.	82.	3.4	111.
%RSD	2.986	1.973	2.104	2.488	2.166	2.093	10.33
#1	37.39	11.87	15880.	1202.	3814.	165.3	1198.
#2	35.25	11.84	15370.	1144.	3691.	159.9	984.5
#3	36.01	11.46	15990.	1172.	3847.	166.3	1038.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	24.50	1.274	28.38	58.70	31.16	3.487	3.004
SDev	1.00	1.718	.48	1.39	.72	1.744	.627
%RSD	4.095	134.8	1.705	2.367	2.318	50.02	20.87
#1	25.19	2.422	28.43	59.08	31.78	1.865	2.749
#2	23.35	2.102	27.87	57.16	30.37	3.265	2.545
#3	24.97	-.7013	28.83	59.85	31.34	5.332	3.718
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.834	37.25	28.11	2.601	3.196	2.017	4.212
SDev	.676	.92	.77	2.569	.441	1.335	1.980
%RSD	23.84	2.459	2.722	98.78	13.81	66.15	46.99
#1	3.201	38.30	28.51	2.287	2.970	.5813	2.497
#2	2.054	36.63	27.23	.2030	3.705	2.251	3.762
#3	3.247	36.82	28.59	5.312	2.914	3.219	6.378
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.676	.9911	.9318	832.1
SDev	2.166	1.570	.7661	29.9
%RSD	32.45	158.4	82.22	3.598
#1	5.466	2.766	.9951	859.6
#2	9.177	.4238	.1360	800.2
#3	5.385	-.2165	1.664	836.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 928870 #28 Operator:
Run Time: 02/15/99 13:56:20
Client: SDG:20601 ClientID:DP-132-4 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0090	10980.	118.7	.9443	442400.	3.068	15.46
SDev	.1543	20.	.3	.0862	1861.	.150	.34
%RSD	1723.	.1790	.2739	9.125	.4206	4.886	2.206
#1	.1647	11000.	119.0	1.035	440200.	3.220	15.09
#2	-.1304	10990.	118.6	.9348	443200.	2.920	15.77
#3	-.0612	10960.	118.4	.8633	443600.	3.063	15.52
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	32.44	46.08	32650.	2262.	104300.	1211.	1072.
SDev	.94	.32	39.	17.	218.	4.	19.
%RSD	2.889	.6918	.1182	.7548	.2092	.2959	1.751
#1	33.52	45.77	32610.	2282.	104000.	1207.	1091.
#2	31.95	46.07	32670.	2250.	104400.	1213.	1053.
#3	31.85	46.41	32680.	2255.	104400.	1214.	1072.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	39.57	3.027	43.02	124.0	24.79	.7480	2.341
SDev	.46	1.324	.29	.3	.47	.8325	.120
%RSD	1.158	43.73	.6714	.2798	1.880	111.3	5.133
#1	40.10	1.529	42.73	123.6	24.31	1.303	2.246
#2	39.37	4.040	43.02	124.1	24.84	-.2093	2.301
#3	39.25	3.514	43.30	124.3	25.24	1.150	2.476
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	17.33	26.88	23.74	3.640	1.684	-4.151	3.184
SDev	1.23	2.26	1.81	3.246	1.635	4.700	1.388
%RSD	7.077	8.394	7.620	89.18	97.11	113.2	43.60
#1	18.57	28.84	22.03	.9680	2.875	-3.531	3.708
#2	16.12	27.37	23.56	7.252	-.1802	-9.129	4.235
#3	17.29	24.41	25.64	2.699	2.356	.2087	1.610
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.120	.8914	2.161	558.9
SDev	1.260	.1906	.631	23.1
%RSD	30.57	21.38	29.20	4.124
#1	3.666	.9167	2.738	585.5
	5.544	1.068	1.487	544.0
	3.151	.6894	2.258	547.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS928583 #29 Operator:
Run Time: 02/15/99 14:03:14
Client: SDG:20601 ClientID:DP-102-3.5A 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.39	122600.	926.0	16.75	22050.	-.2181	215.3
SDev	.27	552.	1.9	.03	25.	.3184	.6
%RSD	1.311	.4507	.2067	.2016	.1143	145.9	.2792
#1	20.60	121900.	927.6	16.73	22050.	.0697	215.6
#2	20.08	122800.	926.6	16.79	22070.	-.1641	215.7
#3	20.48	123000.	923.9	16.73	22020.	-.5601	214.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	241.6	204.8	182100.	10680.	43080.	1684.	6790.
SDev	.7	.8	198.	18.	69.	4.	31.
%RSD	.3086	.4012	.1089	.1705	.1594	.2243	.4555
#1	242.3	203.9	182100.	10690.	43090.	1686.	6789.
#2	241.7	205.3	182300.	10680.	43140.	1686.	6760.
#3	240.8	205.3	181900.	10660.	43010.	1680.	6822.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	367.3	51.70	338.2	619.3	86.66	9.179	122.0
SDev	.4	3.10	.2	.9	.97	1.357	.4
%RSD	.1204	6.000	.0528	.1439	1.115	14.78	.3470
#1	367.4	55.19	338.4	619.1	85.79	7.747	122.2
#2	367.7	50.62	338.0	620.3	86.48	10.45	121.5
#3	366.9	49.28	338.1	618.5	87.70	9.344	122.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	38.78	98.17	80.90	119.4	123.2	.8891	13.31
SDev	.89	1.55	2.22	1.0	.6	.6294	2.05
%RSD	2.297	1.579	2.743	.8768	.4714	70.80	15.41
#1	39.55	99.67	78.85	118.9	123.9	1.168	11.02
#2	37.81	98.25	80.59	118.8	122.8	1.331	14.99
#3	38.99	96.58	83.26	120.7	123.0	.1684	13.92
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.063	6.933	2.401	2046.
SDev	1.899	.785	.211	29.
%RSD	37.51	11.32	8.795	1.428
#1	6.120	6.963	2.624	2079.
#2	6.197	7.703	2.204	2036.
#3	2.871	6.134	2.376	2024.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS928430 5X Operator:
Run Time: 02/15/99 14:10:08
Comment: 17-01-002A MP 2/15/99 2294
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.92	123.3	88.53	10.27	384900.	13.66	101.0
SDev	.20	12.3	.01	.04	1270.	.20	.5
%RSD	1.020	9.946	.0164	.3845	.3298	1.471	.5130
#1	20.15	132.0	88.53	10.28	383700.	13.43	100.5
#2	19.77	128.7	88.55	10.30	384900.	13.80	101.2
#3	19.84	109.3	88.52	10.22	386200.	13.74	101.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	550000.	120000.	5000.	600000.	30000.	40000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	222.8	85.52	29.15	7563.	8439.	31.39	10500.
SDev	.3	.20	1.60	2.	19.	.06	31.
%RSD	.1324	.2352	5.487	.0326	.2244	.2025	.2962
#1	222.5	85.41	29.25	7560.	8421.	31.33	10470.
#2	223.0	85.39	30.69	7565.	8436.	31.39	10480.
#3	222.9	85.75	27.50	7564.	8459.	31.46	10530.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	40000.	40000.	300000.	400000.	600000.	20000.	500000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.29	18.94	116.5	71.81	56.33	79.95	128.0
SDev	.35	2.62	.3	.01	.01	1.30	1.5
%RSD	.4347	13.82	.2296	.0182	.0230	1.620	1.164
#1	79.95	15.92	116.2	71.82	56.33	79.55	129.1
#2	80.65	20.35	116.6	71.81	56.34	81.39	128.5
#3	80.27	20.55	116.6	71.80	56.32	78.90	126.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	20000.	40000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	36.59	56.42	56.28	128.4	127.7	84.11	77.86
SDev	1.84	3.15	1.57	.6	2.1	4.28	.23
%RSD	5.035	5.584	2.794	.4895	1.611	5.088	.2974
#1	38.63	60.05	54.46	129.1	129.1	82.51	78.07
#2	36.09	54.82	57.09	128.0	128.8	88.96	77.61
#3	35.05	54.39	57.27	128.1	125.4	80.86	77.91
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-7.407	.6573	2.316	-2.007
SDev	2.931	1.586	.379	4.446
%RSD	39.57	241.3	16.38	221.5
#1	-10.79	2.257	2.721	-7.112
#2	-5.780	-.9156	1.969	.0654
#3	-5.650	.6308	2.258	1.024
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CRI Operator:
Run Time: 02/15/99 14:17:03
Comment: CRI
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.37	39.08	.0594	10.43	-1.083	10.14	102.9
SDev	.23	3.42	.0613	.05	12.514	.25	.6
%RSD	1.181	8.746	103.2	.5014	1155.	2.493	.6166
#1	19.22	37.11	.1298	10.49	11.66	10.37	103.6
#2	19.63	37.11	.0301	10.40	-1.554	9.870	102.6
#3	19.26	43.03	.0182	10.41	-13.35	10.19	102.5
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.11	48.19	-2.114	-1.132	5.756	31.08	-439.2
SDev	.71	.19	5.135	9.098	1.415	.17	252.8
%RSD	3.530	.3924	242.9	803.3	24.59	.5523	57.57
#1	20.84	47.99	2.046	8.053	6.482	31.25	-408.1
#2	20.07	48.36	-.5362	-1.310	6.661	31.06	-203.2
#3	19.42	48.24	-7.853	-10.14	4.125	30.91	-706.1
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.99	21.02	104.4	32.92	6.146	10.73	122.8
SDev	.42	1.33	.7	.34	.512	.76	.8
%RSD	.5168	6.317	.6257	1.032	8.336	7.104	.6173
#1	81.47	19.49	105.1	33.24	5.693	11.46	123.7
#2	80.70	21.83	104.4	32.95	6.702	10.78	122.4
#3	80.81	21.74	103.8	32.56	6.043	9.941	122.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.90	5.642	6.387	123.1	122.7	13.99	9.088
SDev	.93	.729	1.011	.3	1.0	1.87	2.065
%RSD	4.254	12.92	15.83	.2768	.8019	13.37	22.72
#1	20.88	6.444	5.307	123.4	123.8	11.97	11.20
#2	22.71	5.462	7.310	122.7	122.2	14.33	8.995
#3	22.11	5.020	6.543	123.0	122.1	15.67	7.072
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	44.29	42.58	20.71	59.97
SDev	1.87	2.04	.45	8.70
%RSD	4.225	4.784	2.165	14.51
#1	42.13	44.49	20.88	70.00
#2	45.30	42.83	20.21	54.44
#3	45.43	40.44	21.06	55.47
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.00	50.00	50.00	50.00

lethod: CLP3I Sample Name: ICSA Operator:
Time: 02/15/99 14:23:57
nt: ICSA ICSA
lo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1561	535100.	1.344	.3885	500200.	-3.462	-.2001
SDev	.3852	2255.	.096	.0137	295.	.417	.4673
%RSD	246.9	.4214	7.122	3.527	.0590	12.06	233.6
#1	.2774	532600.	1.453	.4043	500300.	-3.031	-.1507
#2	-.4594	535700.	1.305	.3792	499900.	-3.492	.2407
#3	-.2861	537000.	1.274	.3821	500500.	-3.864	-.6901
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0976	1.057	198600.	3.116	531200.	.2724	-344.0
SDev	.5707	.272	146.	14.76	354.	.0537	181.7
%RSD	584.4	25.69	.0736	473.8	.0666	19.71	52.83
#1	.5425	1.294	198700.	20.08	531100.	.2991	-318.3
#2	-.2824	1.116	198400.	-3.866	530900.	.2106	-176.5
#3	-.5531	.7608	198700.	-6.862	531600.	.3075	-537.2
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.428	-3.010	3.646	-3.838	-2.774	-1.948	1.833
SDev	.976	2.718	.226	.130	1.819	1.106	.989
%RSD	68.35	90.31	6.198	3.375	65.59	56.77	53.97
#1	2.273	-4.222	3.474	-3.739	-4.663	-1.788	1.601
#2	1.650	.1035	3.902	-3.789	-2.624	-.9310	2.918
#3	.3599	-4.910	3.563	-3.984	-1.034	-3.126	.9804
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.395	20.24	-14.28	-2.468	3.971	-8.991	1.558
SDev	.449	3.32	4.14	3.377	.474	1.783	1.614
%RSD	32.17	16.42	28.98	136.9	11.93	19.83	103.6
#1	1.389	23.96	-18.97	-4.255	4.515	-6.972	.7903
#2	.9488	17.57	-12.72	1.428	3.653	-9.651	3.413
#3	1.846	19.19	-11.14	-4.576	3.745	-10.35	.4713
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.710	8.182	-2.100	-26.99
SDev	4.076	2.271	.903	13.98
%RSD	238.3	27.76	42.99	51.82
#1	-6.189	8.860	-1.198	-11.02
	-.7243	10.04	-2.100	-32.88
	1.782	5.649	-3.004	-37.06
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: ICSAB Operator:
Run Time: 02/15/99 14:30:51
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	200.7	528900.	562.9	506.6	498900.	967.7	511.6
SDev	.8	1235.	2.2	1.6	1780.	3.0	1.6
%RSD	.3847	.2335	.3929	.3082	.3569	.3102	.3215
#1	200.6	529100.	565.5	508.3	500800.	971.0	513.5
#2	199.9	527600.	561.7	505.9	498500.	965.2	510.6
#3	201.4	530100.	561.6	505.4	497400.	967.0	510.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	501.1	510.6	197500.	11.80	531200.	514.6	-498.1
SDev	2.9	.9	698.	6.08	1246.	1.6	222.6
%RSD	.5793	.1828	.3533	51.56	.2345	.3100	44.69
#1	504.5	510.3	198300.	18.75	532600.	516.4	-274.6
#2	499.7	509.8	197200.	9.131	530800.	513.7	-719.7
#3	499.2	511.6	197100.	7.500	530300.	513.6	-499.9
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	997.6	101.9	520.7	1039.	46.15	48.79	644.5
SDev	3.9	1.8	1.8	3.	2.14	1.97	3.4
%RSD	.3886	1.776	.3391	.2751	4.645	4.030	.5347
#1	1002.	100.6	522.7	1042.	45.33	50.83	645.4
#2	996.6	101.1	520.0	1038.	44.53	48.61	647.3
#3	994.4	104.0	519.4	1037.	48.58	46.91	640.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	110.4	75.11	31.68	641.8	645.8	49.62	48.36
SDev	3.9	3.61	4.84	6.6	8.1	7.31	5.68
%RSD	3.504	4.806	15.27	1.034	1.252	14.73	11.74
#1	114.8	78.36	28.83	644.7	645.8	42.78	54.84
#2	107.9	75.75	28.93	634.2	653.9	57.33	44.26
#3	108.4	71.23	37.26	646.5	637.7	48.75	45.99
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1020.	1120.	1046.	1020.
SDev	5.	5.	7.	47.
%RSD	.5227	.4697	.6654	4.608
#1	1026.	1126.	1054.	1075.
#2	1016.	1116.	1041.	994.7
#3	1017.	1117.	1043.	991.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

000391

Method: CLP3I Sample Name: CCV Operator:
F Time: 02/15/99 14:37:45
Comment: CCV CVS1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.7	2120.	1080.	1045.	49080.	1023.	1042.
SDev	.3	4.	2.	3.	140.	4.	3.
%RSD	.2914	.2089	.1982	.3288	.2844	.3585	.3225
#1	101.4	2116.	1079.	1042.	48960.	1019.	1039.
#2	101.8	2119.	1079.	1044.	49050.	1023.	1042.
#3	101.9	2124.	1083.	1048.	49230.	1027.	1045.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1029.	1015.	2014.	49190.	50730.	1039.	49740.
SDev	3.	4.	3.	96.	149.	2.	165.
%RSD	.2891	.3537	.1427	.1954	.2938	.2052	.3322
#1	1026.	1011.	2010.	49190.	50600.	1037.	49920.
#2	1030.	1016.	2016.	49090.	50700.	1038.	49600.
#3	1032.	1018.	2015.	49280.	50890.	1041.	49710.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1032.	1075.	1057.	1039.	1039.	1064.	1063.
SDev	4.	3.	4.	2.	4.	2.	1.
%RSD	.3878	.3022	.3815	.2046	.3390	.2233	.0609
#1	1028.	1072.	1053.	1038.	1035.	1065.	1063.
#2	1032.	1079.	1056.	1039.	1040.	1062.	1063.
#3	1036.	1075.	1061.	1042.	1041.	1066.	1064.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1064.	1039.	1039.	1057.	1067.	1059.	1067.
SDev	3.	3.	7.	2.	.	2.	3.
%RSD	.3109	.2707	.6370	.1788	.0140	.2209	.2732
#1	1061.	1042.	1031.	1055.	1066.	1058.	1069.
#2	1065.	1037.	1042.	1057.	1067.	1058.	1063.
#3	1068.	1038.	1043.	1058.	1066.	1062.	1068.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1032.	1067.	1056.	1026.
SDev	8.	3.	4.	15.
%RSD	.7750	.3092	.3687	1.414
#1	1024.	1065.	1052.	1043.
	1031.	1065.	1056.	1016.
	1040.	1071.	1060.	1020.
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

000392

Analysis Report QC Standard 02/15/99 02:51:32 PM page 1

Method: CLP3I Sample Name: CCB Operator:
Run Time: 02/15/99 14:44:40 2294
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2572	49.12	.1947	.4491	-49.68	.0874	.2449
SDev	.7348	8.74	.1782	.1082	3.29	.2883	.1850
%RSD	285.8	17.80	91.50	24.09	6.631	329.6	75.54
#1	1.101	57.93	.3984	.5697	-47.81	.2949	.0796
#2	-.0867	49.00	.1180	.4170	-47.73	.2091	.4447
#3	-.2427	40.44	.0677	.3606	-53.48	-.2417	.2103
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0664	-1.363	-3.830	1.274	21.95	.1658	-479.9
SDev	.5528	.382	8.534	15.10	1.89	.0197	233.1
%RSD	833.1	28.06	222.8	1186.	8.608	11.90	48.58
#1	.5713	-1.803	-13.67	16.39	22.64	.1773	-511.6
#2	-.3596	-1.180	.6904	-13.81	23.39	.1771	-232.5
#3	-.4108	-1.106	1.493	1.249	19.81	.1430	-695.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4253	1.743	.2673	-4.666	.2341	-.7881	.7968
SDev	.8827	1.528	.3533	.125	.4285	2.8231	.7754
%RSD	207.5	87.69	132.2	2.668	183.1	358.2	97.32
#1	1.393	3.418	-.1406	-4.765	-.2426	-1.482	-.0393
#2	.2194	.4254	.4705	-4.707	.5874	2.317	.9371
#3	-.3362	1.385	.4720	-4.527	.3574	-3.199	1.492
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.840	.6518	.0168	-.7022	1.536	1.296	-1.837
SDev	.251	4.900	3.035	4.4929	1.129	3.763	4.313
%RSD	8.846	751.8	18070.	639.8	73.49	290.3	234.7
#1	2.646	6.206	-3.471	-5.821	2.839	5.308	-4.881
#2	3.124	-1.190	1.466	1.128	.8329	.7355	3.098
#3	2.751	-3.061	2.055	2.586	.9376	-2.154	-3.730
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.199	1.516	.1116	1.023
SDev	1.706	3.615	.5930	15.55
%RSD	142.3	238.4	531.2	1521.
#1	3.122	5.640	.7909	18.97
#2	-.1350	-1.104	-.1532	-7.409
#3	.6112	.0125	-.3028	-8.492
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

000393

TANDARDS and REAGENTS TRACEABILITY

Date: 2-12-99

NO3 [Baker Instra-analyzed Trace-Metals grade,	Ref#*: 1M2-153-4
ICl [Baker Instra-analyzed Trace-Metals grade,	Ref#: 1M2-152-17
CL-11 multi-element standard mix	Ref#: 7M2-226-14
CL-2 multi-element standard mix	Ref#: ↓ 15
CL-3A multi-element standard mix	Ref#: ↓ 17
CV1 multi-element standard mix	Ref#: 7M1-3-9
CV2 multi-element standard mix	Ref#: ↓ 10
CV3 multi-element standard mix	Ref#: ↓ 11
CV4 multi-element standard mix	Ref#: ↓ 12
CSA multi-element standard mix	Ref#: 7M1-4-27
CSAB multi-element standard mix	Ref#: 7M1-3-24
RS-1 multi-element standard mix	Ref#: 7M1-2-12
RS-2 multi-element standard mix	Ref#: ↓ 13
Spex multi-element standard mix	Ref#: 7M1-1-13
COM Lab mix 5	Ref#: 7M1-3-4
CRDL-1 multi-element standard mix	Ref#: 7M1-1-9
ANTIMONY (Sb) 1,000 PPM single-element standard	Ref#: ↓ 5
BISMUTH (Bi) 1,000 PPM single-element standard	Ref#: 7M1-2-21
TITANIUM (Ti) 1,000 PPM single-element standard	Ref#: 7M1-1-6
TIN (Sn) 1,000 PPM single-element standard	Ref#: ↓ 8
IRON (Fe) 10,000 PPM single-element standard	Ref#: 7M1-4-22
ALUMINUM (Al) 10,000 PPM single-element standard	Ref#: ↓ 14
CALCIUM (Ca) 10,000 PPM single-element standard	Ref#: 7M1-1-1
MAGNESIUM (Mg) 10,000 PPM single-element standard	Ref#: ↓ 2
MOLYBDENUM (Mo) 1,000 PPM single-element standard	Ref#: 7M1-3-15
ARSENIC (As) 1, 000 PPM single-element standard	Ref#: 7M1-4-3

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The following standard solutions are applicable only when dissolved samples are analyzed.

XCL-LCS multi-element standard mix Ref#: NA
XCL-20 multi-element standard mix Ref#: NA

Reviewed By: M Powell
Date: 2/12/99

The following spaces are provided for non-CLP metals standards not previously identified.

NA ml of NA 1,000 PPM standard Ref# NA
NA ml [illegible] 1,000 PPM standard Ref#

*Ref# = Logbook ID, Page number and item number. from Materials Receipt Log

000394

500

200

Standards/QC Preparation for Trace ICAP

Standard Lot Number	Preparation instructions
SO/ICB/CCB- 021299PW	Place in a 500-ml volumetric flask: 100 ml of deionized water 30 ml concentrated HNO_3, and 25 ml concentrated HCl. Bring up to volume with deionized water. Prepare weekly.
XCL-11- 021299-PW	Place in a 100-ml volumetric flask: PW 2-12-99 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml XCL-11 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-2- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of XCL-2 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-3A- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 1.0 ml of XCL-3A into flask. Bring up to volume with deionized water. Prepare weekly.
TSB2-2X- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml of concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of Sn, Bi, Ti, Sb, ___, ___, into flask. Bring up to volume with deionized water. Prepare weekly.
TD3- 021299-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 5 ml concentrated HCl 1.0 ml of 10,000-ppm Al, 0.5 ml of 10,000-ppm Fe, 1.0 ml of 10,000-ppm Mg 1.0 ml of 10,000-ppm Ca, Bring up to volume with deionized water. Prepare weekly.
VS1- 021299-PW	Place in a 500-ml volumetric flask: 400 ml of deionized water 30 ml concentrated HNO_3 25 ml of concentrated HCl 0.5ml of Sb, 0.5 ml of Sn, 0.5 ml of Bi, 0.5 ml of Ti, 0.05 ml of Al, 0.05 ml of Fe 0.500 ml of XCL-2. 0.500 ml of XCL-11, 2.5 ml of XCL-3A Bring to volume with deionized water. Prepare weekly.

Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: M Powell 2/12/99 Date: 2/12/99

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000395

Standard Lot Number*	Preparation instructions*
ICV1- 02 12 99- pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml of concentrated HNO_3 10 ml concentrated HCl, Pipet 20.0 ml of ICV1 into flask. Bring up to volume with deionized water. Prepare as needed.
ICV3- 02 12 99- pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated. HNO_3 10 ml concentrated HCl Pipet:20.0 ml of ICV3, 20.0 ml of ICV2, and 20.0 ml of ICV4 into flask. Bring to volume with deionized water. Prepare as needed.
SPEXAS- 02 12 99- pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 0.2 ml of CompuChem SPEX into flask. Bring up to volume with deionized water. Prepare as needed.
ICSA- 02 12 99- pw	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA into flask. Bring up to volume with deionized water. Prepare as needed.
ICSAB- 02 12 99- pw	Place in a 200-ml volumetric flask: 50 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA and 20.0 ml ICSB into flask. Pipet: 0.20 ml Bi standard ___ ml Sn standard ___ ml Ti standard ___ ml Mo standard into flask. Bring up to volume with deionized water. Prepare as needed.
LRS- 02 12 99- pw	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 and 5 ml concentrated HCl Pipet 0.10 ml LRS-1 and 0.10 ml LRS-2 into flask. Prepare as needed.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: Powell Date: 2/12/99

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000396

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Standard Lot Number*	Preparation instructions*
CRI - 021299-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet: 0.20 CRDL-1 into flask. 0.025 ml Bi into flask. 0.025 ml Sn into flask. 0.014 ml Mo into flask. 0.012 ml Ti into flask. NA ml NA 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. Bring up to volume with deionized water. Prepare as needed.
Internal Standard - 021299-PW	Place in a 2000-ml volumetric flask: 1000 ml of deionized water 20 ml of concentrated HNO_3 Pipet: 10 mL of COM LAB MIX #5 internal standard. Bring up to volume with DI water. Prepare as needed. Yttrium, introduced into the sample stream yielding a final concentration in the plasma of 1 ppm, is used as an internal standard. Cesium, introduced into the sample stream yielding a final concentration in the plasma of 50ppm, is used as a reducing agent.
As - 021299-PW	Place 100 ml volumetric flask 50 ml DI water 1 ml concentrated HNO_3 0.1 ml 1000 ppm As Bring to volume. Prepare as needed.

Dissolved Metals Only:	Prepared By	Date Prepared	Preparation Instructions
LCS	NA	NA	Add 1.0 ml of XCL-LCS solution to 9.0 ml of acidified water NA ml HNO_3 + NA ml HCl.
Prep Blank	↓	↓	Use acidified water (1% HNO_3 + 5% HCl NA ml HNO_3 + NA ml HCl
Sample Spike			Add 0.1 ml of XCL-20 to 10.0 ml of sample.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed by: N Powell Date: 2/12/99

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0003977

CompuChem a division of Liberty Analytical Corp.. LOGBOOK 1 BBB 24 34103/00001

Automated Mercury Runlog

Case name: 34125/30501, 34121/1, 34061/mpcc22

Method (Circle one.): CLP SW-846 MCAWW Date: 2/12/99 Page 1 of 2

Operator: Lori Cooke File name: LC0212 WSL name V221232

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	0 ppb			1	928436		
	0.2 ppb			2	928438		2294
	0.5 ppb			3	928439		
	1.0 ppb			4	928440		
	5.0 ppb			5	928442		
	10.0 ppb			6	928443		
	ICV			7	928445		
	ICB			8	928447		
	CRA			9	928449		
	CCV			10	928457		
	CCB				CCV		
1	928660	PBS			CCB		
2	928631	LCSS		1	928578	PBW	
3	928621			2	928330	LCSW 0.5mL in	13mL (26x) 2/12/99
4	928579	PBW		3	928321		
5	928433	LCSW		4	928331	dup	
6	928430			5	928328	spk 0.5mL in	13mL (26x) 2/12/99
7	928434	dup		6	928329	spk	↓
8	928431	spk		7	928411		
9	928432	spk		8	927847	PBW	
10	928435			9	927488	LCSW	
	CCV			10	927485		
	CCB				CCV		
					CCB		

COMMENTS

Reviewed By: Thomas R. Cole

Date: 2-12-99

~~3524~~

Automated Mercury Runlog

Case name: SAME

Method (Circle one.): CLP SW-846 MCAWW Date: 2/12/99 Page 2 of 2

Operator: Lori Cooke File name: V221232 WSL name LC0212

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	~~0 ppb~~			1			
	0.2 ppb			2		2294	
	0.5 ppb			3			
	1.0 ppb			4			
	5.0 ppb			5			
	10.0 ppb			6			
	ICV	2/12/99		7			
	ICB			8			
	CRA			9			
	CCV			10			
	~~CCB~~				CCV		
1	927487	Dup			CCB		
2	927486	spk		1		2/12/99	
3	123123			2			
4	123123			3			
5	123123			4			
6	CCV			5			
7	CCB			6			
8				7			
9		2/12/99		8			
10				9			
	CCV			10			
	CCB				CCV		
					~~CCB~~		

COMMENTS

Reviewed By: Thomas R. Cole

Date: 2-12-99

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 0 07:55:56 12 Feb 1999 HG

Hg .0000 PPB -1012
Ave. Int. = -1012 S. D. = 0

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*** Standard: 2 Rep: 1 Seq: 1 07:58:14 12 Feb 1999 HG

Hg .2000 PPB 4697
Ave. Int. = 4697 S. D. = 0

*** Standard: 3 Rep: 1 Seq: 2 08:00:32 12 Feb 1999 HG

Hg .5000 PPB 12876
Ave. Int. = 12876 S. D. = 0

*** Standard: 4 Rep: 1 Seq: 3 08:02:51 12 Feb 1999 HG

Hg 1.000 PPB 27780
Ave. Int. = 27780 S. D. = 0

*** Standard: 5 Rep: 1 Seq: 4 08:05:09 12 Feb 1999 HG

Hg 5.000 PPB 136194
Ave. Int. = 136194 S. D. = 0

*** Standard: 6 Rep: 1 Seq: 5 08:07:28 12 Feb 1999 HG

Hg 10.00 PPB 273786
Ave. Int. = 273786 S. D. = 0

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Protocol: HG2

Rev: 2.005 Time: 08:07:34 12 Feb 1999

Folder: LC8212 Seq: 6 Print: On

User: Batch: Id: Std6Rep1 Cup: Gas: 0.30 LPM

State: Idle Macro AUTOCRA 81 : F3 Print Xmit: Off Autosampler: On

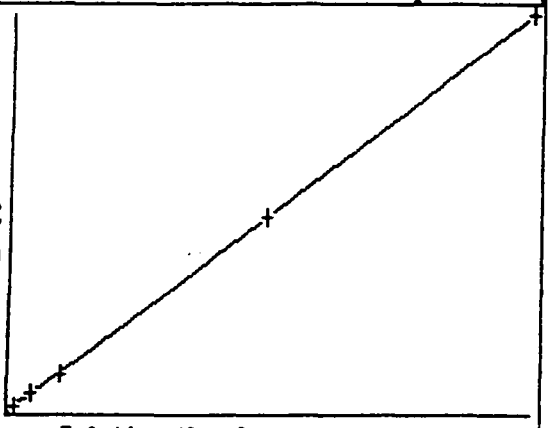
CALIBRATION: Line Calibration

Line: Hg

	Conc.	Calc.	Dev.	Accepted
S1	.0000	-.0136	-.0136	LiNear
S2	.2000	.1945	-.0055	Quadratic
S3	.5000	.4926	-.0074	WtdLinear
S4	1.000	1.036	.0359	C
S5	5.000	4.988	-.0124	Accept
S6	10.00	10.00	.0029	o
				StdAdd
				n
				c

A .0000000 r .999989

B 3.64504e-5 C 2.33065e-2



Relative Absorbance

	Mean	%RSD	
S1	-1012	0	-1012
S2	4697	0	4697
S3	12876	0	12876
S4	27780	0	27780
S5	136194	0	136194
S6	273786	0	273786

New cal coefficients stored

2294

Line Conc. Units SD/RSD 1 2 3 4 5

*** Check Standard: 3 Ck3ICV Seq: 6 08:09:50 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		90.83	3.724	4.100	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 7 08:12:07 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0341	.2000	PPB	.0000

*** Check Standard: 4 Ck4CRA Seq: 8 08:14:22 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		106.9	.2139	.2000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 9 08:16:39 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.5	5.075	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 10 08:18:57 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0085	.2000	PPB	.0000

*** Sample ID: 928660 Seq: 11 08:21:11 12 Feb 1999 HG
PBS 1:1
Hg .0102 PPB .0000 .0102

*** Sample ID: LCSS928631 Seq: 12 08:23:24 12 Feb 1999 HG
LCSS 1:1
Hg 3.647 PPB .0000 3.647

*** Sample ID: 928621 Seq: 13 08:25:38 12 Feb 1999 HG
SD00001 1:1
Hg .0966 PPB .0000 .0966

*** Sample ID: 928579 Seq: 14 08:27:52 12 Feb 1999 HG
PBW 1:1
Hg .0144 PPB .0000 .0145

*** Sample ID: LCSW928433 Seq: 15 08:30:07 12 Feb 1999 HG
LCSW 1:1
Hg 2.451 PPB .0000 2.451

*** Sample ID: 928430 Seq: 16 08:32:21 12 Feb 1999 HG
17-01-002 1:1
Hg .0171 PPB .0000 .0172

*** Sample ID: 928434 Seq: 17 08:34:34 12 Feb 1999 HG
17-01-002D 1:1
Hg .0215 PPB .0000 .0215

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Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 928431 Seq: 18 08:36:47 12 Feb 1999 HG
17-01-002S 1:1
Hg .7632 PPB .0000 .7632

*** Sample ID: 928432 Seq: 19 08:39:00 12 Feb 1999 HG
17-01-002M 1:1
Hg .8646 PPB .0000 .8646

*** Sample ID: 928435 Seq: 20 08:41:14 12 Feb 1999 HG
18-02-002 1:1
Hg .0428 PPB .0000 .0428

*** Check Standard: 2 Ck2CCV Seq: 21 08:43:29 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.3	5.116	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 22 08:45:45 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0233	.2000	PPB	.0000

*** Sample ID: 928436 Seq: 23 08:48:00 12 Feb 1999 HG
19-03-002 1:1
Hg .0447 PPB .0000 .0447

*** Sample ID: 928438 Seq: 24 08:50:14 12 Feb 1999 HG
20-04-002 1:1
Hg .1384 PPB .0000 .1384

*** Sample ID: 928439 Seq: 25 08:52:28 12 Feb 1999 HG
21-05-002 1:1
Hg .0649 PPB .0000 .0649

*** Sample ID: 928440 Seq: 26 08:54:42 12 Feb 1999 HG
22-06-002 1:1
Hg .1028 PPB .0000 .1028

*** Sample ID: 928442 Seq: 27 08:56:56 12 Feb 1999 HG
23-07-002 1:1
Hg .0662 PPB .0000 .0662

*** Sample ID: 928443 Seq: 28 08:59:10 12 Feb 1999 HG
24-08-002 1:1
Hg .0581 PPB .0000 .0581

*** Sample ID: 928445 Seq: 29 09:01:25 12 Feb 1999 HG
25-09-002 1:1
.0639 PPB .0000 .0639

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Line Conc. Units SD/RSD 1 2 3 4 5

*** Sample ID: 928447 Seq: 30 09:03:39 12 Feb 1999 HG
26-10-002 1:1
Hg .0572 PPB .0000 .0572

*** Sample ID: 928449 Seq: 31 09:05:51 12 Feb 1999 HG
28-11-002 1:1
Hg .0461 PPB .0000 .0461

*** Sample ID: 928457 Seq: 32 09:08:07 12 Feb 1999 HG
LEACH BLANK 1:1
Hg .0496 PPB .0000 .0496

*** Check Standard: 2 Ck2CCV Seq: 33 09:10:21 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.3	5.067	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 34 09:12:36 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0352	.2000	PPB	.0000

*** Sample ID: 928578 Seq: 35 09:14:50 12 Feb 1999 HG
PBW 1:1
Hg .0291 PPB .0000 .0291

*** Sample ID: LCSW928330 Seq: 36 09:17:03 12 Feb 1999 HG
LCSW 1:25
Hg 8.628 PPB .0000 8.628

*** Sample ID: 928321 Seq: 37 09:19:21 12 Feb 1999 HG
D231008 1:1
Hg .0187 PPB .0000 .0187

*** Sample ID: 928331 Seq: 38 09:21:36 12 Feb 1999 HG
D231008D 1:1
Hg .0361 PPB .0000 .0361

*** Sample ID: 928328 Seq: 39 09:23:49 12 Feb 1999 HG
D231008S 1:25
Hg 7.140 PPB .0000 7.140

*** Sample ID: 928329 Seq: 40 09:26:05 12 Feb 1999 HG
D231008M 1:25
Hg 7.311 PPB .0000 7.311

*** Sample ID: 928411 Seq: 41 09:28:22 12 Feb 1999 HG
LEACH BLANK 1:1
Hg .0023 PPB .0000 .0023

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Line Conc. Units SD/RSD 1 2 3 4 5

*** Sample ID: 927847 Seq: 42 09:30:35 12 Feb 1999 HG

PBW

Hg .0046 PPB .0000 .0046

*** Sample ID: 927488 Seq: 43 09:32:49 12 Feb 1999 HG

LCSW

Hg 2.534 PPB .0000 2.534

*** Sample ID: 927485 Seq: 44 09:35:05 12 Feb 1999 HG

0311

Hg 4.514 PPB .0000 4.514

*** Check Standard: 2 Ck2CCV Seq: 45 09:37:23 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.1	5.107	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 46 09:39:38 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0117	.2000	PPB	.0000

*** Sample ID: 927487 Seq: 47 09:41:57 12 Feb 1999 HG

0311D

Hg 4.628 PPB .0000 4.628

*** Sample ID: 927486 Seq: 48 09:44:17 12 Feb 1999 HG

0311S

Hg 5.512 PPB .0000 5.512

*** Sample ID: 123123 Seq: 49 09:46:36 12 Feb 1999 HG

Hg -.0133 PPB .0000 -.0133

*** Check Standard: 1 Ck~~1ICB/CCB~~ 123123 Seq: 50 09:48:51 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0131	.2000	PPB	.0000

*** Check Standard: 2 ~~Ck2CCV~~ 123123 Seq: 51 09:51:06 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.9	5.144	5.000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 52 09:53:21 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.5	5.074	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 53 09:55:36 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
		.0097	.2000	PPB	.0000

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Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2CCV Seq: 54 09:57:51 12 Feb 1999 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.2	5.059	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 55 10:00:07 12 Feb 1999 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0185	.2000	PPB	.0000

Standards/QC Preparation Log for Cold Vapor Mercury

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 NNN 25

STANDARDS AND REAGENTS TRACEABILITY	
ICV-5	Ref#: 7m1-2-26
Sulfuric Acid (H_2SO_4)	Ref#: 1m2-152-24
Nitric Acid (HNO_3)	Ref#: 1m2-153-10
Potassium Permanganate ($KMnO_4$)	Ref#: 7m2-177-4
Hydrochloric Acid (HCl)	Ref#: 1m2-153-18
Mercury (20-ppm Hg)	Ref#: 7m1-3-7
Potassium Persulfate ($K_2S_2O_8$)	Ref#: 1m2-151-27
Hydroxylamine Hydrochloride (NH_2OH-HCl)	Ref#: 1m2-154-3
Stannous Chloride ($SnCl_2$-$2H_2O$)	Ref#: 1m2-153-1
STANDARD LOT NUMBER	**PREPARATION INSTRUCTIONS**
Hg 100 ppb- ~~012999~~ 021199 LC (gr 2/12/99)	Place in a 100-ml volumetric flask: 0.5 ml of 20-ppm Hg stock solution 5.0 ml of concentrated HNO_3 Baker instra-analyzed Trace Metals grade Dilute to 100 volume with DI water. Prepare as needed
$K_2S_2O_8$- 012799-LC Potassium persulfate	Place in a 1000-ml Erienmeyer flask: 50.0 g of $K_2S_2O_8$ Baker instra-analyzed Trace Metals grade Dilute to 1000 volume with DI water. Transfer a repippettor bottle. Prepare as needed
$KMnO_4$- 021199-LC Potassium permanganate	Place in a 1000-ml Erienmeyer flask: 50.0 g of $KMnO_4$ Baker instra-analyzed Trace Metals grade Dilute to 1000 volume with DI water. Transfer to a repipettor bottle. Prepare as needed
NH_2OH-HCl- 021099-LC Hydroxylamine hydrochloride	Place in a 1000-ml volumetric flask: 240.0 g of NH_2OH-HCl Baker analyzed Dilute to 1000 volume with DI water. Place solution in a repippetor bottle. Prepare as needed

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: Thomas R. Cole Date: 2-12-99

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Standards/QC Preparation Log for Cold Vapor Mercury COMPUCHEM a division of Liberty Analytical Corp LOGBOOK 1 NNN

STANDARD LOT NUMBER	PREPARATION INSTRUCTIONS
$SnCl_2$-012999-LC Stannous chloride	Place in a 1000-ml volumetric flask 100 g of $SnCl_2$-$2H_2O$ Baker Analyzed 250 ml of HCl Baker Analyzed, Dilute to 1000 ml with DI water Prepare as needed
0-021199-LC 0.2-021199-LC 0.5-021199-LC 1.0-021199-LC 5.0-021199-LC 10.0-021199-LC Standard Curve (0, 0.2, 0.5, 1.0, 5.0, 10.0 ppb)	Pipet into 250-ml fleakers: 0, 0.2, 0.5, 1.0, 5.0, 10.0 ml of 100-ppb Hg standard solution; dilute each to 100 mL with DI water. Add: 5.0 ml of H_2SO_4 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution. All standards are digested with samples and recorded on the appropriate logs submitted with this data. Prepare with each batch of samples.
ICV-5-021199-LC	Pipet into 250-ml fleaker: 1.0 ml of ICV-5 and 99 ml of DI water. Add: 5.0 ml of H_2SO_4 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Prepare with each batch of samples. This standard is digested with samples and recorded on the appropriate logs submitted with this data. Prepare with each batch of samples.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: Thomas R. Cole Date: 2-12-99

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5. Digestion and Distillation Logs

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Logs shall be submitted in the following order: digestion logs for ICP, flame AA (if used), furnace AA (if used), and mercury preparations, followed by a copy of the distillation log for cyanide.

3036

Mercury Preparation Log

Method (Circle one.): MCAWW: 245.1 245.5 ILM04.0: 245.1-M 245.5-M ~~SW846:~~ 7470A 7471A

Prepared by lcoke Date 2/11/99

Case/SDG: 34121/00001

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial (wt/vol)	Final (vol)	Description Before	Description After	pH
1	928430	17-01-002	2/9/99	100ml	100ml	colorless/clear	Violet	<2
2	928435	18-02-002	↓	↓	↓	↓	↓	↓
3	928436	19-03-002	↓	↓	↓	↓	↓	↓
4	928438	20-04-002	↓	↓	↓	↓	↓	↓
5	928439	21-05-002	↓	↓	↓	↓	↓	↓
6	928440	22-06-002	↓	↓	↓	↓	↓	↓
7	928442	23-07-002	↓	↓	↓	↓	↓	↓
8	928443	24-08-002	↓	↓	↓	↓	↓	↓
9	928445	25-09-002	↓	↓	↓	↓	↓	↓
10	928447	26-10-002	↓	↓	↓	↓	↓	↓
11	928449	28-11-002	↓	↓	↓	↓	↓	↓
12	928457	Leach BLK	2/11/99 ~~2/10/99~~	↓	↓	↓	↓	↓
13								
14								
15								
16								
17								
18								
19								
20								
21	928431/928432	Sample Spike	N/A	100ml	100ml	N/A	Ref CCN: (928430)	
22	928434	Duplicate Sample	↓	↓	↓	↓	Ref CCN: (928430)	
23	928433	Lab Ctrl Sample	↓	↓	↓	↓	Reviewed by: [signature]	
24	928579	Prep. Blank	↓	↓	↓	↓	Date: 2/11/99	
25								

lcoke 2/11/99

Standard Curve

0 ml 100 ppb Hg to 100 ml
0.2 ml 100 ppb Hg to 100 ml
0.5 ml 100 ppb Hg to 100 ml
1.0 ml 100 ppb Hg to 100 ml
5.0 ml 100 ppb Hg to 100 ml
10.0 ml 100 ppb Hg to 100 ml
ICV-5:
1.0 ml of ICV-5 to 100 ml

The standards listed above were digested in the same manner and at the same time as the associated samples. For all standards and QC preparations, and lot #s associated with this batch, refer to the attached Standard Preparation Logbook (1NNN), pages.

Time started: 1PM
Time finished: 3 PM
Water bath temp: 95 °C

QC (SS): 1.0ml 100ppbHg
Ref#: 7M1-3-7
QC (LCS): 3.0ml 100ppbHg
Ref#: 7M1-3-7

Reagent Manufacturer & Lot #s:
HNO_3: BIA lot# M28025 (1M2-153-10) H_2SO_4: BIA lot# M31028 (1M2-152-24)
$KMnO_4$: lot# 7068 KLAS (9M2-177-4) $K_2S_2O_8$: lot# J03776 (1M2-151-27)

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COMPUCHEM Division of Liberty Analytical Corp. LOGBOOK ID 52

Metals Preparation Log

Method (Circle one.): CLP(ILM04.0) 200.7 3010A 3020A 3050B 3005A

Case/SDG No. 34121/06001 Digestion Temp.: 95°C Prepared by Lecroke Date 2/11/99

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial Plasma (wt/vol)	Final Plasma (vol)	Initial Furnace (wt/vol)	Final Furnace (vol)	Description Before	Description After	pH
1	928430	17-01-002	2/4/99	50ml	50ml	N/A	N/A	colorless/clear	colorless/clear	<2
2	928435	18-02-002								
3	928436	19-03-002								
4	928438	20-04-002								
5	928439	21-05-002								
6	928440	22-06-002								
7	928442	23-07-002								
8	928443	24-08-002								
9	928445	25-09-002								
10	928447	26-10-002								
11	928449	27-11-002								
12	928457	Leach BIK	2/24/99							
13										
14										
15										
16										
17										
18										
19										
20										
21	Sample Spike: 928431/928432	QC	N/A	50ml	50ml	N/A	N/A	REF CCN: (928430)	QC SS/SSD 0.5ml XCL-20 P Reff#: 7M1-5-2	
22	Duplicate Sample: 928434	F Refs						REF CCN: (928430)		
23	Lab Ctrl Sample: 928433	QC						Reviewed By:	QC LCSW 5.0ml XCLLCS P Reff#: 7M1-5-1	
24	Prep Blank: 928579	F Refs						Date: 2/11/99		

25 Reagent Manufacturer & Lot #'s: HNO3: BIA lot# M28025 (1M2-153-10) HCl: BIA lot# M28034 (1M2-153-18)

Lecroke 2/11/99

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00421

COMPUCHEM

ASSIGNED TO: Darren Sparkman / Tony / Graeme

DATE EXTRACTED 2/9/99

TCLP WASTE CHARACTERIZATION LEACHATE

EMPLOYEE ID: 7325

-814

QUEUE # 54

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000412 278

COMPU-CHEM SAMPLE NUMBER	CASE #	CLIENT #	PRE-TEST pH VALUE START	PRE-TEST pH VALUE FINAL	EXTRACTION FLUID AND VOL. (mL) ADDED[1] 1	EXTRACTION FLUID AND VOL. (mL) ADDED[1] 2	PARTICLE REDUCT. DONE (Y/N)	SAMPLE WEIGHT (g)	FINAL LEACH. pH VALUE	FINAL VOLUME (ml)	Percent Solid	COMMENTS
928430	34121	17-01-0002	11.4	7.17	N/A	2000	Y	100.0	5.26	950	100	
928435		18-01-0002	11.6	9.11		2000	Y	100.0	4.16	950	100	
928436		19-03-0002	11.4	7.46		2000	Y	100.0	4.88	975	100	
928438		20-04-0002	11.8	10.10		2000	Y	100.0	5.46	975	100	
928439		21-05-0002	11.7	10.60		2000	Y	100.0	5.15	950	100	
928440		22-06-0002	11.5	9.03		2000	Y	100.0	2.64	950	100	
928442		23-07-0002	12.1	10.54		2000	Y	100.0	5.60	925	100	
928443		24-08-0002	11.7	8.83		2000	Y	100.0	5.44	950	100	
928445		25-09-0002	11.7	8.00		2000	Y	100.0	5.08	975	100	
928447		26-10-0002	11.6	10.33		2000	Y	100.0	5.35	950	100	
928449		28-11-0002	12.1	10.49		2000	Y	100.0	5.45	950	100	
928456	BLANK	TCL0044F	2.90	2.90		2000	N/A	100.0	2.84	975	N/A	
928457	BLANK	TCL0044G	2.90	2.90		2000	N/A	100.0	2.83	975	N/A	

CH 2/11/99

LOADED TUMBLER CALIB. CHECK (MUST BE 30 rpm ± 2 rpm)	
TUMBLER #:	CALC. RPM
1A	32
2A	31

(COUNT [illegible] OR 30 sec. AND MULTIP[illegible] NUMBER BY 2 TO [illegible]

MANUAL COUNTER 468/

ROATATION TIME ONLY

DATE/TIME STARTED 2/9/99, 3:30 PM

DATE/TIME COMPLETED 2/10/99, 4:00 PM

Room Temp. 230

Final Vol. Verified CHuh

Reviewed By: [illegible]

Received By: Temp Storage

Ext. Fluid 1 pH N/A (4.93 ± 0.05)

Ext. Fluid 2 pH 2.90 (2.88 ± 0.05)

[1] Enter volume (mL) of Extraction Fluid added into appropriate column, e.g. [illegible] volume into column 1 if Extraction Fluid # 1 is used. Ensure that the fluid volum[illegible]mple weight ratio is 20:1.

C. Chain-of-Custody Documentation

The laboratory shall include a copy of the Chain-of-Custody (CoC) Documentation for all of the samples in the SDG. The CoC documentation shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

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INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 426846
Page 1 of 2

Project Name/No. [1] FDFPoP/775743
Sample Team Members [2] TAN
Profit Center No. [3]
Project Manager [4] Paul Lewis
Purchase Order No. [6] 775743
Required Report Date [11] 2-19-99

Samples Shipment Date [7] 2-8-99
Lab Destination [8] Compu Chem
Lab Contact [9] Chuck Smith
Project Contact/Phone [12] Mary Hall 423-694-7326
Carrier/Waybill No. [13] FedX

Bill to: [5] IT Corp
312 Directors Dr
Knoxville Tn 37923

Report to: [10] Mary Hall
304 Directors Dr
Knoxville Tn 37923

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ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117901-01-002	Solid	2-8-99 3:35pm	1L plastic	1L	NA	TCLP metals from UTS list		
117902-02-002		2-8-99 3:37pm				Sb, Ba, Be, Cd, Cr, Pb, Hg, Ni, Ag, Tl, Se, Tl	FOR LAB USE ONLY	
117903-03-002		2-8-99 3:40pm						
117904-04-002		2-8-99 3:41pm						
117905-05-002		2-8-99 3:43pm						
117906-06-002		2-8-99 3:47pm					FOR LAB USE ONLY	
117907-07-002		2-8-99 3:49pm						
117908-08-002		2-8-99 3:50pm						

Special Instructions: [23] Please call with pH's 1 & 2 before continuing. Will call back in 1hr with decision. Include pH's (all 3) in data pkg.

Possible Hazard Identification: [24] Lead
Non-hazard ✓ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ✓ Archive ..... (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ✓

QC Level: [27]
I. ☐ II. ☐ III. ✓ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Mary M Hall	Date: 2-8-99 Time: 3:45pm	1. Received by [28] (Signature/Affiliation)	Date: Time:
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation) Patrina McCoy	Date: 2/9/99 Time: 9:00

Comments: [29] 22°C

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

000414

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 426846

Project Name FDF PoP

2294

Project No. 775743

Samples Shipment Date 2-8-99

00415

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
117902509-002	Solid	2-8-99 3:51pm	1L plastic	1L	NA	TCLP metals from UTS list		
117902610-002	↓	2-8-99 3:53pm	↓	↓	↓	Sb, Be, Ba, Cd, Cr, Pb, Hg, Ni, Ag, Tl, Se	FOR LAB USE ONLY	FOR LAB USE ONLY
117902811-002	↓	2-8-99 3:55pm	↓	↓	↓	↓		
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions.

COMPUCHEM
a division of Liberty Analytical Corp.

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29/DEC/98

IT CORPORATION
ATTN: MS. MARY HALL
304 DIRECTORS DRIVE
KNOXVILLE, TN 37923

Subject: Report of Data - Account Number# 501218 Order# 34021

ATTN: MS. MARY HALL

Enclosed are the results of analytical work performed in accordance with the referenced account number.

This report covers 6 sample(s) appearing on the attached listing.

Thank you for selecting CompuChem Environmental for your sample analysis. If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097.

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary, NC 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp.

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29/DEC/98

IT CORPORATION
ATTN: MS. MARY HALL
304 DIRECTORS DRIVE
KNOXVILLE, TN 37923

ACCOUNT #: 501218

CC#	SAMPLE-ID	RECEIPT DATE
922046	1174-8605	12/10/98
922051	1174-8705	12/10/98
922052	1174-8805	12/10/98
922053	1174-8905	12/10/98
922054	1174-9005	12/10/98
922055	1174-9105	12/10/98

TOTAL NUMBER OF SAMPLES = 6

501 Madison Avenue ■ Cary, NC 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

CompuChem Environmental

I. SAMPLE DATA PACKAGE

SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field and analytical samples, reanalyses, blanks, spikes, duplicates, and laboratory control samples. The sample data package consists of the following:

A. Cover Page

B. Sample Data

C. Chain-of-Custody (CoC) Documentation

LAB CODE : COMPU

CONTRACT # : SW-846

CASE # : 34021

SDG # : 00001

A. Cover Page -

Inorganic Analyses Data Package

The Cover Page includes laboratory information, the Case and SDG numbers, the client ID numbers in alphanumeric order showing the client ID numbers cross-referenced with Lab ID numbers, comments, and completion of the statement on the use of ICP background and interelement correction for the samples.

On separate pages, the laboratory will include any problems encountered; both technical and administrative, the corrective action taken, and the resolution. This information is included in the Inorganic Case Summary Narrative which follows the Cover Page.

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021 SAS No.: _____ SDG No.:00001_

SOW No.: SW846__

EPA Sample No.	Lab Sample ID
LEACHBLK	922056
1174-8605	922046
1174-8605D	922050
1174-8605M	922048
1174-8605S	922047
1174-8705	922051
1174-8805	922052
1174-8905	922053
1174-9005	922054
1174-9105	922055

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:
THE FOLLOWING ANALYTES HAVE BEEN FLAGGED WITH AN "E" TO INDICATE SERIAL DILUTION RESULTS WHICH WERE OUTSIDE CONTROL LIMITS:
BARIUM NICKEL

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 floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Thomas R. Cole for Name: Carol J. Yandell

Date: December 29, 1998 Title: Laboratory Manager

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

INORGANIC CASE SUMMARY NARRATIVE
CASE # 34021 SDG # 00001
PROTOCOL #SW-846

The indicated Sample Delivery Group (SDG) consisting of six (6) soil samples was received into the laboratory management system (LIMS) on December 10, 1998 intact and in good condition with Chain of Custody (COC) records in order. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared as leachates then analyzed for antimony, barium, beryllium, cadmium, chromium, lead, mercury, silver, nickel, and thallium using analytical methods delineated in SW-846 (Third Edition)-Update III.

It was determined that in the initial run of the field samples dilutions were necessary to reduce the interference of calcium which was at an extremely high level in most of the samples. This coupled with the extremely high levels of lead required dilution levels at a factor of 10. The original analyses of these sample are placed in the non-reportable section. Also, it was determined that after the samples had been prepared and analyzed as TCLP leachates (according to internal laboratory instructions) additional non-TCLP analytes had been requested per client COC. An LCS from a water case prepared the same day has been applied to this case with one exception: barium. This application was necessary to cover the non-TCLP analytes. However, no spiking solution was added to cover the non-TCLP analytes in the matrix spikes.. This data package is submitted with these notices.

SAMPLE IDs:

The following customer IDs are associated with this SDG:

1174-8605	1174-8705	1174-8805	1174-8905	1174-9005	1174-9105

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, CCB) and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSW & PBW) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spike, CCN = 922047 (ID = 1174-8605S) and sample matrix spike duplicate, CCN = 922048 (ID = 1174-8605M) were found to be inside control limits for the TCLP analytes. Antimony, beryllium, nickel, and thallium were not added to the matrix samples. This results in the analytes showing readings outside the control limits recorded on Forms 1 and 5a.

SW-846 control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more; in this case effected analytes are not flagged even if recoveries fall outside percentage recovery control limits.

Post-digestion spikes were not performed.

The sample matrix duplicate, CCN = 922050 (ID = 1174-8605D) was inside control limits for the requested analytes.

SW-846 control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 922046 (ID = 1174-8605L) was performed in accordance with SW-846 requirements for ICP analysis.

The adjusted sample concentrations were outside control limits for barium and nickel, which are flagged with an "E" on all associated Form 1, the Cover Page and Form 9.

An "E" indicates that a chemical or physical interference effect was encountered during the analysis of the flagged analyte. As a result of this interference, all values for the analyte in the same matrix must be considered to be estimated quantities.

SW-846 control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution-adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

This SDG package was processed using the Ward Scientific software. This software package has a seven character limitation on the Forms 13 and 14 -- any sample ID's which exceed seven characters are truncated from left to right on these forms.

Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Thomas R. Cole
Thomas R. Cole
Chemist II
December 29, 1998

Note: This report is paginated for reference and accountability.

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I, under the column labeled "C" for concentration qualifier and "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each analyte.

The C (concentration) qualifiers used are:

U: This flag indicates the analyte was analyzed for but not detected. This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL). The IDL will be adjusted to reflect any dilution and, for soils, the percent moisture.

B: This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

The Q qualifiers used are:

E: This flag indicates an estimated value. This flag is used:

1. When the serial dilution (a five fold dilution for CLP and a four fold dilution for SW-846 method 6010A) results are not within 10%. The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample).
2. When the analytical spike recovery associated with the sample is below 40% after two successive dilutions by Graphite Furnace Atomic Absorption (GFAA).

M: This flag applies to GFAA analyses for concentrations greater than the Contract Required Detection Limit (CRDL). This flag is only used for GFAA if the analytical sample or analytical spike duplicate injection reading is not within 20% of the Relative Standard Deviation (RSD).

N: This flag indicates the sample spike recovery is outside of control limits:

*: This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits.

S: This flag applies to GFAA analyses to indicate the reported value was determined by the Method of Standard Additions (MSA).

W: This flag applies to GFAA analyses when the post-digestion spike (analytical spike) is out of control limits (85% - 115%), while sample absorbance is less than 50% of "spike" absorbance ["spike" is defined as (absorbance or concentration of spike sample) minus (absorbance or concentration of the sample)].

+: This flag applies to GFAA analyses when the correlation coefficient for the MSA is less than 0.995 after two MSA analyses.

NOTE: Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

The extensions: D, S, M, L. A, added to the end of the client ID represent as follows:

D: matrix duplicate
S: matrix spike
M: matrix spike duplicate
L: serial dilution
A: post digestion spike

B. Sample Data

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1. Results
2. Quality Control Data
3. Quarterly Verification of Instrument Performance
4. Raw Data
5. Digestion and Distillation Logs

LAB CODE : COMPU

CASE # : 34021

CONTRACT # : SW-846

SDG # : 00001

1. Results

Sample results shall be arranged in packets with the Inorganic Analysis Data Sheet (Form I - IN). These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers, and shall include all the samples in the SDG.

U.S. EPA - CLP

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LEACHBLK

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922056

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.7	U	N	P
7440-38-2	Arsenic__	3.0	B		P
7440-39-3	Barium___	1.4	B	E	P
7440-41-7	Beryllium	0.34	B	N	P
7440-43-9	Cadmium__	1.0	U		P
7440-47-3	Chromium_	0.60	U		P
7439-92-1	Lead_____	2.0	B		P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	1.8	B	N	P
7782-49-2	Selenium_	18.6	B		P
7440-22-4	Silver___	0.40	U		P
7440-28-0	Thallium_	2.9	U	N	P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

rnl 3/17/99

U.S. EPA - CLP

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1174-8605

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922046

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	27.6	B	N	P_
7440-38-2	Arsenic__	102	B		P_
7440-39-3	Barium___	1160	B	E	P_
7440-41-7	Beryllium	3.5	B	N	P_
7440-43-9	Cadmium__	40.4	B		P_
7440-47-3	Chromium_	675	B		P_
7439-92-1	Lead_____	341000			P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	140		N	P_
7782-49-2	Selenium_	350	B		P_
7440-22-4	Silver___	4.0	U		P_
7440-28-0	Thallium_	29.0	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

Duplicate_(1174-8605D)

FORM I - IN SW846

~~10~~ 3/17/99

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1174-8705

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922051

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	34.0	U	N	P
7440-38-2	Arsenic__	76.6	B		P
7440-39-3	Barium___	940	B	E	P
7440-41-7	Beryllium	6.3	B	N	P
7440-43-9	Cadmium__	29.9	B		P
7440-47-3	Chromium_	1720	B		P
7439-92-1	Lead_____	666000			P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	115		N	P
7782-49-2	Selenium_	306	B		P
7440-22-4	Silver___	8.0	U		P
7440-28-0	Thallium_	58.0	U	N	P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

mt 3/17/99

U.S. EPA - CLP **2294**

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1174-8805

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922052

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	17.0	U	N	P
7440-38-2	Arsenic__	80.3	B		P
7440-39-3	Barium___	1210	B	E	P
7440-41-7	Beryllium	3.3	B	N	P
7440-43-9	Cadmium__	46.9	B		P
7440-47-3	Chromium_	448	B		P
7439-92-1	Lead_____	301000			P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	133		N	P
7782-49-2	Selenium_	324	B		P
7440-22-4	Silver___	4.0	U		P
7440-28-0	Thallium_	29.0	U	N	P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1174-8905

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922053

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	2.8	B	N	P
7440-38-2	Arsenic__	5.2	B		P
7440-39-3	Barium___	277	B	E	P
7440-41-7	Beryllium	0.27	B	N	P
7440-43-9	Cadmium__	9.9	B		P
7440-47-3	Chromium_	813	B		P
7439-92-1	Lead_____	4410			P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	0.70	U	N	P
7782-49-2	Selenium_	303	B		P
7440-22-4	Silver___	0.40	U		P
7440-28-0	Thallium_	2.9	U	N	P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1174-9005

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922054

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	17.0	U	N	P
7440-38-2	Arsenic__	155	B		P
7440-39-3	Barium___	1190	B	E	P
7440-41-7	Beryllium	3.6	B	N	P
7440-43-9	Cadmium__	31.5	B		P
7440-47-3	Chromium_	878	B		P
7439-92-1	Lead_____	381000			P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	122		N	P
7782-49-2	Selenium_	364	B		P
7440-22-4	Silver___	4.0	U		P
7440-28-0	Thallium_	29.0	U	N	P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

3/17/99

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1174-9105

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Lab Sample ID: 922055

Level (low/med): LOW__ Date Received: 12/10/98

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony_	1.9	B	N	P_
7440-38-2	Arsenic__	28.4	B		P_
7440-39-3	Barium___	156	B	E	P_
7440-41-7	Beryllium	0.30	B	N	P_
7440-43-9	Cadmium__	15.6	B		P_
7440-47-3	Chromium_	519	B		P_
7439-92-1	Lead_____	11.4	B		P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	0.70	U	N	P_
7782-49-2	Selenium_	689			P_
7440-22-4	Silver___	0.40	U		P_
7440-28-0	Thallium_	2.9	U	N	P_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN SW846

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2. Quality Control Data

a. Initial and Continuing Calibration Verification
[Form II (Part 1) - IN]

b. CRDL Standard for AA (if applicable) and ICP
[Form II (Part 2) - IN]

c. Blanks
[Form III - IN]

d. ICP Interference Check Sample
[Form IV - IN]

e. Spike Sample Recovery
[Form V (Part 1) - IN]

f. Post Digest Spike Sample Recovery
[Form V (Part 2) - IN]

g. Duplicates
[Form VI - IN]

h. Laboratory Control Sample
[Form VII - IN]

i. Standard Addition Results (if applicable)
[Form VIII - IN]

j. ICP Serial Dilutions
[Form IX - IN]

k. Preparation Log
[Form XIII - IN]

l. Analysis Run Log
[Form XIV - IN]

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2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony	1000.0	950.20	95.0	1000.0	923.70	92.4	929.10	92.9	P
Barium	2009.0	2055.00	102.3	1000.0	1016.00	101.6	1049.00	104.9	P
Beryllium	476.0	470.00	98.7	1000.0	946.30	94.6	957.30	95.7	P
Cadmium	510.0	492.20	96.5	1000.0	943.10	94.3	954.10	95.4	P
Chromium	471.0	474.10	100.7	1000.0	947.60	94.8	959.20	95.9	P
Iron	101.8	97.08	95.4	1000.0	963.80	96.4	972.70	97.3	P
Mercury	4.1	3.85	93.9	5.0	5.04	100.8	5.05	101.0	CV
Nickel	497.0	483.70	97.3	1000.0	936.90	93.7	945.40	94.5	P
Silver	487.0	473.40	97.2	100.0	96.71	96.7	96.59	96.6	P
Thallium	98.9	102.80	103.9	1000.0	997.60	99.8	1002.00	100.2	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony				1000.0	960.80	96.1			P
Barium				1000.0	1048.00	104.8	1061.00	106.1	P
Beryllium				1000.0	995.60	99.6			P
Cadmium				1000.0	989.50	98.9			P
romium				1000.0	997.20	99.7			P
[illegible]				1000.0	1005.00	100.5			P
M[illegible]ury				5.0	5.13	102.6	5.12	102.4	CV
Nickel				1000.0	982.30	98.2			P
Silver				100.0	96.91	96.9			P
Thallium				1000.0	1038.00	103.8			P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_									NR
Barium___				1000.0	1044.00	104.4	1060.00	106.0	P_
Beryllium									NR
Cadmium__									NR
[illegible]romium_									NR
[illegible]									NR
M[illegible]ury__				5.0	5.13	102.6	5.14	102.8	CV
Nickel___									NR
Silver___									NR
Thallium_									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

FORM II (PART 1) - IN

SW846

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: SPEX_____

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)	M
Antimony_									NR
Barium___				1000.0	1055.00	105.5	1045.00	104.5	P
Beryllium									NR
Cadmium__									NR
Chromium_									NR
[illegible]d____									NR
Mercury__									NR
Nickel___									NR
Silver___									NR
Thallium_									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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2B
LOW RANGE STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

AA CRDL Standard Source: SPEX_____

ICP CRDL Standard Source: LRS_____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				10.0	8.58	85.8		
Barium								
Beryllium				5.0	4.70	94.0		
Cadmium				5.0	5.18	103.6		
Chromium				5.0	3.95	79.0		
[illegible]				3.0	1.42	47.3		
Mercury	0.2	0.12	60.0					
Nickel				5.0	5.04	100.8		
Silver				5.0	4.67	93.4		
Thallium				10.0	13.29	132.9		

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3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

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	Prepa-ration Blank	C	M
Antimony	1.7	U	1.7	U	1.7	U	1.7	U	1.70	U	P
Barium	0.4	U	0.4	U	0.4	U	0.5	B	1.17	B	P
Beryllium	0.2	U	0.3	B	0.4	B	0.5	B	0.20	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	1.00	U	P
Chromium	0.6	U	0.6	U	0.6	U	0.6	U	0.60	U	P
Lead	-1.0	B	-1.2	B	0.9	B	0.7	U	-0.73	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.10	U	CV
Nickel	0.7	U	0.7	U	0.7	U	0.7	U	0.70	U	P
Silver	0.4	U	0.4	U	0.4	U	-0.4	B	0.40	U	P
Thallium	3.0	B	3.4	B	2.9	U	3.1	B	2.90	U	P

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3
BLANKS

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Barium			0.4	U	0.5	B	0.4	U			P
Beryllium											NR
Cadmium											NR
Chromium											NR
Lead											NR
Mercury			0.1	U	0.1	U	0.1	U			CV
Nickel											NR
Silver											NR
Thallium											NR

FORM III - IN

SW846

U.S. EPA - CLP

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3
BLANKS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Barium			0.4	B	0.4	U					P
Beryllium											NR
[illegible]ium											NR
[illegible]mium											NR
Lead											NR
Mercury											NR
Nickel											NR
Silver											NR
Thallium											NR

FORM III - IN

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4

ICP INTERFERENCE CHECK SAMPLE

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony	0	600	6	567.9	94.6	7	600.4	100.1
Barium	0	500	4	535.0	107.0	4	545.2	109.0
Beryllium	0	500	0	462.2	92.4	0	490.7	98.1
Cadmium	0	1000	3	916.1	91.6	3	971.6	97.2
Chromium	21	500	5	475.7	95.1	5	506.6	101.3
Lead	0	50	6	53.1	106.2	7	56.1	112.2
Mercury								
Nickel	0	1000	0	925.5	92.5	1	980.6	98.1
Silver	0	200	0	195.2	97.6	0	195.5	97.7
Thallium	0	100	5	107.7	107.7	10	116.3	116.3

FORM IV - IN

U.S. EPA - CLP

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ ICS Source: ICF_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	%R	Final Found Sol. A	Final Found Sol. AB	%R
Antimony	0	600						
Barium	0	500				4	543.3	108.7
Beryllium	0	500						
Cadmium	0	1000						
Chromium	21	500						
Lead	0	50						
Mercury								
Nickel	0	1000						
Silver	0	200						
Thallium	0	100						

U.S. EPA - CLP

2294

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

1174-8605M

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony_	75-125_	24.8200_	B	27.5700	B	500.00	-0.5	N	P_
Barium___	75-125_	84050.0000_		1161.0000	B	100000.00	82.9		P_
Beryllium	75-125_	3.0300_	B	3.4700	B	50.00	-0.9	N	P_
Cadmium__	75-125_	969.2000_	B	40.3600	B	1000.00	92.9		P_
Chromium_	75-125_	5308.0000_	B	675.0000	B	5000.00	92.7		P_
Lead_____		291800.0000_		341500.0000		5000.00	-994.0		P_
Mercury__	75-125_	192.4750_		0.1000	U	200.00	96.2		CV
ickel___	75-125_	122.6000_		140.0000		500.00	-3.5	N	P_
ver___	75-125_	976.1000_	B	4.0000	U	1000.00	97.6		P_
lium_	75-125_	29.0000_	U	29.0000	U	50.00	0.0	N	P_

Comments:

FORM V (Part 1) - IN

SW846

U.S. EPA - CLP

2294

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

1174-8605S

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75-125	19.2600	B	27.5700	B	500.00	-1.7	N	P
Barium	75-125	77370.0000		1161.0000	B	100000.00	76.2		P
Beryllium	75-125	2.5100	B	3.4700	B	50.00	-1.9	N	P
Cadmium	75-125	985.5000	B	40.3600	B	1000.00	94.5		P
Chromium	75-125	5441.0000	B	675.0000	B	5000.00	95.3		P
Lead		295500.0000		341500.0000		5000.00	-920.0		P
Mercury	75-125	193.4000		0.1000	U	200.00	96.7		CV
ickel	75-125	125.7000		140.0000		500.00	-2.9	N	P
ver	75-125	973.1000	B	4.0000	U	1000.00	97.3		P
lium	75-125	29.0000	U	29.0000	U	50.00	0.0	N	P

Comments:

FORM V (Part 1) - IN

SW846

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5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

1174-8605A

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water) : WATER_ Level (low/med): LOW___

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Antimony_									NR
Barium___									NR
Beryllium									NR
Cadmium__									NR
Chromium_									NR
Lead____									NR
Mercury__									NR
Nickel___									NR
Silver___									NR
Thallium_									NR

Comments:

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6
DUPLICATES

2294

EPA SAMPLE NO.

1174-8605D

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Level (low/med): _LOW__

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony		27.5700	B	23.4200	B	16.3		P
Barium		1161.0000	B	1117.0000	B	3.9		P
Beryllium		3.4700	B	3.2800	B	5.6		P
Cadmium		40.3600	B	39.2400	B	2.8		P
Chromium		675.0000	B	650.6000	B	3.7		P
Lead		341500.0000		329800.0000		3.5		P
Mercury		0.1000	U	0.1000	U			CV
Nickel	50.0	140.0000		128.1000		8.9		P
Silver		4.0000	U	4.0000	U			P
Thallium		29.0000	U	29.0000	U			P

FORM VI - IN

U.S. EPA - CLP

2294

7

LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Solid LCS Source: _____

Aqueous LCS Source: PELMER_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony	6000.0	5990.00	99.8						
Barium									
Beryllium	500.0	513.00	102.6						
Cadmium	500.0	508.00	101.6						
Chromium	1000.0	1006.00	100.6						
Lead	300.0	309.20	103.1						
Mercury									
Nickel	4000.0	4019.00	100.5						
Silver	1000.0	945.00	94.5						
Thallium	1000.0	1065.00	106.5						

U.S. EPA - CLP

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7

LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Solid LCS Source: _____

Aqueous LCS Source: PELMER_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony_									
Barium___	_100000	108750.0	108.7_						
Beryllium									
Cadmium__									
romium_									
d									
ury__									
Nickel___									
Silver___									
Thallium_									

FORM VII - IN

SW846

000450

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U.S. EPA - CLP

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7

LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Solid LCS Source: _____

Aqueous LCS Source: IVT_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony_									
Barium___									
Beryllium									
Cadmium__									
ıromium_									
[illegible]									
[illegible]ury__	200.0	188.47	94.2						
Nickel___									
Silver___									
Thallium_									

U.S. EPA - CLP

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STANDARD ADDITION RESULTS

Lab Name: COMPUCHEM_ENV._CORP._____ Contract:SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.:_____ SDG No.:00001_

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q

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ICP SERIAL DILUTION

EPA SAMPLE NO.

1174-8605L

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

Matrix (soil/water): WATER Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	27.57		85.00	U	100.0		P
Barium	1161.00	B	1900.50	B	63.7	E	P
Beryllium	3.47	B	11.55	B	232.9		P
Cadmium	40.40	B	50.00	U	100.0		P
Chromium	675.00	B	709.50	B	5.1		P
Lead	341500.00		352650.00		3.3		P
Mercury							NR
Nickel	140.00		180.45	B	28.9	E	P
Silver	4.00	B	20.00	U	100.0		P
Thallium	29.00		145.00	U	100.0		P

FORM IX - IN

SW846

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13
PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34021_ SAS No.: _____ SDG No.:00001_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
174-8605	12/17/98		50
174-8605D	12/17/98		50
174-8605M	12/17/98		50
174-8605S	12/17/98		50
174-8705	12/17/98		50
174-8805	12/17/98		50
174-8905	12/17/98		50
174-9005	12/17/98		50
174-9105	12/17/98		50
CSW	12/17/98		50
EACHBLK	12/17/98		50
BW	12/17/98		50

000454

FORM XIII - IN SW846

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13
PREPARATION LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34021_ SAS No.: _____ SDG No.:00001_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
CSW	12/17/98		50
BW	12/17/98		50

U.S. EPA - CLP

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PREPARATION LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.:_34021_ SAS No.: _____ SDG No.:00001_

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
174-8605	12/15/98		100
174-8605D	12/15/98		100
174-8605M	12/15/98		100
174-8605S	12/15/98		100
174-8705	12/15/98		100
174-8805	12/15/98		100
174-8905	12/15/98		100
174-9005	12/15/98		100
174-9105	12/15/98		100
CSW	12/15/98		100
EACHBLK	12/15/98		100
BW	12/15/98		100

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ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: V2_____ Method: CV

Start Date: 12/16/98 End Date: 12/16/98

EPA Sample No.	D/F	Time	% R	Analytes																					
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL												
S0	1.00	0819								X															
S0.2	1.00	0822								X															
S0.5	1.00	0824								X															
S1	1.00	0826								X															
S5	1.00	0829								X															
S10	1.00	0831								X															
TCV	1.00	0833								X															
B	1.00	0836								X															
[illegible]	1.00	0838								X															
[illegible]	1.00	0840								X															
CCB	1.00	0843								X															
ZZZZZZ	1.00	0845																							
ZZZZZZ	1.00	0847																							
ZZZZZZ	1.00	0849																							
ZZZZZZ	1.00	0852																							
ZZZZZZ	1.00	0854																							
ZZZZZZ	1.00	0856																							
ZZZZZZ	1.00	0858																							
ZZZZZZ	1.00	0901																							
ZZZZZZ	1.00	0903																							
ZZZZZZ	1.00	0905																							
CCV	1.00	0907								X															
CCB	1.00	0910								X															
ZZZZZZ	1.00	0912																							
ZZZZZZ	1.00	0914																							
PBW	1.00	0916								X															
LCSW	25.00	0919								X															
174-8605	1.00	0921								X															
74-8605D	1.00	0923								X															
74-8605S	25.00	0925								X															
74-8605M	25.00	0928								X															
174-8705	1.00	0930								X															

000457

FORM XIV - IN

SW846

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ANALYSIS RUN LOG

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: V2_____ Method: CV

Start Date: 12/16/98 End Date: 12/16/98

EPA Sample No.	D/F	Time	% R	Analytes																					
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL												
174-8805	1.00	0932								X															
CCV	1.00	0934								X															
CCB	1.00	0937								X															
174-8905	1.00	0939								X															
174-9005	1.00	0941								X															
174-9105	1.00	0943								X															
EACHBLK	1.00	0945								X															
ZZZZ	1.00	0948																							
ZZ	25.00	0950																							
ZZ	1.00	0952																							
ZZZZZZ	1.00	0954																							
ZZZZZZ	25.00	0957																							
ZZZZZZ	25.00	0959																							
CCV	1.00	1001								X															
CCB	1.00	1004								X															
ZZZZZZ	1.00	1006																							
ZZZZZZ	1.00	1008																							
ZZZZZZ	1.00	1010																							
ZZZZZZ	1.00	1012																							
ZZZZZZ	1.00	1015																							
ZZZZZZ	1.00	1017																							
ZZZZZZ	1.00	1019																							
CCV	1.00	1022								X															
CCB	1.00	1024								X															
CCV	1.00	1026								X															
CCB	1.00	1028								X															

FORM XIV - IN

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ANALYSIS RUN LOG

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Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 12/17/98 End Date: 12/18/98

EPA Sample No.	D/F	Time	% R	Analytes									
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL
S0	1.00	2246			X								
S	1.00	2253											
S	1.00	2300											
S	1.00	2305			X								
S	1.00	2311											
S	1.00	2316											
ICV	1.00	2323			X								
ICV	1.00	2330											
CV	1.00	2337											
	1.00	2344			X								
	1.00	2351											
ICSA	1.00	2358			X								
ICSAB	1.00	0005			X								
CCV	1.00	0012			X								
CCB	1.00	0019			X								
ZZZZZZ	1.00	0030											
ZZZZZZ	1.00	0037											
ZZZZZZ	1.00	0044											
ZZZZZZ	1.00	0051											
ZZZZZZ	1.00	0058											
ZZZZZZ	1.00	0105											
ZZZZZZ	5.00	0114											
ZZZZZZ	1.00	0121											
ZZZZZZ	1.00	0128											
ZZZZZZ	1.00	0135											
CCV	1.00	0142			X								
CCB	1.00	0149			X								
ZZZZZZ	1.00	0156											
ZZZZZZ	1.00	0202											
ZZZZZZ	1.00	0209											
PBW	1.00	0216			X								
LCSW	1.00	0223											

FORM XIV - IN

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 12/17/98 End Date: 12/18/98

EPA Sample No.	D/F	Time	% R	Analytes									
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL
LCSW	5.00	0230			X								
174-8605	10.00	0237			X								
74-8605D	10.00	0244			X								
74-8605S	10.00	0251			X								
ZZZZZZ	1.00	0258											
CCV	1.00	0305			X								
CCB	1.00	0312			X								
1-8605M	10.00	0319			X								
ZZZZZ	5.00	0325											
8605L	50.00	0332			X								
-8705	10.00	0339			X								
174-8805	10.00	0346			X								
174-8905	1.00	0353			X								
174-9005	10.00	0400			X								
CRI	1.00	0407											
ICSA	1.00	0414			X								
ICSAB	1.00	0421			X								
CCV	1.00	0428			X								
CCB	1.00	0435			X								
174-9105	1.00	0441			X								
LEACHBLK	1.00	0448			X								
74-8605A	1.00	0455											
ZZZZZZ	1.00	0502											
ZZZZZZ	1.00	0509											
ZZZZZZ	1.00	0516											
ZZZZZZ	1.00	0523											
ZZZZZZ	1.00	0530											
ZZZZZZ	1.00	0537											
ZZZZZZ	5.00	0544											
CCV	1.00	0551			X								
CCB	1.00	0557			X								
ZZZZZZ	1.00	0604											

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 12/17/98 End Date: 12/18/98

EPA Sample No.	D/F	Time	% R	Analytes										
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL	
ZZZZZZ	1.00	0611												
ZZZZZZ	1.00	0618												
ZZZZZZ	1.00	0625												
ZZZZZZ	1.00	0632												
ZZZZZZ	1.00	0639												
ZZZZZZ	1.00	0646												
ZZZZZZ	1.00	0653												
ZZZZZZ	1.00	0700												
ZZZZ	1.00	0707												
C	1.00	0714			X									
C	1.00	0720			X									
ZZZZZZ	1.00	0727												
ZZZZZZ	1.00	0734												
ZZZZZZ	1.00	0741												
ZZZZZZ	1.00	0748												
ZZZZZZ	1.00	0755												
ZZZZZZ	1.00	0802												
ZZZZZZ	1.00	0809												
ZZZZZZ	1.00	0816												
ZZZZZZ	1.00	0823												
ZZZZZZ	1.00	0830												
CCV	1.00	0837			X									
CCB	1.00	0843			X									
CRI	1.00	0850												
ICSA	1.00	0857			X									
ICSAB	1.00	0904			X									
CCV	1.00	0911			X									
CCB	1.00	0918			X									

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ANALYSIS RUN LOG

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Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 12/28/98 End Date: 12/28/98

EPA Sample No.	D/F	Time	% R	Analytes																					
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL												
S0	1.00	1043		X		X	X	X	X		X	X	X												
S	1.00	1050					X	X	X		X	X	X												
S	1.00	1057																							
S	1.00	1102				X																			
S	1.00	1109																							
S	1.00	1116		X																					
ICV	1.00	1125				X	X	X			X	X													
ICV	1.00	1132							X				X												
V	1.00	1139		X																					
	1.00	1146		X		X	X	X	X		X	X	X												
	1.00	1153																							
ICSA	1.00	1200		X		X	X	X	X		X	X	X												
ICSAB	1.00	1207		X		X	X	X	X		X	X	X												
CCV	1.00	1214		X		X	X	X	X		X	X	X												
CCB	1.00	1221		X		X	X	X	X		X	X	X												
LRS	1.00	1228		X		X	X	X	X		X	X	X												
PBW	1.00	1235		X		X	X	X	X		X	X	X												
LCSW	1.00	1241		X		X	X	X	X		X	X	X												
174-8605	10.00	1248		X		X	X	X	X		X	X	X												
74-8605D	10.00	1255		X		X	X	X	X		X	X	X												
74-8605S	10.00	1302		X		X	X	X	X		X	X	X												
74-8605M	10.00	1309		X		X	X	X	X		X	X	X												
74-8605L	50.00	1316		X		X	X	X	X		X	X	X												
174-8705	20.00	1323		X		X	X	X	X		X	X	X												
174-8805	10.00	1330		X		X	X	X	X		X	X	X												
CCV	1.00	1337		X		X	X	X	X		X	X	X												
CCB	1.00	1344		X		X	X	X	X		X	X	X												
174-8905	1.00	1350		X		X	X	X	X		X	X	X												
174-9005	10.00	1357		X		X	X	X	X		X	X	X												
174-9105	1.00	1404		X		X	X	X	X		X	X	X												
LEACHBLK	1.00	1411		X		X	X	X	X		X	X	X												
ZZZZZZ	1.00	1418																							

FORM XIV - IN SW846

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.:00001_

Instrument ID Number: ICP3_____ Method: P_

Start Date: 12/28/98 End Date: 12/28/98

EPA Sample No.	D/F	Time	% R	Analytes																					
				SB	BA	BE	CD	CR	PB	HG	NI	AG	TL												
ZZZZZZ	1.00	1425																							
ZZZZZZ	1.00	1432																							
CRI	1.00	1439																							
ICSA	1.00	1446		X		X	X	X	X		X	X	X												
ICSAB	1.00	1453		X		X	X	X	X		X	X	X												
CCV	1.00	1500		X		X	X	X	X		X	X	X												
CCB	1.00	1507		X		X	X	X	X		X	X	X												

FORM XIV - IN

SW846

3. Quarterly Verification of Instrument Performance

a. Instrument Detection Limits (Quarterly)
[Form X - IN]

b. ICP Interelement Correction Factors (Annually)
[Form XI (Part 1) - IN]

c. ICP Interelement Correction Factors (Annually)
[Form XI (Part 2) - IN]

d. ICP Linear Ranges (Quarterly)
[Form XII - IN]

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Instrument Detection Limits (Quarterly) 2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: _____ Date: 09/24/98

Flame AA ID Number : V2_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Antimony			10		NR
Barium			50000		NR
Beryllium			5		NR
Cadmium			2500		NR
Chromium			2500		NR
Lead			2500		NR
Mercury	253.70		100.0	0.1	CV
Nickel			5		NR
Silver			2500		NR
Thallium			10		NR

Comments:

FORM X - IN SW846

U.S. EPA - CLP

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Instrument Detection Limits (Quarterly) 2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 11/02/98

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Antimony	206.84		10	1.7	P
Barium	493.41		50000	0.4	P
Beryllium	313.04		5	0.2	P
Cadmium	226.50		2500	1.0	P
Chromium	267.72		2500	0.6	P
Lead	220.35		2500	0.7	P
Mercury			100.0		NR
Nickel	231.60		5	0.7	P
Silver	328.07		2500	0.4	P
Thallium	190.86		10	2.9	P

Comments:

FORM X - IN

SW846

U.S. EPA - CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY) 2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	BA_
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0000910	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0001090	0.0000000	-0.0000260	0.0000000	0.0000000
Mercury__						
ckel___	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
ver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
lium_	190.86	0.0000000	0.0000000	-0.0024320	0.0000000	0.0000000

Comments:

FORM XI (Part 1) - IN SW846

U.S. EPA - CLP

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : BE_	CD_	CO_	CR_	CU_
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0032000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	-0.0001220	0.0000000	0.0000000
Chromium_	267.72	0.0000810	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0000000	0.0000000	-0.0001090	0.0000000	0.0000000
Mercury__						
ckel___	231.60	0.0000880	0.0000000	0.0000000	0.0000000	0.0000000
ver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
lium_	190.86	0.0000000	0.0000000	0.0026730	0.0003390	0.0000000

Comments:

FORM XI (Part 2) - IN

SW846

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11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : MN_	MO_	NI_	SB_	SN_
Antimony_	206.84	0.0000000	0.0027990	-0.0001560	0.0000000	-0.0008685
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0000000	0.0000000	0.0001160	0.0000000	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	-0.0009020	0.0000000
[illegible]lver___	328.07	0.0000720	0.0000000	0.0000000	0.0000000	0.0000000
[illegible]lium_	190.86	-0.0010960	-0.0002290	0.0000000	0.0000000	0.0000000

Comments:

FORM XI (Part 2) - IN

SW846

U.S. EPA - CLP

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

2294

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 09/14/98

Analyte	Wave-length (nm)	Interelement Correction Factors for : TI_	V__	ZN_	___	___
Antimony_	206.84	0.0001630	0.0009140	0.0000000		
Barium___	493.41	0.0000000	0.0000000	0.0000000		
Beryllium	313.04	0.0000000	0.0001370	0.0000000		
Cadmium__	226.50	0.0000000	0.0000000	0.0000000		
Chromium_	267.72	0.0000000	0.0002610	0.0000000		
Lead_____	220.35	-0.0001765	-0.0000600	0.0000000		
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000		
Silver___	328.07	0.0000000	0.0000000	0.0000000		
Thallium_	190.86	0.0016540	0.0016560	0.0000000		

Comments:

U.S. EPA - CLP

12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: COMPUCHEM_ENV._CORP._____ Contract: SW-846____ 2294

Lab Code: COMPU_ Case No.: 34021_ SAS No.: _____ SDG No.: 00001_

ICP ID Number: ICP3_____ Date: 10/29/98

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Antimony	15.00	10000.0	P
Barium	15.00	50000.0	P
Beryllium	15.00	10000.0	P
Cadmium	15.00	30000.0	P
Chromium	15.00	50000.0	P
Lead	15.00	50000.0	P
Mercury			NR
Nickel	15.00	50000.0	P
Silver	15.00	4000.0	P
Thallium	15.00	50000.0	P

Comments:

FORM XII - IN SW846

4. Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the Quarterly Verification of Instrument Parameters submitted as a part of each data package.

The order of the raw data in the data package shall be: ICP, Flame AA (if used), Furnace AA (if used), mercury, and cyanide (if a target analyte).

Raw data shall be labeled using EPA sample number convention in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, interference check samples, ICP serial dilution samples, CRDL standard for ICP and AA (if used), Laboratory Control Sample, and post digestion spike
- diluted and undiluted samples (by client ID number) and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes
- instrument used, including all data voided or data not used and a brief written explanation
- all information for furnace analysis (if used)
- date and time of each analysis (instrument run logs can be submitted if they contain this information
- integration time for AA analyses (if used)

Trace ICP Runlog (P3)

Part (B) of a two part form

Method (Circle one.):
CLP ILM04.0
SW-846 6010B
MCAWW 200.7
Ba only

Case: 34020\3570 i
113303
100001
100005

Date: 12-17-98
Operator: Tom Cole
File name: TRC1217, -17A
WSL.NAME

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
1	SØ			1	921857	PBW	2294
2	XCL-11			2	921760	LCSW	
3	STD-3			3	922475		
4	XCL-2			4	922446	PBW	
5	XCL-3A			5	922049	LCSW	
6	PLSBR			6	922049	LCSW 5X 2ml in 10ml	
7	ICV			7	922046	10X	
8	ICB			8	922050	DUP 10X 2ml in 10ml	
9	LRS			9	922047	SPK 10X 2ml in 10ml	
10	ICSA			10	123123		
	ICSAB						
	CCV				CCV		
	CCB				CCB		
1	922455	PBW 35201		1	922048	10X 2ml in 10ml	
2	922026	LCSW		2	123123		
3	922017			3	922046	50X 2ml in 10ml	
4	922027	DUP		4	922051	10X 2ml in 10ml	
5	922024	SPK		5	922052	10X	✓
6	922025	SPK		6	922053		
7	922017	SDI 5X 2ml in 10ml		7	922054	10X 2ml in 10ml	
8	922028			8	CRI		
9	922056			9	ICSA		
10	922017	PDS 2xCRDL		10	ICSAB		
	CCV				CCV		
	CCB				CCB		

COMMENTS

Reviewed By: M. Powell
Date 12/18/98

~~3200~~
~~55~~
000473

Trace ICP Runlog (P3)

Part (A) of a two part form

Method (Circle one.):
CLP ILM04.0
~~SW 846 6010B~~
MCAWW 200.7

Case: Same **Date:** 12-17-98
Operator: Tom Cole
File name: Same
WSL.NAME

No.	Sample ID	Comments	Action needed
	~~SO~~		
	XCL-11		
	STD3		
	XCL-2		
	SCL-3A		
	PLSBR		
	ICV		
	ICB		
	CRI		
	ICSA		
	ICSAB		
	CCV		
	CCB	2AC	12-18-98
1	922055		
2	922056		
3	922056	PDS	
4	922980	PDS	
5	922554	LCSS	
6	922542		
7	922555	DUP	
8	922552	Spk	
9	922553	Spk	
10	922542	5DI 5X	Dil in 10 ml
	CCV		
	CCB		

No	Sample ID	Comments	Action Needed
1	922548		
2	922551		2294
3	922556		
4	922557		
5	922558		
6	922559		
7	922560		
8	922561		
9	922562		
10	922563		
	CCV		
	CCB		
1	922564		
2	922565		
3	922566		
4	922567		
5	922568		
6	922569		
7	922570		
8	922571		
9	922572		
10	922542		
	CCV / CRI / ICSA / ICSAB / CCV		
	CCB / CCB		

COMMENTS

Reviewed By: M Powell
Date: 12/18/98

Method: CLPBOR Standard: BLANK
Run Time: 12/17/98 22:46:15

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Avge	-.0497	2.902	-.0106	.2832	.0036	-.4661	-.0068
SDev	.0191	.025	.0246	.0170	.0004	.0802	.0149
%RSD	38.54	.8783	231.7	5.988	10.19	17.21	220.2
#1	-.0340	2.880	-.0388	.2663	.0038	-.5230	.0102
#2	-.0710	2.895	.0006	.2830	.0032	-.3743	-.0127
#3	-.0440	2.930	.0063	.3002	.0038	-.5010	-.0177

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Avge	.0057	.6770	-.0023	.3049	.0186	.0110	.2177
SDev	.0089	.0062	.0031	.1792	.0048	.0003	.0201
%RSD	155.8	.9224	134.7	58.79	25.70	3.177	9.228
#1	-.0044	.6820	.0013	.0999	.0235	.0108	.1968
#2	.0095	.6790	-.0044	.4320	.0140	.0108	.2369
#3	.0120	.6700	-.0038	.3826	.0184	.0114	.2193

Elem	Ni2316	Tl1908	V_2924	Zn2138	As1890	22031	22032
Avge	-.0193	-.1801	-.0027	-.0146	-.3588	1.207	.0742
SDev	.0081	.0140	.0007	.0006	.1216	.071	.0954
%RSD	41.88	7.779	26.53	4.175	33.88	5.878	128.4
#1	-.0280	-.1954	-.0019	-.0140	-.4989	1.134	.0324
#2	-.0121	-.1773	-.0032	-.0146	-.2811	1.212	.1834
#3	-.0177	-.1678	-.0032	-.0152	-.2964	1.276	.0070

Elem	20681	20682	19601	19602	Sn1899	Bi2230	Mo2020
Avge	.1168	.0332	-.3266	.4261	-.0159	-.1330	-.0085
SDev	.0415	.0157	.0612	.0713	.0181	.0482	.0160
%RSD	35.53	47.15	18.74	16.74	114.0	36.25	188.6
#1	.1570	.0439	-.3966	.3457	-.0318	-.1741	-.0210
#2	.1193	.0152	-.3001	.4505	.0038	-.0799	.0095
#3	.0741	.0405	-.2831	.4820	-.0196	-.1450	-.0139

Elem	Ti3349	B_2496
Avge	-.6413	-.0721
SDev	1.1557	.0176
%RSD	180.2	24.40
#1	-1.975	-.0518
#2	-.0235	-.0826
#3	.0741	-.0818

Method: CLPBOR Standard: XCL-11
Run Time: 12/17/98 22:53:10

Elem	Ag3280	Cd2265	Cr2677	Cu3247	Ni2316	Tl1908	Zn2138
Avge	24.04	683.9	29.48	144.9	25.46	32.52	19.41
SDev	.06	.3	.05	.7	.04	.07	.03
%RSD	.2677	.0417	.1616	.4590	.1522	.2302	.1727
#1	23.97	683.8	29.43	144.2	25.43	32.50	19.38
#2	24.09	684.3	29.52	145.1	25.50	32.60	19.45
#3	24.07	683.8	29.48	145.4	25.46	32.46	19.41

Elem	22031	22032	19601	19602
Avge	196.3	173.1	27.83	55.93
SDev	.7	2.0	.09	.77
%RSD	.3332	1.155	.3091	1.385
#1	196.9	170.8	27.89	55.05
#2	196.2	174.3	27.87	56.53
#3	195.6	174.3	27.73	56.19

2294

Method: CLPBOR Standard: STD3
Run Time: 12/17/98 23:00:04

2294

[illegible]m	Al3082	Ca3179	Fe2714	Mg2790
[illegible]	1369.	11.06	44.57	204.4
[illegible]	13.	.12	.42	1.8
%RSD	.9707	1.077	.9526	.8906
#1	1360.	10.97	44.26	203.1
#2	1363.	11.01	44.39	203.7
#3	1385.	11.19	45.05	206.5

Method: CLPBOR Standard: XCL-2
Run Time: 12/17/98 23:05:24

m	Ba4934	Be3130	Co2286	Mn2576	V 2924	As1890	Mo2020
e	360.1	1331.	110.3	44.18	14.24	133.1	109.0
v	1.9	1.	.2	.05	.02	.7	.3
%RSD	.5339	.0704	.1657	.1197	.1270	.5056	.3109
#1	362.3	1332.	110.5	44.23	14.26	133.9	108.6
#2	358.7	1331.	110.4	44.19	14.23	132.7	109.2
#3	359.3	1330.	110.1	44.12	14.22	132.8	109.2

2294

Method: CLPBOR Standard: XCL-3A
Run Time: 12/17/98 23:11:32

	K 7664	Na3302
A	579.3	33.41
S	4.7	.16
%RSD	.8130	.4805
#1	584.7	33.23
#2	575.8	33.45
#3	577.6	33.54

2294

Method: CLPBOR Standard: PLSBR
Run Time: 12/17/98 23:16:53

[illegible]em	20681	20682	Sn1899	Bi2230	Ti3349	B 2496
[illegible]	101.7	66.81	18.41	135.6	133.3	239.7
[illegible]	2.2	.13	.12	.5	17.1	.5
%RSD	2.146	.1958	.6531	.3889	12.85	.2064
#1	99.21	66.96	18.27	136.2	153.1	239.3
#2	102.7	66.76	18.50	135.3	123.5	240.2
#3	103.3	66.72	18.45	135.3	123.4	239.7

2294

Method: CLPBOR Sample Name: ICV1 Operator:
Run Time: 12/17/98 23:23:47
Comment: ICV ICV1
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	492.6	1950.	2055.	485.9	49720.	504.5	543.8
SDev	.8	4.	2.	.8	232.	.8	1.6
%RSD	.1601	.2231	.1177	.1704	.4669	.1640	.2904
#1	491.7	1946.	2057.	485.2	49470.	503.9	542.2
#2	493.1	1950.	2052.	485.6	49740.	504.2	543.8
#3	493.1	1954.	2056.	486.8	49940.	505.5	545.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	487.0	1956.	2009.	476.0	50710.	510.0	520.0
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	486.6	489.0	1962.	46990.	24160.	497.8	49340.
SDev	1.1	1.5	4.	469.	74.	1.5	99.
%RSD	.2209	.2997	.1808	.9976	.3048	.2919	.2014
#1	485.6	487.3	1959.	47530.	24080.	496.3	49250.
#2	486.4	489.8	1961.	46650.	24170.	497.8	49340.
#3	487.7	489.8	1966.	46810.	24230.	499.3	49450.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	471.0	497.0	1985.	49600.	24590.	491.0	48790.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	495.3	-.1567	506.2	3121.	5101.	-.4035	3.254
SDev	1.4	.6502	1.8	11.	62.	1.1766	2.995
%RSD	.2846	414.8	.3558	.3584	1.212	291.6	92.05
#1	494.7	-.8768	504.2	3109.	5030.	-1.066	6.680
#2	494.3	.0192	506.6	3122.	5128.	.9550	1.133
#3	496.9	.3874	507.7	3132.	5144.	-1.099	1.948
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	497.0		492.0	3012.			
Range	10.00		10.00	10.00			

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.246	5122.	5090.	2.685	3.530	1.662	-1.443
SDev	.660	15.	98.	3.197	2.903	3.105	2.321
%RSD	52.99	.3005	1.916	119.1	82.25	186.8	160.9
#1	-1.638	5135.	4978.	6.371	6.827	-1.508	-.8540
#2	-1.616	5105.	5140.	.6768	1.353	1.796	.5273
#3	-.4836	5127.	5153.	1.006	2.410	4.699	-4.001
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5579	3.015	.9899	10.69	22.27
SDev	1.0291	2.878	.1679	11.23	3.69
%RSD	184.5	95.48	16.96	105.1	16.58
#1	-1.526	2.525	1.182	22.96	26.32
#2	-.6708	.4124	.9169	.9008	21.41
	.5230	6.106	.8710	8.215	19.09
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

Method: CLPBOR Sample Name: ICV3 Operator:
Run Time: 12/17/98 23:30:42
Comment: ICV ICV3
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	99.92	19.50	.5065	.1729	-42.87	98.26	.2930
SDev	.28	4.89	.0531	.0144	3.79	4.23	.1921
%RSD	.2844	25.08	10.48	8.313	8.831	4.308	65.55
#1	99.66	13.86	.4602	.1795	-39.52	93.39	.2160
#2	100.2	22.03	.4949	.1828	-42.10	100.3	.1514
#3	99.88	22.61	.5644	.1564	-46.98	101.1	.5117
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.063	.0601	5.645	246.0	5.940	-.2428	173.2
SDev	.694	.0424	2.333	31.2	.994	.0408	143.8
%RSD	65.28	70.57	41.33	12.70	16.73	16.81	83.05
#1	.2723	.0971	4.626	210.2	6.932	-.1957	27.16
#2	1.346	.0138	8.315	260.1	4.945	-.2668	177.6
#3	1.571	.0693	3.995	267.7	5.945	-.2659	314.7
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3793	100.2	-.0002	-3.814	101.0	95.68	1039.
SDev	.1723	3.7	.1919	.049	4.2	2.86	37.
%RSD	45.43	3.684	118600.	1.288	4.121	2.984	3.545
#1	-.3952	96.58	.2155	-3.757	96.26	92.76	996.7
#2	-.5432	99.97	-.1519	-3.841	103.0	98.46	1057.
#3	-.1996	103.9	-.0641	-3.844	103.9	95.81	1064.
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		98.90			98.80	101.4	
Range		10.00			10.00	10.00	

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	96.41	102.7	100.2	1037.	1040.	95.81	95.60
SDev	3.48	1.8	5.7	52.	29.	1.90	4.11
%RSD	3.613	1.747	5.731	4.971	2.835	1.987	4.294
#1	92.46	101.6	93.59	977.6	1006.	96.22	91.02
#2	99.03	101.7	103.6	1062.	1055.	97.47	98.95
#3	97.74	104.7	103.5	1071.	1060.	93.73	96.84
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	101.8						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.113	2.347	.3553	6.324	21.56
SDev	3.310	1.918	.0303	12.84	1.03
%RSD	297.3	81.73	8.540	203.1	4.758
#1	2.382	1.888	.3447	-7.783	20.89
#2	-2.643	.6998	.3896	9.412	21.05
	3.601	4.453	.3317	17.34	22.74
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

Analysis Report QC Standard 12/17/98 11:44:28 PM page 1

Method: CLPBOR Sample Name: SPEXASSE Operator:
Run Time: 12/17/98 23:37:36
Comment: ICV SPEXASSE
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3016	7.949	.1656	-.0175	-55.72	.1109	-.5090
SDev	.1031	2.521	.0548	.0249	3.29	.0731	.2836
%RSD	34.19	31.72	33.07	142.5	5.902	65.96	55.72
#1	.2380	10.86	.1089	.0109	-51.94	.0382	-.6466
#2	.2463	6.606	.2181	-.0274	-57.29	.1099	-.6975
#3	.4206	6.382	.1697	-.0360	-57.93	.1845	-.1828
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0566	.2344	-3.887	12.18	-.0101	-.0960	127.1
SDev	.3308	.4534	7.264	28.61	.8236	.0226	49.6
%RSD	584.3	193.4	186.9	234.8	8162.	23.59	39.01
#1	-.4273	-.2787	-11.62	-20.67	-.9309	-.1195	78.45
#2	.0488	.5811	2.801	25.56	.2442	-.0940	177.6
#3	.2087	.4009	-2.846	31.65	.6564	-.0744	125.3
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6656	.6547	-12.03	-4.375	-1.468	1.670	1002.
SDev	.3488	.9297	.44	.079	.392	.656	12.
%RSD	52.41	142.0	3.665	1.809	26.68	39.30	1.174
#1	-.6081	1.615	-12.25	-4.296	-1.086	1.472	1005.
#2	-1.040	.5892	-12.32	-4.454	-1.448	1.135	1012.
#3	-.3491	-.2405	-11.53	-4.374	-1.869	2.402	989.4
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value							1000.
Range							10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0794	-2.068	-1.176	1004.	1002.	3.659	.6686
SDev	1.793	2.178	.755	16.	15.	3.354	.7284
%RSD	2259.	105.3	64.18	1.627	1.536	91.67	108.9
#1	-1.684	.4166	-1.845	989.4	1013.	3.336	.5333
#2	1.901	-3.649	-.3575	1021.	1008.	.4781	1.455
#3	.0216	-2.971	-1.326	999.8	984.2	7.163	.0173
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	986.9	990.3	994.2	1014.	6.863
SDev	15.4	19.0	15.3	157.	.636
%RSD	1.557	1.923	1.536	15.46	9.265
#1	997.2	1005.	1003.	Q1195.	6.669
#2	994.1	997.1	1003.	935.6	6.347
#3	969.2	968.8	976.6	912.4	7.574
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: S0 Operator:
Run Time: 12/17/98 23:44:30
Comment: ICB
Units: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5229	6.944	.0795	.0704	-57.78	.0646	.0112
SDev	.3819	3.228	.1073	.0130	.91	.0612	.1049
%RSD	73.04	46.48	134.9	18.51	1.573	94.76	939.8
#1	.9103	9.653	-.0442	.0575	-57.14	.0150	-.1097
#2	.1466	7.807	.1365	.0701	-57.37	.0459	.0647
#3	.5119	3.373	.1462	.0836	-58.82	.1331	.0784
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2183	-.1618	1.452	6.434	.3574	.0038	37.67
SDev	.7215	.1862	8.093	23.65	2.777	.0413	220.9
%RSD	330.4	115.1	557.2	367.5	776.8	1095.	586.4
#1	-.5606	-.0832	-5.279	-18.62	-2.842	-.0051	-208.8
#2	.8637	-.0277	10.43	28.36	1.775	.0487	217.8
#3	.3520	-.3744	-.7952	9.563	2.139	-.0324	104.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0975	-1.449	.0903	-4.544	-.6216	-1.220	1.020
SDev	.1986	.849	.1419	.034	.1772	.638	1.279
%RSD	203.6	58.60	157.2	.7383	28.51	52.31	125.4
#1	-.0468	-.5250	-.0636	-4.573	-.4873	-.7775	2.400
#2	.0154	-2.196	.1183	-4.507	-.8224	-1.951	.7878
#3	.3240	-1.628	.2161	-4.551	-.5550	-.9305	-.1270
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.411	.0645	-.9716	-2.293	2.667	-.9250	-1.374
SDev	.693	.5900	.1972	.674	2.212	2.4821	.347
%RSD	49.09	914.1	20.30	29.38	82.93	268.3	25.26
#1	-.6962	.7388	-1.107	-2.767	4.972	1.188	-1.767
#2	-2.080	-.3569	-1.062	-2.589	2.466	-3.658	-1.106
#3	-1.458	-.1882	-.7454	-1.522	.5622	-.3046	-1.250
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.340	1.112	.9694	5.656	1.025
SDev	2.475	.440	.8682	12.94	.226
%RSD	105.8	39.59	89.56	228.7	22.08
#1	-4.533	.7337	1.918	-9.273	1.175
#2	-2.830	1.595	.2136	12.70	.7648
	.3436	1.006	.7769	13.54	1.137
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

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Method: CLPBOR Sample Name: ~~CRI~~ Operator:
Run Time: 12/17/98 23:51:25 2294
Comment: LRS MP 12/18/98
Units: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.08	8.899	.0999	9.844	-62.40	10.19	99.40
SDev	.21	8.528	.0945	.010	.06	.08	.78
%RSD	1.066	95.83	94.56	.1033	.0956	.8204	.7837
#1	20.31	18.57	-.0048	9.840	-62.33	10.25	98.72
#2	20.04	5.661	.1258	9.836	-62.45	10.23	99.23
#3	19.88	2.464	.1788	9.855	-62.40	10.09	100.2
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.65	49.83	-4.959	4.690	-1.331	29.95	98.68
SDev	.62	.56	6.391	21.72	2.542	.18	216.7
%RSD	2.981	1.127	128.9	463.2	191.0	.5930	219.6
#1	19.94	49.26	-10.83	-19.62	-3.494	29.78	-143.5
#2	21.01	49.85	-5.892	11.48	-1.967	29.93	165.3
#3	21.01	50.39	1.847	22.21	1.468	30.14	274.3
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.61	19.12	101.0	32.89	5.075	9.283	121.2
SDev	.27	2.51	.5	.21	.507	2.335	.9
%RSD	.3344	13.12	.5119	.6243	9.984	25.15	.7554
#1	80.84	18.36	100.6	32.65	5.342	7.309	120.2
#2	80.31	21.93	100.8	33.03	5.393	11.86	122.1
#3	80.68	17.09	101.6	32.98	4.491	8.681	121.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.48	7.247	3.982	118.5	122.6	10.70	8.569
SDev	.92	2.515	1.423	4.0	1.0	3.38	1.813
%RSD	4.729	34.71	35.75	3.412	.8054	31.60	21.16
#1	20.29	9.916	3.048	113.8	123.5	7.900	7.006
#2	18.48	4.921	5.620	120.6	122.8	14.46	10.56
#3	19.69	6.905	3.276	121.0	121.5	9.744	8.143
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.78	43.44	21.77	67.34	99.78
SDev	2.06	1.95	.31	3.72	1.51
%RSD	5.040	4.490	1.426	5.522	1.514
#1	38.43	44.14	21.99	64.74	99.61
#2	41.63	41.23	21.42	65.67	98.36
#3	42.27	44.94	21.92	71.60	101.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	40.00	40.00	20.00	60.00	
Range	50.50	50.50	50.50	50.50	

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Method: CLPBOR Sample Name: ICSA Operator:
Run Time: 12/17/98 23:58:19
Comment: ICSA ICSA
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0329	569800.	4.042	.1269	483300.	10.64	-2.101
SDev	.6228	19311.	.384	.1300	17888.	3.66	.333
%RSD	1896.	3.389	9.510	102.4	3.701	34.44	15.85
#1	.6284	579900.	4.467	.2745	493700.	14.86	-2.183
#2	-.6084	547500.	3.719	.0297	462700.	8.320	-2.385
#3	-.1186	581900.	3.939	.0765	493700.	8.732	-1.734
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.054	2.145	188500.	15.00	496600.	-4.840	401.1
SDev	5.021	.092	6357.	8.97	16542.	.170	419.7
%RSD	62.34	4.303	3.373	59.81	3.331	3.506	104.7
#1	13.84	2.191	191800.	25.35	505400.	-4.905	884.5
#2	4.892	2.205	181200.	9.520	477600.	-4.648	128.8
#3	5.427	2.039	192600.	10.12	506900.	-4.968	190.0
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.856	-23.55	3.643	-25.62	1.194	.3281	5.939
SDev	3.073	9.80	.235	.71	3.447	1.356	2.070
%RSD	165.5	41.60	6.446	2.776	288.8	413.2	34.85
#1	5.390	-12.40	3.460	-26.14	-2.781	-.9212	7.339
#2	.3627	-30.79	3.562	-24.81	3.365	.1358	3.561
#3	-.1840	-27.47	3.908	-25.90	2.997	1.770	6.916
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4153	.9400	1.311	-4.276	11.03	-3.929	2.445
SDev	1.888	15.00	12.62	23.395	13.70	21.160	12.41
%RSD	454.6	1596.	963.1	547.1	124.2	538.6	507.5
#1	1.638	17.90	-13.12	-31.29	26.61	20.14	-11.44
#2	-1.759	-10.58	10.32	8.919	.8782	-12.32	6.348
#3	1.367	-4.500	6.730	9.540	5.598	-19.60	12.43
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-3.365	14.80	8.002	77.02	38.41
SDev	3.513	9.18	16.50	416.2	.52
%RSD	104.4	62.03	206.2	540.4	1.356
#1	-7.170	25.29	27.06	557.6	38.48
#2	-2.681	8.249	-1.761	-166.9	37.86
#3	-.2436	10.86	-1.289	-159.7	38.89
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

Method: CLPBOR Sample Name: ICSAB Operator:
Run Time: 12/18/98 00:05:13
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	200.0	577000.	535.0	492.3	492200.	971.6	487.4
SDev	1.6	5094.	3.4	3.4	3718.	5.8	3.5
%RSD	.8237	.8828	.6419	.6848	.7553	.5956	.7227
#1	198.1	573100.	535.0	490.2	490300.	972.3	485.2
#2	200.6	582800.	538.5	496.2	496500.	977.0	491.5
#3	201.2	575200.	531.6	490.5	489900.	965.5	485.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	502.5	501.1	193000.	24.17	506900.	490.6	422.2
SDev	3.9	5.1	1440.	3.95	3791.	3.6	431.4
%RSD	.7663	1.014	.7463	16.36	.7479	.7337	102.2
#1	505.1	495.3	191900.	28.03	504200.	488.8	897.8
#2	504.3	504.2	194600.	20.13	511300.	494.7	312.6
#3	498.0	504.0	192400.	24.34	505300.	488.2	56.27
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	973.5	Q78.51	500.1	996.3	50.61	52.16	648.1
SDev	6.9	6.18	3.3	7.5	.70	3.54	6.4
%RSD	.7110	7.867	.6546	.7511	1.376	6.785	.9817
#1	974.5	85.62	498.3	990.5	49.88	54.34	640.8
#2	980.0	Q74.46	503.9	1005.	51.26	48.08	650.9
#3	966.2	Q75.45	498.1	993.6	50.67	54.06	652.6
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	104.9	57.19	47.31	636.7	653.8	54.29	51.08
SDev	5.2	10.31	6.14	25.7	4.7	15.31	2.90
%RSD	4.948	18.03	12.99	4.035	.7261	28.20	5.668
#1	99.25	69.02	40.31	607.5	657.5	67.37	47.83
#2	109.5	50.14	51.82	655.7	648.4	37.45	53.37
#3	106.0	52.42	49.79	647.0	655.4	58.06	52.05
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B_2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1015.	1104.	1021.	1108.	1091.
SDev	9.	8.	11.	545.	11.
%RSD	.9032	.7127	1.055	49.22	.9791
#1	1007.	1111.	1031.	Q1737.	1084.
#2	1025.	1106.	1022.	806.9	1104.
#3	1013.	1096.	1009.	Q779.5	1086.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	20.00	20.00	20.00	20.00	

Method: CLPBOR Sample Name: CCV Operator:
Run Time: 12/18/98 00:12:13
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	100.9	2030.	1016.	1012.	48050.	1002.	1013.
SDev	.6	14.	1.	1.	160.	2.	3.
%RSD	.5511	.6885	.0561	.1266	.3338	.1947	.2492
#1	100.3	2045.	1017.	1010.	47860.	1001.	1010.
#2	100.9	2029.	1016.	1012.	48110.	1000.	1013.
#3	101.5	2017.	1016.	1013.	48170.	1004.	1015.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1007.	992.4	1971.	46730.	48100.	1011.	48860.
SDev	2.	4.9	4.	459.	123.	2.	71.
%RSD	.1952	.4908	.1891	.9825	.2551	.2074	.1450
#1	1006.	987.0	1970.	47260.	47960.	1009.	48800.
#2	1006.	996.5	1975.	46520.	48150.	1012.	48840.
#3	1009.	993.7	1968.	46420.	48190.	1013.	48940.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	997.9	1043.	1018.	1013.	1019.	1037.	1041.
SDev	1.5	2.	2.	2.	12.	12.	6.
%RSD	.1468	.1962	.2192	.2236	1.137	1.169	.5468
#1	996.3	1041.	1016.	1011.	1005.	1024.	1035.
#2	998.0	1044.	1019.	1015.	1026.	1047.	1043.
#3	999.3	1044.	1020.	1014.	1025.	1041.	1046.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1032.	1025.	1015.	1044.	1040.	1035.	1038.
SDev	1.	2.	18.	19.	3.	3.	19.
%RSD	.0635	.2201	1.820	1.836	.2808	.2583	1.851
#1	1033.	1028.	994.0	1022.	1041.	1038.	1016.
#2	1032.	1023.	1027.	1056.	1036.	1035.	1053.
#3	1031.	1024.	1025.	1054.	1041.	1033.	1045.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B_2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1028.	1035.	1029.	1030.	26.79
SDev	6.	5.	4.	185.	.30
%RSD	.5474	.5010	.3491	17.96	1.137
#1	1022.	1041.	1025.	Q1244.	26.97
#2	1029.	1031.	1031.	920.2	26.43
#3	1034.	1033.	1031.	927.0	26.95
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: CCB Operator:
Run Time: 12/18/98 00:19:08
C ment: CCB
M CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0138	31.82	.2228	.2736	-32.10	.2819	-.0936
SDev	.1993	6.16	.0291	.0156	8.69	.1516	.2497
%RSD	1439.	19.36	13.08	5.710	27.06	53.80	266.8
#1	.2047	29.69	.2014	.2900	-36.80	.1397	-.2731
#2	-.0609	27.01	.2560	.2718	-37.42	.2643	-.1993
#3	-.1854	38.76	.2110	.2590	-22.07	.4415	.1916
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5079	.0277	5.924	4.548	29.04	.2038	14.98
SDev	.2005	.0635	9.073	18.47	5.07	.0424	94.69
%RSD	39.48	229.6	153.2	406.0	17.45	20.80	632.1
#1	.7016	.0415	-4.553	-16.71	25.42	.1697	-89.49
#2	.3013	.0832	11.16	16.59	26.86	.1903	39.29
#3	.5208	-.0417	11.17	13.77	34.83	.2512	95.15
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1264	.3423	-.0918	-4.251	-1.185	-.3980	-.5936
SDev	.1016	1.749	.1055	.079	1.220	2.5800	.2423
%RSD	80.35	511.1	114.9	1.864	102.9	648.3	40.81
#1	.2013	2.107	-.1546	-4.183	-.6083	-3.352	-.3778
#2	.1671	.3113	.0300	-4.338	-.3606	.7448	-.8556
#3	.0108	-1.391	-.1507	-4.233	Q-2.587	1.413	-.5472
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.373	-1.202	-1.184	-2.762	.4813	-.7039	-.2529
SDev	.645	1.721	1.237	1.072	.5509	3.0478	2.5760
%RSD	46.94	143.2	104.4	38.82	114.5	433.0	1019.
#1	-1.651	.5156	-1.177	-3.233	1.040	-4.054	-3.009
#2	-1.832	-1.195	.0486	-3.518	.4660	1.906	.1577
#3	-.6361	-2.927	-2.425	-1.535	-.0618	.0362	2.093
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.185	.8626	1.700	4.035	.5890
SDev	.448	.5516	1.417	4.806	.2147
%RSD	37.81	63.94	83.32	119.1	36.46
#1	-1.690	1.412	3.311	-1.258	.6061
#2	-1.029	.8675	1.144	8.126	.7947
	-.8356	.3086	.6462	5.238	.3662
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

Method: CLPBOR Sample Name: 922455 #15 Operator:
Run Time: 12/18/98 00:30:54
C ment: SDG:35701 ClientID:PBW 1:1
M CONC Corr. Factor: 1

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E	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2850	26.85	.1929	.0535	-28.49	.1490	-.0487
SDev	.5052	22.34	.0272	.0155	19.03	.1118	.2455
%RSD	177.3	83.20	14.11	28.95	66.79	75.02	504.0
#1	.8605	11.80	.1879	.0546	-41.61	.2640	-.2872
#2	-.0858	16.23	.1685	.0375	-37.20	.1424	-.0623
#3	.0802	52.51	.2222	.0683	-6.665	.0407	.2033
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6867	.1109	13.12	24.72	29.48	.0237	203.2
SDev	.3598	.2523	11.57	4.57	26.43	.0542	51.0
%RSD	52.39	227.5	88.23	18.48	89.65	229.0	25.11
#1	1.102	-.1803	2.636	19.96	8.256	.0862	232.8
#2	.4770	.2496	11.18	25.12	21.10	-.0084	232.5
#3	.4809	.2635	25.54	29.07	59.08	-.0069	144.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6078	.2031	-.0951	-2.776	-.1912	.3011	-1.070
SDev	.3563	.8228	.3788	.193	1.2211	1.025	.340
%RSD	58.63	405.1	398.2	6.936	638.6	340.3	31.75
#1	.9032	-.0981	-.5202	-2.884	.8026	1.399	-.7004
#2	.2120	-.4265	.0284	-2.554	-1.554	-.6296	-1.141
#3	.7080	1.134	.2064	-2.891	.1781	.1338	-1.369
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.158	.4256	-.5068	-3.721	.2460	.8323	.0282
SDev	1.094	2.452	1.5816	.973	.6411	.7228	1.856
%RSD	94.44	576.3	312.1	26.15	260.7	86.84	6574.
#1	-2.272	3.182	-.3932	-3.912	.8953	.0074	2.086
#2	-1.119	-.3923	-2.142	-2.667	-.3866	1.135	-1.518
#3	-.0846	-1.513	1.015	-4.584	.2292	1.354	-.4833
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1177	3.642	.5499	15.40	.5900
SDev	2.3735	2.839	.2295	5.80	.6382
%RSD	2017.	77.96	41.73	37.68	108.2
#1	-1.990	6.912	.3448	22.06	1.251
#2	2.552	2.204	.7977	11.39	-.0224
	-.9149	1.809	.5073	12.76	.5410
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00	500.0
Low	-20.00	-10.00	-5.000	-30.00	-500.0

Method: CLPBOR Sample Name: PLCSW922026 #16 Operator:
Run Time: 12/18/98 00:37:49
Comment: SDG:35701 ClientID:LCSW 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	944.5	19360.	20420.	505.0	49640.	500.6	5041.
SDev	7.1	505.	489.	12.5	1388.	11.9	128.
%RSD	.7543	2.611	2.395	2.471	2.796	2.377	2.542
#1	936.4	18780.	19850.	490.6	48030.	486.9	4893.
#2	949.5	19660.	20710.	512.2	50420.	507.3	5116.
#3	947.6	19650.	20700.	512.3	50460.	507.7	5114.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	995.1	2464.	9904.	48390.	49090.	1501.	50040.
SDev	24.7	26.	270.	707.	1263.	38.	1007.
%RSD	2.484	1.036	2.730	1.461	2.573	2.562	2.013
#1	966.6	2434.	9591.	47580.	47630.	1456.	48880.
#2	1010.	2481.	10060.	48820.	49840.	1523.	50690.
#3	1009.	2476.	10060.	48780.	49790.	1523.	50560.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3974.	1024.	5066.	2064.	301.1	514.2	6133.
SDev	97.	25.	130.	56.	9.9	15.3	174.
%RSD	2.439	2.418	2.573	2.704	3.294	2.976	2.834
#1	3863.	995.2	4916.	2000.	289.6	496.7	5933.
#2	4032.	1036.	5142.	2096.	306.7	524.7	6231.
#3	4029.	1040.	5141.	2097.	306.9	521.4	6237.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1016.	304.1	299.5	6156.	6122.	515.0	513.9
SDev	25.	4.8	12.5	224.	149.	9.3	18.3
%RSD	2.446	1.588	4.162	3.642	2.429	1.798	3.566
#1	987.5	298.5	285.1	5897.	5951.	504.3	492.8
#2	1029.	307.2	306.4	6284.	6204.	521.2	526.4
#3	1032.	306.6	307.1	6286.	6213.	519.4	522.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1007.	1019.	1016.	1023.	9.573
SDev	27.	17.	27.	157.	.643
%RSD	2.700	1.667	2.662	15.31	6.718
#1	975.5	999.2	984.8	1204.	8.962
	1021.	1026.	1033.	934.3	9.514
	1024.	1030.	1031.	930.8	10.24
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	1205.	1205.	1205.	1205.	
Low	795.0	795.0	795.0	795.0	

Method: CLPBOR Sample Name: 922017 #17 Operator:
Run Time: 12/18/98 00:44:44
Comment: SDG:35701 ClientID:DF-SOIL 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2952	7879.	3390.	2.597	H910600.	27.24	45.01
SDev	.0732	22.	13.	.098	4079.	.21	.09
%RSD	24.81	.2829	.3965	3.770	.4479	.7593	.1909
#1	-.2113	7903.	3405.	2.709	H907200.	27.44	45.11
#2	-.3280	7859.	3381.	2.557	H909400.	27.03	44.97
#3	-.3462	7874.	3383.	2.526	H915100.	27.25	44.95
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	59.77	973.0	40230.	19990.	231700.	5922.	2775.
SDev	1.52	1.7	85.	212.	425.	16.	5.
%RSD	2.535	.1700	.2116	1.062	.1835	.2680	.1963
#1	61.51	972.6	40160.	20230.	231700.	5909.	2780.
#2	58.77	974.8	40200.	19880.	231300.	5917.	2775.
#3	59.02	971.5	40320.	19860.	232100.	5940.	2769.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	705.6	L-22.20	6.456	2582.	48760.	48.03	13.51
SDev	1.8	2.77	.221	5.	264.	.28	5.93
%RSD	.2599	12.49	3.426	.1856	.5415	.5825	43.87
#1	707.4	L-19.22	6.701	2579.	48470.	48.20	20.13
#2	703.8	L-22.70	6.271	2580.	48820.	47.71	11.70
#3	705.7	L-24.70	6.396	2588.	48980.	48.19	8.696
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.610	49160.	48550.	15.44	12.54	88.18	27.98
SDev	1.608	226.	480.	5.44	6.28	14.63	7.18
%RSD	24.33	.4604	.9893	35.22	50.10	16.60	25.66
#1	5.200	49390.	48000.	20.96	19.70	104.7	19.98
#2	8.361	48940.	48750.	15.28	9.911	82.97	30.10
#3	6.269	49160.	48900.	10.09	7.993	76.86	33.87
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-67.65	9.891	-.0614	25.23	76.63
SDev	5.36	2.114	3.3867	162.5	.43
%RSD	7.928	21.37	5513.	644.2	.5672
#1	L-72.90	12.20	3.843	212.9	76.91
#2	L-62.18	8.042	-2.201	L-67.23	76.84
	L-67.88	9.434	-1.826	L-69.97	76.13
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000492

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Method: CLPBOR Sample Name: 922027 #18 Operator:
Run Time: 12/18/98 00:51:38
Comment: SDG:35701 ClientID:DF-SOILD 1:1
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1709	7702.	3327.	2.414	H891700.	26.81	43.75
SDev	.1161	20.	12.	.053	654.	.31	.07
%RSD	67.96	.2616	.3487	2.177	.0733	1.161	.1643
#1	-.0382	7723.	3340.	2.475	H891000.	27.17	43.81
#2	-.2541	7700.	3325.	2.380	H891800.	26.62	43.67
#3	-.2203	7683.	3317.	2.388	H892200.	26.63	43.77
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	58.80	956.1	39390.	19890.	227700.	5810.	2749.
SDev	1.67	2.5	22.	212.	346.	4.	55.
%RSD	2.848	.2602	.0563	1.065	.1521	.0767	1.990
#1	60.73	955.0	39390.	20130.	228100.	5811.	2690.
#2	57.77	959.0	39420.	19810.	227600.	5813.	2797.
#3	57.90	954.4	39370.	19730.	227500.	5805.	2761.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	690.6	L-18.90	5.763	2532.	47740.	44.19	7.805
SDev	.6	6.60	.315	3.	361.	3.57	1.075
%RSD	.0907	34.93	5.457	.1246	.7555	8.076	13.77
#1	691.2	L-11.28	5.915	2536.	47330.	40.61	6.815
#2	690.0	L-22.60	5.401	2531.	47930.	47.74	8.948
#3	690.5	L-22.81	5.973	2530.	47970.	44.21	7.652
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.166	48320.	47450.	6.936	8.231	85.10	23.76
SDev	1.216	111.	595.	5.302	1.396	4.69	7.67
%RSD	19.72	.2290	1.254	76.44	16.96	5.516	32.29
#1	5.862	48440.	46770.	.9240	9.748	90.18	15.85
#2	5.132	48240.	47770.	10.94	7.944	80.93	31.17
#3	7.505	48270.	47820.	8.943	7.000	84.18	24.25
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-65.45	10.96	-.8541	30.58	75.25
SDev	.86	1.64	2.6442	159.3	.67
%RSD	1.319	14.97	309.6	521.1	.8918
#1	L-64.88	12.85	2.198	214.6	76.02
#2	L-66.44	9.880	-2.305	L-61.22	74.95
	L-65.02	10.15	-2.455	L-61.61	74.79
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922024 #19 Operator:
Run Time: 12/18/98 00:58:33
Comment: SDG:35701 ClientID:DF-SOILS 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	44.27	9776.	5469.	50.28	H907200.	72.43	509.6
SDev	.21	158.	97.	.63	9156.	1.01	5.8
%RSD	.4738	1.618	1.765	1.254	1.009	1.394	1.147
#1	44.04	9959.	5580.	51.00	H917600.	73.59	516.3
#2	44.30	9685.	5415.	49.86	H900300.	71.74	505.2
#3	44.46	9684.	5411.	49.98	H903600.	71.96	507.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	246.6	1199.	40880.	19680.	230300.	6335.	2782.
SDev	4.7	5.	404.	531.	2831.	72.	165.
%RSD	1.906	.4540	.9887	2.696	1.230	1.139	5.927
#1	252.0	1206.	41350.	20300.	233500.	6418.	2973.
#2	243.6	1196.	40610.	19380.	228400.	6289.	2684.
#3	244.2	1196.	40690.	19370.	228900.	6298.	2690.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1156.	24.76	484.6	3053.	48300.	60.71	504.7
SDev	12.	4.10	5.5	37.	103.	2.84	2.6
%RSD	1.063	16.56	1.140	1.213	.2126	4.682	.5069
#1	1170.	29.43	491.0	3095.	48420.	57.90	506.6
#2	1146.	23.10	481.2	3028.	48240.	60.63	501.8
#3	1151.	21.75	481.6	3034.	48240.	63.59	505.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	46.65	48760.	48070.	508.0	503.1	102.9	39.64
SDev	.93	640.	166.	8.9	7.3	5.2	6.77
%RSD	1.986	1.313	.3452	1.756	1.460	5.042	17.08
#1	45.60	49500.	47880.	497.7	511.0	108.7	32.52
#2	47.37	48370.	48170.	512.4	496.5	101.2	40.39
#3	46.97	48410.	48150.	513.9	501.7	98.80	46.00
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	882.2	1054.	969.6	995.2	78.07
SDev	7.7	24.	10.6	299.3	.95
%RSD	.8709	2.296	1.098	30.08	1.222
#1	889.7	1082.	981.8	1340.	79.05
#2	882.6	1041.	963.2	807.1	77.15
	874.4	1040.	963.7	838.1	78.03
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922025 #20 Operator:
Run Time: 12/18/98 01:05:27
Comment: SDG:35701 ClientID:DF-SOILM 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	44.97	9818.	5451.	50.43	H910700.	72.84	511.3
SDev	.12	19.	9.	.19	8824.	.19	4.1
%RSD	.2764	.1911	.1594	.3856	.9689	.2662	.8064
#1	45.04	9802.	5457.	50.21	H900700.	72.90	507.0
#2	45.04	9813.	5441.	50.49	H913800.	72.62	511.6
#3	44.82	9838.	5455.	50.59	H917600.	72.99	515.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	247.5	1212.	41030.	19810.	231700.	6367.	2962.
SDev	1.2	4.	248.	165.	1325.	41.	67.
%RSD	.4946	.3178	.6054	.8322	.5718	.6416	2.267
#1	248.6	1208.	40760.	20000.	230200.	6322.	3039.
#2	246.2	1211.	41110.	19690.	231900.	6379.	2915.
#3	247.8	1215.	41240.	19730.	232800.	6401.	2933.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1158.	26.62	486.2	3067.	48560.	58.07	508.7
SDev	3.	4.62	3.2	19.	491.	1.96	1.9
%RSD	.2471	17.34	.6533	.6335	1.011	3.379	.3665
#1	1155.	31.51	482.6	3046.	48000.	57.36	507.1
#2	1159.	26.00	487.2	3071.	48770.	56.56	508.3
#3	1160.	22.34	488.7	3084.	48910.	60.29	510.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	49.19	49040.	48320.	512.6	506.8	95.98	39.13
SDev	3.65	135.	680.	16.1	5.6	11.38	7.09
%RSD	7.423	.2747	1.407	3.135	1.114	11.86	18.12
#1	45.06	48920.	47540.	494.8	513.3	109.1	31.52
#2	51.96	49010.	48650.	517.1	503.9	89.05	40.32
#3	50.56	49190.	48770.	526.0	503.2	89.78	45.55
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	880.0	1055.	972.6	1009.	78.19
SDev	7.7	4.	3.6	282.	1.48
%RSD	.8756	.3432	.3710	27.93	1.891
#1	871.4	1059.	968.8	1335.	78.36
#2	882.6	1056.	972.8	847.4	76.64
#3	886.1	1052.	976.0	845.5	79.58
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: SDI922017 #21 Operator:
Run Time: 12/18/98 01:14:34
Comment: SDG:35701 ClientID:DF-SOILL 1:5
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0239	1545.	674.6	.5738	192200.	5.750	9.428
SDev	.2009	5.	.7	.0145	608.	.116	.243
%RSD	842.1	.3306	.0981	2.527	.3161	2.010	2.579
#1	.0483	1539.	674.9	.5860	191500.	5.883	9.223
#2	-.2509	1547.	675.1	.5578	192700.	5.694	9.364
#3	.1310	1548.	673.9	.5778	192400.	5.673	9.696
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.41	198.4	8472.	3023.	47960.	1257.	546.9
SDev	.99	.8	30.	9.	139.	3.	55.0
%RSD	7.410	.4036	.3487	.2989	.2899	.2426	10.05
#1	14.56	197.5	8438.	3015.	47810.	1254.	583.5
#2	12.84	198.9	8491.	3033.	48090.	1260.	573.5
#3	12.83	198.9	8487.	3022.	47970.	1258.	483.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	150.9	-3.403	1.240	520.2	10340.	10.80	1.355
SDev	.5	.546	.104	1.6	114.	1.42	.309
%RSD	.3185	16.04	8.360	.3012	1.099	13.17	22.82
#1	150.7	-2.842	1.120	518.7	10210.	9.810	1.072
#2	150.5	-3.932	1.301	521.8	10420.	12.43	1.685
#3	151.4	-3.434	1.298	520.0	10390.	10.15	1.309
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.469	10390.	10310.	.5094	1.770	21.13	5.631
SDev	1.949	27.	168.	.9701	.021	4.45	4.283
%RSD	132.6	.2587	1.627	190.4	1.170	21.07	76.06
#1	3.689	10390.	10120.	-.3765	1.787	25.47	1.986
#2	.6769	10420.	10420.	1.546	1.747	16.57	10.35
#3	.0412	10370.	10400.	.3587	1.776	21.35	4.559
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-14.10	2.992	.6031	9.905	15.69
SDev	1.53	1.173	1.124	26.07	.90
%RSD	10.88	39.20	186.3	263.2	5.704
#1	-15.87	2.942	1.858	39.99	14.70
#2	-13.27	1.845	-.3111	-6.010	16.43
	-13.15	4.189	.2626	-4.269	15.94
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922028 #22 Operator:
R Time: 12/18/98 01:21:29
Client: SDG:35701 ClientID:DF-PLANTS 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2614	881.3	159.4	.6020	277700.	14.83	16.14
SDev	.4313	13.1	.8	.0402	586.	.05	.14
%RSD	165.0	1.488	.4940	6.685	.2111	.3197	.8784
#1	.1149	894.7	160.1	.6284	277700.	14.82	16.06
#2	-.7320	880.5	159.7	.6218	278300.	14.79	16.05
#3	-.1670	868.5	158.6	.5556	277200.	14.89	16.30
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	16.21	807.9	10090.	H592700.	72770.	2060.	H1038000.
SDev	.90	2.9	18.	9628.	202.	4.	1641.
%RSD	5.538	.3593	.1798	1.624	.2772	.2109	.1580
#1	17.24	804.7	10100.	H603700.	72940.	2060.	H1040000.
#2	15.78	808.6	10100.	H588300.	72830.	2065.	H1038000.
#3	15.61	810.3	10070.	H586000.	72550.	2056.	H1037000.
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	115.7	-8.485	17.54	2835.	3986.	28.52	5.263
SDev	.6	1.014	.19	8.	14.	1.18	1.093
%RSD	.4883	11.95	1.084	.2932	.3447	4.149	20.76
#1	115.9	-7.315	17.46	2841.	3971.	27.40	4.002
#2	115.1	-9.068	17.41	2839.	3999.	29.76	5.883
#3	116.2	-9.074	17.76	2826.	3988.	28.40	5.905
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	27.64	4038.	3960.	5.011	5.381	57.32	14.14
SDev	2.99	21.	30.	4.955	.943	3.65	3.59
%RSD	10.83	.5081	.7629	98.90	17.52	6.367	25.42
#1	24.18	4061.	3926.	-.5894	6.285	60.94	10.65
#2	29.38	4026.	3985.	8.829	4.405	53.64	17.83
#3	29.35	4025.	3969.	6.793	5.453	57.36	13.94
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-54.95	2.619	.7589	14.04	670.0
SDev	3.30	1.310	1.185	45.48	2.7
%RSD	6.002	50.01	156.2	323.8	.3969
#1	L-58.64	1.209	2.104	66.47	670.7
	L-52.28	3.797	.3079	-14.72	672.2
	L-53.94	2.851	-.1348	-9.623	667.0
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922056 #23 Operator:
Run Time: 12/18/98 01:28:23
Comment: SDG:35701 ClientID:LEACH BLANK 1:1
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1439	37.88	1.388	.0457	68.59	.0587	.1844
SDev	.4016	3.88	.060	.0462	21.84	.1959	.3402
%RSD	279.1	10.25	4.304	101.1	31.84	333.8	184.5
#1	-.6004	33.67	1.341	-.0065	92.67	-.1189	-.2084
#2	.1549	38.67	1.456	.0620	63.03	.2689	.3764
#3	.0138	41.31	1.368	.0815	50.06	.0261	.3851
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2573	1.377	11.04	533.5	38.42	.6315	H1008000.
SDev	.9991	.188	7.93	19.6	3.70	.1188	985.
%RSD	388.4	13.67	71.85	3.683	9.618	18.81	.0977
#1	-.8909	1.262	1.887	542.8	42.43	.7548	H1008000.
#2	.9294	1.595	15.33	546.7	37.69	.6219	H1009000.
#3	.7332	1.276	15.90	510.9	35.15	.5179	H1007000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.683	-7.583	-.0839	-1.447	2.348	15.94	-.6991
SDev	.367	.876	.1897	.103	2.429	.95	.8746
%RSD	21.78	11.56	226.1	7.142	103.5	5.943	125.1
#1	1.299	-8.523	-.0881	-1.329	5.053	14.87	-1.377
#2	1.721	-6.788	-.2715	-1.523	1.639	16.32	-1.009
#3	2.029	-7.437	.1079	-1.487	.3525	16.65	.2883
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.520	1.632	2.698	.9193	-1.515	36.63	5.606
SDev	.269	4.149	4.654	2.998	.822	4.84	2.941
%RSD	17.68	254.2	172.5	326.2	54.23	13.21	52.47
#1	1.522	-.8458	7.990	.3816	-2.262	36.29	4.160
#2	1.788	6.422	-.7572	-1.774	-.6352	41.63	3.668
#3	1.251	-.6795	.8598	4.150	-1.648	31.97	8.991
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-23.04	.6653	-.2003	-4.516	4.978
SDev	1.58	2.499	.3329	19.587	.435
%RSD	6.844	375.6	166.2	433.8	8.728
#1	L-24.81	-1.919	-.4394	-26.84	5.476
#2	L-22.53	.8465	.1799	9.773	4.673
	L-21.79	3.069	-.3414	3.522	4.786
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: PDS922017 #24 Operator:
Run Time: 12/18/98 01:35:18
C ment: SDG:35701 ClientID:DF-SOILA 1:1
M CONC Corr. Factor: 1

2294

E	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.90	7821.	3369.	13.04	H907000.	37.31	146.9
SDev	.22	49.	27.	.05	2576.	.41	.2
%RSD	1.069	.6321	.8144	.3894	.2840	1.109	.1283
#1	20.64	7874.	3399.	13.10	H909900.	37.78	146.7
#2	21.00	7812.	3363.	13.01	H906300.	37.05	147.1
#3	21.05	7776.	3345.	13.02	H904800.	37.08	147.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	81.16	1020.	39950.	19770.	230800.	5924.	3042.
SDev	2.01	4.	84.	292.	1093.	22.	253.
%RSD	2.477	.3955	.2106	1.478	.4738	.3683	8.316
#1	83.39	1015.	40040.	20100.	232000.	5947.	3335.
#2	79.48	1024.	39950.	19660.	230500.	5921.	2899.
#3	80.61	1020.	39870.	19550.	229800.	5903.	2893.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	783.3	-1.417	116.0	2609.	48500.	58.27	142.2
SDev	3.5	3.184	.2	8.	157.	1.97	.8
%RSD	.4478	224.7	.1863	.3168	.3246	3.377	.5655
#1	787.3	2.256	116.2	2618.	48370.	56.43	142.0
#2	781.9	-3.094	116.0	2609.	48670.	58.03	143.1
#3	780.7	-3.412	115.7	2601.	48450.	60.35	141.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	27.72	48870.	48310.	141.8	142.4	99.59	37.63
SDev	3.20	423.	374.	6.8	3.4	12.31	8.51
%RSD	11.55	.8662	.7744	4.775	2.380	12.36	22.61
#1	24.55	49330.	47890.	134.0	146.0	113.7	27.86
#2	27.67	48790.	48620.	145.3	142.0	90.75	41.69
#3	30.95	48490.	48420.	146.1	139.2	94.37	43.35
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-67.73	11.51	-1.198	31.65	75.98
SDev	1.07	1.64	2.671	177.5	.76
%RSD	1.578	14.21	223.0	560.8	.9957
#1	L-68.55	13.39	1.831	236.5	76.72
#2	L-68.13	10.38	-3.218	L-76.35	75.20
	L-66.52	10.76	-2.206	L-65.20	76.02
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: CCV Operator:
F Time: 12/18/98 01:42:12
(ent: CCV CVS1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.1	2037.	1049.	1040.	49320.	1027.	1038.
SDev	.4	7.	3.	2.	161.	2.	2.
%RSD	.3523	.3352	.2886	.1836	.3269	.1510	.1741
#1	100.6	2045.	1053.	1038.	49160.	1027.	1036.
#2	101.2	2035.	1048.	1042.	49480.	1028.	1040.
#3	101.3	2032.	1047.	1039.	49310.	1025.	1038.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1035.	1003.	2000.	47850.	49220.	1036.	49690.
SDev	1.	7.	5.	477.	136.	2.	134.
%RSD	.1039	.7215	.2316	.9973	.2756	.2033	.2689
#1	1034.	995.6	1995.	48400.	49080.	1034.	49580.
#2	1036.	1005.	2004.	47570.	49340.	1038.	49650.
#3	1034.	1010.	2000.	47590.	49250.	1036.	49840.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1025.	1064.	1049.	1040.	1048.	1073.	1065.
SDev	3.	6.	1.	3.	9.	3.	3.
%RSD	.2777	.5585	.1398	.2927	.8524	.2434	.3283
#1	1026.	1057.	1048.	1038.	1039.	1071.	1062.
#2	1027.	1067.	1050.	1044.	1057.	1076.	1069.
#3	1022.	1067.	1048.	1040.	1050.	1071.	1066.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1061.	1054.	1046.	1065.	1066.	1073.	1072.
SDev	1.	10.	17.	21.	6.	15.	10.
%RSD	.0551	.9474	1.593	1.961	.5393	1.407	.9033
#1	1060.	1064.	1027.	1041.	1072.	1090.	1062.
#2	1060.	1055.	1058.	1079.	1064.	1064.	1081.
#3	1061.	1044.	1052.	1076.	1061.	1064.	1074.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1054.	1067.	1056.	1066.	26.47
SDev	5.	6.	2.	191.	.42
%RSD	.4291	.5313	.2195	17.87	1.579
#1	1050.	1073.	1054.	Q1286.	26.76
	1059.	1066.	1059.	960.8	25.99
	1053.	1061.	1056.	951.3	26.66
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: CCB Operator:
Run Time: 12/18/98 01:49:07
Comment: CCB
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2269	12.68	.2602	.2447	-27.46	.0903	.0885
SDev	.2847	2.51	.0256	.0541	10.51	.1098	.1097
%RSD	125.5	19.83	9.839	22.11	38.29	121.6	123.9
#1	.5533	15.57	.2327	.3058	-16.86	.2160	.2150
#2	.0304	10.99	.2833	.2254	-27.64	.0130	.0307
#3	.0968	11.48	.2646	.2030	-37.89	.0418	.0198
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3411	.1941	4.954	3.695	18.87	.2946	-17.57
SDev	.3311	.0278	2.845	26.24	3.34	.0785	205.03
%RSD	97.07	14.30	57.43	710.2	17.68	26.67	1167.
#1	-.0402	.1663	3.309	-26.38	22.14	.3691	-241.7
#2	.5556	.2218	3.313	21.91	19.00	.3021	160.5
#3	.5079	.1941	8.238	15.56	15.47	.2125	28.53
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0850	-.8411	.0604	-4.132	1.961	.5574	-.3675
SDev	.4751	.8516	.1349	.026	1.520	1.691	1.0946
%RSD	558.7	101.2	223.4	.6409	77.50	303.4	297.9
#1	-.4437	-1.468	.0273	-4.122	Q3.373	1.603	.8649
#2	.2227	-1.184	.2087	-4.111	Q2.159	-1.394	-.7404
#3	.4761	.1284	-.0549	-4.162	.3522	1.463	-1.227
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1707	2.524	1.673	-2.417	.6484	.8896	.3840
SDev	.7397	2.185	1.238	.803	1.576	4.025	.5269
%RSD	433.4	86.55	74.02	33.24	243.0	452.4	137.2
#1	.9558	4.833	2.636	-2.361	2.467	3.423	.6858
#2	.0694	2.250	2.106	-1.644	-.2968	-3.751	-.2244
#3	-.5132	.4895	.2761	-3.248	-.2254	2.996	.6907
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.803	-.5320	1.815	-.4082	.0548
SDev	1.094	1.8028	1.397	13.580	.3884
%RSD	60.69	338.9	76.94	3327.	708.8
#1	-1.535	.7088	3.319	-15.99	.4875
#2	-3.006	.2952	1.569	8.895	-.0596
	-.8675	-2.600	.5586	5.872	-.2635
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

Method: CLPBOR Sample Name: 921857 #27 Operator:
Run Time: 12/18/98 01:56:02
Comment: SDG:00005 ClientID:PBW 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0083	18.07	.2707	.2198	-41.13	.0726	-.0157
SDev	.0314	2.49	.0476	.0454	10.00	.0998	.2078
%RSD	378.0	13.78	17.57	20.64	24.31	137.4	1326.
#1	.0138	20.18	.2214	.1758	-52.31	.1236	-.2122
#2	-.0443	15.32	.2745	.2172	-38.02	.1367	-.0365
#3	.0055	18.71	.3163	.2664	-33.05	-.0424	.2017
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4828	.0554	-2.086	11.00	8.739	.1760	101.9
SDev	.1814	.1819	6.508	5.22	3.295	.0950	139.2
%RSD	37.57	328.1	312.0	47.41	37.70	53.96	136.6
#1	.6923	.0277	-.2295	5.438	5.209	.0780	261.7
#2	.3780	-.1110	-9.321	11.79	9.274	.1823	6.952
#3	.3782	.2496	3.292	15.78	11.73	.2676	37.04
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2962	.5472	.0328	-2.618	.1173	.2225	.4031
SDev	.7583	1.237	.0858	.237	.7390	1.653	1.165
%RSD	256.0	226.1	261.4	9.042	629.8	742.7	289.1
#1	1.062	.8947	.1180	-2.889	.6141	1.604	1.657
#2	-.4548	1.573	-.0537	-2.510	-.7319	-1.608	.1981
#3	.2819	-.8264	.0342	-2.455	.4698	.6720	-.6461
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.370	1.737	-.6990	-2.342	1.766	3.018	-1.181
SDev	1.555	.703	1.0376	.479	1.680	3.038	2.636
%RSD	113.5	40.49	148.4	20.46	95.09	100.7	223.2
#1	-.5335	2.522	-.3461	-2.353	3.652	5.894	-.5457
#2	-.4125	1.527	-1.867	-1.858	1.217	3.319	-4.076
#3	-3.165	1.163	.1161	-2.817	.4300	-.1591	1.079
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.883	3.076	.7382	8.502	-.0795
SDev	.757	.684	.2514	3.900	.5188
%RSD	26.24	22.24	34.05	45.88	653.0
#1	-3.664	3.806	1.019	12.49	.3912
#2	-2.832	2.449	.5345	4.695	-.6358
#3	-2.153	2.975	.6611	8.321	.0062
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00	500.0
Low	-20.00	-10.00	-5.000	-30.00	-500.0

000502

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Method: CLPBOR Sample Name: PLCSW921760 #28 Operator:
Run Time: 12/18/98 02:02:57
C ment: SDG:00005 ClientID:LCSW 1:1
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	979.7	19800.	20780.	494.3	50100.	508.1	5095.
SDev	2.3	26.	42.	.5	108.	1.4	2.
%RSD	.2308	.1297	.2024	.0981	.2159	.2853	.0299
#1	978.2	19800.	20820.	494.8	49980.	509.7	5095.
#2	978.7	19770.	20740.	494.3	50200.	507.1	5097.
#3	982.3	19830.	20790.	493.8	50120.	507.4	5094.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1007.	2526.	9997.	52370.	49780.	1516.	51390.
SDev	2.	9.	2.	518.	14.	2.	34.
%RSD	.1894	.3571	.0166	.9896	.0290	.1061	.0660
#1	1008.	2522.	9995.	52960.	49770.	1514.	51410.
#2	1007.	2520.	9998.	51980.	49790.	1517.	51410.
#3	1005.	2536.	9997.	52180.	49790.	1517.	51350.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4007.	1031.	5148.	2110.	306.8	521.6	6264.
SDev	9.	3.	2.	.	4.1	4.6	90.
%RSD	.2294	.3028	.0415	.0157	1.333	.8845	1.442
#1	4017.	1035.	5145.	2109.	302.3	517.7	6160.
#2	4000.	1029.	5149.	2110.	310.3	526.7	6323.
#3	4003.	1030.	5149.	2109.	307.8	520.3	6309.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1034.	309.2	305.6	6239.	6276.	521.5	521.6
SDev	1.	1.2	6.5	246.	15.	3.7	6.5
%RSD	.1397	.3777	2.113	3.937	.2363	.7028	1.239
#1	1034.	310.2	298.4	5956.	6262.	523.1	515.0
#2	1035.	309.4	310.7	6385.	6291.	524.1	527.9
#3	1032.	307.9	307.7	6376.	6275.	517.3	521.8
Errors	LC Pass	NOCHECK	NOCHECK	NOCHFCK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1016.	1057.	1026.	1044.	8.743
SDev	9.	14.	2.	187.	.381
%RSD	.8669	1.308	.1732	17.92	4.358
#1	1006.	1073.	1024.	H1260.	8.314
#2	1020.	1049.	1027.	933.7	9.042
	1022.	1049.	1027.	937.7	8.871
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	1205.	1205.	1205.	1205.	
Low	795.0	795.0	795.0	795.0	

Method: CLPBOR Sample Name: 922475 #29 Operator:
Run Time: 12/18/98 02:09:51
Comment: SDG:00005 ClientID:T5-981207 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4803	28.56	517.8	.1935	105500.	1.166	1.149
SDev	.7503	10.59	20.7	.0377	4778.	.038	.103
%RSD	156.2	37.06	4.001	19.51	4.529	3.303	8.976
#1	1.336	25.38	507.2	.2076	102700.	1.137	1.267
#2	-.0671	19.93	504.5	.1507	102800.	1.150	1.076
#3	.1725	40.37	541.6	.2221	111000.	1.210	1.105
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.183	2.967	-8.704	2110.	34890.	208.1	17250.
SDev	.734	.180	4.939	81.	1532.	8.9	631.
%RSD	62.07	6.075	56.74	3.830	4.391	4.288	3.655
#1	2.014	3.176	-6.705	2065.	33980.	202.9	16910.
#2	.6222	2.870	-14.33	2063.	34040.	203.1	16880.
#3	.9127	2.857	-5.079	2204.	36660.	218.4	17980.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.352	-.0367	1.006	89.36	.2379	2.409	19.37
SDev	.592	1.3111	.191	3.91	.6813	.280	20.78
%RSD	25.16	3570.	18.97	4.375	286.4	11.60	107.3
#1	1.974	-.4784	1.214	86.96	1.000	2.423	43.31
#2	3.034	1.438	.8401	87.25	-.3108	2.122	8.855
#3	2.048	-1.070	.9625	93.88	.0240	2.680	5.946
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5122	1.685	-.4923	33.56	12.28	2.370	2.420
SDev	.7931	1.170	.4419	42.14	10.21	3.155	1.809
%RSD	154.9	69.43	89.76	125.6	83.16	133.1	74.77
#1	1.223	2.963	.0128	82.21	23.88	-.9272	4.088
#2	.6574	.6681	-.8073	9.950	8.301	5.361	.4969
#3	-.3435	1.423	-.6825	8.511	4.658	2.676	2.674
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-6.050	2.961	32.62	11.76	114.9
SDev	5.432	.821	.90	16.04	5.0
%RSD	89.78	27.74	2.758	136.4	4.309
#1	.1577	2.587	33.01	30.05	111.8
#2	-9.930	3.903	31.59	5.172	112.2
	-8.377	2.393	33.26	.0566	120.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

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Method: CLPBOR Sample Name: 922446 #30 Operator:
Run Time: 12/18/98 02:16:46
Comment: SDG:00001 ClientID:PBW 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1992	17.68	1.175	.1137	-32.16	.0921	.3031
SDev	.5201	1.38	.363	.0075	5.27	.1777	.1049
%RSD	261.1	7.783	30.87	6.580	16.39	192.9	34.62
#1	.5119	18.55	1.543	.1051	-26.74	.2880	.3195
#2	.4869	16.10	1.163	.1187	-32.46	.0474	.1909
#3	-.4012	18.40	.8180	.1172	-37.27	-.0590	.3988
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4898	-.0462	-1.737	12.52	5.741	.0495	84.36
SDev	.5841	.1113	9.130	21.09	1.152	.0564	178.4
%RSD	119.3	240.6	525.5	168.4	20.06	114.0	211.5
#1	.2219	-.0555	-9.633	-8.053	6.881	.0532	-89.53
#2	1.160	.0694	8.261	34.09	5.763	.1040	267.0
#3	.0877	-.1526	-3.840	11.53	4.578	-.0087	75.58
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4288	.3030	.0877	-2.852	-1.005	-1.057	.9053
SDev	.3600	1.779	.3135	.063	.201	.323	.7701
%RSD	83.95	586.9	357.4	2.200	20.02	30.54	85.07
#1	.6057	-1.750	.1161	-2.887	-1.077	-1.183	.3635
#2	.6661	1.297	.3860	-2.779	-1.160	-1.298	1.787
#3	.0146	1.363	-.2390	-2.889	-.7776	-.6903	.5655
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4928	.2681	-1.648	-1.819	2.257	-.5452	-1.320
SDev	.9275	2.437	1.488	2.944	1.642	2.6113	1.663
%RSD	188.2	909.2	90.27	161.9	72.74	479.0	125.9
#1	-1.162	2.330	-2.786	-4.926	2.996	2.263	-2.912
#2	.5659	.8952	-2.194	-1.460	3.400	-.9972	-1.455
#3	-.8820	-2.421	.0354	.9301	.3759	-2.901	.4058
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.167	4.030	.7663	10.93	.1761
SDev	.802	2.339	.2732	11.82	.3669
%RSD	68.77	58.03	35.65	108.1	208.3
#1	.2619	2.252	.7903	5.155	.0164
#2	1.791	6.679	1.027	24.54	.5959
#3	1.447	3.158	.4819	3.111	-.0838
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00	500.0
Low	-20.00	-10.00	-5.000	-30.00	-500.0

Method: CLPBOR Sample Name: PLCSW922049 #31 Operator:
Run Time: 12/18/98 02:23:41
Comment: SDG:00001 ClientID:LCSW 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1034.	16.90	108800.	.1030	-48.38	1048.	4.474
SDev	4.	6.67	884.	.0471	3.18	11.	.646
%RSD	.3730	39.45	.8123	45.77	6.567	1.090	14.43
#1	1030.	22.54	108000.	.1411	-52.04	1035.	3.758
#2	1035.	18.63	108700.	.1176	-46.78	1051.	4.650
#3	1037.	9.541	109800.	.0503	-46.32	1058.	5.013
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High	1200.					1200.	
Low	800.0					800.0	

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5174.	-.3051	-5.217	16.10	-.8775	-.0109	269.7
SDev	72.	.6033	10.013	11.10	3.9061	.0132	69.6
%RSD	1.399	197.7	191.9	68.97	445.1	121.7	25.81
#1	5097.	-.9152	-16.77	3.438	-5.339	-.0044	189.3
#2	5185.	-.2912	.2182	24.18	1.929	-.0021	309.0
#3	5241.	.2912	.9038	20.67	.7776	-.0260	310.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	6000.						
Low	4000.						

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.354	-1.819	-.1882	-2.771	5230.	1042.	19.09
SDev	1.407	1.388	.1882	.097	138.	22.	1.13
%RSD	104.0	76.32	100.00	3.506	2.635	2.114	5.941
#1	2.970	-3.370	-.3343	-2.830	5077.	1018.	17.98
#2	.3986	-.6923	.0241	-2.659	5271.	1049.	19.05
#3	.6929	-1.395	-.2544	-2.823	5343.	1060.	20.24
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	LC Pass	NOCHECK
High					6000.	1200.	
Low					4000.	800.0	

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5053.	5264.	5213.	26.16	15.55	1043.	1042.
SDev	72.	90.	169.	4.07	1.00	13.	28.
%RSD	1.431	1.704	3.235	15.57	6.450	1.206	2.667
#1	4975.	5189.	5020.	21.46	16.23	1033.	1010.
#2	5064.	5240.	5287.	28.35	14.40	1040.	1054.
#3	5118.	5363.	5333.	28.68	16.03	1057.	1062.
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	6000.						
Low	4000.						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.049	7.781	1.051	15.12	.9658
SDev	2.872	1.584	.119	12.49	1.350
%RSD	140.2	20.36	11.29	82.58	139.8
#1	-1.896	9.449	1.179	28.93	1.574
#2	.7436	7.596	1.030	11.80	1.905
#3	-4.995	6.297	.9442	4.634	-.5817
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High					
Low					

Method: CLPBOR Sample Name: PLCSW922049 #32 Operator:
Run Time: 12/18/98 02:30:36
Comment: SDG:00001 ClientID:LCSW 1:5
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	216.1	3.083	21750.	.0057	-57.42	218.5	1.191
SDev	.2	.654	51.	.0054	.00	.7	.450
%RSD	.1145	21.21	.2323	95.50	.0084	.3281	37.80
#1	216.4	3.559	21700.	.0026	-57.42	217.7	.7890
#2	216.1	2.337	21760.	.0025	-57.42	219.0	1.677
#3	215.9	3.353	21800.	.0120	-57.43	218.9	1.106
Errors	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High			24000.				
Low			16000.				

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1082.	.2542	1.336	9.147	-.2078	.1244	100.6
SDev	5.	.2059	6.404	16.03	3.3188	.0167	101.8
%RSD	.4212	80.98	479.4	175.3	1597.	13.42	101.2
#1	1077.	.0277	-5.961	-9.364	-3.828	.1341	12.81
#2	1086.	.4299	6.023	18.59	2.690	.1340	212.3
#3	1084.	.3050	3.946	18.22	.5143	.1051	76.85
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							
Low							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6480	-.8783	-.1485	-1.162	1084.	213.9	3.793
SDev	.7621	2.1464	.2673	.096	15.	3.1	.592
%RSD	117.6	244.4	180.0	8.268	1.340	1.466	15.59
#1	1.511	-2.329	-.4159	-1.218	1067.	210.3	3.814
#2	.3657	-1.893	.1187	-1.218	1093.	215.0	3.192
#3	.0674	1.587	-.1484	-1.051	1091.	216.3	4.374
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							
Low							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1067.	1087.	1082.	2.926	4.219	213.1	214.3
SDev	3.	2.	23.	2.508	1.461	2.5	5.8
%RSD	.2757	.1795	2.079	85.72	34.64	1.166	2.715
#1	1069.	1089.	1056.	.0541	5.684	215.2	207.9
#2	1067.	1087.	1096.	4.039	2.761	213.6	215.6
#3	1064.	1085.	1095.	4.686	4.211	210.3	219.3
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							
Low							

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8712	4.249	.6209	11.32	.2909
SDev	1.1853	2.459	.1650	3.77	.2380
%RSD	136.1	57.88	26.57	33.34	81.80
#1	-1.721	6.922	.6792	15.31	.1752
#2	.4829	3.745	.4347	10.83	.5647
#3	-1.376	2.081	.7489	7.813	.1329
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High					
Low					

Method: CLPBOR Sample Name: 922046 #33 Operator:
Run Time: 12/18/98 02:37:31
C ment: SDG:00001 ClientID:1174-8605 1:10
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2168	278.0	116.1	.1334	353200.	4.031	3.740
SDev	.4293	2.8	3.2	.0438	1378.	.356	.282
%RSD	198.0	.9967	2.791	32.81	.3902	8.831	7.537
#1	.6815	281.2	119.8	.1839	354800.	4.322	3.465
#2	-.1650	276.3	114.6	.1068	352400.	3.634	3.727
#3	.1338	276.5	113.9	.1094	352300.	4.137	4.028
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	69.92	6.508	142.0	5563.	11660.	410.7	7556.
SDev	1.11	.250	5.9	77.	43.	1.5	128.
%RSD	1.589	3.837	4.135	1.388	.3730	.3623	1.700
#1	71.21	6.393	135.2	5652.	11710.	412.4	7703.
#2	69.26	6.337	145.5	5516.	11640.	409.9	7462.
#3	69.31	6.795	145.2	5521.	11630.	409.7	7504.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.40	-2.181	1.745	209.2	34710.	34.19	1.215
SDev	.69	2.837	.290	.8	226.	3.17	.901
%RSD	5.160	130.1	16.59	.3681	.6523	9.275	74.15
#1	14.16	.3901	1.415	210.1	34460.	30.53	2.073
#2	13.25	-5.224	1.866	208.9	34880.	36.07	.2768
#3	12.80	-1.710	1.955	208.7	34810.	35.97	1.295
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.47	34900.	34620.	.2504	1.689	35.61	33.47
SDev	1.49	245.	459.	3.172	2.367	2.00	4.13
%RSD	13.02	.7014	1.325	1267.	140.2	5.603	12.34
#1	12.97	35180.	34100.	-2.623	4.410	34.05	28.76
#2	11.46	34780.	34930.	-.2803	.5470	37.86	35.16
#3	9.979	34730.	34850.	3.654	.1092	34.93	36.48
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-19.80	3.030	.2065	16.16	51.98
SDev	2.35	3.441	.6336	19.87	.85
%RSD	11.87	113.5	306.9	123.0	1.633
#1	L-22.43	6.973	.9009	38.27	51.19
#2	-19.09	1.484	-.3403	-.2200	51.87
#3	-17.89	.6338	.0588	10.43	52.88
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922050 #34 Operator:
Run Time: 12/18/98 02:44:25
Comment: SDG:00001 ClientID:1174-8605D 1:10
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4155	283.6	111.7	.1661	356900.	4.084	4.597
SDev	.0925	.9	.6	.0323	616.	.185	.309
%RSD	22.25	.3085	.5549	19.44	.1727	4.535	6.727
#1	.3989	284.6	112.4	.1996	356200.	4.273	4.253
#2	.3324	283.2	111.7	.1351	357400.	4.077	4.690
#3	.5151	283.0	111.1	.1637	357100.	3.903	4.850
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	71.27	7.280	164.7	5800.	11860.	417.6	7896.
SDev	.31	.233	13.2	20.	33.	1.0	76.
%RSD	.4282	3.204	8.008	.3439	.2780	.2480	.9657
#1	71.60	7.017	149.8	5823.	11820.	416.5	7896.
#2	71.22	7.460	169.3	5788.	11880.	418.6	7819.
#3	71.00	7.363	174.9	5788.	11870.	417.7	7972.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.34	-3.654	2.475	213.6	35320.	36.46	.9101
SDev	.36	.117	.150	.7	374.	.95	.7796
%RSD	2.497	3.200	6.075	.3472	1.060	2.601	85.66
#1	14.75	-3.534	2.398	213.1	34890.	35.37	1.675
#2	14.11	-3.659	2.378	214.4	35540.	37.06	.1171
#3	14.15	-3.768	2.648	213.2	35530.	36.96	.9378
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.16	35360.	35300.	1.080	.8175	41.57	33.90
SDev	1.12	241.	666.	2.754	2.057	1.93	1.84
%RSD	11.04	.6813	1.887	255.0	251.6	4.633	5.421
#1	8.981	35600.	34530.	-1.334	3.170	42.04	32.03
#2	11.21	35370.	35630.	.4944	-.0790	43.22	33.97
#3	10.28	35120.	35740.	4.080	-.6388	39.46	35.70
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-19.53	4.220	.6066	21.48	53.03
SDev	6.14	2.293	1.165	15.04	1.12
%RSD	31.43	54.33	192.1	70.02	2.107
#1	L-26.41	6.814	1.864	36.84	52.46
#2	-17.52	3.384	-.4362	6.783	52.32
#3	-14.64	2.463	.3917	20.81	54.32
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922047 #35 Operator:
Run Time: 12/18/98 02:51:20
Comment: SDG:00001 ClientID:1174-8605S 1:10
Type: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	105.9	294.8	7737.	.0883	348900.	106.6	4.401
SDev	.9	3.3	73.	.0636	4739.	1.0	.374
%RSD	.8034	1.106	.9481	72.01	1.358	.9107	8.497
#1	105.1	298.2	7691.	.1617	344200.	105.8	3.986
#2	105.9	294.3	7697.	.0496	348900.	106.2	4.712
#3	106.8	291.8	7821.	.0537	353700.	107.7	4.505
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	587.8	7.280	152.2	5611.	11590.	408.8	7640.
SDev	7.1	.422	12.1	38.	137.	5.4	92.
%RSD	1.204	5.794	7.935	.6729	1.185	1.310	1.208
#1	580.9	6.795	138.2	5602.	11450.	403.3	7549.
#2	587.4	7.488	159.3	5580.	11590.	409.1	7639.
#3	595.1	7.557	158.9	5653.	11720.	414.0	7733.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.50	-2.914	2.183	207.8	34100.	143.6	2.201
SDev	.28	2.178	.454	2.3	502.	2.0	.995
%RSD	2.107	74.72	20.82	1.113	1.472	1.390	45.20
#1	13.78	-1.080	1.759	205.6	33540.	141.6	2.848
#2	13.21	-5.321	2.662	207.7	34250.	143.5	1.055
#3	13.49	-2.342	2.127	210.2	34510.	145.6	2.699
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	549.3	34400.	33950.	2.570	2.008	148.4	141.2
SDev	8.1	139.	691.	2.938	2.837	5.2	5.2
%RSD	1.480	.4038	2.036	114.3	141.3	3.483	3.661
#1	540.3	34280.	33170.	-.5581	4.541	154.2	135.3
#2	551.3	34360.	34190.	5.272	-1.057	144.4	143.1
#3	556.2	34550.	34490.	2.998	2.541	146.6	145.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-17.72	4.717	.2991	13.54	51.65
SDev	2.55	2.990	.6031	11.76	.56
%RSD	14.38	63.39	201.6	86.89	1.080
#1	-19.21	7.325	.9922	24.72	51.02
#2	-19.18	1.454	-.1064	1.270	52.07
#3	-14.78	5.372	.0116	14.62	51.87
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: P3LRSI #36 Operator:
Run Time: 12/18/98 02:58:15
ment: LRS
CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.427	87.83	13.22	4.866	1027.	5.579	6.090
SDev	.187	2.21	.27	.017	20.	.092	.470
%RSD	3.442	2.514	2.050	.3579	1.952	1.645	7.722
#1	5.349	86.02	13.14	4.863	1041.	5.572	5.593
#2	5.640	87.18	12.99	4.850	1004.	5.674	6.148
#3	5.291	90.29	13.52	4.884	1036.	5.491	6.528
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	150.0	15.00	7.500	1500.	7.500	7.500
Low	2.500	50.00	5.000	2.500	500.0	2.500	2.500

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	H85.10	H8.307	H432.5	788.7	965.1	H22.73	2101.
SDev	10.98	.060	43.3	10.9	3.5	.19	89.
%RSD	12.91	.7278	10.02	1.385	.3651	.8262	4.216
#1	H74.93	H8.238	H394.3	781.3	965.6	H22.61	2051.
#2	H83.63	H8.335	H423.6	801.3	961.4	H22.64	2203.
#3	H96.75	H8.349	H479.6	783.7	968.3	H22.95	2048.
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC High	LC Pass
High	7.500	7.500	150.0	1500.	1500.	15.00	3000.
Low	2.500	2.500	50.00	500.0	500.0	5.000	1000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	H73.37	9.535	20.62	17.76	H14.48	L2.063	10.37
SDev	1.09	1.885	.18	.09	3.09	.467	.24
%RSD	1.479	19.76	.8561	.5181	21.36	22.64	2.345
#1	H72.12	7.708	20.43	17.73	H17.93	L1.526	10.11
#2	H73.92	11.47	20.77	17.69	H11.95	L2.289	10.59
#3	H74.07	9.425	20.68	17.86	H13.57	L2.374	10.42
Errors	LC High	LC Pass	LC Pass	LC Pass	LC High	LC Low	LC Pass
High	7.500	15.00	30.00	30.00	4.500	7.500	15.00
Low	2.500	5.000	10.00	10.00	1.500	2.500	5.000

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.99	12.64	15.39	6.460	12.32	6.389	-.1044
SDev	.25	2.43	3.97	1.619	.73	2.963	1.9972
%RSD	2.265	19.24	25.81	25.06	5.898	46.38	1912.
#1	10.74	14.93	19.41	5.097	12.60	8.302	-1.865
#2	10.98	12.89	11.47	6.035	12.86	7.890	-.5145
#3	11.24	10.09	15.30	8.250	11.49	2.976	2.066
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	15.00						
Low	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18.75	55.51	6.579	53.06	49.52
SDev	1.05	.83	.233	6.68	.18
%RSD	5.614	1.487	3.538	12.59	.3563
#1	18.56	55.64	6.326	54.94	49.72
#2	17.81	56.26	6.784	58.60	49.42
	19.89	54.63	6.626	45.64	49.41
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	30.00	75.00	7.500	60.00	
Low	10.00	25.00	2.500	20.00	

Method: CLPBOR Sample Name: CCV Operator:
Run Time: 12/18/98 03:05:09
Comment: CCV CVS1
Units CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	103.8	2007.	1048.	1013.	47790.	1002.	1013.
SDev	.3	3.	4.	1.	116.	1.	1.
%RSD	.2528	.1667	.4270	.0938	.2431	.0685	.0913
#1	103.5	2011.	1053.	1012.	47660.	1002.	1012.
#2	103.8	2005.	1045.	1014.	47870.	1003.	1014.
#3	104.0	2005.	1046.	1013.	47840.	1002.	1013.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1011.	1034.	1951.	47530.	47990.	1015.	49250.
SDev	1.	5.	10.	593.	50.	1.	198.
%RSD	.0957	.4824	.4952	1.248	.1047	.0777	.4020
#1	1012.	1029.	1940.	48220.	47940.	1014.	49480.
#2	1011.	1036.	1958.	47170.	48040.	1015.	49100.
#3	1010.	1038.	1954.	47210.	48000.	1015.	49190.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1000.	1048.	1029.	1012.	1021.	1051.	1054.
SDev	2.	.	1.	2.	11.	12.	5.
%RSD	.1586	.0448	.1231	.1768	1.088	1.101	.4557
#1	1002.	1047.	1028.	1010.	1008.	1037.	1048.
#2	998.9	1048.	1029.	1014.	1028.	1057.	1057.
#3	999.5	1048.	1030.	1013.	1027.	1058.	1056.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1040.	1029.	1017.	1056.	1053.	1053.	1050.
SDev	4.	6.	19.	19.	3.	6.	18.
%RSD	.3372	.5889	1.909	1.760	.2666	.5266	1.749
#1	1038.	1036.	994.5	1034.	1055.	1055.	1029.
#2	1044.	1029.	1027.	1066.	1053.	1057.	1057.
#3	1038.	1024.	1029.	1068.	1050.	1047.	1063.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1031.	1055.	1033.	1048.	26.27
SDev	4.	6.	3.	187.	.83
%RSD	.4313	.6021	.2524	17.85	3.150
#1	1026.	1063.	1030.	Q1264.	27.02
#2	1032.	1053.	1036.	940.1	25.38
	1034.	1050.	1033.	939.8	26.40
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: CCB Operator:
Run Time: 12/18/98 03:12:05
Comment: CCB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4565	20.01	.4524	.3072	-36.91	.3271	.4142
SDev	.4250	2.84	.0350	.0703	5.68	.0423	.1362
%RSD	93.11	14.20	7.743	22.89	15.39	12.93	32.89
#1	.9019	23.29	.4908	.3881	-33.42	.3636	.3927
#2	.4122	18.57	.4223	.2610	-33.85	.2808	.2900
#3	.0553	18.19	.4440	.2724	-43.47	.3370	.5599
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.590	.3189	5.107	18.43	17.47	.2966	86.30
SDev	.284	.1366	3.421	10.56	1.13	.0461	76.88
%RSD	17.85	42.83	66.99	57.32	6.453	15.53	89.08
#1	1.893	.2079	1.176	10.83	18.59	.3468	3.358
#2	1.330	.2773	6.732	13.96	17.47	.2563	100.4
#3	1.546	.4714	7.412	30.49	16.34	.2867	155.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6364	1.397	.1830	-4.240	.3367	-1.153	-.3041
SDev	.3654	1.091	.1006	.079	.8073	2.055	1.0722
%RSD	57.43	78.11	54.95	1.863	239.8	178.3	352.6
#1	1.023	2.594	.1239	-4.154	.9678	.6470	-.6298
#2	.5905	1.143	.1260	-4.309	-.5730	-3.393	-1.176
#3	.2961	.4558	.2991	-4.258	.6153	-.7135	.8932
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8070	.8317	.0821	-2.138	.6041	-1.902	-.7863
SDev	1.4413	4.086	1.503	2.785	1.238	5.651	1.4030
%RSD	178.6	491.3	1830.	130.3	204.9	297.0	178.4
#1	-2.138	5.550	-1.327	-5.013	1.551	.5724	.6769
#2	.7238	-1.554	-.0908	-1.950	-.7962	-8.369	-.9157
#3	-1.007	-1.501	1.664	.5489	1.058	2.089	-2.120
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6954	2.929	1.924	9.086	.0900
SDev	1.4461	2.307	1.468	2.416	.0979
%RSD	208.0	78.76	76.29	26.59	108.8
#1	.1692	2.629	3.592	7.670	.0120
#2	-2.365	.7869	1.356	7.713	.0581
#3	.1095	5.371	.8257	11.88	.1999
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

Method: CLPBOR Sample Name: 922048 #39 Operator:
Run Time: 12/18/98 03:19:00
Comment: SDG:00001 ClientID:1174-8605M 1:10
Type: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	105.8	252.6	8405.	.1528	348900.	106.1	4.119
SDev	1.3	11.9	78.	.0762	5140.	.7	.976
%RSD	1.195	4.718	.9300	49.89	1.473	.6621	23.70
#1	106.4	265.8	8492.	.2408	345100.	105.8	4.105
#2	106.6	249.6	8381.	.1076	346800.	105.5	3.151
#3	104.3	242.5	8342.	.1100	354700.	106.9	5.103
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	584.5	6.933	144.4	5604.	11540.	408.3	7587.
SDev	4.6	.427	10.3	105.	72.	3.5	207.
%RSD	.7839	6.159	7.137	1.870	.6228	.8663	2.729
#1	581.9	6.822	144.4	5710.	11480.	405.3	7734.
#2	581.9	6.573	134.1	5602.	11520.	407.5	7351.
#3	589.8	7.405	154.8	5500.	11620.	412.2	7678.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.74	-1.934	1.669	207.6	34770.	142.0	3.326
SDev	.64	1.502	.707	2.0	448.	1.8	1.251
%RSD	4.629	77.64	42.33	.9684	1.287	1.249	37.60
#1	14.45	-2.801	1.748	205.9	34350.	141.7	2.552
#2	13.55	-.2003	.9267	207.0	34700.	140.4	2.656
#3	13.22	-2.802	2.334	209.8	35240.	143.9	4.768
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	545.7	35030.	34630.	3.856	3.053	145.0	140.4
SDev	3.2	288.	558.	4.287	.276	7.2	4.3
%RSD	.5946	.8216	1.611	111.2	9.049	4.979	3.042
#1	543.9	34920.	34070.	1.047	3.296	153.2	136.0
#2	543.8	34810.	34650.	1.731	3.110	139.4	140.8
#3	549.5	35360.	35180.	8.790	2.753	142.6	144.5
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-19.17	4.972	.2222	21.25	52.21
SDev	4.65	4.011	.7976	21.51	.95
%RSD	24.25	80.67	359.0	101.2	1.821
#1	L-23.05	9.245	1.128	45.85	51.14
#2	-14.02	1.289	-.3745	6.011	52.54
#3	L-20.43	4.382	-.0870	11.89	52.96
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 123123 #40 Operator:
Run Time: 12/18/98 03:25:54
C ment: SDG:00001 ClientID:1174-8605M 1:5
M CONC Corr. Factor: 1

2294

E	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1632	-12.82	47.76	-.0317	13.23	.2786	-.1999
SDev	.1297	2.21	7.22	.0254	10.59	.0670	.5254
%RSD	79.43	17.27	15.12	80.04	80.04	24.05	262.8
#1	.3126	-13.40	55.27	-.0567	23.76	.3097	-.7852
#2	.0968	-14.69	47.15	-.0326	2.577	.2017	-.0457
#3	.0802	-10.38	40.87	-.0059	13.37	.3243	.2312
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.409	.3420	1.431	18.99	.6266	.0962	155.1
SDev	.179	.1992	8.973	17.69	4.230	.0583	213.9
%RSD	12.69	58.24	627.1	93.16	675.1	60.63	137.9
#1	1.210	.1941	-8.726	-1.255	-4.130	.0491	-90.63
#2	1.461	.5685	4.734	31.46	2.046	.1614	256.1
#3	1.556	.2635	8.285	26.76	3.964	.0780	299.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.8966	.5941	-.1493	-2.498	23.73	-.3289	-.8010
SDev	.2495	1.897	.3895	.146	3.92	1.6335	.5620
%RSD	27.83	319.3	261.0	5.858	16.51	496.6	70.16
#1	1.162	.8599	-.5962	-2.664	28.24	1.460	-.1723
#2	.6662	-1.422	.0303	-2.389	21.75	-.7043	-.9759
#3	.8619	2.344	.1180	-2.441	21.19	-1.742	-1.255
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0130	23.51	23.83	-1.613	-.4032	-.1451	-.4283
SDev	.6179	5.21	3.32	1.416	.5078	5.6264	1.1919
%RSD	4748.	22.17	13.94	87.78	125.9	3877.	278.3
#1	.4509	29.52	27.59	-.5912	.0292	6.310	-.9695
#2	.2245	20.13	22.55	-1.018	-.9623	-4.010	.9382
#3	-.7145	20.89	21.33	-3.229	-.2764	-2.736	-1.254
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.186	3.091	.8742	16.49	.5855
SDev	1.197	1.797	.2114	4.12	.3028
%RSD	54.77	58.12	24.18	25.00	51.72
#1	-2.418	1.117	.8670	13.35	.3241
#2	-.8892	3.527	.6665	21.16	.5152
	-3.249	4.630	1.089	14.97	.9173
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: SDI922046 #41 Operator:
Run Time: 12/18/98 03:32:49
Comment: SDG:00001 ClientID:1174-8605L 1:50
M[illegible] CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1626	46.49	38.01	.0205	71840.	.9886	.6075
SDev	.3144	2.20	4.45	.0046	1161.	.1415	.1673
%RSD	193.3	4.733	11.71	22.63	1.616	14.32	27.54
#1	.4311	45.06	42.64	.0162	70510.	1.152	.4241
#2	-.1833	45.38	37.61	.0199	72450.	.9004	.7518
#3	.2401	49.02	33.77	.0254	72580.	.9136	.6467
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	15.78	1.673	31.28	913.6	2361.	85.49	1671.
SDev	.20	.092	3.83	12.0	35.	1.23	71.
%RSD	1.266	5.518	12.23	1.310	1.481	1.443	4.248
#1	15.61	1.719	28.31	899.9	2321.	84.07	1752.
#2	16.00	1.733	29.94	919.3	2376.	86.25	1639.
#3	15.74	1.567	35.60	921.7	2385.	86.16	1621.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
[illegible]rge	4.058	-.4525	.5051	40.32	7142.	8.146	-.7223
[illegible]ev	.385	2.1381	.0510	.67	126.	.183	.2398
[illegible]	9.491	472.5	10.10	1.650	1.761	2.247	33.20
[illegible]	4.495	-1.209	.5640	39.58	6998.	7.985	-.5124
#2	3.767	1.961	.4758	40.50	7203.	8.345	-.9837
#3	3.911	-2.109	.4755	40.87	7226.	8.107	-.6709
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.353	7176.	7125.	-2.751	.2827	11.16	6.635
SDev	1.241	43.	167.	1.568	.7738	3.15	1.774
%RSD	91.72	.5976	2.349	57.00	273.7	28.24	26.73
#1	1.148	7128.	6932.	-3.543	.9931	14.78	4.587
#2	2.683	7191.	7209.	-3.764	.3968	9.670	7.677
#3	.2269	7210.	7234.	-.9448	-.5417	9.027	7.641
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-3.857	3.767	.3497	17.62	10.39
SDev	3.090	1.011	.4588	3.82	.22
%RSD	80.12	26.83	131.2	21.66	2.122
#1	-2.679	4.806	.2948	21.83	10.55
#2	-7.363	2.788	-.0792	16.65	10.14
[illegible]	-1.528	3.706	.8335	14.39	10.48
[illegible]rs	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
[illegible]	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922051 #42 Operator:
Run Time: 12/18/98 03:39:43
Client: SDG:00001 ClientID:1174-8705 1:10
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3165	595.4	94.04	.1882	296100.	3.335	3.465
SDev	.6592	18.3	3.41	.0381	7077.	.314	.039
%RSD	208.3	3.072	3.622	20.22	2.390	9.420	1.125
#1	.2749	616.5	97.93	.2322	304300.	3.698	3.434
#2	-1.027	584.1	92.62	.1667	292200.	3.157	3.508
#3	-.1971	585.7	91.59	.1658	291900.	3.150	3.452
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	177.7	7.946	673.7	4256.	11100.	399.8	6317.
SDev	5.5	.156	9.6	128.	254.	9.0	216.
%RSD	3.088	1.967	1.428	2.998	2.285	2.248	3.416
#1	184.1	7.849	681.9	4403.	11390.	410.2	6566.
#2	174.6	7.863	663.1	4170.	10960.	394.9	6176.
#3	174.6	8.126	676.2	4194.	10950.	394.3	6209.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.92	-2.090	3.888	270.6	H68740.	30.46	.1529
SDev	.80	1.103	.150	6.5	418.	2.73	1.501
%RSD	6.675	52.75	3.849	2.417	.6077	8.955	982.0
#1	12.74	-2.837	3.718	278.2	H69130.	31.46	-1.475
#2	11.15	-2.610	3.945	266.7	H68780.	27.38	.4525
#3	11.86	-.8238	4.001	267.0	H68300.	32.56	1.481
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.087	69310.	68450.	.3732	.0350	36.15	27.62
SDev	2.180	1611.	336.	4.835	.5986	6.48	2.27
%RSD	53.35	2.324	.4916	1295.	1712.	17.92	8.218
#1	1.904	71130.	68140.	-5.180	.3662	42.04	26.16
#2	4.093	68730.	68810.	2.657	-.6560	29.21	26.45
#3	6.265	68070.	68420.	3.643	.3946	37.20	30.23
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-19.26	5.255	.1186	9.221	44.42
SDev	3.18	2.857	.8439	21.65	.59
%RSD	16.54	54.37	711.7	234.8	1.332
#1	-18.37	8.281	1.076	33.27	45.09
#2	-16.62	4.879	-.2024	-8.709	43.99
#3	L-22.80	2.604	-.5177	3.100	44.17
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922052 #43 Operator:
Run Time: 12/18/98 03:46:37
mment: SDG:00001 ClientID:1174-8805 1:10
de: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4008	121.3	121.3	.0224	405600.	4.444	4.092
SDev	.4236	10.5	.8	.0884	2973.	.234	.435
%RSD	105.7	8.690	.6870	394.7	.7329	5.266	10.63
#1	.8298	132.5	122.1	.1216	402500.	4.675	3.700
#2	.3897	119.9	121.2	-.0065	405800.	4.207	4.017
#3	-.0171	111.6	120.5	-.0479	408500.	4.451	4.561
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	46.15	6.185	101.9	5197.	12220.	429.6	6901.
SDev	.28	.243	10.6	47.	43.	1.9	79.
%RSD	.6031	3.929	10.40	.8996	.3494	.4464	1.138
#1	46.46	5.949	92.02	5247.	12180.	427.5	6931.
#2	46.08	6.171	100.6	5190.	12240.	430.0	6812.
#3	45.92	6.434	113.1	5154.	12260.	431.2	6960.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.94	-.6124	.8427	183.2	29720.	32.42	.3012
SDev	.55	.9835	.3160	.5	367.	1.83	1.351
%RSD	4.230	160.6	37.50	.2999	1.236	5.653	448.6
#1	13.36	.0371	.4778	182.5	29300.	30.56	-1.191
#2	13.14	-.1303	1.022	183.4	29840.	32.47	.6531
#3	12.32	-1.744	1.028	183.5	30010.	34.22	1.442
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.610	29990.	29580.	-.7162	.8014	37.74	29.75
SDev	1.787	104.	545.	4.6341	.3799	1.90	3.38
%RSD	27.04	.3471	1.841	647.0	47.40	5.036	11.34
#1	6.561	30000.	28950.	-5.979	1.191	39.70	25.99
#2	8.421	29880.	29810.	1.079	.4326	35.90	30.76
#3	4.848	30090.	29960.	2.752	.7800	37.64	32.51
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-15.69	5.185	.1472	20.62	40.13
SDev	.56	.952	.7233	14.11	.53
%RSD	3.547	18.35	491.5	68.45	1.323
#1	-16.30	6.283	.7911	36.91	39.80
#2	-15.21	4.601	.2859	12.07	39.85
#3	-15.57	4.672	-.6355	12.88	40.74
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922053 #44 Operator:
Run Time: 12/18/98 03:53:32
ment: SDG:00001 ClientID:1174-8905 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4233	208.5	276.9	-.0652	H976400.	9.690	-.2307
SDev	.3283	1.8	2.0	.0407	15953.	.437	.3428
%RSD	77.55	.8630	.7250	62.33	1.634	4.509	148.6
#1	-.0443	208.9	276.1	-.0330	H962900.	9.225	-.1880
#2	-.6170	206.5	275.3	-.0518	H972300.	10.09	.0888
#3	-.6087	210.0	279.1	-.1109	H994000.	9.754	-.5928
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	857.5	1.077	-.4791	76570.	64.30	.0178	H1051000.
SDev	8.5	.291	9.4280	925.	2.16	.0454	5167.
%RSD	.9954	27.01	1968.	1.208	3.354	254.9	.4915
#1	849.9	1.179	-5.863	77590.	65.61	.0693	H1049000.
#2	855.7	1.304	10.41	75770.	65.47	.0006	H1048000.
#3	866.7	.7491	-5.982	76350.	61.81	-.0164	H1057000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5639	-6.845	3.132	-1.783	4650.	318.7	2.574
SDev	1.0002	.212	.423	.055	102.	10.4	.601
%RSD	177.4	3.103	13.50	3.090	2.199	3.277	23.34
#1	-1.116	-6.622	3.520	-1.827	4566.	309.9	1.945
#2	.5906	-6.869	3.196	-1.721	4619.	316.0	3.142
#3	-1.166	-7.045	2.681	-1.800	4764.	330.3	2.635
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5087	4718.	4616.	3.154	2.276	333.2	311.5
SDev	2.323	40.	134.	5.343	1.849	3.4	15.5
%RSD	456.6	.8473	2.912	169.4	81.22	1.013	4.985
#1	-1.931	4696.	4501.	-2.994	4.403	335.5	297.2
#2	2.694	4693.	4582.	6.674	1.371	329.4	309.3
#3	.7632	4764.	4764.	5.784	1.054	334.8	328.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-53.48	-.1995	21.28	-10.95	5.739
SDev	2.89	1.7389	.08	23.85	.410
%RSD	5.409	871.5	.3772	217.8	7.136
#1	L-53.92	-.2489	21.37	L-32.73	6.188
#2	L-50.40	1.564	21.24	14.53	5.643
#3	L-56.13	-1.913	21.23	-14.64	5.386
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922054 #45 Operator:
Run Time: 12/18/98 04:00:27
Comment: SDG:00001 ClientID:1174-9005 1:10
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2655	352.3	118.8	.0428	280000.	3.360	3.571
SDev	.2536	.8	.3	.0251	2344.	.173	.244
%RSD	95.50	.2133	.2347	58.58	.8372	5.154	6.839
#1	.5258	351.9	118.5	.0715	277400.	3.516	3.321
#2	.2516	353.2	118.9	.0252	282000.	3.174	3.809
#3	.0192	351.9	119.0	.0318	280600.	3.391	3.582
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	95.11	10.25	229.4	5029.	11950.	386.5	6955.
SDev	.31	.34	9.8	5.	78.	2.6	90.
%RSD	.3305	3.336	4.251	.0948	.6564	.6629	1.288
#1	95.15	9.860	218.3	5034.	11860.	383.6	7059.
#2	95.40	10.41	233.6	5025.	12020.	388.4	6898.
#3	94.78	10.48	236.4	5026.	11970.	387.5	6909.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.83	-2.803	5.477	233.5	40530.	41.33	-.0008
SDev	.19	3.048	.334	1.7	564.	.42	.5859
%RSD	1.482	108.7	6.104	.7370	1.391	1.026	70360.
#1	12.94	.1531	5.100	231.5	39880.	41.45	-.5462
#2	12.61	-2.628	5.594	234.9	40920.	40.85	-.0750
#3	12.93	-5.935	5.738	234.0	40790.	41.67	.6186
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.62	40840.	40370.	-2.370	1.174	46.22	38.88
SDev	.74	117.	802.	3.591	1.257	4.00	1.97
%RSD	5.072	.2853	1.986	151.6	107.1	8.662	5.056
#1	14.09	40750.	39450.	-6.507	2.422	50.84	36.76
#2	14.30	40980.	40890.	-.0549	-.0925	44.11	39.22
#3	15.46	40800.	40780.	-.5471	1.193	43.71	40.65
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-17.44	3.967	.5269	12.35	44.47
SDev	.15	1.523	.5639	10.56	.60
%RSD	.8333	38.39	107.0	85.51	1.353
#1	-17.60	5.673	1.178	24.50	43.96
#2	-17.31	3.487	.2014	5.455	44.31
#3	-17.40	2.742	.2012	7.084	45.13
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: CRI Operator:
Run Time: 12/18/98 04:07:21
ment: CRI
: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.82	5.148	.2397	9.825	21.67	10.23	99.69
SDev	.07	1.410	.0550	.083	22.65	.20	1.23
%RSD	.3391	27.40	22.93	.8497	104.6	1.933	1.236
#1	20.85	5.828	.3011	9.736	45.26	10.27	98.28
#2	20.74	3.526	.1951	9.840	19.65	10.01	100.2
#3	20.87	6.090	.2230	9.901	.0881	10.40	100.6
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.30	52.91	-2.539	15.22	-.5716	30.25	71.82
SDev	.19	.32	4.915	6.67	3.0638	.35	81.08
%RSD	.8940	.6109	193.6	43.82	536.1	1.166	112.9
#1	21.47	52.55	2.415	19.43	2.930	29.85	160.7
#2	21.09	53.17	-7.415	7.532	-1.887	30.40	1.975
#3	21.32	53.01	-2.617	18.70	-2.758	30.51	52.76
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	81.27	19.16	101.7	33.50	Q17.63	10.04	122.7
SDev	.87	.57	.9	.25	4.79	1.09	3.0
%RSD	1.067	2.995	.9338	.7557	27.15	10.90	2.421
#1	80.54	18.59	100.6	33.24	Q22.76	10.83	119.5
#2	81.05	19.74	102.1	33.51	Q16.85	8.788	123.1
#3	82.23	19.15	102.4	33.74	Q13.28	10.50	125.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.89	17.56	17.66	120.4	123.8	11.24	9.428
SDev	.64	4.67	4.89	3.8	2.9	5.66	1.547
%RSD	3.210	26.58	27.68	3.180	2.329	50.33	16.41
#1	19.21	22.80	22.74	116.0	121.3	12.59	9.939
#2	20.47	16.00	17.27	122.9	123.3	5.031	10.66
#3	19.98	13.87	12.98	122.3	127.0	16.10	7.690
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.59	44.13	21.50	76.13	99.07
SDev	.89	2.49	.19	11.59	1.16
%RSD	2.190	5.635	.8703	15.22	1.175
#1	40.87	46.96	21.60	89.43	97.77
#2	39.59	43.09	21.28	68.18	99.44
#3	41.30	42.33	21.62	70.79	100.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	40.00	40.00	20.00	60.00	
Range	50.50	50.50	50.50	50.50	

Method: CLPBOR Sample Name: ICSA Operator:
Run Time: 12/18/98 04:14:16
Comment: ICSA
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3102	593400.	4.295	.0546	492400.	11.60	-2.296
SDev	.3735	5203.	.210	.1639	8859.	3.00	.301
%RSD	120.4	.8768	4.896	300.1	1.799	25.87	13.13
#1	.7363	591200.	4.536	.2430	486600.	15.07	-2.320
#2	.1553	589700.	4.146	-.0239	487900.	9.743	-2.584
#3	.0391	599400.	4.204	-.0553	502600.	10.00	-1.983
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.800	2.418	193900.	17.52	508700.	-4.946	300.9
SDev	4.259	.153	2595.	25.26	7235.	.056	283.9
%RSD	48.40	6.317	1.338	144.2	1.422	1.129	94.37
#1	13.72	2.566	192300.	-10.82	504300.	-4.948	600.2
#2	6.261	2.261	192500.	25.73	504700.	-4.890	35.40
#3	6.422	2.427	196900.	37.65	517100.	-5.001	267.0
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.358	-18.97	3.326	-26.38	6.336	-1.072	7.608
SDev	3.069	6.83	.266	.22	1.150	3.030	1.122
%RSD	130.2	35.99	7.998	.8517	18.15	282.6	14.75
#1	5.804	-12.61	3.363	-26.24	5.255	-4.565	8.607
#2	-.0800	-26.18	3.043	-26.26	7.544	.4955	7.823
#3	1.349	-18.11	3.571	-26.63	6.208	.8527	6.394
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6001	4.272	7.357	-9.620	16.20	-.3111	-1.460
SDev	1.9559	8.040	5.529	15.165	9.05	10.274	9.670
%RSD	325.9	188.2	75.16	157.6	55.87	3303.	662.2
#1	-2.853	13.55	1.104	-26.95	26.35	11.50	-12.59
#2	.3835	-.5963	11.60	-3.142	13.29	-5.214	3.338
#3	.6687	-.1400	9.367	1.230	8.964	-7.215	4.872
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-5.387	14.81	8.153	88.72	38.31
SDev	2.304	6.26	15.93	410.9	1.33
%RSD	42.76	42.31	195.4	463.1	3.485
#1	-8.000	21.59	26.48	563.1	39.75
#2	-4.512	9.236	-2.374	-154.2	37.11
#3	-3.649	13.59	.3571	-142.8	38.08
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

Method: CLPBOR Sample Name: ICSAB Operator:
Run Time: 12/18/98 04:21:11
Comment: ICSAB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	207.9	584200.	545.2	493.9	489000.	970.4	490.4
SDev	1.1	5376.	2.5	5.5	7237.	6.9	6.0
%RSD	.5232	.9203	.4496	1.104	1.480	.7103	1.215
#1	206.6	578000.	542.4	487.6	480600.	962.5	483.6
#2	208.2	586700.	546.3	496.4	493100.	974.7	493.6
#3	208.7	587800.	546.8	497.6	493200.	974.1	494.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	504.1	525.2	193100.	23.08	507300.	494.8	523.6
SDev	1.6	2.2	2472.	25.44	5937.	5.7	334.4
%RSD	.3213	.4225	1.280	110.2	1.170	1.151	63.86
#1	502.2	523.9	190300.	-1.145	500500.	488.3	909.8
#2	505.0	524.0	194300.	49.58	510100.	497.9	336.4
#3	505.1	527.8	194800.	20.81	511300.	498.3	324.7
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	967.9	81.46	505.0	994.1	51.90	52.74	654.2
SDev	6.8	6.75	6.1	12.4	2.81	1.10	10.1
%RSD	.7071	8.290	1.215	1.242	5.420	2.077	1.548
#1	960.2	88.80	497.9	979.9	48.89	53.81	642.5
#2	970.7	80.06	508.2	1000.0	52.37	51.62	660.9
#3	973.0	Q75.51	508.9	1002.	54.45	52.78	659.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	106.7	48.47	53.61	646.3	658.1	52.11	53.04
SDev	1.9	9.13	8.63	39.2	5.1	27.98	12.95
%RSD	1.795	18.84	16.11	6.063	.7687	53.69	24.41
#1	104.9	59.01	43.82	601.1	663.2	83.03	39.22
#2	108.7	43.38	56.85	666.9	658.0	44.80	55.02
#3	106.3	43.02	60.15	670.9	653.1	28.52	64.88
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1024.	1106.	1029.	1109.	1101.
SDev	15.	4.	4.	522.	10.
%RSD	1.462	.3628	.3772	47.03	.9144
#1	1008.	1110.	1033.	Q1712.	1090.
#2	1028.	1102.	1025.	809.1	1104.
	1037.	1105.	1029.	807.1	1109.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	20.00	20.00	20.00	20.00	

000523

Method: CLPBOR Sample Name: CCVB Operator:
Run Time: 12/18/98 04:28:06 2294
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	105.5	2074.	1061.	1033.	48750.	1020.	1035.
SDev	.5	44.	15.	14.	630.	14.	14.
%RSD	.4986	2.124	1.451	1.358	1.292	1.377	1.396
#1	104.9	2105.	1056.	1028.	48510.	1015.	1029.
#2	105.6	2093.	1078.	1049.	49460.	1036.	1051.
#3	105.9	2023.	1049.	1023.	48260.	1009.	1024.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1029.	1045.	2019.	48110.	49110.	1036.	50170.
SDev	13.	14.	25.	680.	679.	14.	601.
%RSD	1.281	1.334	1.235	1.414	1.384	1.377	1.198
#1	1025.	1029.	2029.	48050.	48790.	1030.	49990.
#2	1043.	1056.	2038.	48820.	49890.	1052.	50840.
#3	1017.	1050.	1991.	47460.	48650.	1025.	49680.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1018.	1065.	1048.	1028.	1040.	1073.	1077.
SDev	12.	15.	13.	14.	13.	13.	16.
%RSD	1.191	1.428	1.285	1.401	1.274	1.210	1.501
#1	1014.	1056.	1042.	1021.	1035.	1069.	1077.
#2	1032.	1083.	1063.	1045.	1055.	1088.	1093.
#3	1008.	1057.	1038.	1019.	1030.	1063.	1061.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1059.	1050.	1036.	1090.	1070.	1072.	1074.
SDev	17.	13.	14.	12.	18.	18.	11.
%RSD	1.578	1.281	1.351	1.100	1.728	1.646	.9940
#1	1052.	1051.	1028.	1087.	1072.	1068.	1070.
#2	1078.	1063.	1052.	1104.	1088.	1092.	1086.
#3	1046.	1036.	1028.	1080.	1051.	1057.	1065.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1051.	1068.	1054.	1061.	27.95
SDev	16.	17.	13.	177.	1.84
%RSD	1.530	1.607	1.276	16.71	6.591
#1	1041.	1069.	1048.	Q1265.	29.93
#2	1069.	1084.	1069.	973.8	27.65
#3	1043.	1050.	1044.	944.7	26.28
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

000524

Method: CLPBOR Sample Name: CCBB Operator:
Run Time: 12/18/98 04:35:01
Comment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2822	.9673	.3101	.1711	-37.76	.2376	.1253
SDev	.4294	6.988	.0528	.0828	7.67	.0423	.5476
%RSD	152.2	722.5	17.02	48.43	20.31	17.79	436.9
#1	.6861	8.445	.2698	.2596	-29.40	.2857	-.3108
#2	.3292	-.1450	.3699	.1581	-39.40	.2061	.7400
#3	-.1688	-5.398	.2907	.0955	-44.47	.2212	-.0531
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.7425	.7072	6.463	11.43	23.88	.2094	-84.81
SDev	.3132	.2180	7.857	32.79	7.21	.0617	297.99
%RSD	42.19	30.82	121.6	286.8	30.18	29.47	351.4
#1	.6110	.6655	1.271	-25.17	31.06	.2783	-344.2
#2	1.100	.9430	15.50	38.14	23.95	.1906	240.7
#3	.5164	.5130	2.617	21.32	16.64	.1592	-150.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2848	1.339	.0727	-4.329	-.8331	-.5527	.0101
SDev	.5687	.985	.4213	.062	.5816	1.8573	.2738
%RSD	199.7	73.54	579.7	1.431	69.81	336.0	2705.
#1	.0202	.4341	-.1303	-4.301	-.3554	-2.672	-.0062
#2	.9377	2.388	.5570	-4.400	-1.481	.2243	.2917
#3	-.1034	1.196	-.2087	-4.286	-.6632	.7899	-.2552
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1392	.5279	-1.520	-2.670	1.341	-2.781	.5526
SDev	.8881	2.896	1.522	1.776	1.156	1.640	2.134
%RSD	638.0	548.5	100.2	66.51	86.21	58.98	386.1
#1	.4187	3.328	-2.201	-4.359	2.160	-4.218	-1.908
#2	-1.163	.7112	-2.582	-2.834	1.845	-3.131	1.892
#3	.3270	-2.455	.2241	-.8179	.0185	-.9941	1.673
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.820	4.000	1.662	8.007	.5074
SDev	2.166	2.165	1.003	12.59	.3537
%RSD	119.0	54.12	60.33	157.2	69.71
#1	-1.936	1.509	2.741	-5.572	.1057
#2	.4011	5.421	.7585	19.28	.7719
#3	-3.925	5.070	1.487	10.31	.6446
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

000525

Method: CLPBOR Sample Name: 922055 #51 Operator:
Run Time: 12/18/98 04:41:56
Comment: SDG:00001 ClientID:1174-9105 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.989	42.11	155.9	.0241	H1371000.	13.54	-.4399
SDev	2.653	6.47	1.8	.1336	66784.	1.31	.9572
%RSD	133.3	15.36	1.128	554.1	4.872	9.672	217.6
#1	-1.920	40.72	157.3	.1538	H1436000.	14.69	.6245
#2	.6281	36.45	153.9	.0316	H1374000.	13.81	-.7141
#3	-4.676	49.16	156.4	-.1130	H1303000.	12.11	-1.230
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	520.8	1.231	11.09	65920.	1187.	-.1353	H1078000.
SDev	14.0	.900	17.15	1023.	28.	.0807	8384.
%RSD	2.690	73.18	154.7	1.552	2.366	59.65	.7776
#1	534.3	2.261	30.50	66720.	1219.	-.1199	H1084000.
#2	521.7	.8330	-2.005	64770.	1174.	-.2225	H1069000.
#3	506.3	.5973	4.767	66280.	1167.	-.0634	H1082000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7504	-7.754	9.949	-2.208	3.049	707.7	1.052
SDev	2.6110	5.230	.995	.101	1.268	6.6	.565
%RSD	347.9	67.45	10.01	4.554	41.61	.9299	53.71
#1	.9235	-5.735	11.09	-2.132	3.273	703.3	1.280
#2	.5842	-3.835	9.507	-2.170	1.683	704.5	.4085
#3	-3.759	L-13.69	9.251	-2.322	4.191	715.3	1.467
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	24.35	-5.847	7.482	6.257	-1.554	723.8	699.6
SDev	1.63	17.607	10.63	16.11	7.354	17.5	18.6
%RSD	6.709	301.2	142.1	257.5	473.1	2.423	2.661
#1	24.21	-3.211	6.501	1.964	.9310	734.8	687.6
#2	26.05	10.29	-2.624	-7.271	4.235	732.9	690.3
#3	22.79	-24.62	18.57	24.08	-9.829	703.5	721.1
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-154.4	-4.329	9.235	-26.88	111.9
SDev	4.9	10.882	1.369	63.47	1.3
%RSD	3.199	251.4	14.82	236.2	1.166
#1	L-153.5	3.604	10.61	11.49	113.1
#2	L-149.9	.1431	9.232	8.017	110.5
#3	L-159.7	L-16.73	7.869	L-100.1	112.1
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000526

Method: CLPBOR Sample Name: 922056 #52 Operator:
Run Time: 12/18/98 04:48:51
Comment: SDG:00001 ClientID:LEACHBLK 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.9296	26.56	1.380	.0017	179.5	.2924	-.3249
SDev	.1382	10.87	.123	.0633	31.1	.3694	.8000
%RSD	14.87	40.95	8.944	3784.	17.31	126.3	246.2
#1	.8854	37.27	1.466	.0744	213.3	.4843	-1.207
#2	1.085	26.87	1.238	-.0287	173.2	-.1334	-.1208
#3	.8189	15.53	1.435	-.0407	152.1	.5265	.3532
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.511	1.729	-.8963	441.7	18.74	.3354	H1043000.
SDev	.897	.653	17.920	39.5	7.80	.1877	2009.
%RSD	59.36	37.75	1999.	8.952	41.61	55.97	.1926
#1	2.101	1.026	-21.49	443.9	10.11	.1243	H1044000.
#2	.4788	1.844	7.630	401.0	20.85	.4836	H1044000.
#3	1.954	2.316	11.17	480.0	25.27	.3982	H1041000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.344	-5.847	-.4344	-1.700	-.8574	16.27	-.3198
SDev	.991	.659	.7565	.096	.7074	1.77	.4217
%RSD	42.30	11.26	174.1	5.630	82.50	10.86	131.8
#1	3.206	-5.158	-1.269	-1.788	-1.242	16.54	-.6434
#2	1.261	-5.912	-.2410	-1.713	-1.289	17.88	-.4731
#3	2.564	-6.470	.2066	-1.598	-.0410	14.38	.1570
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.879	3.388	-2.984	-4.083	1.551	39.27	4.777
SDev	2.407	5.923	3.388	4.427	1.968	9.09	4.214
%RSD	128.1	174.8	113.5	108.4	126.9	23.16	88.22
#1	-4.462	10.05	-6.885	-9.095	3.568	49.33	.1589
#2	.3015	-1.294	-1.294	-.7077	-.3636	36.84	8.413
#3	-1.477	1.412	-.7740	-2.447	1.449	31.64	5.757
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-25.91	2.121	-.3358	13.62	5.032
SDev	3.94	4.362	.9759	22.44	2.330
%RSD	15.20	205.6	290.7	164.8	46.30
#1	L-29.90	5.749	.7079	28.42	2.403
#2	L-22.03	-2.719	-1.226	-12.20	6.843
	L-25.81	3.334	-.4894	24.63	5.849
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000527

Method: CLPBOR Sample Name: PDS922046 #53 Operator:
Run Time: 12/18/98 04:55:46
C ment: SDG:00001 ClientID:1174-8605A 1:1 **2294**
M CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4704	-28.50	.1689	-.1214	-38.67	.1264	-.3789
SDev	.1223	1.90	.1030	.0218	4.83	.2315	.7715
%RSD	25.99	6.666	60.99	17.94	12.48	183.1	203.6
#1	.3625	-28.96	.0761	-.1165	-33.68	-.0332	-1.269
#2	.4455	-30.13	.1509	-.1452	-39.01	.0205	.0444
#3	.6032	-26.42	.2797	-.1025	-43.31	.3919	.0883
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.166	.5546	-6.834	9.313	-3.774	.0152	412.5
SDev	.408	.3539	13.470	40.04	8.033	.0860	97.8
%RSD	34.98	63.80	197.1	429.9	212.8	564.5	23.70
#1	.9161	.1524	-22.26	-32.76	-13.05	-.0772	311.1
#2	.9458	.8181	-.8373	13.75	1.101	.0300	420.3
#3	1.637	.6933	2.596	46.95	.6211	.0928	506.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5427	-.7484	-.6272	-2.172	-1.855	1.308	-.5407
SDev	.4868	1.8811	.6300	.130	.985	1.534	1.3751
%RSD	89.70	251.3	100.5	5.999	53.06	117.3	254.3
#1	.4418	-2.657	-1.353	-2.243	-1.450	2.819	.4866
#2	.1142	-.6911	-.3035	-2.252	L-2.978	1.352	-.0060
#3	1.072	1.103	-.2248	-2.022	-1.138	-.2474	-2.103
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2440	1.796	-3.686	-4.773	1.565	3.962	-.0245
SDev	.4636	2.887	1.675	1.068	1.863	3.466	1.4171
%RSD	190.0	160.8	45.44	22.38	119.0	87.48	5784.
#1	-.5246	5.129	-4.742	-5.210	3.323	7.938	.2565
#2	.2912	.1760	-4.560	-3.556	1.759	1.579	1.231
#3	-.4985	.0822	-1.755	-5.554	-.3872	2.369	-1.561
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4830	4.120	.5405	20.87	.7110
SDev	2.5104	3.535	.8528	12.98	.4336
%RSD	519.8	85.79	157.8	62.23	60.98
#1	-1.638	5.864	1.462	13.56	.2615
#2	-2.208	.0524	.3805	13.18	.7446
	2.397	6.444	-.2209	35.86	1.127
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000528

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Method: CLPBOR Sample Name: 922980 #54 Operator:
Run Time: 12/18/98 05:02:40
Comment: SDG:13303 ClientID:PBS 1:1
M[illegible] CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2767	-17.94	.4146	-.0972	-51.38	.2970	-.1975
SDev	.4712	4.52	.1557	.0351	2.67	.1347	.4257
%RSD	170.3	25.21	37.56	36.16	5.190	45.36	215.5
#1	-.2518	-22.59	.2511	-.1375	-53.31	.1839	-.6282
#2	.4289	-13.55	.4315	-.0803	-52.49	.2611	-.1875
#3	.6530	-17.68	.5612	-.0736	-48.34	.4461	.2231
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.009	.4021	-7.796	19.03	-3.085	-.0366	-308.0
SDev	.810	.1600	9.760	55.50	5.502	.0874	574.8
%RSD	80.28	39.78	125.2	291.7	178.4	239.1	186.6
#1	.2845	.2356	-18.81	-36.39	-9.410	-.1340	-967.1
#2	.8588	.5547	-.2186	18.86	-.4363	-.0107	-45.57
#3	1.883	.4160	-4.361	74.61	.5923	.0350	88.74
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3340	1.525	-.4281	-2.072	-1.170	-1.638	-1.377
SDev	.5990	.532	.5045	.123	.707	.561	.280
%RSD	179.4	34.91	117.8	5.959	60.42	34.23	20.37
#1	-.0422	1.010	-1.003	-2.191	-.3671	-1.395	-1.075
#2	.0193	1.491	-.0584	-1.944	-1.443	-1.240	-1.427
#3	1.025	2.073	-.2230	-2.080	-1.699	-2.280	-1.628
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4185	-1.959	-.7830	-3.755	-.1970	4.206	-4.564
SDev	1.3898	.276	1.1022	1.927	.7906	1.722	.279
%RSD	332.1	14.06	140.8	51.32	401.3	40.94	6.110
#1	-1.097	-2.093	.4873	-3.173	-.0344	5.508	-4.849
#2	-1.339	-1.642	-1.351	-2.186	-1.056	4.856	-4.292
#3	1.180	-2.142	-1.485	-5.906	.4997	2.254	-4.551
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B_2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.17	2.602	.4870	14.13	.9327
SDev	.77	3.095	.4939	20.70	.8660
%RSD	6.313	118.9	101.4	146.5	92.84
#1	12.32	-.9535	.4388	-7.171	.1106
#2	12.85	4.692	1.003	15.38	1.837
#3	11.34	4.068	.0189	H34.17	.8508
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00	500.0
Low	-20.00	-10.00	-5.000	-30.00	-500.0

000529

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Method: CLPBOR Sample Name: PLCSS922554 #55 Operator:
Run Time: 12/18/98 05:09:35
Comment: SDG:13303 ClientID:LCSS 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	554.1	40230.	1835.	756.3	10670.	1085.	690.6
SDev	5.8	161.	12.	3.9	105.	6.	4.6
%RSD	1.041	.4007	.6274	.5184	.9864	.5492	.6635
#1	547.5	40200.	1846.	752.4	10570.	1079.	685.8
#2	556.5	40080.	1823.	756.1	10680.	1085.	691.1
#3	558.2	40400.	1835.	760.3	10780.	1091.	694.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	735.0	76900.	2610.	1010.	16600.	1420.	956.0
Low	408.0	37600.	1280.	565.0	9030.	849.0	518.0

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1699.	929.1	63520.	10980.	9712.	2427.	13000.
SDev	9.	7.2	403.	133.	55.	13.	94.
%RSD	.5465	.7774	.6352	1.207	.5668	.5239	.7235
#1	1690.	921.0	63090.	11140.	9656.	2414.	13100.
#2	1698.	931.3	63560.	10890.	9715.	2425.	13000.
#3	1709.	935.0	63900.	10920.	9766.	2440.	12910.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2290.	1170.	133000.	20400.	15300.	3190.	18300.
Low	1210.	646.0	48300.	9570.	8880.	2040.	9390.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	620.8	837.4	903.1	1806.	647.4	1181.	197.6
SDev	1.8	2.5	4.6	12.	9.8	6.	2.9
%RSD	.2864	.2974	.5086	.6555	1.511	.4909	1.458
#1	619.5	834.8	899.0	1794.	636.2	1175.	195.2
#2	620.0	837.7	902.2	1808.	652.2	1183.	196.8
#3	622.8	839.7	908.1	1817.	653.9	1186.	200.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	986.0	1140.	1260.	2360.	873.0	1550.	496.0
Low	381.0	458.0	651.0	1440.	447.0	914.0	34.90

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1626.	663.3	639.5	196.2	198.3	1170.	1186.
SDev	4.	7.2	18.2	10.2	2.4	21.	19.
%RSD	.2291	1.087	2.852	5.184	1.234	1.806	1.615
#1	1623.	671.7	618.4	184.8	200.4	1194.	1165.
#2	1624.	658.8	648.8	199.2	195.6	1159.	1194.
#3	1630.	659.6	651.1	204.5	199.0	1156.	1200.
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	2250.						
Low	1020.						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1667.	3.350	1106.	1969.	969.6
SDev	14.	4.189	5.	341.	3.1
%RSD	.8378	125.1	.4621	17.31	.3209
#1	1655.	7.272	1103.	2363.	967.2
#2	1663.	3.841	1102.	1776.	968.5
	1682.	-1.064	1112.	1769.	973.2
Errors	LC Pass	NOCHECK	LC Pass	LC Pass	NOCHECK
High	2240.		1460.	3580.	
Low	1240.		789.0	1110.	

000530

Method: CLPBOR Sample Name: 922542 #56 Operator:
Run Time: 12/18/98 05:16:30
Comment: SDG:13303 ClientID:EZSW-1 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2011	55170.	512.0	3.448	431400.	8.483	59.08
SDev	.4117	310.	2.2	.078	4108.	.830	.77
%RSD	204.7	.5624	.4334	2.253	.9523	9.788	1.297
#1	.2736	54970.	512.5	3.538	427000.	9.435	58.19
#2	-.4168	55000.	509.6	3.408	431900.	7.914	59.52
#3	-.4601	55520.	514.0	3.399	435200.	8.098	59.52
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	109.6	144.9	146200.	11330.	163800.	3225.	2177.
SDev	2.2	1.3	1245.	87.	1009.	23.	167.
%RSD	2.015	.8737	.8517	.7632	.6161	.7128	7.674
#1	112.1	143.5	144900.	11420.	162900.	3203.	2123.
#2	108.0	145.3	146100.	11250.	163700.	3223.	2364.
#3	108.8	145.9	147400.	11330.	164900.	3249.	2043.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	159.1	.1286	159.7	337.8	69.48	7.635	2.666
SDev	1.2	4.405	1.4	2.8	2.20	1.181	.876
%RSD	.7617	3426.	.8526	.8274	3.167	15.48	32.86
#1	160.2	3.540	158.4	335.0	66.97	6.276	1.851
#2	157.8	1.691	159.6	338.0	71.07	8.416	2.553
#3	159.2	-4.845	161.1	340.6	70.41	8.213	3.592
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.03	79.38	64.53	-.5699	4.273	-6.388	14.63
SDev	1.01	2.82	4.68	5.7419	1.879	.374	1.62
%RSD	2.897	3.555	7.256	1007.	43.97	5.848	11.09
#1	34.93	82.63	59.14	-7.177	6.351	-6.718	12.75
#2	34.07	77.98	67.61	2.256	2.694	-5.982	15.60
#3	36.09	77.54	66.84	3.212	3.775	-6.464	15.53
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.958	7.879	17.77	1749.	80.89
SDev	2.910	4.671	3.25	346.	.27
%RSD	36.56	59.29	18.29	19.77	.3313
#1	6.782	12.77	21.51	2148.	80.80
#2	5.821	7.392	16.07	1543.	80.68
#3	11.27	3.470	15.72	1555.	81.19
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000531

Method: CLPBOR Sample Name: 922555 #57 Operator:
Run Time: 12/18/98 05:23:24
Comment: SDG:13303 ClientID:EZSW-1D 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8307	54830.	510.0	3.269	454900.	9.165	57.60
SDev	.0164	1896.	18.3	.266	14462.	1.231	1.60
%RSD	1.979	3.458	3.588	8.144	3.179	13.43	2.771
#1	-.8117	57020.	531.1	3.576	471600.	10.59	59.44
#2	-.8401	53720.	499.0	3.132	446800.	8.519	56.54
#3	-.8403	53760.	499.9	3.100	446400.	8.392	56.84
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	109.4	140.7	157100.	11310.	177500.	3516.	2186.
SDev	7.3	.4	4921.	494.	5399.	105.	327.
%RSD	6.699	.2965	3.133	4.368	3.042	2.979	14.95
#1	117.8	140.2	162800.	11880.	183700.	3637.	2562.
#2	105.2	141.0	154300.	11010.	174500.	3454.	2030.
#3	105.0	140.8	154200.	11030.	174300.	3457.	1966.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	158.0	.4251	162.2	331.4	66.04	5.641	1.946
SDev	7.7	8.083	4.8	10.8	.79	1.795	.821
%RSD	4.854	1902.	2.969	3.256	1.193	31.82	42.19
#1	166.8	9.118	167.7	343.8	66.31	6.006	2.442
#2	154.2	-.9780	159.8	325.0	66.66	3.692	2.398
#3	153.0	-6.865	159.0	325.3	65.16	7.226	.9985
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	33.58	76.60	60.77	-2.509	4.162	-10.56	13.72
SDev	1.14	5.99	2.79	4.128	2.283	3.99	2.55
%RSD	3.381	7.825	4.599	164.6	54.85	37.84	18.56
#1	34.86	83.50	57.72	-6.279	6.788	-6.124	12.05
#2	33.18	73.55	63.21	1.903	2.638	-13.88	12.45
#3	32.70	72.74	61.36	-3.150	3.062	-11.67	16.65
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.700	9.739	20.91	1754.	81.58
SDev	2.024	7.611	3.71	460.	2.82
%RSD	23.26	78.15	17.75	26.22	3.456
#1	9.668	18.52	25.14	2285.	84.83
#2	6.374	5.624	19.40	1492.	80.11
#3	10.06	5.070	18.19	1485.	79.80
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922552 #58 Operator: 2294
Run Time: 12/18/98 05:30:19
C ment: SDG:13303 ClientID:EZSW-1S 1:1
M. CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	44.71	60230.	2464.	49.35	429800.	53.77	517.3
SDev	.24	241.	14.	.25	952.	1.08	1.0
%RSD	.5373	.3994	.5586	.4998	.2214	2.003	.1965
#1	44.43	60510.	2480.	49.62	430100.	55.00	518.0
#2	44.84	60130.	2457.	49.28	430600.	53.24	517.7
#3	44.86	60060.	2455.	49.15	428700.	53.05	516.1
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	295.3	383.6	160800.	11100.	168900.	3968.	2118.
SDev	4.2	3.0	286.	154.	332.	9.	333.
%RSD	1.426	.7785	.1781	1.386	.1964	.2177	15.73
#1	300.2	380.3	161100.	11270.	169200.	3975.	2497.
#2	293.0	384.6	160900.	11020.	169000.	3970.	1984.
#3	292.8	386.0	160500.	11000.	168500.	3958.	1872.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	599.5	42.38	628.8	799.5	84.73	16.43	101.6
SDev	4.4	2.17	1.6	2.3	1.73	2.18	2.2
%RSD	.7291	5.126	.2527	.2875	2.041	13.29	2.134
#1	604.4	44.71	629.5	800.9	82.80	14.87	99.13
#2	598.1	40.40	629.9	800.7	85.26	18.93	102.5
#3	596.0	42.04	627.0	796.8	86.14	15.50	103.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	64.06	94.59	79.80	99.44	102.7	.8958	24.18
SDev	1.78	3.43	4.21	7.06	.3	5.635	4.05
%RSD	2.779	3.622	5.275	7.096	.2736	629.0	16.74
#1	65.98	98.49	74.96	91.40	103.0	5.480	19.55
#2	62.48	92.05	81.87	102.3	102.7	2.602	27.07
#3	63.71	93.24	82.58	104.6	102.4	-5.395	25.92
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	858.8	1008.	888.6	2608.	92.25
SDev	2.6	12.	2.9	488.	.96
%RSD	.3003	1.156	.3269	18.70	1.036
#1	856.4	1021.	891.2	3171.	92.06
#2	861.5	1001.	889.1	2327.	91.41
#3	858.5	1001.	885.5	2325.	93.29
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

ethod: CLPBOR Sample Name: 922553 #59 Operator:
u Time: 12/18/98 05:37:14
c ent: SDG:13303 ClientID:EZSW-1M 1:1
lou CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	45.21	62450.	2479.	49.81	436700.	53.77	528.5
SDev	.32	365.	7.	.30	4379.	.87	4.4
%RSD	.7147	.5847	.2669	.5958	1.003	1.624	.8253
#1	44.87	62030.	2472.	49.47	431700.	54.76	523.4
#2	45.24	62710.	2484.	49.97	439100.	53.43	531.2
#3	45.52	62610.	2480.	50.00	439400.	53.12	530.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	299.8	390.6	147100.	11740.	169700.	3692.	2072.
SDev	.8	2.8	1311.	47.	1375.	30.	191.
%RSD	.2623	.7282	.8914	.4017	.8105	.8038	9.212
#1	300.7	387.3	145600.	11790.	168100.	3658.	2293.
#2	299.6	392.5	147900.	11720.	170500.	3710.	1964.
#3	299.2	392.0	147900.	11700.	170500.	3707.	1960.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	618.6	42.02	634.3	823.6	87.14	12.86	101.0
SDev	3.9	3.27	4.9	6.9	2.10	.86	1.3
%RSD	.6247	7.772	.7664	.8416	2.412	6.709	1.297
#1	614.3	45.46	628.7	815.6	84.75	12.25	99.85
#2	619.9	38.96	637.3	827.1	87.96	12.48	100.8
#3	621.6	41.65	636.9	828.1	88.71	13.85	102.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	80.55	98.47	81.47	98.77	102.2	.0801	19.24
SDev	3.04	3.52	4.79	8.19	2.7	1.373	.63
%RSD	3.774	3.575	5.881	8.297	2.662	1714.	3.255
#1	77.28	102.4	75.94	89.33	105.1	-.6802	18.70
#2	83.29	95.56	84.16	103.0	99.73	-.7444	19.08
#3	81.08	97.48	84.32	103.9	101.7	1.665	19.93
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	862.1	1019.	900.2	2552.	89.27
SDev	8.5	4.	3.4	440.	.78
%RSD	.9909	.3444	.3819	17.24	.8693
#1	852.3	1021.	896.5	3060.	88.38
	866.9	1015.	900.7	2304.	89.65
	867.2	1021.	903.3	2292.	89.78
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: SDI922542 #60 Operator:
Run Time: 12/18/98 05:44:08
Comment: SDG:13303 ClientID:EZSW-1L 1:5
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1798	10830.	106.0	.6471	91790.	1.707	12.78
SDev	.3630	44.	.7	.0167	407.	.094	.09
%RSD	201.9	.4058	.6774	2.582	.4436	5.510	.6996
#1	.3375	10840.	106.7	.6643	91620.	1.814	12.87
#2	.4373	10780.	105.3	.6309	91500.	1.637	12.77
#3	-.2354	10860.	105.9	.6462	92260.	1.670	12.69
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	24.30	29.56	31570.	1837.	33770.	694.0	506.6
SDev	1.34	.17	144.	14.	120.	2.5	103.5
%RSD	5.513	.5596	.4556	.7740	.3562	.3622	20.43
#1	25.81	29.37	31540.	1852.	33750.	694.0	626.1
#2	23.83	29.68	31450.	1824.	33660.	691.5	446.4
#3	23.26	29.64	31730.	1837.	33900.	696.5	447.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.12	1.558	33.60	66.74	13.74	.9515	-.1313
SDev	.56	1.515	.07	.28	.26	2.061	1.5362
%RSD	1.586	97.23	.2092	.4163	1.882	216.6	1170.
#1	35.76	2.850	33.61	66.76	13.88	-.4851	1.267
#2	34.73	1.935	33.66	66.46	13.91	.0272	.1145
#3	34.86	-.1094	33.53	67.01	13.45	3.312	-1.776
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	6.905	16.14	12.54	-1.810	.6993	-.1670	1.502
SDev	.750	1.91	.58	.760	2.469	1.9524	4.061
%RSD	10.86	11.84	4.606	41.98	353.1	1169.	270.3
#1	6.045	17.49	12.07	-2.568	3.174	1.025	-1.247
#2	7.245	16.96	12.37	-1.048	.6875	.8944	-.4132
#3	7.425	13.95	13.18	-1.814	-1.764	-2.420	6.167
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.975	4.421	4.825	377.2	16.55
SDev	.581	1.477	1.455	77.5	.27
%RSD	29.42	33.42	30.16	20.54	1.640
#1	2.411	6.126	6.463	466.6	16.25
#2	1.315	3.553	4.331	334.1	16.62
#3	2.198	3.582	3.681	330.9	16.77
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: CCV Operator:
Run Time: 12/18/98 05:51:03
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	104.2	1998.	1044.	1034.	49020.	1026.	1038.
SDev	.7	24.	9.	12.	609.	11.	11.
%RSD	.7142	1.187	.8403	1.124	1.243	1.087	1.070
#1	103.3	1979.	1038.	1022.	48380.	1014.	1026.
#2	104.7	2024.	1054.	1045.	49590.	1037.	1048.
#3	104.5	1990.	1040.	1035.	49100.	1026.	1038.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1032.	1026.	2018.	47330.	48970.	1035.	49580.
SDev	11.	6.	29.	354.	565.	12.	354.
%RSD	1.092	.6081	1.432	.7474	1.153	1.142	.7150
#1	1021.	1019.	1986.	47500.	48390.	1023.	49250.
#2	1044.	1031.	2042.	47560.	49520.	1046.	49960.
#3	1031.	1027.	2026.	46920.	48990.	1035.	49540.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1021.	1063.	1046.	1030.	1043.	1061.	1065.
SDev	10.	15.	12.	12.	19.	19.	14.
%RSD	1.011	1.434	1.156	1.205	1.829	1.766	1.275
#1	1011.	1050.	1033.	1017.	1022.	1039.	1051.
#2	1032.	1080.	1058.	1041.	1059.	1073.	1078.
#3	1021.	1059.	1046.	1031.	1048.	1070.	1067.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1049.	1052.	1038.	1077.	1060.	1065.	1059.
SDev	10.	8.	25.	26.	8.	7.	25.
%RSD	.9591	.7985	2.446	2.376	.7671	.6214	2.347
#1	1038.	1046.	1009.	1048.	1053.	1057.	1030.
#2	1057.	1062.	1057.	1097.	1069.	1068.	1076.
#3	1053.	1048.	1048.	1085.	1058.	1069.	1070.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1052.	1056.	1052.	1055.	26.66
SDev	14.	9.	13.	166.	.78
%RSD	1.304	.8487	1.258	15.73	2.921
#1	1039.	1051.	1039.	Q1246.	26.15
	1067.	1066.	1065.	963.6	27.55
	1051.	1050.	1052.	954.7	26.27
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

nalysis Report QC Standard 12/18/98 06:04:51 AM page 1

ethod: CLPBOR Sample Name: CCB Operator:
u. Time: 12/18/98 05:57:58
c t:
od CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0609	.6847	.5380	.2653	-21.50	.5031	.3329
SDev	.0817	2.903	.0251	.0485	2.49	.0733	.1734
%RSD	134.2	424.0	4.665	18.29	11.58	14.57	52.09
#1	.0304	4.024	.5553	.3196	-22.38	.5055	.1336
#2	-.1273	-1.245	.5092	.2503	-23.43	.5752	.4161
#3	-.0858	-.7251	.5494	.2261	-18.69	.4287	.4491
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.009	.7719	10.05	-72.61	23.89	.4663	55.25
SDev	.139	.1756	3.10	157.01	2.00	.0774	14.74
%RSD	6.918	22.75	30.86	216.3	8.375	16.59	26.68
#1	2.065	.5823	6.859	5.510	22.84	.5063	40.79
#2	2.110	.8042	13.06	30.03	22.63	.3771	54.69
#3	1.850	.9290	10.24	-253.4	26.19	.5155	70.26
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3156	-.0997	.0633	-4.069	-.6691	-1.370	-.2428
SDev	.2217	3.5360	.1340	.147	.6841	1.764	.9325
%RSD	70.25	3547.	211.5	3.622	102.2	128.8	384.1
#1	.5656	-.8935	.0299	-4.226	-1.433	.2592	-.0744
#2	.2382	3.766	.2108	-4.045	-.1138	-1.126	.5940
#3	.1429	-3.171	-.0507	-3.934	-.4602	-3.244	-1.248
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.660	.8097	-1.415	-2.781	1.017	-.6859	-1.719
SDev	1.201	.8463	1.432	.802	1.497	1.0105	2.693
%RSD	72.32	104.5	101.2	28.84	147.2	147.3	156.6
#1	-.3328	1.624	-2.967	-3.706	1.731	-1.386	1.073
#2	-2.670	-.0654	-.1455	-2.283	2.023	.4725	-1.931
#3	-1.977	.8705	-1.132	-2.353	-.7035	-1.144	-4.300
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0954	3.440	1.327	11.33	1.297
SDev	2.564	1.038	1.524	1.63	2.577
%RSD	2688.	30.18	114.9	14.42	198.6
#1	.5527	4.565	3.063	12.97	.0367
	2.400	2.520	.7047	11.31	-.4064
	-2.666	3.233	.2124	9.704	4.262
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

000537

~~120~~

Method: CLPBOR Sample Name: 922548 #63 Operator:
Run Time: 12/18/98 06:04:53
Comment: SDG:13303 ClientID:EZSW-2 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2719	46090.	564.7	2.636	492300.	8.470	50.25
SDev	.5266	344.	2.4	.121	6392.	.768	1.04
%RSD	193.7	.7457	.4216	4.574	1.298	9.064	2.073
#1	.3055	45750.	563.1	2.768	485800.	9.353	49.09
#2	-.3953	46440.	567.5	2.609	498600.	8.098	51.12
#3	-.7258	46070.	563.6	2.532	492600.	7.959	50.53
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.0	135.9	97670.	8462.	185200.	2438.	2142.
SDev	2.0	1.6	943.	42.	1847.	25.	134.
%RSD	2.028	1.203	.9657	.5005	.9975	1.031	6.267
#1	103.2	134.1	96730.	8478.	183300.	2412.	2285.
#2	100.5	136.4	98620.	8494.	187000.	2462.	2019.
#3	99.21	137.3	97670.	8414.	185100.	2440.	2121.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	132.4	-2.191	150.1	405.2	181.3	2.671	1.550
SDev	1.2	1.243	2.0	4.3	2.2	2.621	.433
%RSD	.9004	56.74	1.331	1.065	1.202	98.15	27.94
#1	133.7	-1.052	147.9	400.8	178.9	1.758	1.840
#2	132.3	-2.004	151.8	409.5	183.1	.6276	1.052
#3	131.3	-3.517	150.6	405.4	182.0	5.626	1.757
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	57.41	193.6	175.2	-1.308	2.969	-10.07	9.025
SDev	1.60	6.1	6.2	5.009	2.753	5.37	3.950
%RSD	2.785	3.160	3.540	382.8	92.73	53.36	43.77
#1	55.67	200.6	168.1	-6.766	6.129	-5.119	5.184
#2	57.77	190.9	179.2	-.2389	1.689	-15.79	8.815
#3	58.80	189.4	178.3	3.080	1.089	-9.312	13.08
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	9.966	5.276	16.21	1711.	58.64
SDev	.775	5.140	2.67	350.	.49
%RSD	7.776	97.42	16.49	20.45	.8339
#1	10.84	10.50	19.20	2115.	58.14
#2	9.710	5.097	15.39	1514.	59.12
#3	9.352	.2281	14.05	1504.	58.67
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922551 #64 Operator:
Run Time: 12/18/98 06:11:48
Comment: SDG:13303 ClientID:EZSW-3 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6748	64010.	494.9	3.559	H612600.	11.06	78.86
SDev	.1614	391.	4.3	.110	1558.	1.20	.19
%RSD	23.92	.6114	.8776	3.088	.2543	10.82	.2408
#1	-.5071	64460.	500.0	3.685	H614300.	12.44	78.64
#2	-.6881	63760.	492.3	3.489	H612100.	10.39	79.00
#3	-.8291	63800.	492.5	3.502	H611300.	10.36	78.92
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	116.0	192.1	145900.	12730.	126900.	3772.	4146.
SDev	3.8	1.0	444.	215.	459.	13.	266.
%RSD	3.279	.5351	.3041	1.690	.3615	.3527	6.409
#1	120.4	191.0	146400.	12980.	127400.	3787.	4444.
#2	113.9	192.9	145700.	12600.	126700.	3765.	3935.
#3	113.7	192.6	145600.	12610.	126600.	3763.	4060.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	212.8	-.8748	152.7	445.8	74.56	4.536	.9146
SDev	3.1	3.0191	.3	1.4	.21	1.281	.1532
%RSD	1.458	345.1	.2160	.3059	.2782	28.23	16.75
#1	216.4	2.611	153.1	447.4	74.32	5.508	1.083
#2	210.9	-2.633	152.6	445.2	74.72	5.016	.8761
#3	211.1	-2.603	152.4	444.9	74.63	3.085	.7842
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	56.93	83.55	70.06	-2.172	2.448	-11.13	12.35
SDev	2.75	4.55	2.58	2.963	1.652	4.96	.77
%RSD	4.835	5.450	3.680	136.5	67.48	44.53	6.221
#1	58.56	88.80	67.08	-5.224	4.225	-6.438	11.46
#2	53.75	80.91	71.62	.6937	.9596	-10.64	12.83
#3	58.48	80.92	71.48	-1.984	2.159	-16.32	12.76
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.690	8.584	18.21	1609.	82.36
SDev	1.810	5.517	4.42	354.	.70
%RSD	20.83	64.27	24.27	21.99	.8441
#1	8.970	14.95	23.28	2018.	82.91
#2	10.34	5.451	16.21	1408.	82.59
#3	6.756	5.347	15.15	1401.	81.57
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922556 #65 Operator:
Run Time: 12/18/98 06:18:43
Comment: SDG:13303 ClientID:EZSW-4 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4994	80230.	631.7	4.570	363200.	7.901	84.21
SDev	.6220	1749.	14.4	.128	7294.	1.230	1.58
%RSD	124.6	2.180	2.272	2.790	2.008	15.57	1.878
#1	.1523	80980.	639.6	4.684	364800.	9.312	84.29
#2	-1.087	81480.	640.4	4.594	369500.	7.334	85.75
#3	-.5637	78230.	615.1	4.432	355200.	7.056	82.59
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	141.2	181.8	166000.	13010.	166000.	3024.	3756.
SDev	4.4	1.6	3220.	371.	3325.	60.	225.
%RSD	3.114	.8596	1.940	2.851	2.003	1.998	5.991
#1	145.6	180.8	166800.	13310.	167100.	3042.	4003.
#2	141.4	183.6	168700.	13130.	168700.	3074.	3703.
#3	136.8	181.1	162400.	12600.	162300.	2957.	3562.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	216.3	-1.570	208.8	404.7	86.76	7.917	1.799
SDev	5.9	5.578	3.8	8.2	2.62	1.474	.443
%RSD	2.731	355.3	1.799	2.028	3.018	18.62	24.63
#1	221.2	4.442	209.2	407.4	85.22	9.378	1.996
#2	217.9	-2.573	212.3	411.1	89.78	6.430	1.291
#3	209.8	-6.578	204.8	395.4	85.27	7.944	2.109
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	97.96	97.46	81.41	-2.417	3.896	-12.53	18.12
SDev	1.24	6.58	5.64	5.466	2.966	5.41	2.59
%RSD	1.269	6.755	6.932	226.2	76.14	43.12	14.31
#1	98.67	104.7	75.49	-8.666	7.311	-7.238	17.67
#2	98.69	95.87	86.73	-.0641	1.961	-12.32	15.78
#3	96.53	91.82	82.00	1.479	2.416	-18.04	20.91
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.234	8.306	18.06	1657.	108.6
SDev	1.596	5.922	3.58	374.	1.4
%RSD	30.49	71.30	19.84	22.59	1.296
#1	5.779	15.12	22.19	2087.	109.3
#2	6.487	4.361	15.81	1481.	109.5
#3	3.437	5.441	16.18	1403.	107.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922557 #66 Operator:
Run Time: 12/18/98 06:25:38
Comment: SDG:13303 ClientID:EZSW-5 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0495	55160.	486.4	3.444	356900.	7.179	59.69
SDev	.1670	37.	1.9	.043	1386.	.854	.57
%RSD	337.5	.0671	.3860	1.252	.3884	11.89	.9484
#1	.1088	55180.	488.4	3.491	355300.	8.165	59.03
#2	-.0332	55190.	485.9	3.405	357600.	6.709	60.03
#3	-.2240	55120.	484.8	3.436	357700.	6.663	59.99
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	109.8	143.9	138500.	9943.	143200.	3541.	4529.
SDev	2.7	1.1	370.	91.	376.	6.	153.
%RSD	2.483	.7798	.2670	.9136	.2625	.1832	3.369
#1	113.0	142.6	138100.	10040.	142700.	3533.	4687.
#2	108.1	144.3	138700.	9915.	143400.	3545.	4519.
#3	108.4	144.7	138800.	9870.	143400.	3543.	4382.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	155.8	-1.598	165.3	317.7	74.18	6.179	1.879
SDev	1.2	2.833	.7	.3	1.33	.958	1.620
%RSD	.7515	177.3	.4211	.0910	1.799	15.51	86.21
#1	157.1	1.102	164.5	317.7	72.71	5.454	.4392
#2	154.9	-1.348	165.8	318.1	74.52	5.819	1.565
#3	155.4	-4.548	165.6	317.5	75.31	7.266	3.633
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.22	84.86	68.84	-.9172	3.268	-10.84	14.67
SDev	1.24	2.77	3.35	3.8851	.923	2.61	2.55
%RSD	3.531	3.263	4.872	423.6	28.24	24.07	17.38
#1	33.80	88.05	65.04	-5.162	3.228	-10.94	13.63
#2	35.75	83.35	70.10	-.0533	2.365	-8.178	12.80
#3	36.12	83.18	71.37	2.463	4.210	-13.39	17.57
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.146	6.429	11.27	1391.	78.26
SDev	1.577	3.025	3.19	309.	.84
%RSD	30.64	47.04	28.29	22.25	1.077
#1	3.468	9.786	14.91	1748.	79.19
#2	5.372	5.585	9.956	1214.	77.55
#3	6.598	3.916	8.954	1210.	78.04
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922558 #67 Operator:
Run Time: 12/18/98 06:32:33
Segment: SDG:13303 ClientID:EZSW-6 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2645	94230.	815.8	5.129	330000.	8.172	99.86
SDev	.7467	386.	.4	.042	2601.	1.124	.96
%RSD	282.3	.4094	.0470	.8135	.7882	13.75	.9603
#1	.5703	93790.	815.3	5.169	327100.	9.439	98.76
#2	-.4950	94420.	815.9	5.085	331200.	7.781	100.3
#3	-.8688	94480.	816.1	5.133	331800.	7.296	100.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	165.6	198.4	197200.	19270.	140300.	4069.	2866.
SDev	2.3	1.9	1343.	147.	935.	24.	126.
%RSD	1.378	.9818	.6810	.7649	.6662	.5973	4.391
#1	168.3	196.2	195700.	19440.	139300.	4041.	3007.
#2	164.1	199.4	197800.	19200.	140700.	4081.	2764.
#3	164.6	199.7	198200.	19180.	141000.	4086.	2828.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	263.6	-.2673	204.4	507.4	87.02	8.691	2.073
SDev	.5	1.9121	2.0	3.4	1.49	1.940	1.329
%RSD	.2050	715.3	.9609	.6631	1.712	22.32	64.11
#1	264.2	1.936	202.3	503.6	85.30	6.749	.7645
#2	263.1	-1.245	205.0	508.7	87.75	10.63	3.422
#3	263.7	-1.493	206.1	509.9	88.00	8.694	2.033
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	209.7	100.3	80.37	-3.641	4.918	-7.629	16.83
SDev	1.9	6.1	5.29	7.542	2.199	2.506	3.97
%RSD	.9199	6.109	6.578	207.1	44.71	32.85	23.61
#1	208.7	107.4	74.27	-12.33	7.294	-4.762	12.49
#2	208.5	96.66	83.29	1.232	4.507	-8.725	20.28
#3	211.9	96.89	83.55	.1735	2.954	-9.400	17.72
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.766	10.02	35.84	1971.	104.6
SDev	1.460	5.49	3.59	368.	1.2
%RSD	30.64	54.78	10.03	18.68	1.144
#1	3.091	16.24	39.99	2396.	103.2
#2	5.774	5.881	33.59	1765.	105.3
#3	5.433	7.928	33.95	1752.	105.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922559 #68 Operator:
Run Time: 12/18/98 06:39:27
Client: SDG:13303 ClientID:EZSW-7 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0142	12070.	74.64	.7865	362500.	4.139	17.13
SDev	.5343	250.	1.27	.0278	8935.	.502	.79
%RSD	3772.	2.074	1.706	3.535	2.465	12.14	4.613
#1	.6268	11930.	74.21	.8135	355600.	4.718	16.54
#2	-.2286	11920.	73.64	.7580	359300.	3.811	16.82
#3	-.3557	12360.	76.08	.7881	372600.	3.889	18.02
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.07	45.29	26220.	2067.	85800.	1074.	1391.
SDev	1.34	.52	603.	37.	1865.	23.	129.
%RSD	3.818	1.149	2.301	1.813	2.174	2.173	9.261
#1	36.51	44.78	25780.	2047.	84480.	1058.	1440.
#2	33.87	45.28	25980.	2044.	84990.	1064.	1245.
#3	34.82	45.82	26910.	2110.	87930.	1101.	1488.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	46.03	-2.451	67.10	76.53	22.70	4.438	.3614
SDev	.74	.216	1.74	1.80	.53	1.540	1.576
%RSD	1.617	8.810	2.592	2.346	2.313	34.71	436.1
#1	46.19	-2.201	65.69	75.39	23.24	4.893	-.1074
#2	45.21	-2.577	66.56	75.60	22.19	2.721	-.9270
#3	46.68	-2.573	69.04	78.60	22.68	5.700	2.119
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	15.76	30.83	18.64	-2.333	1.699	1.084	6.105
SDev	1.23	4.44	1.59	3.059	1.581	.822	1.914
%RSD	7.794	14.41	8.544	131.1	93.10	75.79	31.35
#1	14.62	35.95	16.89	-5.271	2.463	1.540	6.559
#2	15.61	28.51	19.03	-2.559	-.1198	.1356	4.004
#3	17.06	28.02	20.00	.8332	2.753	1.577	7.750
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.03	1.988	4.691	836.8	21.14
SDev	1.99	1.134	.920	174.8	.35
%RSD	14.22	57.06	19.61	20.89	1.658
#1	11.85	3.257	5.753	1038.	20.74
#2	14.49	1.075	4.121	722.2	21.40
#3	15.76	1.631	4.201	750.3	21.27
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

lethod: CLPBOR Sample Name: 922560 #69 Operator:
Time: 12/18/98 06:46:22
nt: SDG:13303 ClientID:EZSW-8 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1630	19920.	166.4	1.078	39840.	.8577	13.05
SDev	.7566	21.	.6	.048	147.	.4835	.25
%RSD	464.0	.1058	.3799	4.417	.3684	56.37	1.912
#1	.7002	19930.	167.1	1.131	39700.	1.414	12.77
#2	-.7109	19930.	166.1	1.064	39990.	.5377	13.14
#3	-.4785	19890.	165.9	1.039	39830.	.6216	13.25
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	58.39	16.20	35640.	1246.	16290.	498.3	912.0
SDev	1.58	.43	66.	22.	27.	1.0	169.5
%RSD	2.708	2.653	.1856	1.786	.1644	.1912	18.59
#1	60.17	15.71	35570.	1269.	16260.	497.4	1102.
#2	57.83	16.48	35710.	1243.	16310.	499.3	859.0
#3	57.16	16.41	35630.	1225.	16290.	498.1	775.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	34.00	.9846	93.34	78.49	23.53	.2089	.4518
SDev	1.07	1.248	.33	.51	.60	.8049	.7925
%RSD	3.137	126.7	.3528	.6530	2.565	385.2	175.4
#1	35.23	.0636	92.98	78.15	22.87	-.5630	.7488
#2	33.45	2.405	93.61	79.08	24.05	1.043	1.053
#3	33.31	.4853	93.45	78.24	23.67	.1466	-.4463
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.68	31.91	19.34	-2.454	1.895	-8.902	4.750
SDev	.42	3.45	2.60	2.699	1.710	3.636	2.821
%RSD	3.900	10.81	13.45	109.9	90.22	40.85	59.40
#1	10.47	35.89	16.36	-5.293	3.758	-7.940	3.112
#2	11.16	29.81	21.17	.0784	1.532	-12.92	8.008
#3	10.42	30.02	20.49	-2.149	.3962	-5.844	3.130
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	9.952	4.030	2.798	1252.	13.46
SDev	2.477	3.830	1.175	200.	.64
%RSD	24.89	95.05	41.97	15.97	4.737
#1	12.74	8.353	4.149	1482.	14.07
	9.097	1.060	2.225	1141.	12.80
	8.016	2.676	2.020	1131.	13.50
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922561 #70 Operator:
Run Time: 12/18/98 06:53:17
Comment: SDG:13303 ClientID:EZSW-9 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0494	23440.	103.7	.8076	4806.	.4678	15.14
SDev	.5153	123.	.3	.0229	42.	.5342	.87
%RSD	1044.	.5267	.2428	2.837	.8784	114.2	5.744
#1	.6001	23320.	103.7	.8333	4759.	1.041	14.14
#2	-.4210	23450.	103.4	.8000	4820.	.3797	15.54
#3	-.0310	23570.	103.9	.7894	4840.	-.0168	15.74
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	49.16	15.32	36700.	635.1	6344.	276.0	830.9
SDev	.72	.44	298.	11.4	47.	2.1	74.0
%RSD	1.469	2.859	.8112	1.795	.7478	.7610	8.912
#1	49.91	14.82	36370.	623.3	6293.	273.8	830.1
#2	48.47	15.64	36760.	636.0	6352.	276.3	757.2
#3	49.11	15.50	36960.	646.1	6386.	278.0	905.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	34.43	1.836	73.86	87.54	18.41	1.344	.2361
SDev	.33	1.545	1.08	.81	.78	2.717	.1410
%RSD	.9459	84.13	1.457	.9280	4.218	202.2	59.72
#1	34.56	.8072	72.69	86.68	17.53	-.8630	.3227
#2	34.06	1.089	74.08	87.67	18.76	4.379	.3121
#3	34.68	3.613	74.81	88.28	18.96	.5165	.0734
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.741	27.60	13.82	-2.150	1.420	-10.32	7.160
SDev	.321	4.67	3.48	3.337	1.745	4.29	4.025
%RSD	3.672	16.91	25.18	155.2	122.9	41.56	56.22
#1	8.695	32.98	9.801	-5.896	3.420	-7.940	2.663
#2	8.445	24.58	15.84	.5011	.2103	-7.749	10.43
#3	9.082	25.25	15.81	-1.054	.6289	-15.27	8.390
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.46	2.131	2.797	1521.	10.78
SDev	.80	.824	1.290	203.	.64
%RSD	7.018	38.67	46.13	13.34	5.941
#1	11.63	3.072	4.232	1755.	10.06
#2	12.17	1.776	2.425	1400.	11.30
#3	10.58	1.544	1.734	1408.	10.97
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922562 #71 Operator:
Run Time: 12/18/98 07:00:12
Comment: SDG:13303 ClientID:EZSW-10 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1166	21850.	91.32	.6821	66170.	1.143	18.12
SDev	.1907	435.	1.81	.0429	1314.	.460	.57
%RSD	163.6	1.992	1.986	6.283	1.986	40.26	3.164
#1	.3103	21850.	91.73	.7240	65870.	1.664	17.63
#2	-.0710	21410.	89.34	.6383	65040.	.7932	17.98
#3	.1103	22280.	92.90	.6841	67610.	.9709	18.75
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	41.20	23.53	33070.	1371.	25650.	496.1	982.9
SDev	1.71	.38	653.	30.	491.	9.5	104.2
%RSD	4.147	1.609	1.974	2.215	1.916	1.917	10.60
#1	42.76	23.12	32960.	1387.	25590.	494.8	1080.
#2	39.37	23.59	32480.	1336.	25190.	487.3	872.9
#3	41.48	23.87	33770.	1389.	26170.	506.2	995.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	41.10	.8716	62.78	72.97	19.60	.3055	-.4506
SDev	.91	1.094	1.31	1.46	.32	2.370	.3444
%RSD	2.206	125.5	2.082	2.007	1.611	775.7	76.43
#1	41.88	.9865	61.94	72.71	19.44	1.116	-.4569
#2	40.10	-.2754	62.12	71.66	19.39	2.164	-.1031
#3	41.30	1.904	64.29	74.55	19.96	-2.363	-.7919
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	16.21	27.55	15.62	-1.222	-.0734	-9.368	5.127
SDev	.88	2.00	1.07	3.600	1.7645	3.719	2.188
%RSD	5.413	7.266	6.836	294.7	2404.	39.70	42.68
#1	15.35	29.55	14.39	-5.302	1.954	-6.155	4.738
#2	16.19	25.55	16.30	1.506	-.9142	-8.506	7.484
#3	17.10	27.53	16.17	.1307	-1.260	-13.44	3.160
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.07	3.150	4.663	1237.	16.96
SDev	.78	1.800	1.167	194.	.87
%RSD	7.050	57.15	25.02	15.68	5.130
#1	10.68	4.750	5.979	1459.	16.20
#2	11.97	1.201	4.257	1099.	16.79
#3	10.56	3.499	3.754	1153.	17.91
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922563 #72 Operator:
Run Time: 12/18/98 07:07:07
Comment: SDG:13303 ClientID:EZSW-11 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1078	21010.	96.10	.6609	2919.	.2794	13.14
SDev	.2359	485.	1.78	.0080	78.	.4141	.67
%RSD	218.7	2.307	1.852	1.211	2.677	148.2	5.087
#1	.3741	20450.	94.09	.6564	2830.	.7541	12.41
#2	.0244	21360.	97.50	.6562	2977.	.0921	13.72
#3	-.0750	21200.	96.70	.6702	2950.	-.0080	13.30
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	45.24	11.76	23970.	710.3	5388.	309.3	753.5
SDev	.58	.31	631.	20.7	135.	7.5	42.3
%RSD	1.285	2.626	2.632	2.920	2.511	2.418	5.608
#1	44.58	11.49	23250.	686.5	5234.	300.8	763.2
#2	45.66	12.10	24420.	724.9	5484.	314.8	790.1
#3	45.48	11.71	24250.	719.5	5447.	312.2	707.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	30.37	1.506	47.69	63.19	15.43	-.6197	.6103
SDev	.33	1.262	1.32	1.89	1.08	1.1578	1.595
%RSD	1.077	83.76	2.769	2.986	6.986	186.8	261.3
#1	30.28	.2919	46.25	61.03	14.77	.4657	-1.173
#2	30.73	1.417	48.84	64.54	16.67	-.4865	1.104
#3	30.09	2.811	47.99	64.00	14.85	-1.838	1.900
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.370	23.00	11.64	-1.728	1.770	-10.06	4.087
SDev	.280	1.56	2.19	5.078	1.307	4.61	1.260
%RSD	20.44	6.794	18.81	293.9	73.85	45.78	30.84
#1	-1.668	24.79	9.758	-7.361	1.909	-8.111	4.740
#2	-1.327	21.92	14.05	2.501	.3992	-6.752	2.634
#3	-1.113	22.28	11.13	-.3244	3.003	-15.32	4.887
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.72	2.046	1.231	1243.	7.585
SDev	.63	2.364	.687	138.	.522
%RSD	4.931	115.5	55.80	11.09	6.878
#1	12.31	3.191	2.023	1402.	7.104
#2	13.44	-.6725	.8840	1169.	7.511
#3	12.41	3.618	.7875	1158.	8.140
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

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Method: CLPBOR Sample Name: CCVA Operator 2294
Run Time: 12/18/98 07:14:02
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	105.7	2007.	1060.	1050.	49640.	1038.	1054.
SDev	1.3	27.	15.	13.	573.	13.	12.
%RSD	1.185	1.356	1.432	1.205	1.154	1.284	1.141
#1	104.3	2037.	1078.	1064.	50270.	1053.	1067.
#2	106.0	1985.	1048.	1039.	49140.	1027.	1044.
#3	106.7	2000.	1055.	1048.	49520.	1035.	1052.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1046.	1049.	2037.	48220.	49620.	1052.	50660.
SDev	14.	5.	24.	1008.	592.	12.	637.
%RSD	1.344	.4391	1.174	2.090	1.194	1.178	1.257
#1	1062.	1045.	2064.	49360.	50260.	1066.	51350.
#2	1034.	1048.	2018.	47460.	49100.	1042.	50090.
#3	1043.	1054.	2029.	47830.	49500.	1049.	50530.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1033.	1073.	1062.	1043.	1053.	1069.	1079.
SDev	13.	12.	12.	13.	8.	9.	6.
%RSD	1.216	1.075	1.138	1.246	.7341	.8365	.5914
#1	1047.	1086.	1076.	1057.	1047.	1061.	1081.
#2	1022.	1064.	1052.	1031.	1050.	1067.	1071.
#3	1031.	1070.	1060.	1041.	1061.	1078.	1083.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1071.	1063.	1048.	1091.	1073.	1077.	1065.
SDev	15.	11.	14.	21.	15.	14.	19.
%RSD	1.370	1.075	1.370	1.952	1.352	1.304	1.745
#1	1087.	1075.	1033.	1067.	1088.	1092.	1045.
#2	1057.	1052.	1049.	1095.	1059.	1066.	1068.
#3	1069.	1061.	1062.	1109.	1070.	1072.	1081.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1067.	1073.	1071.	1067.	27.15
SDev	10.	19.	9.	178.	.94
%RSD	.9806	1.747	.8343	16.72	3.458
#1	1077.	1093.	1080.	Q1273.	28.21
#2	1057.	1056.	1062.	957.4	26.43
#3	1067.	1069.	1070.	970.9	26.80
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: CCBA Operator: 2294
Run Time: 12/18/98 07:20:58
Comment: CCB
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.7000	-26.40	.2770	.0798	-43.58	.1864	.2154
SDev	.5466	.67	.0851	.0166	5.00	.0383	.0808
%RSD	78.09	2.557	30.72	20.80	11.46	20.57	37.49
#1	.9601	-25.62	.1929	.0990	-38.60	.1523	.1224
#2	1.068	-26.81	.3631	.0703	-48.59	.2279	.2559
#3	.0719	-26.76	.2750	.0703	-43.56	.1790	.2679
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3242	1.021	2.117	4.816	8.110	.2567	-68.44
SDev	.6423	.049	5.543	38.67	.759	.0501	347.05
%RSD	198.2	4.766	261.8	803.1	9.359	19.50	507.1
#1	-.2189	1.068	-3.645	-36.99	7.244	.3145	-459.1
#2	1.033	1.026	7.413	39.31	8.660	.2265	204.3
#3	.1581	.9706	2.583	12.13	8.425	.2292	49.50
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2816	2.356	-.0475	-4.397	-1.799	-1.250	-.5933
SDev	1.000	.684	.0872	.083	.713	1.448	1.0497
%RSD	355.2	29.04	183.5	1.896	39.61	115.8	176.9
#1	-.4804	2.039	-.1354	-4.472	-1.075	.1706	-.7181
#2	1.414	1.888	-.0462	-4.411	-1.823	-1.198	.5132
#3	-.0891	3.141	.0390	-4.307	Q-2.500	-2.723	-1.575
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8211	1.852	-3.630	-3.997	1.098	-.3325	-1.716
SDev	.6322	2.122	.307	1.407	1.758	3.1896	.595
%RSD	76.99	114.6	8.454	35.20	160.0	959.2	34.67
#1	-.1408	3.587	-3.410	-5.601	1.712	2.936	-1.217
#2	-.9319	2.483	-3.980	-3.415	2.467	-.4960	-1.556
#3	-1.390	-.5141	-3.499	-2.974	-.8842	-3.437	-2.374
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6194	1.225	.9910	1.888	.2925
SDev	2.1446	2.404	1.159	18.54	.1710
%RSD	346.3	196.2	117.0	981.8	58.45
#1	.4462	-.6108	2.279	-16.98	.1519
#2	-3.088	3.945	.6635	20.08	.4829
#3	.7837	.3399	.0306	2.574	.2429
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

000549

Method: CLPBOR Sample Name: 922564 #75 Operator:
Run Time: 12/18/98 07:27:53
Comment: SDG:13303 ClientID:EZSW-12 1:1
CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2135	14760.	98.08	.6747	162400.	2.033	14.29
SDev	.2026	158.	1.54	.0517	847.	.426	.59
%RSD	94.89	1.073	1.569	7.671	.5214	20.94	4.120
#1	.0075	14950.	99.84	.7340	163400.	2.524	13.71
#2	-.2576	14680.	97.36	.6513	162000.	1.769	14.27
#3	-.3904	14660.	97.03	.6387	161900.	1.806	14.89
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	43.06	20.16	25630.	1185.	34360.	545.7	1023.
SDev	1.80	.60	154.	27.	250.	4.3	44.
%RSD	4.188	2.952	.5990	2.250	.7262	.7822	4.309
#1	45.14	19.49	25810.	1215.	34650.	550.6	1036.
#2	41.91	20.36	25550.	1173.	34240.	543.5	973.5
#3	42.14	20.63	25540.	1166.	34200.	543.0	1059.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	33.43	-.4202	64.32	72.34	22.81	.8904	-.1412
SDev	1.55	2.9623	.43	.51	.22	1.310	1.5172
%RSD	4.646	705.0	.6706	.7068	.9723	147.1	1074.
#1	35.21	-.2557	64.58	72.86	22.87	2.097	-.7667
#2	32.65	2.457	63.82	72.34	22.99	1.077	-1.246
#3	32.42	-3.461	64.56	71.83	22.56	-.5031	1.589
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.97	30.00	19.21	-3.017	1.287	-6.363	4.504
SDev	1.06	3.80	1.79	3.428	1.461	2.653	.644
%RSD	8.178	12.66	9.293	113.6	113.5	41.69	14.30
#1	12.56	34.32	17.15	-6.475	2.075	-3.833	5.050
#2	14.18	28.50	20.24	-2.957	-.3991	-6.133	4.669
#3	12.18	27.18	20.25	.3813	2.184	-9.124	3.793
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.95	4.184	4.283	1164.	12.32
SDev	1.80	3.495	1.019	219.	.33
%RSD	16.45	83.52	23.78	18.81	2.683
#1	9.260	8.219	5.452	1416.	12.49
#2	12.84	2.227	3.812	1040.	11.94
#3	10.75	2.107	3.585	1035.	12.54
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922565 #76 Operator: 2294
Run Time: 12/18/98 07:34:47
Comment: SDG:13303 ClientID:EZSW-13 1:1
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1634	10140.	78.10	.5828	271600.	3.382	12.35
SDev	.5139	20.	.05	.0400	1589.	.296	.44
%RSD	314.4	.1961	.0598	6.870	.5849	8.739	3.575
#1	.2935	10120.	78.16	.6289	269800.	3.714	11.85
#2	-.0641	10150.	78.06	.5617	272600.	3.147	12.64
#3	-.7198	10160.	78.09	.5576	272500.	3.286	12.57
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	32.19	23.36	41460.	1325.	52840.	1313.	1116.
SDev	1.59	.31	196.	10.	211.	6.	96.
%RSD	4.932	1.328	.4737	.7603	.3997	.4197	8.560
#1	34.02	23.02	41230.	1314.	52590.	1307.	1226.
#2	31.13	23.43	41580.	1332.	52970.	1316.	1058.
#3	31.42	23.63	41560.	1330.	52950.	1316.	1063.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	34.44	-.5092	50.82	75.44	13.39	.6077	-.6502
SDev	.40	1.6323	.51	.69	.51	4.694	.5109
%RSD	1.162	320.6	1.001	.9133	3.840	772.4	78.57
#1	34.74	-1.078	50.24	74.64	13.98	-3.727	-.0751
#2	34.59	-1.781	51.02	75.88	13.11	5.593	-1.052
#3	33.98	1.331	51.19	75.79	13.07	-.0422	-.8239
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.356	19.64	10.25	-2.568	.2996	-9.261	5.527
SDev	1.446	4.16	1.34	1.133	1.170	5.127	4.651
%RSD	17.31	21.20	13.08	44.11	390.4	55.36	84.14
#1	8.119	24.28	8.827	-3.494	1.624	-12.75	.7688
#2	9.906	18.43	10.45	-2.904	-.1342	-3.374	10.06
#3	7.043	16.22	11.49	-1.305	-.5913	-11.66	5.751
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.76	2.706	2.030	912.6	16.98
SDev	2.46	1.902	.765	170.2	.41
%RSD	20.89	70.30	37.69	18.66	2.404
#1	11.51	3.740	2.866	1109.	17.45
#2	14.33	.5105	1.856	813.8	16.73
	9.438	3.867	1.366	814.8	16.76
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922566 #77 Operator:
P Time: 12/18/98 07:41:42
(ment: SDG:13303 ClientID:EZSW-14 1:1
Mo CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0153	16390.	142.3	.6263	7273.	2.598	32.41
SDev	.4332	221.	2.3	.0290	94.	.387	.16
%RSD	2833.	1.350	1.628	4.624	1.293	14.91	.4838
#1	.2226	16640.	145.0	.6593	7381.	3.021	32.51
#2	.3059	16290.	141.2	.6145	7229.	2.261	32.49
#3	-.4826	16240.	140.8	.6051	7209.	2.512	32.23
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	47.45	179.1	20770.	1632.	6285.	210.9	953.8
SDev	1.53	.7	233.	38.	74.	2.6	176.4
%RSD	3.216	.4139	1.120	2.331	1.174	1.210	18.49
#1	49.18	178.2	21030.	1675.	6369.	213.8	1157.
#2	46.85	179.5	20680.	1616.	6255.	209.8	863.5
#3	46.31	179.6	20600.	1604.	6231.	209.1	840.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
ge	63.78	.5712	49.09	106.7	30.33	4.054	.3784
v	1.68	2.252	.58	1.2	.79	2.550	.3695
	2.627	394.2	1.172	1.159	2.615	62.89	97.67
#1	65.70	3.118	49.75	108.0	29.47	6.970	.5939
#2	63.05	-1.157	48.68	106.5	30.50	2.945	.5895
#3	62.60	-.2472	48.85	105.5	31.03	2.247	-.0483
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.517	36.84	27.08	-.4470	.7831	-4.919	8.527
SDev	.693	2.51	2.44	2.8796	1.960	7.053	1.587
%RSD	12.56	6.806	9.003	644.2	250.3	143.4	18.61
#1	6.222	39.44	24.48	-3.107	2.434	1.958	9.465
#2	4.836	36.64	27.42	-.8456	1.299	-4.581	6.695
#3	5.494	34.44	29.32	2.611	-1.383	-12.14	9.420
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.24	3.651	5.047	954.2	12.44
SDev	.68	2.663	.677	159.2	.07
%RSD	5.544	72.93	13.40	16.68	.5377
#1	11.53	5.926	5.811	1138.	12.37
	12.31	4.304	4.810	864.7	12.50
	12.89	.7228	4.522	860.0	12.44
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922567 #78 Operator:
R Time: 12/18/98 07:48:37
C ent: SDG:13303 ClientID:EZSW-15 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1653	28050.	251.3	1.347	11420.	2.668	38.70
SDev	.5343	63.	1.1	.036	41.	.497	.48
%RSD	323.2	.2230	.4385	2.659	.3583	18.62	1.238
#1	.7769	28030.	252.1	1.385	11380.	3.235	38.36
#2	-.0699	28120.	251.7	1.340	11460.	2.307	39.25
#3	-.2110	28000.	250.0	1.315	11420.	2.464	38.50
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	82.95	105.3	38170.	2798.	12250.	356.5	1120.
SDev	.86	.8	117.	39.	38.	1.1	172.
%RSD	1.039	.7518	.3075	1.379	.3117	.3191	15.33
#1	83.94	104.4	38070.	2842.	12220.	355.4	1319.
#2	82.36	106.0	38300.	2784.	12290.	357.6	1018.
#3	82.54	105.6	38150.	2769.	12250.	356.6	1025.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	93.38	1.255	99.91	146.4	35.83	5.565	1.691
SDev	1.13	2.423	.57	.3	1.11	.467	1.483
%RSD	1.214	193.1	.5724	.1752	3.101	8.399	87.69
#1	94.60	2.498	99.30	146.3	36.05	5.998	2.944
#2	93.16	2.804	100.4	146.7	34.62	5.627	2.076
#3	92.37	-1.537	99.99	146.2	36.81	5.069	.0536
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.500	45.64	30.92	-1.637	3.345	-4.651	10.66
SDev	1.005	5.17	2.10	2.005	2.648	6.539	3.11
%RSD	28.71	11.32	6.779	122.5	79.15	140.6	29.15
#1	2.720	51.01	28.58	-3.575	6.191	1.585	8.194
#2	4.634	40.71	31.57	.4296	2.891	-11.46	14.15
#3	3.146	45.19	32.61	-1.764	.9539	-4.083	9.631
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	11.23	2.537	2.930	1392.	20.26
SDev	.28	2.865	1.212	222.	.53
%RSD	2.515	112.9	41.36	15.97	2.597
#1	11.35	5.679	4.329	1649.	19.90
	10.91	.0712	2.186	1266.	20.01
	11.44	1.862	2.276	1262.	20.86
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922568 #79 Operator:
Run Time: 12/18/98 07:55:31
Comment: SDG:13303 ClientID:EZBS-1 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3202	60760.	633.6	3.329	472400.	13.41	60.06
SDev	.4860	1727.	15.4	.045	14811.	.38	1.99
%RSD	151.8	2.842	2.424	1.366	3.135	2.835	3.314
#1	.2298	58790.	616.1	3.287	455500.	13.81	57.77
#2	-.4992	61470.	639.9	3.322	478700.	13.05	61.03
#3	-.6913	62030.	644.8	3.377	483000.	13.38	61.37
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	116.2	167.8	108900.	14130.	196100.	2148.	2021.
SDev	.5	2.1	3194.	245.	5545.	61.	89.
%RSD	.4451	1.227	2.932	1.735	2.828	2.843	4.419
#1	115.9	165.5	105300.	13860.	189800.	2078.	2121.
#2	115.9	169.0	110300.	14200.	198400.	2175.	1948.
#3	116.8	169.1	111300.	14330.	200100.	2191.	1994.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	163.4	-3.403	169.3	354.9	123.7	4.534	2.429
SDev	3.4	3.498	5.2	10.4	3.4	.989	1.738
%RSD	2.056	102.8	3.095	2.935	2.750	21.82	71.57
#1	159.7	-.2182	163.3	343.0	119.8	5.057	.5721
#2	164.3	-7.147	171.8	359.5	125.6	3.393	4.018
#3	166.2	-2.844	172.9	362.2	125.7	5.151	2.697
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.22	135.8	117.7	-1.488	4.377	-5.546	9.558
SDev	1.67	3.0	6.6	6.636	1.415	6.509	2.095
%RSD	11.72	2.221	5.612	445.9	32.32	117.4	21.92
#1	12.55	139.2	110.1	-9.147	5.417	.7589	7.195
#2	14.22	133.9	121.5	2.139	4.949	-12.24	11.19
#3	15.88	134.1	121.5	2.544	2.766	-5.155	10.29
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	9.929	5.793	10.80	1836.	84.46
SDev	.064	5.851	2.73	357.	2.50
%RSD	.6427	101.0	25.30	19.43	2.965
#1	9.950	12.55	13.95	2248.	81.61
#2	9.857	2.558	9.460	1620.	85.45
	9.980	2.275	9.003	1640.	86.32
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922569 #80 Operator:
Run Time: 12/18/98 08:02:26
Comment: SDG:13303 ClientID:EZBS-2 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5227	73390.	607.3	3.723	H830900.	13.13	73.44
SDev	.5604	1667.	14.7	.148	19652.	1.29	1.25
%RSD	107.2	2.272	2.422	3.967	2.365	9.830	1.699
#1	.1243	75010.	621.6	3.890	H850200.	14.62	74.33
#2	-.8497	73480.	608.0	3.672	H831500.	12.48	73.98
#3	-.8428	71680.	592.2	3.608	H810900.	12.30	72.01
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	128.5	189.8	163000.	19730.	147300.	4275.	2756.
SDev	6.3	1.2	3233.	560.	2863.	86.	437.
%RSD	4.919	.6412	1.983	2.839	1.943	2.022	15.86
#1	135.6	188.7	166100.	20310.	150100.	4357.	3248.
#2	126.3	191.1	163300.	19680.	147600.	4282.	2607.
#3	123.5	189.7	159700.	19190.	144400.	4185.	2413.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	186.1	-4.556	172.1	388.0	66.71	4.309	2.589
SDev	5.7	3.917	3.4	7.7	1.10	.305	.760
%RSD	3.066	85.98	1.969	1.994	1.648	7.069	29.35
#1	192.6	-.7357	175.4	395.4	67.65	3.959	3.461
#2	184.0	-4.369	172.3	388.8	66.98	4.516	2.233
#3	181.8	-8.563	168.6	379.9	65.50	4.452	2.072
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	36.41	79.21	60.46	-2.916	5.330	-11.56	12.23
SDev	1.78	7.71	2.90	5.179	3.690	4.11	2.47
%RSD	4.884	9.737	4.791	177.6	69.24	35.53	20.21
#1	34.51	88.11	57.42	-8.422	9.387	-7.094	9.470
#2	38.03	74.54	63.19	-2.185	4.431	-12.42	12.96
#3	36.68	74.98	60.76	1.858	2.172	-15.18	14.25
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.862	11.41	23.74	1957.	108.5
SDev	3.343	5.83	4.18	417.	1.6
%RSD	179.6	51.11	17.62	21.33	1.510
#1	3.536	18.12	28.57	2438.	110.3
#2	-1.988	7.517	21.41	1744.	107.9
#3	4.037	8.601	21.24	1689.	107.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922570 #81 Operator:
Run Time: 12/18/98 08:09:21
Comment: SDG:13303 ClientID:EZBS-3 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3846	72260.	569.0	3.889	H742500.	12.35	79.81
SDev	.6087	548.	1.4	.054	10170.	1.01	1.36
%RSD	158.2	.7590	.2451	1.392	1.370	8.173	1.704
#1	.1775	71630.	567.4	3.951	H730800.	13.51	78.24
#2	-.3004	72560.	570.0	3.850	H747900.	11.67	80.58
#3	-1.031	72600.	569.5	3.866	H748900.	11.87	80.61
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	134.4	175.6	163100.	19640.	157900.	4124.	2674.
SDev	2.4	1.5	1944.	128.	1629.	40.	187.
%RSD	1.782	.8264	1.192	.6506	1.032	.9636	6.999
#1	137.2	174.0	160800.	19790.	156000.	4078.	2889.
#2	133.2	176.1	164000.	19560.	158700.	4145.	2591.
#3	132.9	176.8	164300.	19580.	159000.	4149.	2544.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	212.9	-3.769	177.2	404.6	69.32	3.855	2.936
SDev	.6	3.130	1.7	4.5	1.69	.897	1.342
%RSD	.2759	83.04	.9652	1.104	2.436	23.27	45.71
#1	212.5	-.1747	175.2	399.5	67.64	3.712	3.201
#2	212.7	-5.892	178.1	407.1	69.29	4.815	1.481
#3	213.6	-5.239	178.2	407.3	71.02	3.038	4.127
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	47.61	80.40	63.77	-1.224	5.006	-12.00	11.76
SDev	.90	4.85	4.88	4.438	2.275	3.29	2.37
%RSD	1.885	6.036	7.657	362.7	45.45	27.40	20.13
#1	47.75	85.90	58.52	-5.424	7.500	-8.226	9.664
#2	48.43	78.60	64.63	-1.666	3.045	-14.26	14.33
#3	46.66	76.70	68.17	3.419	4.472	-13.51	11.29
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.813	10.06	26.57	1826.	112.5
SDev	1.116	6.29	3.29	370.	.9
%RSD	61.55	62.59	12.40	20.26	.7655
#1	.8286	17.29	30.30	2254.	111.7
#2	3.026	7.023	24.05	1620.	112.3
	1.586	5.852	25.36	1606.	113.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

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Method: CLPBOR Sample Name: 922571 #82 Operator:
Run Time: 12/18/98 08:16:16
Document: SDG:13303 ClientID:EZBS-4 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7296	97770.	833.0	5.678	386400.	11.44	113.3
SDev	.2420	725.	8.2	.093	624.	1.60	.3
%RSD	33.17	.7416	.9812	1.645	.1615	13.95	.2299
#1	-.4623	98610.	842.4	5.785	386700.	13.28	113.2
#2	-.9336	97410.	829.4	5.618	385700.	10.44	113.1
#3	-.7928	97300.	827.3	5.629	386900.	10.59	113.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	182.1	212.1	280800.	21230.	171600.	4650.	2144.
SDev	4.7	1.3	607.	363.	392.	13.	350.
%RSD	2.564	.5917	.2163	1.708	.2283	.2840	16.34
#1	187.4	210.9	281500.	21650.	172000.	4666.	2548.
#2	179.6	213.4	280300.	21080.	171300.	4641.	1929.
#3	179.2	212.2	280700.	20970.	171400.	4645.	1954.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	299.8	-2.000	241.5	600.7	94.68	9.498	4.805
SDev	4.6	9.104	.1	.8	2.59	1.884	1.244
%RSD	1.535	455.2	.0294	.1359	2.731	19.84	25.89
#1	305.1	8.461	241.6	601.6	92.12	7.473	4.357
#2	297.1	-6.327	241.4	600.1	97.29	11.20	3.847
#3	297.1	-8.133	241.5	600.3	94.62	9.822	6.211
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	37.64	109.0	87.53	-1.084	7.737	-13.92	21.18
SDev	.18	6.6	6.67	6.597	3.060	6.18	5.73
%RSD	.4689	6.081	7.622	608.4	39.55	44.37	27.07
#1	37.72	116.4	79.97	-8.665	10.85	-9.268	15.82
#2	37.43	106.7	92.59	2.058	4.733	-20.93	27.23
#3	37.75	103.8	90.04	3.354	7.630	-11.56	20.49
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.952	14.13	15.46	1973.	130.2
SDev	1.704	7.52	4.51	416.	1.6
%RSD	43.10	53.25	29.20	21.11	1.204
#1	4.800	22.74	20.66	2454.	131.9
#2	5.065	10.80	12.67	1741.	129.9
#3	1.991	8.844	13.04	1725.	128.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

Method: CLPBOR Sample Name: 922572 #83 Operator:
Run Time: 12/18/98 08:23:11
Comment: SDG:13303 ClientID:EZBS-5 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2671	107600.	971.8	6.184	393000.	9.894	112.6
SDev	.4176	299.	2.9	.049	2982.	1.329	1.4
%RSD	156.4	.2779	.2977	.7943	.7588	13.44	1.276
#1	.1852	107400.	974.7	6.240	389700.	11.42	110.9
#2	-.3484	107900.	971.9	6.166	395300.	9.284	113.5
#3	-.6382	107500.	968.9	6.146	394100.	8.978	113.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	190.8	216.7	226100.	26710.	118700.	3412.	2295.
SDev	3.1	1.4	1240.	292.	589.	17.	151.
%RSD	1.600	.6599	.5483	1.094	.4960	.4875	6.591
#1	194.2	215.1	224700.	27040.	118000.	3394.	2469.
#2	189.8	217.7	227100.	26580.	119200.	3426.	2215.
#3	188.3	217.4	226400.	26500.	118800.	3416.	2200.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	331.0	2.251	240.1	590.4	80.67	10.48	3.969
SDev	.7	6.395	1.8	3.4	1.72	2.96	.904
%RSD	.1993	284.2	.7291	.5810	2.132	28.27	22.77
#1	331.7	8.523	238.1	586.7	78.69	7.184	4.860
#2	330.8	2.490	241.2	593.5	81.62	11.33	3.054
#3	330.4	-4.261	241.0	590.9	81.71	12.92	3.995
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	60.28	93.47	74.28	-3.514	7.698	-12.38	21.88
SDev	2.79	7.49	6.31	6.254	4.291	5.12	5.46
%RSD	4.625	8.017	8.494	178.0	55.74	41.39	24.94
#1	57.16	102.0	67.02	-10.71	12.63	-9.925	15.72
#2	62.52	90.25	77.30	-.4423	4.792	-18.27	26.10
#3	61.17	88.11	78.50	.6100	5.677	-8.942	23.83
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.858	11.34	32.84	2115.	148.6
SDev	2.036	5.60	4.73	412.	.4
%RSD	52.77	49.35	14.40	19.47	.2803
#1	1.790	17.80	38.29	2590.	148.4
#2	5.861	8.336	30.35	1883.	149.1
#3	3.924	7.888	29.88	1871.	148.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000558

Method: CLPBOR Sample Name: PDS922542 #84 Operator:
Run Time: 12/18/98 08:30:05
Comment: SDG:13303 ClientID:EZSW-1A 1:1
Data: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.55	55830.	514.3	12.98	436000.	17.80	157.1
SDev	.52	88.	1.7	.09	1868.	.80	1.1
%RSD	2.543	.1579	.3286	.6858	.4283	4.519	.6800
#1	21.14	55890.	516.0	13.08	434800.	18.73	156.1
#2	20.37	55870.	514.3	12.97	438200.	17.36	158.2
#3	20.15	55730.	512.6	12.90	435100.	17.32	156.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	129.2	201.1	149700.	11470.	165700.	3289.	1968.
SDev	2.5	1.3	433.	94.	488.	10.	122.
%RSD	1.954	.6370	.2889	.8235	.2944	.2922	6.204
#1	132.0	199.6	149500.	11580.	165400.	3283.	2108.
#2	128.4	201.6	150200.	11420.	166200.	3300.	1914.
#3	127.2	202.0	149400.	11410.	165400.	3283.	1883.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	237.4	19.04	263.3	381.9	76.43	14.64	125.3
SDev	1.9	3.02	1.3	1.4	1.69	1.29	1.1
%RSD	.7945	15.85	.4831	.3685	2.205	8.820	.9068
#1	239.3	21.92	262.3	381.3	74.49	13.15	124.0
#2	237.4	15.90	264.7	383.5	77.55	15.33	125.7
#3	235.6	19.31	262.9	380.9	77.25	15.44	126.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	54.66	86.41	71.44	124.3	125.8	-2.721	23.30
SDev	1.44	6.50	5.74	8.2	2.4	3.529	3.40
%RSD	2.641	7.522	8.032	6.602	1.935	129.7	14.59
#1	53.11	93.85	64.82	114.9	128.6	-.0320	19.72
#2	55.97	83.52	74.56	128.7	124.2	-1.415	23.68
#3	54.91	81.85	74.95	129.4	124.6	-6.717	26.49
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.380	7.286	17.02	1784.	80.34
SDev	3.205	5.420	2.62	368.	.28
%RSD	43.43	74.39	15.41	20.64	.3535
#1	5.156	13.13	20.04	2209.	80.03
#2	5.931	6.298	15.28	1585.	80.40
#3	11.05	2.428	15.75	1559.	80.59
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	10000.	10000.	30000.	10000.	
Low	-20.00	-10.00	-10.00	-30.00	

000559

Method: CLPBOR Sample Name: CCVA Operator:
Run Time: 12/18/98 08:37:01
Comment: CCV CVS1
Units: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	107.1	2019.	1055.	1050.	49770.	1041.	1054.
SDev	.4	36.	14.	16.	851.	17.	17.
%RSD	.3644	1.761	1.370	1.518	1.710	1.654	1.603
#1	106.7	2060.	1072.	1069.	50750.	1061.	1073.
#2	106.9	1996.	1047.	1040.	49190.	1029.	1043.
#3	107.5	2002.	1047.	1043.	49370.	1033.	1046.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1047.	1057.	2081.	47930.	49670.	1050.	50350.
SDev	18.	9.	45.	890.	723.	16.	674.
%RSD	1.735	.8559	2.169	1.857	1.455	1.504	1.339
#1	1067.	1046.	2133.	48950.	50500.	1068.	51120.
#2	1034.	1063.	2053.	47470.	49200.	1039.	49890.
#3	1038.	1060.	2058.	47360.	49300.	1042.	50030.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1036.	1076.	1061.	1043.	1059.	1076.	1081.
SDev	19.	14.	16.	16.	12.	15.	15.
%RSD	1.796	1.290	1.507	1.570	1.112	1.367	1.426
#1	1057.	1092.	1080.	1062.	1072.	1092.	1098.
#2	1023.	1066.	1051.	1032.	1050.	1063.	1071.
#3	1028.	1070.	1053.	1035.	1055.	1072.	1073.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1069.	1066.	1055.	1095.	1073.	1075.	1076.
SDev	13.	21.	7.	5.	21.	21.	13.
%RSD	1.205	1.980	.6856	.4156	1.977	1.910	1.171
#1	1084.	1090.	1063.	1100.	1098.	1098.	1089.
#2	1060.	1051.	1049.	1091.	1061.	1063.	1063.
#3	1064.	1057.	1054.	1096.	1062.	1063.	1076.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1063.	1074.	1071.	1069.	27.06
SDev	18.	18.	15.	192.	.99
%RSD	1.647	1.661	1.386	17.94	3.641
#1	1083.	1094.	1088.	Q1291.	28.16
#2	1053.	1061.	1060.	953.1	26.76
	1052.	1066.	1065.	964.2	26.25
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: CCBA Operator:
Run Time: 12/18/98 08:43:56
Instrument: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6806	-10.30	.4376	.1687	-29.17	.5353	.4538
SDev	.8530	4.34	.1352	.0708	9.25	.0702	.6987
%RSD	125.3	42.13	30.88	41.95	31.73	13.12	154.0
#1	1.666	-5.484	.5925	.2505	-18.48	.6164	1.117
#2	.1798	-13.90	.3433	.1262	-34.50	.4938	-.2756
#3	.1964	-11.53	.3771	.1296	-34.52	.4958	.5200
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.119	.9244	9.076	38.56	17.63	.4491	118.4
SDev	.529	.2451	9.500	28.13	9.11	.1871	219.6
%RSD	47.33	26.51	104.7	72.95	51.67	41.66	185.5
#1	1.730	1.206	19.99	68.16	28.14	.6598	346.2
#2	.8131	.7626	2.632	12.18	12.07	.3853	-92.04
#3	.8127	.8042	4.610	35.33	12.66	.3022	101.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.5999	1.831	.3330	-4.248	-1.658	.8923	-.8894
SDev	.6079	1.781	.5085	.096	.302	3.079	.8457
%RSD	101.3	97.30	152.7	2.266	18.20	345.0	95.08
#1	1.266	3.542	.9118	-4.155	-1.418	.7270	-.2833
#2	.0753	1.963	-.0421	-4.347	-1.997	4.050	-1.856
#3	.4584	-.0129	.1292	-4.240	-1.560	-2.100	-.5294
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7716	-1.946	-1.522	-2.354	-.1657	2.043	.3104
SDev	1.1980	1.752	.428	1.062	1.6203	3.028	4.008
%RSD	155.3	90.02	28.13	45.13	977.9	148.2	1291.
#1	.5988	-.3995	-1.935	-1.967	.5495	4.897	-1.362
#2	-1.293	-3.850	-1.080	-1.540	-2.021	2.367	4.884
#3	-1.620	-1.590	-1.551	-3.555	.9740	-1.134	-2.590
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2092	3.322	1.809	18.20	.7886
SDev	1.080	1.782	.994	9.57	1.241
%RSD	516.3	53.62	54.94	52.56	157.4
#1	-.0383	5.158	2.880	27.88	2.167
	1.392	3.208	1.632	8.755	.4387
	-.7257	1.601	.9159	17.96	-.2402
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

000561

Method: CLPBOR Sample Name: CRI Operator:
Run Time: 12/18/98 08:50:52
Comment: CRI
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.89	-11.95	.0661	9.523	-45.31	9.970	97.38
SDev	.12	5.69	.1533	.300	1.21	.209	3.15
%RSD	.5898	47.64	231.8	3.154	2.664	2.098	3.234
#1	20.79	-6.698	-.1107	9.799	-44.07	10.11	100.2
#2	20.86	-18.00	.1614	9.203	-46.49	9.730	94.00
#3	21.03	-11.16	.1477	9.567	-45.36	10.07	97.91
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.63	52.74	-2.560	-13.80	1.730	29.38	-287.6
SDev	.41	.39	5.399	36.56	1.175	.89	336.4
%RSD	2.090	.7404	210.9	265.0	67.90	3.042	117.0
#1	19.60	52.79	-8.775	-55.56	.4738	30.17	-657.0
#2	19.23	52.33	.9662	1.679	1.915	28.41	-207.0
#3	20.05	53.10	.1283	12.48	2.801	29.58	1.268
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	78.27	20.02	98.99	32.22	4.514	8.953	118.7
SDev	1.75	.44	2.92	1.04	.551	2.652	3.1
%RSD	2.234	2.184	2.948	3.238	12.20	29.63	2.615
#1	79.72	20.20	101.7	33.07	3.885	11.80	120.7
#2	76.33	20.34	95.88	31.06	4.749	6.559	115.1
#3	78.75	19.52	99.41	32.53	4.907	8.496	120.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.15	4.045	4.739	116.7	119.7	10.09	8.380
SDev	2.03	.414	.628	4.3	3.1	3.70	2.251
%RSD	10.59	10.24	13.26	3.722	2.557	36.73	26.86
#1	21.48	3.571	4.032	116.9	122.6	14.34	10.53
#2	17.78	4.331	4.950	112.3	116.5	7.584	6.040
#3	18.20	4.234	5.235	121.0	119.9	8.334	8.569
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	40.09	42.26	21.31	57.53	96.72
SDev	.52	1.21	.80	9.48	2.70
%RSD	1.300	2.852	3.756	16.48	2.792
#1	40.04	40.93	21.42	46.61	99.41
#2	39.60	42.58	20.46	62.38	94.01
#3	40.64	43.27	22.05	63.61	96.74
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	40.00	40.00	20.00	60.00	
Range	50.50	50.50	50.50	50.50	

Method: CLPBOR Sample Name: ICSA Operator:
Run Time: 12/18/98 08:57:46
C ment: ICSA ICSA
M CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2245	579000.	4.025	-.1054	490700.	11.06	-2.425
SDev	.6817	13467.	.053	.1147	12566.	2.66	.237
%RSD	303.7	2.326	1.316	108.8	2.561	24.04	9.768
#1	.9272	563500.	4.083	.0266	476200.	14.12	-2.699
#2	-.4340	587100.	3.979	-.1624	497400.	9.770	-2.287
#3	.1802	586500.	4.013	-.1805	498400.	9.289	-2.290
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.976	2.774	195200.	4.575	506800.	-5.015	199.9
SDev	3.971	.147	4468.	40.34	11576.	.031	236.8
%RSD	49.79	5.293	2.289	881.8	2.284	.6099	118.5
#1	12.56	2.607	190000.	-40.60	493400.	-5.001	458.8
#2	5.749	2.829	197700.	17.34	513200.	-5.050	-5.622
#3	5.618	2.885	197800.	36.99	513700.	-4.995	146.5
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.953	-15.92	3.250	-25.63	.8191	1.872	7.675
SDev	2.467	4.97	.412	.34	4.700	3.234	1.507
%RSD	126.3	31.21	12.68	1.343	573.8	172.8	19.63
#1	4.798	-10.40	2.907	-25.28	-4.346	5.397	7.430
#2	.6635	-20.04	3.135	-25.97	1.959	1.176	9.290
#3	.3975	-17.31	3.707	-25.65	4.845	-.9576	6.306
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6598	5.937	-1.745	-12.72	17.85	-1.071	3.333
SDev	.9050	14.74	14.316	23.99	11.99	28.336	9.322
%RSD	137.2	248.3	820.4	188.6	67.17	2647.	279.7
#1	.2934	22.89	-17.95	-40.38	31.29	28.87	-6.328
#2	-.0047	-1.226	3.540	-.1241	13.98	-4.605	4.054
#3	1.691	-3.851	9.177	2.354	8.271	-27.47	12.27
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-8.056	14.12	7.318	63.38	37.27
SDev	1.365	7.52	16.15	377.8	1.28
%RSD	16.94	53.26	220.7	596.1	3.433
#1	-6.577	22.81	25.96	499.6	35.80
#2	-9.267	9.625	-1.430	-148.0	38.04
	-8.324	9.941	-2.572	-161.5	37.98
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

Method: CLPBOR Sample Name: ICSAB Operator:
Date Time: 12/18/98 09:04:40
Instrument: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	209.3	587400.	543.3	500.9	496600.	984.2	497.0
SDev	1.3	3098.	1.0	2.2	3431.	1.7	3.1
%RSD	.6307	.5274	.1858	.4343	.6908	.1685	.6282
#1	207.8	584200.	543.3	498.6	492800.	983.3	493.4
#2	210.4	587700.	542.3	501.2	497600.	983.2	498.7
#3	209.7	590400.	544.3	502.9	499400.	986.1	498.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	509.0	526.4	198100.	-22.38	514900.	500.1	290.5
SDev	1.7	3.4	1180.	71.90	2899.	2.4	111.2
%RSD	.3287	.6418	.5959	321.2	.5630	.4754	38.26
#1	510.9	522.5	196800.	-105.4	511700.	497.5	405.4
#2	507.8	528.5	198400.	17.26	515700.	500.6	282.6
#3	508.3	528.2	199100.	20.97	517400.	502.2	183.5
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	980.5	84.06	509.8	1005.	50.56	54.96	656.0
SDev	2.3	7.54	2.8	6.	3.39	1.77	3.2
%RSD	.2376	8.969	.5486	.5504	6.710	3.228	.4943
#1	978.3	92.45	506.6	999.2	46.65	52.95	653.0
#2	980.3	81.87	510.8	1007.	52.31	56.30	655.7
#3	983.0	Q77.85	512.0	1010.	52.72	55.62	659.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	108.0	52.93	49.37	652.8	657.7	54.98	54.94
SDev	4.1	11.22	10.69	35.5	13.6	19.53	12.35
%RSD	3.841	21.20	21.65	5.434	2.073	35.52	22.48
#1	103.3	65.88	37.04	612.1	673.4	77.50	40.68
#2	109.6	46.76	55.07	668.9	649.1	44.57	62.15
#3	111.1	46.14	55.99	677.4	650.5	42.86	61.98
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1035.	1114.	1040.	1139.	1112.
SDev	4.	5.	11.	565.	4.
%RSD	.4160	.4824	1.015	49.61	.3683
#1	1031.	1119.	1052.	Q1791.	1108.
	1039.	1115.	1033.	812.8	1113.
	1033.	1108.	1035.	812.8	1116.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	20.00	20.00	20.00	20.00	

Method: CLPBOR Sample Name: CCVA Operator:
Run Time: 12/18/98 09:11:36
Comment:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	106.6	2037.	1045.	1036.	48930.	1025.	1038.
SDev	.2	24.	2.	2.	165.	2.	3.
%RSD	.2102	1.167	.1970	.2077	.3364	.2198	.3089
#1	106.4	2064.	1047.	1034.	48740.	1022.	1035.
#2	106.7	2028.	1043.	1038.	49030.	1026.	1039.
#3	106.8	2020.	1046.	1037.	49020.	1026.	1041.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1031.	1053.	2041.	47670.	49230.	1036.	49720.
SDev	2.	5.	8.	526.	115.	3.	94.
%RSD	.1729	.4612	.3855	1.104	.2330	.2778	.1891
#1	1029.	1048.	2046.	48270.	49110.	1033.	49820.
#2	1032.	1055.	2044.	47290.	49260.	1038.	49630.
#3	1032.	1057.	2032.	47460.	49330.	1039.	49720.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1020.	1066.	1046.	1028.	1042.	1063.	1067.
SDev	1.	4.	3.	3.	11.	5.	3.
%RSD	.0816	.3315	.2785	.3238	1.045	.4894	.2893
#1	1019.	1062.	1043.	1024.	1030.	1057.	1064.
#2	1020.	1068.	1047.	1030.	1046.	1066.	1070.
#3	1021.	1068.	1049.	1030.	1050.	1066.	1068.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1059.	1052.	1037.	1079.	1061.	1064.	1062.
SDev	2.	4.	18.	18.	5.	5.	10.
%RSD	.1544	.3767	1.763	1.710	.4587	.4456	.9343
#1	1058.	1057.	1016.	1058.	1067.	1069.	1051.
#2	1057.	1050.	1045.	1090.	1060.	1064.	1066.
#3	1061.	1050.	1050.	1090.	1058.	1059.	1069.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1052.	1063.	1059.	1064.	27.94
SDev	8.	4.	3.	184.	.86
%RSD	.8030	.4145	.2576	17.25	3.064
#1	1042.	1068.	1056.	Q1276.	28.79
#2	1059.	1060.	1059.	968.9	27.95
#3	1054.	1060.	1061.	947.5	27.08
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1000.	1000.	1000.	1000.	
Range	10.00	10.00	10.00	10.00	

Method: CLPBOR Sample Name: CCBA Operator:
Run Time: 12/18/98 09:18:31
Diluent:
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4150	9.471	.2152	.1778	-32.51	.2481	.1556
SDev	.2923	6.201	.2064	.0461	7.62	.2497	.0331
%RSD	70.44	65.48	95.90	25.94	23.42	100.7	21.30
#1	.7525	16.58	-.0198	.2295	-24.27	-.0180	.1561
#2	.2462	5.202	.3672	.1631	-39.29	.4774	.1885
#3	.2462	6.627	.2982	.1408	-33.98	.2850	.1223
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0275	.6609	4.905	-14.86	20.73	.2520	-347.1
SDev	1.192	.0836	4.890	70.60	4.41	.0246	684.3
%RSD	4337.	12.65	99.69	475.0	21.30	9.769	197.2
#1	-1.348	.6517	3.985	-96.37	25.82	.2262	-1137.
#2	.7723	.5824	.5402	27.03	18.06	.2752	17.34
#3	.6577	.7488	10.19	24.75	18.31	.2545	77.87
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1281	1.310	.0410	-4.356	-1.795	.0219	-.2222
SDev	.7998	1.242	.1504	.049	.629	.4324	.2969
%RSD	624.3	94.85	366.8	1.118	35.05	1975.	133.6
#1	-.7595	-.0461	-.1326	-4.360	Q-2.289	.5212	-.0149
#2	.7927	1.582	.1290	-4.403	Q-2.009	-.2263	-.5623
#3	.3512	2.394	.1266	-4.305	-1.087	-.2292	-.0895
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1208	.1063	-2.751	-2.688	1.001	2.515	-1.230
SDev	.3950	2.175	2.009	2.872	1.773	4.057	1.405
%RSD	326.8	2045.	73.01	106.9	177.1	161.3	114.2
#1	-.2677	2.261	-4.567	-5.980	2.956	7.067	-2.754
#2	.5219	.1466	-3.092	-.6939	-.5040	-.7221	.0138
#3	.1083	-2.088	-.5938	-1.389	.5519	1.201	-.9506
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349	B 2496
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5155	-.4539	1.594	-9.940	.5007
SDev	1.4596	3.8679	.706	38.637	.0959
%RSD	283.1	852.1	44.27	388.7	19.14
#1	.5199	-4.804	2.403	Q-54.41	.3901
	-2.185	2.598	1.275	15.39	.5526
	.1185	.8442	1.104	9.197	.5595
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	.0000	.0000	.0000	.0000	
Range	20.00	10.00	5.000	30.00	

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STANDARDS and REAGENTS TRACEABILITY

Date: 12-17-98

HNO3 [Baker Instra-analyzed Trace-Metals grade,	Ref#*: 1M2-153-4
HCl [Baker Instra-analyzed Trace-Metals grade,	Ref#: 1M2-152-17
XCL-11 multi-element standard mix	Ref#: 7M2-226-14
XCL-2 multi-element standard mix	Ref#: ↓ 15
XCL-3A multi-element standard mix	Ref#: ↓ 13
ICV1 multi-element standard mix	Ref#: 7M1-3-9
ICV2 multi-element standard mix	Ref#: ↓ 10
ICV3 multi-element standard mix	Ref#: ↓ 11
ICV4 multi-element standard mix	Ref#: ↓ 12
ICSA multi-element standard mix	Ref#: 7M1-3-21
ICSAB multi-element standard mix	Ref#: ↓ 24
LRS-1 multi-element standard mix	Ref#: 7M1-2-12
LRS-2 multi-element standard mix	Ref#: ↓ 13
Spex multi-element standard mix	Ref#: 7M1-1-13
COM Lab mix 5	Ref#: 7M1-3-4
CRDL-1 multi-element standard mix	Ref#: 7M1-1-9
ANTIMONY (Sb) 1,000 PPM single-element standard	Ref#: 7M1-1-5
BISMUTH (Bi) 1,000 PPM single-element standard	Ref#: 7M1-2-21
TITANIUM (Ti) 1,000 PPM single-element standard	Ref#: 7M1-1-6
TIN (Sn) 1,000 PPM single-element standard	Ref#: ↓ 8
IRON (Fe) 10,000 PPM single-element standard	Ref#: 7M2-225-3
ALUMINUM (Al) 10,000 PPM single-element standard	Ref#: 7M1-1-4
CALCIUM (Ca) 10,000 PPM single-element standard	Ref#: ↓ 1
MAGNESIUM (Mg) 10,000 PPM single-element standard	Ref#: ↓ 2
MOLYBDENUM (Mo) 1,000 PPM single-element standard	Ref#: 7M1-3-15
ARSENIC (As) 1, 000 PPM single-element standard	Ref#: 7M1-4-3

The following standard solutions are applicable only when dissolved samples are analyzed.

XCL-LCS multi-element standard mix Ref#: 7M2-226-2
XCL-20 multi-element standard mix Ref#: 7M1-3-5

Reviewed By: M. Pacwell
Date: 12/17/98

The following spaces are provided for non-CLP metals standards not previously identified.

NA B 1,000 PPM standard Ref# 7M1-1-21
NA of NA 1,000 PPM standard Ref# NA

*Ref# = Logbook ID, Page number and item [illegible] from Materials Receipt Log

Standards/QC Preparation for Trace ICAP

Standard Lot Number*	Preparation instructions
SO/ICB/CCB- 121798-PW	Place in a 500-ml volumetric flask: 100 ml of deionized water 30 ml concentrated HNO_3, and 25 ml concentrated HCl. Bring up to volume with deionized water. Prepare weekly.
XCL-11- 121798-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml XCL-11 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-2- 121798-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of XCL-2 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-3A- 121798-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 1.0 ml of XCL-3A into flask. Bring up to volume with deionized water. Prepare weekly.
PLSB2-2X- 121798-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml of concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of Sn, Bi, Ti, Sb, ~~and~~ B, into flask. Bring up to volume with deionized water. Prepare weekly.
STD3- 121798-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 5 ml concentrated HCl 1.0 ml of 10,000-ppm Al, 0.5 ml of 10,000-ppm Fe, 1.0 ml of 10,000-ppm Mg 1.0 ml of 10,000-ppm Ca, Bring up to volume with deionized water. Prepare weekly.
CVS1- 121798-PW	Place in a 500-ml volumetric flask: 400 ml of deionized water 30 ml concentrated HNO_3 25 ml of concentrated HCl 0.5ml of Sb, 0.5 ml of Sn, 0.5 ml of Bi, 0.5 ml of Ti, 0.05 ml of Al, 0.05 ml of Fe 0.500 ml of XCL-2. 0.500 ml of XCL-11, 2.5 ml of XCL-3A Bring to volume with deionized water. Prepare weekly.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewer: M Powell Date: 12/17/98

2294

000568

Standards/QC Preparation for Trace ICAP

 CompuChem a division of Liberty Analytical Corp. LOGBOOK 1 QQQQ 29

Standard Lot Number*	Preparation instructions*
ICV1- 121798 - PW 2294	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml of concentrated HNO_3 10 ml concentrated HCl. Pipet 20.0 ml of ICV1 into flask. Bring up to volume with deionized water. Prepare as needed.
ICV3- 121798 - PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated. HNO_3 10 ml concentrated HCl Pipet:20.0 ml of ICV3, 20.0 ml of ICV2, and 20.0 ml of ICV4 into flask. Bring to volume with deionized water. Prepare as needed.
SPEXAS- 121798 - PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 0.2 ml of CompuChem SPEX into flask. Bring up to volume with deionized water. Prepare as needed.
ICSA- 121798 - PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA into flask. Bring up to volume with deionized water. Prepare as needed.
ICSAB- 121798 - PW	Place in a 200-ml volumetric flask: 50 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA and 20.0 ml ICSB into flask. Pipet: 0.20 ml Bi standard 0.20 mL B standard — ml Sn standard — ml Ti standard — ml Mo standard into flask. Bring up to volume with deionized water. Prepare as needed.
LRS- 121798 - PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 and 5 ml concentrated HCl 5 µL B standard Pipet 0.10 ml LRS-1 and 0.10 ml LRS-2 into flask. Prepare as needed.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: M Dowell Date: 12/17/98

000569

Standards/QC Preparation for Trace ICAP

 CompuChem a division of Liberty Analytical Corp. LOGBOOK 1 QQQQ 29

Standard Lot Number*	Preparation instructions*
CRI - 121795-PW 2294	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet: 0.20 CRDL-1 into flask. 0.002 ml Bi into flask. 0.002 ml Sn into flask. 0.004 ml Mo into flask. 0.012 ml Ti into flask. 0.020 ml B 1000 standard into flask. NA ml NA 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. Bring up to volume with deionized water. Prepare as needed.
Internal Standard- 121795-PW	Place in a 2000-ml volumetric flask: 1000 ml of deionized water 20 ml of concentrated HNO_3 Pipet: 10 mL of COM LAB MIX #5 internal standard. Bring up to volume with DI water. Prepare as needed. Yttrium, introduced into the sample stream yielding a final concentration in the plasma of 1 ppm, is used as an internal standard. Cesium, introduced into the sample stream yielding a final concentration in the plasma of 50ppm, is used as a reducing agent.
As- 121799-PW	Place 100 ml volumetric flask 50 ml DI water 1 ml concentrated HNO_3 0.1 ml 1000 ppm As Bring to volume. Prepare as needed.

	Prepared By	Date Prepared	Preparation Instructions
Dissolved Metals only: LCS	NA	NA	Add 1.0 ml of XCL-LCS solution to 9.0 ml of acidified water NA ml HNO_3 + NA ml HCl.
Prep Blank	↓	↓	Use acidified water (1% HNO_3 + 5% HCl NA ml HNO_3 + NA ml HCl
Sample Spike	↓	↓	Add 0.1 ml of XCL-20 to 10.0 ml of sample.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed by: M Powell Date: 12/17/98

000520

2294

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 0000 22

Trace ICP Runlog (P3)

Part (A) of a two part form

Page 1 of 1

Method (Circle one.):

CLP ILM04.0

SW-846 6010B

MCAWW 200.7

Case: 34021 100001 **Date:** 12-28-95

34034 1NIK001

34035 1156YA

339221 0AFB9

Operator: P. Wang

File name: PW1228

WSL.NAME P3122501

No.	Sample ID	Comments	Action Needed	No.	Sample ID	Comments	Action Needed
	SO			1	922053		
	XCL-11			2	922054	10X D:1	
	STD3			3	922055		
	XCL-2			4	922056		
	SCL-3A			5	PDS922741		
	PLSBR			6	PDS923300		
	ICV			7	PDS923052		
	ICB			8	CRI		
	CRI			9	ICSA		
	ICSA			10	ICSAB		
	ICSAB				CCV		
	CCV				CCB		
	CCB			1			
1	LRS	DR 12-29-95		2			
2	~~922446~~	PDW	921857A	3			
3	~~922449~~	CCSW	921760A	4			
4	922046	10XD:1		5			
5	922050			6		PW 12-28-95	
6	922047			7			
7	922049			8			
8	SOL922046	50XD:1		9			
9	922051	20XD:1		10			
10	922052	10XD:1			CCV		
	CCV				~~CCB~~		
	CCB						

COMMENTS

Reviewed By: J. R. Cole

Date: 12-28-95

000571

~~154~~

Method: CLP3I Standard: BLANK
Run Time: 12/28/98 10:43:37

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Avge	.0073	1.719	.0127	-.1926	.0047	-.6444	-.0259
SDev	.0386	.108	.0113	.0149	.0005	.0549	.0166
%RSD	526.3	6.300	88.88	7.741	10.56	8.523	64.00
#1	.0380	1.635	.0234	-.2061	.0050	-.5890	-.0075
#2	-.0360	1.682	.0008	-.1952	.0050	-.6988	-.0397
#3	.0200	1.841	.0140	-.1766	.0041	-.6453	-.0305

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Avge	.0243	1.021	.0061	.4560	.0075	.0041	.3737
SDev	.0053	.014	.0041	.0606	.0038	.0014	.0271
%RSD	21.98	1.352	67.88	13.28	51.33	34.92	7.265
#1	.0242	1.031	.0108	.5220	.0108	.0050	.3999
#2	.0190	1.026	.0033	.4030	.0083	.0050	.3457
#3	.0297	1.005	.0041	.4430	.0033	.0025	.3754

Elem	Ni2316	Tl1908	V 2924	Zn2138	As1890	22031	22032
Avge	-.0268	-.2656	-.0105	-.0204	-.7424	1.746	-.2026
SDev	.0027	.0361	.0017	.0028	.0657	.286	.0709
%RSD	9.954	13.58	16.13	13.70	8.846	16.39	34.99
#1	-.0292	-.2302	-.0100	-.0175	-.7801	1.759	-.2328
#2	-.0273	-.3023	-.0091	-.0207	-.6666	1.453	-.1216
#3	-.0239	-.2643	-.0124	-.0231	-.7806	2.025	-.2533

Elem	20681	20682	19601	19602	Sn1899	Bi2230	Mo2020
Avge	-.0408	.0469	-.5245	.6043	-.0434	-.0345	-.0163
SDev	.1937	.0559	.0287	.0359	.0126	.0915	.0130
%RSD	474.6	119.1	5.463	5.947	28.95	265.3	79.76
[illegible]	.1135	.1110	-.5540	.5640	-.0517	-.0476	-.0017
[illegible]	.0223	.0083	-.5227	.6161	-.0289	.0629	-.0265
[illegible]	-.2583	.0215	-.4967	.6329	-.0495	-.1188	-.0206

Elem	Ti3349
Avge	.5322
SDev	.5824
%RSD	109.4
#1	.9903
#2	-.1232
#3	.7294

Method: CLP3I Standard: XCL-11
Run Time: 12/28/98 10:50:31

2294

Elem	Ag3280	Cd2265	Cr2677	Cu3247	Ni2316	Tl1908	Zn2138
Avge	25.00	818.1	34.68	154.5	31.10	39.01	24.02
SDev	.04	3.8	.14	.5	.16	.09	.12
%RSD	.1792	.4626	.4083	.3310	.5048	.2304	.5095
#1	25.03	821.0	34.79	154.5	31.20	39.02	24.12
#2	24.95	819.5	34.73	154.0	31.18	39.09	24.07
#3	25.01	813.8	34.52	155.0	30.92	38.91	23.89

Elem	22031	22032	19601	19602
Avge	239.2	211.5	35.56	72.30
SDev	1.4	1.0	.11	.39
%RSD	.5865	.4905	.3085	.5408
#1	240.5	211.7	35.68	72.69
#2	239.6	212.4	35.53	72.30
#3	237.7	210.3	35.47	71.91

2294

:hod: CLP3I Standard: STD3
Time: 12/28/98 10:57:25

	Al3082	Ca3179	Fe2714	Mg2790
Avge	1599.	12.31	50.73	241.6
SDev	5.	.07	.20	.9
%RSD	.3343	.5669	.3917	.3655
#1	1593.	12.23	50.51	240.6
#2	1601.	12.37	50.89	242.2
#3	1603.	12.33	50.78	241.9

Method: CLP3I Standard: XCL-2

Time: 12/28/98 11:02:45

2294

	Ba4934	Be3130	Co2286	Mn2576	V 2924	As1890	Mo2020
Avge	460.2	1665.	133.6	53.68	17.43	167.7	130.7
SDev	.2	3.	.2	.09	.03	.2	.4
%RSD	.0372	.2055	.1702	.1742	.1565	.0929	.2977
#1	460.0	1663.	133.6	53.68	17.41	167.5	130.4
#2	460.4	1669.	133.8	53.77	17.46	167.9	131.1
#3	460.1	1662.	133.4	53.58	17.41	167.7	130.5

M hod: CLP3I Standard: XCL-3A
R Time: 12/28/98 11:09:39

2294

	K 7664	Na3302
Avge	737.2	42.78
SDev	1.1	.04
%RSD	.1470	.1025
#1	737.5	42.78
#2	738.1	42.83
#3	736.0	42.74

M hod: CLP3I Standard: PLSBR
I Time: 12/28/98 11:16:33

2294

B	20681	20682	Sn1899	Bi2230	Ti3349
Avge	145.8	90.47	23.94	182.1	159.1
SDev	.3	.43	.05	.3	2.1
%RSD	.2011	.4745	.1884	.1443	1.302
#1	145.6	90.87	23.89	181.8	161.5
#2	146.1	90.52	23.98	182.2	157.9
#3	145.7	90.02	23.94	182.2	157.9

M hod: CLP3I Sample Name: ICV1 Operator:
I Time: 12/28/98 11:25:55
Co nt: ICV ICV1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	473.4	2084.	2067.	470.0	50960.	492.2	529.8
SDev	1.7	1.	3.	1.9	267.	1.9	1.9
%RSD	.3656	.0664	.1232	.4116	.5247	.3872	.3648
#1	471.4	2082.	2066.	468.1	50720.	490.7	527.8
#2	474.6	2085.	2070.	469.9	50900.	491.5	530.0
#3	474.3	2084.	2065.	471.9	51250.	494.4	531.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	487.0	1956.	2009.	476.0	50710.	510.0	520.0
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	474.1	471.2	2037.	47750.	24790.	485.7	48780.
SDev	1.9	1.4	5.	102.	64.	1.7	62.
%RSD	.3912	.2912	.2333	.2128	.2570	.3453	.1266
#1	472.3	470.0	2035.	47780.	24730.	484.1	48710.
#2	473.8	472.7	2033.	47830.	24780.	485.6	48830.
#3	476.0	471.0	2042.	47640.	24850.	487.4	48790.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	471.0	497.0	1985.	49600.	24590.	491.0	48790.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	483.7	.1395	498.4	3045.	4998.	-.0719	.5418
SDev	1.7	1.665	1.5	13.	25.	1.3855	.8224
%RSD	.3463	1193.	.3045	.4115	.4920	1926.	151.8
#1	482.1	-.4839	497.0	3035.	4975.	-.2414	1.258
#2	483.7	-1.123	498.1	3042.	4996.	-1.365	.7232
#3	485.4	2.026	500.0	3059.	5024.	1.390	-.3563
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	497.0		492.0	3012.			
Range	10.00		10.00	10.00			

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.212	5029.	4983.	-1.169	1.386	4.999	-2.613
SDev	.997	23.	27.	2.817	1.435	3.459	1.316
%RSD	82.27	.4533	.5326	241.0	103.5	69.20	50.37
#1	2.359	5014.	4955.	-2.093	2.921	7.178	-3.955
#2	.5552	5018.	4985.	1.994	.0790	1.010	-2.561
#3	.7211	5055.	5008.	-3.408	1.157	6.808	-1.324
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.8173	-.7135	.3328	-5.659
SDev	1.3607	2.2365	.4713	8.993
%RSD	166.5	313.5	141.6	158.9
	.0945	1.489	-.1063	4.608
	-.1650	-2.982	.2740	-12.14
#	-2.381	-.6473	.8308	-9.446
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000578

~~161~~

Method: CLP3I Sample Name: ICV3 Operator: 2294
Time: 12/28/98 11:32:49
Comment: ICV ICV3
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	96.34	50.66	.3297	.2090	-59.04	95.73	.6596
SDev	.56	3.11	.0357	.0184	.03	.19	.1488
%RSD	.5771	6.140	10.83	8.815	.0549	.2035	22.55
#1	95.82	54.11	.3710	.2266	-59.01	95.50	.5462
#2	96.93	49.82	.3089	.2106	-59.08	95.83	.6046
#3	96.26	48.06	.3094	.1899	-59.03	95.85	.8281
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3019	-.4560	-1.428	235.9	5.243	.3810	-961.9
SDev	.0696	.2480	4.292	.8	2.631	.0336	160.0
%RSD	23.07	54.39	300.6	.3205	50.18	8.817	16.64
#1	-.2255	-.2171	-.6429	236.5	8.280	.4009	-849.6
#2	-.3181	-.7122	-6.059	235.0	3.719	.3999	-1145.
#3	-.3619	-.4386	2.418	236.2	3.728	.3422	-891.0
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2118	102.8	.6043	-3.503	97.08	101.9	953.0
SDev	.7629	2.3	.1032	.096	.97	1.6	1.9
%RSD	360.2	2.224	17.08	2.750	.9947	1.539	.1978
#1	.3106	101.4	.6638	-3.447	96.00	101.8	951.8
#2	.9205	105.4	.4851	-3.614	97.87	100.4	952.1
#3	-.5957	101.5	.6641	-3.446	97.35	103.6	955.2
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		98.90			98.80	101.4	
Range		10.00			10.00	10.00	

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	101.4	91.31	99.95	949.9	954.6	110.8	97.50
SDev	2.2	1.65	1.47	3.9	1.2	1.2	2.23
%RSD	2.191	1.805	1.473	.4054	.1227	1.098	2.289
#1	99.14	91.34	98.32	946.3	954.5	112.1	96.67
#2	101.4	92.94	100.3	949.3	953.5	109.7	95.80
#3	103.6	89.65	101.2	954.0	955.8	110.7	100.0
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	101.8						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3473	-.7580	.2248	-4.231
SDev	1.3739	1.5368	.2857	2.211
%RSD	395.6	202.8	127.1	52.25
#1	.4776	.1377	.1166	-1.794
#2	-1.933	.1209	.0090	-4.791
#3	.4138	-2.532	.5488	-6.107
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Analysis Report QC Standard 12/28/98 11:46:35 AM page 1

Method: CLP3I Sample Name: SPEXASSE Operator:
Time: 12/28/98 11:39:44
Comment: ICV SPEXASSE
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4348	100.7	.2329	.1331	-64.09	.9426	.1768
SDev	.4171	3.6	.0812	.0138	5.65	.0821	.2169
%RSD	95.92	3.609	34.86	10.33	8.822	8.708	122.7
#1	-.2267	98.02	.3234	.1484	-69.73	.9221	.4238
#2	-.9150	99.32	.2084	.1217	-58.43	1.033	.0175
#3	-.1627	104.9	.1667	.1293	-64.10	.8727	.0891
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.7390	-.5267	19.55	3.787	3.411	.0636	-1061.
SDev	.3005	.0526	2.76	17.16	1.066	.0342	59.
%RSD	40.67	9.996	14.13	453.1	31.26	53.78	5.516
#1	-.4309	-.5832	22.44	23.51	4.190	.0241	-1007.
#2	-.7548	-.5180	16.93	-4.428	2.196	.0834	-1123.
#3	-1.031	-.4789	19.29	-7.723	3.849	.0834	-1052.
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0115	5.481	-11.23	-3.926	-2.823	.3137	950.2
SDev	.3419	.609	.18	.033	.400	1.718	.7
%RSD	2982.	11.11	1.636	.8298	14.17	547.5	.0699
#1	-.0757	5.002	-11.09	-3.908	-3.237	1.903	950.8
#2	-.2784	6.167	-11.44	-3.907	-2.439	.5460	950.3
#3	.3885	5.274	-11.16	-3.964	-2.792	-1.508	949.5
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value							1000.
Range							10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.555	-10.71	1.104	948.1	951.3	11.27	-5.166
SDev	2.254	2.18	1.575	1.1	1.6	.88	2.936
%RSD	63.41	20.36	142.6	.1176	.1632	7.769	56.83
#1	6.137	-9.863	.0607	947.1	952.6	10.99	-2.641
#2	1.980	-13.19	2.916	947.8	951.6	10.57	-4.468
#3	2.548	-9.078	.3367	949.3	949.6	12.25	-8.387
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	933.0	945.7	987.8	926.8
SDev	5.6	3.7	2.1	10.0
%RSD	.5956	.3931	.2118	1.081
#1	938.6	948.6	989.5	938.3
#2	932.8	947.0	988.4	920.9
#3	927.5	941.5	985.5	921.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: S0 Operator:
Time: 12/28/98 11:46:37
nt: ICB
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3948	43.57	.0256	.1667	-61.22	.1700	.1283
SDev	.3784	9.55	.0730	.0466	3.16	.2437	.1633
%RSD	95.85	21.93	285.1	27.93	5.167	143.3	127.3
#1	-.0427	53.81	.1066	.2183	-59.38	.3760	.1437
#2	-.7949	41.99	-.0351	.1540	-59.41	-.0989	.2834
#3	-.3468	34.90	.0054	.1278	-64.87	.2328	-.0422
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0892	-.9902	-3.979	-4.152	-.6310	-.0775	-369.3
SDev	.6277	.2906	3.600	15.222	.8070	.0334	115.4
%RSD	703.8	29.34	90.47	366.6	127.9	43.14	31.24
#1	.6129	-1.207	-6.783	13.36	-1.487	-.0389	-236.1
#2	-.2842	-1.103	.0803	-14.19	.1161	-.0968	-434.3
#3	-.5962	-.6601	-5.234	-11.62	-.5222	-.0967	-437.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4592	3.001	.2247	-4.507	-.9763	-.0085	.4913
SDev	.3009	1.635	.0895	.033	.0869	2.2627	.3105
%RSD	65.53	54.49	39.83	.7260	8.897	26610.	63.20
#1	.7749	4.600	.1355	-4.545	-1.010	2.584	.2441
#2	.4271	1.331	.3145	-4.487	-1.042	-1.027	.8398
#3	.1756	3.071	.2240	-4.490	-.8777	-1.583	.3900
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.337	-1.287	-.8303	-.6384	1.046	5.512	-2.774
SDev	1.212	2.095	1.1039	1.9194	.560	6.717	.272
%RSD	51.85	162.7	133.0	300.6	53.50	121.8	9.795
#1	.9446	1.126	-2.085	-2.671	1.690	13.11	-2.679
#2	3.153	-2.348	-.3986	1.143	.6790	3.069	-3.081
#3	2.914	-2.640	-.0074	-.3877	.7689	.3594	-2.563
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4370	1.180	.6762	-1.151
SDev	.9400	2.314	.9456	12.987
%RSD	215.1	196.2	139.8	1128.
#1	.5119	3.678	1.721	13.79
#2	-.4548	.7537	.4267	-9.715
#3	-1.368	-.8918	-.1197	-7.530
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

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Method: CLP3I Sample Name: CRI Operator:
Analysis Time: 12/28/98 11:53:31
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18.76	59.74	.0208	9.654	-64.25	9.968	96.62
SDev	.25	2.17	.0605	.009	5.62	.108	.52
%RSD	1.337	3.638	290.7	.0952	8.749	1.080	.5336
#1	19.03	57.54	.0871	9.663	-64.05	9.845	97.10
#2	18.55	61.89	-.0313	9.645	-69.96	10.01	96.07
#3	18.69	59.77	.0066	9.653	-58.73	10.05	96.68
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.51	46.78	-4.443	-2.963	2.148	29.06	-414.4
SDev	.18	.02	2.473	15.205	.356	.05	118.5
%RSD	.9080	.0323	55.66	513.1	16.57	.1647	28.59
#1	19.71	46.80	-5.461	14.59	2.512	29.11	-277.7
#2	19.40	46.77	-6.244	-11.30	2.130	29.05	-477.6
#3	19.40	46.77	-1.623	-12.17	1.802	29.01	-487.9
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	78.03	20.33	98.02	32.27	5.004	11.54	110.6
SDev	.47	1.18	.44	.09	.026	1.30	1.1
%RSD	.6073	5.806	.4525	.2817	.5212	11.25	.9850
#1	78.38	21.31	98.53	32.25	5.024	13.03	111.3
#2	78.22	19.02	97.73	32.19	5.015	10.70	109.4
#3	77.49	20.66	97.80	32.37	4.975	10.87	111.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	20.76	4.215	5.386	110.0	110.9	13.15	10.72
SDev	.77	1.663	.828	1.7	1.4	2.38	.88
%RSD	3.688	39.46	15.37	1.537	1.276	18.09	8.201
#1	21.40	5.796	4.626	109.1	112.3	15.72	11.68
#2	19.91	2.480	6.268	109.0	109.5	11.03	10.53
#3	20.96	4.370	5.264	112.0	110.8	12.70	9.955
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	35.77	37.57	22.51	53.18
SDev	.63	2.99	.33	8.05
%RSD	1.769	7.957	1.479	15.13
#1	36.16	40.17	22.56	62.46
#2	36.10	38.23	22.16	48.14
#3	35.04	34.31	22.82	48.94
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.50	50.50	50.50	50.50

M hod: CLP3I Sample Name: ICSA Operator:
R Time: 12/28/98 12:00:26
Co nt: ICSA ICSA
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2691	591100.	3.794	.1623	497900.	2.526	-2.083
SDev	.1251	1154.	.025	.0138	3780.	.089	.208
%RSD	46.49	.1952	.6578	8.480	.7592	3.524	9.995
#1	-.2504	589900.	3.766	.1727	494000.	2.627	-1.867
#2	-.4024	592200.	3.805	.1675	498400.	2.487	-2.282
#3	-.1543	591300.	3.812	.1467	501500.	2.463	-2.101
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.957	.5345	196000.	2.978	511500.	-5.137	64.02
SDev	.599	.1045	1296.	6.385	4138.	.041	68.76
%RSD	12.08	19.55	.6614	214.4	.8089	.7989	107.4
#1	5.538	.5258	194500.	2.228	506900.	-5.096	101.2
#2	4.991	.4346	196300.	-3.000	512600.	-5.135	-15.32
#3	4.342	.6431	197000.	9.704	515000.	-5.178	106.2
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4433	5.266	3.421	-1.039	6.427	6.524	5.566
SDev	.2944	2.705	.057	.090	1.012	.973	2.051
%RSD	66.42	51.37	1.662	8.648	15.75	14.91	36.86
#1	.5548	5.031	3.487	-1.022	5.298	7.465	7.377
#2	.6656	2.686	3.388	-1.136	7.253	5.523	5.982
#3	.1094	8.081	3.388	-.9585	6.731	6.585	3.338
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.210	-29.54	24.37	4.020	6.327	-10.99	15.26
SDev	.934	4.20	1.03	2.849	2.240	4.74	3.38
%RSD	22.19	14.22	4.222	70.87	35.40	43.13	22.15
#1	3.656	-34.27	25.04	7.308	7.402	-15.97	19.15
#2	3.685	-28.10	24.89	2.265	7.828	-10.47	13.49
#3	5.288	-26.25	23.19	2.488	3.752	-6.533	13.12
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-2.469	6.228	.2927	-4.750
SDev	1.972	.502	1.540	11.897
%RSD	79.88	8.061	526.2	250.5
#1	-3.020	6.794	1.891	8.962
#2	-.2794	5.836	.1692	-10.88
#3	-4.106	6.055	-1.182	-12.33
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

Method: CLP3I Sample Name: ICSAB Operator:
Run Time: 12/28/98 12:07:19
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	195.2	574800.	515.5	462.2	491100.	916.1	465.7
SDev	1.0	279.	.9	.2	570.	1.6	.3
%RSD	.5232	.0485	.1652	.0330	.1161	.1730	.0647
#1	194.4	574800.	516.4	462.4	491300.	915.3	465.6
#2	195.0	575000.	515.3	462.2	491600.	915.1	466.1
#3	196.3	574500.	514.7	462.2	490500.	917.9	465.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	475.7	490.5	193800.	12.40	507000.	466.1	170.8
SDev	.6	1.7	83.	4.55	280.	.8	12.8
%RSD	.1345	.3520	.0428	36.72	.0553	.1738	7.510
#1	475.8	489.0	193700.	11.57	507100.	466.7	159.6
#2	476.3	490.0	193800.	17.31	507100.	466.4	168.0
#3	475.0	492.4	193800.	8.320	506600.	465.2	184.8
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	925.5	107.7	477.8	974.6	53.12	57.22	567.9
SDev	1.3	2.1	.2	.5	1.03	3.10	2.1
%RSD	.1446	1.928	.0437	.0495	1.940	5.420	.3758
#1	924.1	105.4	477.9	975.1	52.37	54.73	567.6
#2	925.8	108.2	477.5	974.5	52.70	Q60.69	566.0
#3	926.7	109.5	477.9	974.1	54.30	56.23	570.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	104.5	21.44	68.93	566.9	568.4	45.75	62.94
SDev	1.5	.94	1.34	4.4	2.8	2.64	5.95
%RSD	1.390	4.382	1.946	.7780	.4894	5.781	9.450
#1	104.6	21.76	67.65	562.3	570.3	48.27	57.95
#2	106.0	20.38	68.82	567.5	565.2	43.00	69.52
#3	103.1	22.18	70.32	571.1	569.8	45.96	61.35
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	905.3	985.6	955.0	913.5
SDev	2.8	3.6	1.8	24.2
%RSD	.3095	.3626	.1899	2.654
#1	907.4	989.4	956.5	941.5
#2	906.2	982.4	955.5	898.9
#3	902.1	985.1	953.0	900.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I
Analysis Time: 12/28/98 12:14:14
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

Sample Name: CCV

Operator:

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	96.71	2075.	976.9	946.3	48680.	943.1	950.6
SDev	.23	10.	1.3	1.5	121.	.5	2.4
%RSD	.2347	.4883	.1300	.1601	.2481	.0556	.2570
#1	96.59	2086.	975.4	944.6	48570.	942.5	947.8
#2	96.97	2070.	977.3	946.6	48660.	943.4	951.6
#3	96.56	2068.	977.8	947.6	48810.	943.2	952.4
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	947.6	950.2	1958.	46510.	48640.	949.3	47410.
SDev	2.2	.8	10.	55.	101.	2.0	137.
%RSD	.2296	.0856	.5197	.1179	.2081	.2108	.2888
#1	945.3	949.6	1967.	46440.	48530.	947.2	47270.
#2	947.7	951.1	1959.	46540.	48670.	949.6	47430.
#3	949.7	950.0	1947.	46540.	48730.	951.2	47540.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	936.9	997.6	965.1	954.6	963.8	979.2	923.7
SDev	2.0	1.9	1.5	1.5	4.2	1.1	1.4
%RSD	.2171	.1917	.1559	.1523	.4368	.1126	.1497
#1	934.9	997.3	963.4	953.3	959.0	978.6	923.5
#2	936.8	995.9	965.3	954.5	965.2	978.5	922.4
#3	938.9	999.7	966.4	956.2	967.0	980.4	925.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	974.8	965.3	963.0	920.0	925.5	977.1	980.2
SDev	2.5	2.8	5.3	1.0	1.9	3.2	2.5
%RSD	.2607	.2869	.5486	.1117	.2103	.3326	.2508
#1	977.2	963.2	956.9	918.9	925.8	980.6	977.6
#2	975.0	964.2	965.7	920.3	923.5	974.2	980.6
#3	972.2	968.4	966.3	920.9	927.3	976.5	982.4
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	Q897.3	924.9	969.3	Q895.0
SDev	3.2	1.9	3.1	9.5
%RSD	.3611	.2097	.3190	1.057
#1	Q898.2	923.4	966.6	905.9
#2	Q893.7	924.1	968.6	Q889.7
#3	Q900.0	927.1	972.7	Q889.3
Errors	QC Fail	QC Pass	QC Pass	QC Fail
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 12/28/98 12:21:14
Comment: CCB
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1334	62.35	.0997	.2675	-52.76	.0435	.3522
SDev	.3494	2.97	.0243	.0096	5.65	.0478	.1452
%RSD	262.0	4.761	24.42	3.589	10.72	109.8	41.22
#1	.1254	60.47	.1252	.2688	-47.06	.0452	.4237
#2	-.5309	60.80	.0767	.2573	-58.37	-.0051	.4477
#3	.0053	65.77	.0970	.2764	-52.83	.0904	.1851
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0354	-.9294	.2634	6.859	14.43	.0832	-156.0
SDev	.2839	.2786	2.356	8.599	4.60	.0302	124.0
%RSD	802.7	29.98	894.4	125.4	31.89	36.24	79.48
#1	.0264	-.6862	2.621	12.57	19.73	.0832	-38.45
#2	.2126	-.8686	.2609	11.04	12.14	.1134	-143.9
#3	-.3451	-1.233	-2.091	-3.031	11.42	.0531	-285.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0468	3.442	.3490	-4.474	-1.214	-.4386	-.2157
SDev	.4340	1.193	.0513	.056	.556	1.6832	.6591
%RSD	927.7	34.67	14.71	1.250	45.82	383.8	305.5
#1	.4904	4.772	.3791	-4.532	-.6823	-1.367	-.1829
#2	.0270	2.467	.3782	-4.420	-1.792	1.504	.4263
#3	-.3770	3.085	.2897	-4.472	-1.167	-1.453	-.8906
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.906	-3.930	.1330	.3118	-.4887	3.874	-2.601
SDev	.389	2.520	.4265	2.269	1.3602	3.777	.746
%RSD	20.41	64.11	320.8	727.9	278.3	97.50	28.68
#1	1.966	-1.454	-.3065	-2.241	.8353	2.500	-3.307
#2	2.262	-6.492	.5454	2.100	-.4188	8.145	-1.821
#3	1.491	-3.844	.1600	1.077	-1.882	.9759	-2.676
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.930	1.803	.5667	-3.215
SDev	3.370	.577	.3181	1.779
%RSD	174.6	32.00	56.14	55.33
#1	5.218	2.467	.3832	-1.682
#2	-1.517	1.512	.9341	-2.798
#3	2.090	1.429	.3829	-5.166
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

M hod: CLP3I Sample Name: LRS #15 Operator:
R Time: 12/28/98 12:28:08
Co t: SDG:00001 ClientID:PBW 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4.670	H153.8	9.364	4.696	858.4	5.177	5.017
SDev	.148	4.9	.077	.030	6.7	.154	.110
%RSD	3.174	3.198	.8233	.6436	.7791	2.974	2.198
#1	4.518	H158.1	9.398	4.708	865.5	5.089	5.141
#2	4.678	H154.8	9.418	4.718	852.2	5.355	4.928
#3	4.814	148.5	9.275	4.661	857.6	5.087	4.983
Errors	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	150.0	15.00	7.500	1500.	7.500	7.500
Low	2.500	50.00	5.000	2.500	500.0	2.500	2.500

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.950	3.380	85.66	706.4	923.3	9.331	1585.
SDev	.289	.135	7.68	10.8	4.2	.019	33.
%RSD	7.323	4.007	8.968	1.535	.4564	.1991	2.054
#1	3.767	3.458	94.00	707.9	928.2	9.315	1606.
#2	4.284	3.458	84.13	716.5	921.3	9.327	1601.
#3	3.800	3.224	78.86	694.9	920.6	9.351	1547.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	7.500	7.500	150.0	1500.	1500.	15.00	3000.
Low	2.500	2.500	50.00	500.0	500.0	5.000	1000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.038	13.29	19.14	14.44	L1.419	6.355	8.577
SDev	.131	1.24	.37	.19	.671	.480	.920
%RSD	2.599	9.309	1.920	1.288	47.32	7.546	10.72
#1	5.140	12.81	19.51	14.50	1.760	6.102	8.958
#2	4.890	12.36	19.13	14.58	L.6453	6.055	9.245
#3	5.084	14.70	18.77	14.23	1.851	6.908	7.528
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	7.500	15.00	30.00	30.00	4.500	7.500	15.00
Low	2.500	5.000	10.00	10.00	1.500	2.500	5.000

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.20	-2.983	3.606	7.610	9.051	18.55	.2578
SDev	.78	1.077	.500	1.069	.888	1.13	.3757
%RSD	6.390	36.10	13.87	14.05	9.806	6.073	145.8
#1	13.09	-2.190	3.721	8.389	9.233	17.44	.4311
#2	11.66	-4.209	3.058	8.049	9.834	18.51	-.1733
#3	11.84	-2.550	4.038	6.391	8.087	19.69	.5156
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	15.00						
Low	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.29	45.22	5.076	28.91
SDev	1.92	2.05	.056	4.57
%RSD	9.968	4.542	1.111	15.80
#1	17.62	42.88	5.133	27.23
#2	21.40	46.71	5.020	34.07
#3	18.86	46.07	5.076	25.41
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	75.00	7.500	60.00
Low	10.00	25.00	2.500	20.00

Analysis Report 12/28/98 12:41:54 PM page 1

G21857A

Method: CLP3I Sample Name: ~~922446~~ #16 Operator:

Analysis Time: 12/28/98 12:35:03

Comment: SDG:00001 ClientID:PBW 1:1

Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2428	60.16	.0115	.1943	-59.43	.0134	.3873
SDev	.1120	3.84	.0664	.0254	3.18	.1275	.1601
%RSD	46.15	6.376	579.9	13.07	5.342	949.0	41.34
#1	-.1147	64.39	.0848	.2234	-63.10	.1414	.3136
#2	-.2908	59.18	-.0447	.1831	-57.50	.0125	.2774
#3	-.3228	56.91	-.0057	.1765	-57.70	-.1136	.5710
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	100.0	10.00	5.000	1000.	4.000	5.000
Low	-5.000	-100.0	-10.00	-5.000	-1000.	-4.000	-5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4380	-1.107	.4376	5.137	4.274	.3755	-147.1
SDev	.4475	.168	1.672	11.99	2.007	.0630	198.0
%RSD	102.2	15.13	382.2	233.4	46.95	16.79	134.7
#1	.0760	-1.038	2.110	16.43	5.808	.3998	41.07
#2	-.7402	-1.298	.4364	-7.448	2.003	.3039	-353.7
#3	-.6500	-.9858	-1.234	6.431	5.013	.4227	-128.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	100.0	1000.	1000.	10.00	2000.
Low	-5.000	-5.000	-100.0	-1000.	-1000.	-10.00	-2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1586	.9335	.4193	-2.923	-.7257	-.1480	.3251
SDev	.1505	1.643	.0541	.146	1.2148	.8066	.0516
%RSD	94.93	176.0	12.91	4.979	167.4	545.1	15.87
#1	.2883	-.9491	.4453	-3.058	L-2.087	-.2181	.3134
#2	.1939	2.079	.3570	-2.941	.2491	-.9172	.3815
#3	-.0065	1.671	.4555	-2.769	-.3395	.6914	.2803
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	10.00	20.00	10.00	2.000	5.000	10.00
Low	-5.000	-10.00	-20.00	-10.00	-2.000	-5.000	-10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.850	-2.398	.0992	.6870	.1345	2.045	-1.253
SDev	1.114	1.847	.9333	1.471	.8070	3.322	2.315
%RSD	60.21	77.03	940.5	214.1	599.8	162.4	184.9
#1	2.435	-4.330	-.9768	.3988	.2608	5.792	-3.229
#2	.5655	-.6493	.6878	-.6185	.8709	.8798	-1.824
#3	2.550	-2.214	.5867	2.281	-.7281	-.5375	1.295
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	5.000						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5598	.0513	.3194	-3.671
SDev	.6822	.6531	.1977	9.009
%RSD	121.9	1273.	61.89	245.4
#1	-1.276	.6241	.2740	6.480
#2	-.4857	.1898	.1483	-10.72
#3	.0823	-.6600	.5357	-6.775
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	10.00	5.000	30.00
Low	-20.00	-10.00	-5.000	-30.00

L760A 12.28.98

Method: CLP3I Sample Name: PLCSW92~~2049~~ #17 Operator:
Analysis Time: 12/28/98 12:41:57 1:1
Comment: SDG:00001 ClientID:LCSW
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	945.0	21130.	20960.	513.0	53130.	508.0	5097.
SDev	2.1	30.	48.	.8	62.	.4	5.
%RSD	.2211	.1433	.2281	.1533	.1165	.0834	.1038
#1	942.7	21100.	20910.	512.1	53090.	507.6	5093.
#2	945.5	21160.	20990.	513.6	53200.	508.5	5103.
#3	946.8	21130.	20980.	513.3	53110.	508.0	5097.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	24000.	24000.	600.0	60000.	600.0	6000.
Low	800.0	16000.	16000.	400.0	40000.	400.0	4000.

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1006.	2452.	10620.	51460.	53130.	1512.	51620.
SDev	.	10.	10.	51.	54.	1.	39.
%RSD	.0083	.3924	.0908	.0985	.1024	.0972	.0750
#1	1006.	2441.	10610.	51440.	53090.	1511.	51630.
#2	1006.	2455.	10620.	51520.	53190.	1514.	51640.
#3	1006.	2460.	10630.	51430.	53110.	1512.	51570.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1200.	3000.	12000.	60000.	60000.	1800.	60000.
Low	800.0	2000.	8000.	40000.	40000.	1200.	40000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	4019.	1065.	5129.	2141.	309.2	575.0	5990.
SDev	2.	2.	6.	3.	1.0	5.8	13.
%RSD	.0423	.1895	.1249	.1475	.3156	1.013	.2152
#1	4018.	1063.	5122.	2138.	308.3	575.6	5992.
#2	4021.	1066.	5134.	2145.	310.2	580.5	6001.
#3	4019.	1067.	5132.	2141.	309.0	568.9	5976.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4800.	1200.	6000.	2400.	360.0	600.0	7200.
Low	3200.	800.0	4000.	1600.	240.0	400.0	4800.

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1068.	303.8	311.9	5942.	6014.	586.6	569.1
SDev	4.	1.8	2.1	12.	16.	9.9	3.8
%RSD	.3458	.5988	.6576	.2041	.2613	1.692	.6714
#1	1064.	305.7	309.6	5934.	6021.	588.7	569.0
#2	1071.	303.5	313.6	5956.	6024.	595.4	573.0
#3	1068.	302.1	312.4	5937.	5995.	575.8	565.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1200.						
Low	800.0						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	959.5	987.6	1022.	954.4
SDev	1.2	3.2	3.	10.7
%RSD	.1269	.3223	.2825	1.125
#1	958.1	984.5	1019.	966.6
#2	960.5	990.8	1025.	946.5
#3	959.9	987.5	1022.	950.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	1205.	1205.	1205.	1205.
Low	795.0	795.0	795.0	795.0

000589

~~172~~

Method: CLP3I Sample Name: 922046 10X #18 Operator:
Time: 12/28/98 12:48:51
Client: SDG:00001 ClientID:1174-8605 1:10
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1860	343.7	107.9	.3469	364200.	4.036	4.923
SDev	.0856	2.7	.5	.0164	118.	.065	.128
%RSD	46.03	.7765	.4493	4.733	.0324	1.613	2.609
#1	-.2393	340.7	108.4	.3309	364100.	4.102	4.787
#2	-.0872	344.7	107.7	.3461	364100.	3.972	5.043
#3	-.2313	345.8	107.5	.3637	364300.	4.033	4.940
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	67.50	5.598	158.2	5652.	12110.	397.9	7347.
SDev	.19	.087	7.1	21.	12.	.4	63.
%RSD	.2774	1.549	4.498	.3784	.0979	.1030	.8629
#1	67.59	5.672	150.4	5677.	12120.	398.1	7381.
#2	67.28	5.503	159.9	5637.	12100.	397.4	7387.
#3	67.63	5.620	164.3	5643.	12120.	398.2	7274.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.00	.6688	3.149	205.4	34150.	35.05	2.757
SDev	.54	.9622	.267	.4	31.	1.18	.916
%RSD	3.886	143.9	8.482	.1751	.0907	3.373	33.23
#1	14.61	1.573	2.841	205.2	34180.	36.16	3.722
#2	13.82	.7761	3.307	205.2	34160.	33.81	1.900
#3	13.57	-.3426	3.300	205.8	34120.	35.17	2.649
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.21	34250.	34100.	4.444	1.905	44.68	30.23
SDev	.54	42.	28.	1.816	.874	2.50	1.25
%RSD	5.301	.1228	.0814	40.87	45.89	5.598	4.130
#1	10.81	34300.	34120.	5.402	2.874	45.18	31.65
#2	10.03	34240.	34120.	2.349	1.665	41.97	29.72
#3	9.776	34220.	34070.	5.581	1.175	46.90	29.31
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-17.89	2.050	.6323	-2.861
SDev	2.88	.876	.1949	7.449
%RSD	16.13	42.72	30.82	260.4
#1	-17.73	1.799	.8396	3.871
#2	L-20.85	3.024	.4528	-1.589
#3	-15.08	1.328	.6046	-10.86
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

M·hod: CLP3I Sample Name: 922050 10X #19 Operator:
I Time: 12/28/98 12:55:45
Co nt: SDG:00001 ClientID:1174-8605D 1:10
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.3850	336.4	102.7	.3279	349800.	3.924	4.207
SDev	.2001	3.4	.4	.0045	703.	.131	.447
%RSD	51.97	1.010	.4143	1.381	.2009	3.346	10.64
#1	-.1824	332.6	103.1	.3327	350100.	4.040	4.619
#2	-.3903	337.9	102.7	.3237	349000.	3.781	3.731
#3	-.5825	338.9	102.3	.3273	350300.	3.951	4.272
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	65.06	5.103	146.2	5529.	11710.	384.3	6984.
SDev	.29	.352	3.1	14.	13.	.7	89.
%RSD	.4490	6.900	2.101	.2523	.1139	.1740	1.274
#1	65.39	5.503	149.0	5542.	11720.	384.9	7079.
#2	64.85	4.968	142.9	5529.	11700.	383.5	6902.
#3	64.93	4.838	146.6	5514.	11710.	384.4	6971.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
its	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
e	12.81	-.5150	2.481	196.3	32980.	33.85	2.342
S	.38	1.3293	.246	.2	26.	1.93	.161
%	2.963	258.1	9.896	.0884	.0789	5.709	6.880
#1	13.06	-2.046	2.760	196.1	33000.	32.61	2.343
#2	13.00	.1588	2.297	196.4	32950.	36.08	2.181
#3	12.37	.3426	2.387	196.5	33000.	32.87	2.503
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	10.04	33130.	32910.	3.699	1.656	42.53	29.51
SDev	1.30	59.	26.	1.429	.474	3.49	3.37
%RSD	12.98	.1769	.0803	38.62	28.61	8.209	11.43
#1	8.630	33190.	32900.	3.530	1.741	39.17	29.33
#2	10.28	33080.	32890.	2.363	2.081	42.29	32.97
#3	11.20	33110.	32940.	5.205	1.145	46.14	26.23
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-18.33	1.241	.0455	-4.305
SDev	.25	.285	.1782	3.211
%RSD	1.360	22.98	391.6	74.59
	-18.35	1.124	-.1543	-.9638
	-18.58	1.566	.1028	-7.368
#	-18.08	1.032	.1880	-4.583
Er rs	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 922047 10X #20 Operator:
Run Time: 12/28/98 13:02:39
Client: SDG:00001 ClientID:1174-8605S 1:10
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	97.31	314.7	272.4	.2510	341400.	98.55	3.909
SDev	.10	2.9	.1	.0133	480.	.22	.167
%RSD	.1041	.9148	.0290	5.291	.1407	.2246	4.269
#1	97.20	317.5	272.4	.2527	341400.	98.34	4.100
#2	97.39	311.7	272.3	.2370	341800.	98.78	3.830
#3	97.35	315.0	272.3	.2634	340900.	98.52	3.795
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	544.1	4.729	136.6	5282.	11400.	374.7	6913.
SDev	.4	.413	7.9	8.	13.	.6	97.
%RSD	.0812	8.739	5.805	.1515	.1175	.1586	1.407
#1	544.5	4.786	139.7	5291.	11400.	374.5	7003.
#2	543.6	5.112	142.5	5277.	11410.	375.4	6926.
#3	544.1	4.291	127.6	5278.	11380.	374.3	6809.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.57	.0570	2.267	192.0	29550.	135.7	1.926
SDev	.23	1.474	.220	.3	33.	1.9	1.266
%RSD	1.850	2584.	9.702	.1633	.1120	1.390	65.72
#1	12.84	-1.070	2.521	192.2	29540.	134.9	3.110
#2	12.49	-.4839	2.141	192.1	29580.	134.5	.5923
#3	12.40	1.725	2.138	191.6	29520.	137.9	2.075
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	511.0	29720.	29460.	3.517	1.121	144.2	131.5
SDev	.5	26.	45.	.829	1.601	2.3	2.3
%RSD	.0961	.0866	.1528	23.56	142.8	1.622	1.757
#1	510.8	29750.	29440.	4.472	2.421	145.5	129.5
#2	511.5	29730.	29510.	3.096	-.6676	141.5	130.9
#3	510.6	29700.	29430.	2.984	1.611	145.7	134.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-16.19	2.113	.3535	-3.792
SDev	1.58	1.361	.6644	4.745
%RSD	9.787	64.42	188.0	125.1
#1	-14.36	3.450	.2864	1.023
#2	-17.23	.7290	1.049	-8.462
#3	-16.96	2.159	-.2748	-3.937
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 922048 10X #21 Operator:
Run Time: 12/28/98 13:09:32
Client: SDG:00001 ClientID:1174-8605M 1:10
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	97.61	319.5	260.9	.3030	335600.	96.92	4.106
SDev	.27	2.6	1.8	.0125	1920.	.43	.020
%RSD	.2740	.8160	.7055	4.120	.5722	.4391	.4821
#1	97.84	322.5	262.0	.3168	336600.	97.41	4.123
#2	97.68	318.0	258.7	.2997	333400.	96.62	4.084
#3	97.32	318.0	261.8	.2925	336700.	96.73	4.110
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	530.8	4.547	140.9	5161.	11180.	367.8	6713.
SDev	3.5	.105	11.5	36.	58.	2.1	9.
%RSD	.6688	2.316	8.165	.6959	.5214	.5799	.1342
#1	533.1	4.564	127.7	5196.	11220.	369.2	6723.
#2	526.7	4.434	146.6	5124.	11110.	365.3	6710.
#3	532.6	4.643	148.5	5163.	11210.	368.7	6706.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	12.26	1.846	1.996	188.5	29180.	132.5	2.482
SDev	.47	.954	.226	1.0	97.	3.5	.471
%RSD	3.850	51.68	11.33	.5524	.3312	2.628	18.97
#1	12.01	2.885	1.755	189.1	29240.	136.0	1.964
#2	11.96	1.009	2.204	187.3	29070.	132.4	2.601
#3	12.80	1.645	2.028	189.2	29230.	129.0	2.882
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	497.3	29340.	29100.	3.716	1.857	140.8	128.3
SDev	5.0	111.	100.	1.287	.490	4.4	3.0
%RSD	.9981	.3790	.3422	34.62	26.41	3.105	2.369
#1	502.2	29450.	29130.	2.369	1.751	145.3	131.3
#2	492.3	29230.	28980.	4.933	1.428	140.6	128.3
#3	497.3	29340.	29170.	3.847	2.391	136.6	125.2
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-15.11	1.061	-.2338	-3.126
SDev	.61	.851	.4667	5.731
%RSD	4.054	80.20	199.6	183.4
#1	-14.75	1.215	.2977	3.464
#2	-15.81	.1440	-.5760	-6.953
#3	-14.76	1.826	-.4232	-5.887
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: SDI922046 50X #22 Operator:
Run Time: 12/28/98 13:16:26
Count: SDG:00001 ClientID:1174-8605L 1:50
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2061	121.6	21.48	.2306	75020.	.9358	.9390
SDev	.0323	4.2	.09	.0071	87.	.1219	.3269
%RSD	15.70	3.431	.4077	3.064	.1163	13.03	34.81
#1	-.2248	126.4	21.58	.2383	75120.	.9772	1.057
#2	-.2248	119.7	21.41	.2244	74970.	1.032	1.190
#3	-.1687	118.7	21.45	.2293	74960.	.7986	.5695
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K_7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	14.19	.1998	28.99	897.7	2483.	83.83	1419.
SDev	.19	.1360	4.54	13.7	5.	.13	102.
%RSD	1.339	68.07	15.67	1.531	.2100	.1536	7.210
#1	14.10	.0435	29.36	908.5	2489.	83.77	1507.
#2	14.07	.2649	24.27	882.3	2482.	83.98	1307.
#3	14.41	.2910	33.33	902.3	2479.	83.74	1443.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.609	1.461	.7591	40.01	7053.	7.464	.2081
SDev	.722	.596	.1976	.12	6.	1.171	.8243
%RSD	20.00	40.76	26.02	.3029	.0889	15.69	396.1
#1	3.223	2.108	.9169	40.15	7060.	6.851	-.2522
#2	4.442	.9351	.5376	39.93	7047.	6.726	-.2833
#3	3.163	1.341	.8230	39.95	7053.	8.814	1.160
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.479	7067.	7046.	.7335	-.0642	11.76	5.311
SDev	.622	17.	2.	.9049	.7972	2.03	2.166
%RSD	17.89	.2399	.0222	123.4	1241.	17.30	40.78
#1	4.059	7086.	7047.	.4140	-.5948	13.99	3.275
#2	2.821	7052.	7044.	.0317	-.4505	10.02	5.071
#3	3.558	7064.	7048.	1.755	.8526	11.25	7.586
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-4.748	.4709	.0415	-6.388
SDev	1.017	.6666	.4357	8.375
%RSD	21.42	141.6	1050.	131.1
#1	-5.422	.7911	.4146	.2435
#2	-3.578	-.2954	.1471	-15.80
#3	-5.243	.9169	-.4373	-3.607
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

M hod: CLP3I Sample Name: 922051 20X #23 Operator:
R Time: 12/28/98 13:23:20
Co nt: SDG:00001 ClientID:1174-8705 1:20
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5234	374.9	44.04	.3166	151000.	1.497	2.113
SDev	.3619	7.7	.77	.0039	2405.	.195	.158
%RSD	69.14	2.064	1.742	1.227	1.593	13.01	7.456
#1	-.2648	381.9	44.75	.3211	153000.	1.722	2.036
#2	-.9369	376.2	44.15	.3141	151600.	1.376	2.008
#3	-.3684	366.6	43.22	.3147	148300.	1.394	2.294
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	86.16	2.254	348.7	1886.	5708.	193.3	2983.
SDev	1.48	.144	6.5	28.	87.	3.1	105.
%RSD	1.719	6.366	1.856	1.483	1.533	1.600	3.511
#1	87.52	2.115	347.9	1913.	5779.	195.8	3073.
#2	86.39	2.245	355.5	1888.	5734.	194.2	3008.
#3	84.58	2.402	342.6	1857.	5610.	189.8	2868.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.734	-1.072	2.408	129.1	33280.	15.30	.5164
SDev	.370	.477	.061	2.2	480.	1.01	.9993
%RSD	6.450	44.48	2.541	1.734	1.442	6.573	193.5
#1	6.149	-1.536	2.389	131.0	33710.	16.02	-.2740
#2	5.614	-.5834	2.476	129.7	33360.	14.15	.1836
#3	5.439	-1.097	2.358	126.6	32760.	15.73	1.640
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.830	33320.	33250.	1.226	.1517	22.18	11.86
SDev	1.104	513.	464.	2.267	1.136	3.87	.71
%RSD	28.83	1.539	1.394	184.8	749.0	17.43	5.958
#1	2.784	33800.	33670.	-1.389	.2725	25.95	11.06
#2	3.722	33380.	33350.	2.614	-1.040	18.22	12.11
#3	4.984	32780.	32750.	2.454	1.223	22.36	12.40
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-7.321	.8726	.3314	-6.818
SDev	3.410	2.069	.6057	6.162
%RSD	46.58	237.1	182.7	90.38
#1	-6.364	1.051	1.026	-.0318
#2	-11.11	-1.279	.0529	-12.06
#3	-4.492	2.847	-.0848	-8.359
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 922052 10X #24 Operator:
Run Time: 12/28/98 13:30:14
Comment: SDG:00001 ClientID:1174-8805 1:10
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5617	229.8	123.0	.3267	434800.	4.686	4.060
SDev	.2332	.9	.3	.0154	1277.	.083	.225
%RSD	41.52	.3756	.2780	4.714	.2936	1.762	5.542
#1	-.5057	230.7	123.4	.3440	434500.	4.624	3.800
#2	-.8179	229.0	122.8	.3211	436200.	4.780	4.183
#3	-.3616	229.7	122.8	.3148	433700.	4.655	4.196
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	44.82	4.000	99.90	5435.	13230.	430.0	6682.
SDev	.85	.076	10.44	23.	26.	.7	34.
%RSD	1.901	1.909	10.45	.4315	.1976	.1676	.5023
#1	45.44	3.913	92.99	5462.	13240.	430.2	6699.
#2	45.18	4.056	111.9	5419.	13250.	430.7	6704.
#3	43.85	4.030	94.81	5423.	13200.	429.2	6644.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	13.31	-2.292	1.139	184.8	30090.	32.41	.8745
SDev	.19	.875	.225	.3	82.	1.61	.3225
%RSD	1.454	38.19	19.78	.1479	.2739	4.957	36.88
#1	13.46	-3.157	1.008	185.1	30090.	32.57	.5143
#2	13.09	-1.406	1.399	184.8	30180.	30.73	1.136
#3	13.38	-2.312	1.009	184.5	30010.	33.93	.9727
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	8.035	30240.	30020.	1.622	.4911	40.80	28.21
SDev	1.449	104.	86.	.771	.3201	3.22	1.43
%RSD	18.03	.3439	.2857	47.56	65.19	7.886	5.052
#1	6.515	30310.	29980.	1.124	.1995	43.18	27.26
#2	9.401	30300.	30120.	2.511	.4401	37.14	27.52
#3	8.191	30120.	29960.	1.231	.8336	42.10	29.85
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-15.01	1.756	.0406	-8.417
SDev	.91	1.740	.4866	9.044
%RSD	6.046	99.11	1199.	107.4
#1	-16.02	3.734	-.1953	2.018
#2	-14.75	1.070	.6001	-13.99
#3	-14.27	.4628	-.2831	-13.28
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

000596

Method: CLP3I Sample Name: CCV Operator:
Run Time: 12/28/98 13:37:08
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	96.59	2096.	982.7	957.3	49300.	954.1	958.5
SDev	.56	2.	1.9	1.6	119.	2.1	1.5
%RSD	.5799	.0994	.1918	.1676	.2424	.2159	.1570
#1	96.03	2098.	984.9	955.5	49160.	951.7	957.0
#2	97.15	2094.	982.0	958.4	49380.	955.5	958.6
#3	96.59	2096.	981.4	958.1	49360.	955.0	960.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	959.2	946.0	1963.	46850.	49040.	955.5	47600.
SDev	1.6	1.9	11.	123.	24.	.9	63.
%RSD	.1629	.1979	.5393	.2632	.0480	.0957	.1315
#1	957.6	944.2	1951.	46990.	49020.	954.5	47660.
#2	959.3	945.7	1968.	46780.	49070.	956.2	47540.
#3	960.7	947.9	1970.	46770.	49040.	955.8	47590.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	945.4	1002.	974.7	967.5	972.7	990.4	929.1
SDev	2.0	1.	.9	1.2	1.6	2.7	1.5
%RSD	.2162	.0763	.0910	.1236	.1614	.2740	.1606
#1	944.0	1002.	973.6	966.3	970.9	988.2	927.9
#2	944.5	1003.	975.1	968.6	973.9	993.4	930.8
#3	947.8	1002.	975.3	967.7	973.3	989.7	928.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	983.9	975.6	971.3	917.3	935.0	988.2	991.6
SDev	2.4	1.8	3.0	3.4	1.2	2.8	5.0
%RSD	.2445	.1893	.3078	.3660	.1299	.2865	.5016
#1	981.7	977.2	967.8	913.5	935.0	991.4	986.5
#2	986.4	976.1	972.9	919.9	936.2	987.3	996.5
#3	983.4	973.6	973.1	918.5	933.8	985.9	991.6
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	912.3	931.4	978.8	905.6
SDev	3.8	1.4	2.5	9.9
%RSD	.4159	.1538	.2574	1.093
#1	910.2	932.3	976.2	917.0
#2	916.7	932.0	978.9	Q899.1
#3	910.0	929.7	981.3	900.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Time: 12/28/98 13:44:03
Comment: CCB
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1547	87.58	.1443	.4217	-48.60	.2196	.2871
SDev	.1599	6.75	.0409	.0273	3.55	.1675	.1092
%RSD	103.3	7.709	28.37	6.475	7.295	76.24	38.04
#1	-.3388	94.90	.1888	.4486	-46.19	.3415	.2415
#2	-.0507	86.24	.1359	.4227	-52.67	.2888	.2081
#3	-.0747	81.60	.1083	.3940	-46.94	.0287	.4118
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.0399	-1.789	-9.199	5.371	8.688	.1055	-229.1
SDev	.3955	.177	2.356	6.574	1.027	.0478	171.7
%RSD	991.4	9.887	25.61	122.4	11.82	45.28	74.92
#1	.4769	-1.898	-9.231	10.36	9.381	.1487	-31.14
#2	-.0637	-1.885	-11.54	7.827	7.508	.1136	-319.6
#3	-.2935	-1.585	-6.828	-2.078	9.177	.0542	-336.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.4453	1.830	.3410	-4.393	.9237	.2900	.6862
SDev	.2519	1.706	.1496	.074	1.119	1.417	1.122
%RSD	56.56	93.25	43.88	1.676	121.2	488.7	163.5
#1	.1545	1.193	.1764	-4.447	Q2.181	.2717	1.891
#2	.5913	3.763	.3778	-4.310	.0367	-1.118	-.3289
#3	.5901	.5334	.4688	-4.424	.5530	1.716	.4966
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.131	-1.501	2.125	1.879	.0811	2.230	-.6883
SDev	.499	1.293	1.038	1.161	1.296	.694	2.2201
%RSD	23.43	86.15	48.87	61.81	1599.	31.10	322.5
#1	1.805	-.0922	3.307	2.509	1.573	1.447	-.3251
#2	2.706	-2.634	1.360	.5387	-.7716	2.768	-3.068
#3	1.882	-1.777	1.707	2.589	-.5578	2.475	1.328
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.0079	1.786	.5219	.1604
SDev	.1672	1.822	.4177	6.283
%RSD	2119.	102.0	80.03	3917.
#1	-.1840	2.016	.8842	5.554
#2	.1487	3.481	.0651	1.666
#3	.0116	-.1400	.6164	-6.738
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

Method: CLP3I Sample Name: 922053 #27 Operator:
Run Time: 12/28/98 13:50:57
Comment: SDG:00001 ClientID:1174-8905 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5736	294.6	265.1	.2752	H973300.	9.919	.4435
SDev	.2967	3.4	.2	.0204	3043.	.116	.1436
%RSD	51.73	1.160	.0657	7.418	.3126	1.168	32.38
#1	-.5949	293.4	265.2	.2955	H972800.	10.05	.3880
#2	-.8590	291.9	264.9	.2547	H970500.	9.836	.3359
#3	-.2668	298.4	265.2	.2754	H976500.	9.869	.6066
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	813.5	-.6944	3.449	76530.	75.47	.3379	H1057000.
SDev	1.4	.1168	1.259	136.	2.62	.0765	1054.
%RSD	.1665	16.82	36.51	.1771	3.475	22.64	.0997
#1	812.9	-.6337	2.087	76680.	73.08	.4262	H1058000.
#2	812.5	-.8291	4.571	76500.	75.06	.2937	H1057000.
#3	815.0	.6206	3.690	76420.	78.27	.2937	H1056000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2632	-4.069	4.078	-2.091	4413.	302.7	2.770
SDev	.6389	1.741	.166	.242	11.	1.6	.802
%RSD	242.8	42.80	4.075	11.58	.2544	.5323	28.96
#1	.9417	-2.287	3.991	-2.332	4401.	304.1	2.962
#2	-.3269	-4.154	3.972	-2.092	4414.	300.9	1.890
#3	.1747	-5.767	4.269	-1.848	4424.	303.0	3.460
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.249	4511.	4364.	5.004	1.645	325.6	291.2
SDev	1.649	15.	23.	1.792	.680	2.0	3.4
%RSD	31.41	.3265	.5367	35.80	41.33	.6088	1.169
#1	4.634	4528.	4338.	4.228	2.319	323.8	294.2
#2	3.996	4501.	4371.	3.731	.9598	327.7	287.5
#3	7.117	4504.	4383.	7.053	1.656	325.1	291.9
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-47.23	.5082	19.97	2.410
SDev	4.04	2.312	.76	10.97
%RSD	8.553	454.9	3.796	455.2
#1	L-51.89	3.095	20.85	14.69
#2	L-44.69	-.2174	19.55	-6.426
#3	L-45.12	-1.354	19.52	-1.034
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 922054 10X #28 Operator:
F Time: 12/28/98 13:57:51
Co nt: SDG:00001 ClientID:1174-9005 1:10
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5325	422.9	109.8	.3619	279800.	3.153	3.675
SDev	.2590	1.5	.2	.0005	71.	.181	.143
%RSD	48.63	.3644	.2109	.1352	.0252	5.726	3.879
#1	-.4205	422.8	110.0	.3615	279800.	3.310	3.834
#2	-.8286	421.4	109.8	.3617	279800.	3.195	3.557
#3	-.3484	424.4	109.5	.3624	279900.	2.956	3.635
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	87.83	6.932	225.0	4689.	11920.	357.8	6100.
SDev	.67	.049	1.9	21.	11.	.3	92.
%RSD	.7663	.7118	.8402	.4515	.0914	.0933	1.503
#1	88.45	6.988	224.1	4710.	11930.	358.0	6205.
#2	87.12	6.910	223.6	4688.	11910.	358.0	6058.
#3	87.91	6.897	227.1	4668.	11910.	357.4	6036.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
its	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
ge	12.17	-.9193	5.882	219.4	38120.	36.36	1.300
S	.60	1.1680	.176	.0	30.	2.11	.617
%	4.922	127.1	2.998	.0076	.0780	5.802	47.46
#1	12.83	-1.840	5.998	219.4	38140.	34.17	1.903
#2	11.67	.3945	5.969	219.4	38130.	38.37	.6697
#3	12.01	-1.312	5.679	219.4	38080.	36.54	1.327
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	15.55	38340.	38010.	3.417	.2329	44.08	32.50
SDev	1.45	105.	33.	1.217	.3368	6.37	.65
%RSD	9.352	.2735	.0874	35.61	144.6	14.44	2.008
#1	14.01	38450.	37980.	4.481	.6057	36.94	32.77
#2	16.90	38310.	38040.	2.090	-.0493	49.17	32.97
#3	15.74	38250.	38000.	3.680	.1422	46.11	31.75
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-13.50	.6724	-.0888	-6.001
SDev	1.60	2.061	.3689	10.045
%RSD	11.87	306.5	415.3	167.4
#1	-12.78	.3970	-.4159	5.087
	-15.33	2.857	.3110	-8.596
	-12.38	-1.237	-.1617	-14.49
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: 922055 #29 Operator:
Time: 12/28/98 14:04:45
Client: SDG:00001 ClientID:1174-9105 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.5469	132.6	153.1	.3007	H1548000.	15.57	.1769
SDev	.1046	1.2	.2	.0069	15278.	.28	.0588
%RSD	19.14	.8878	.1493	2.312	.9867	1.789	33.25
#1	-.6189	132.9	152.9	.3086	H1535000.	15.71	.1504
#2	-.5949	131.3	153.4	.2955	H1545000.	15.25	.2443
#3	-.4268	133.6	153.2	.2980	H1565000.	15.76	.1360
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	519.4	-1.050	17.46	66060.	1254.	.2123	H1101000.
SDev	2.1	.057	4.56	114.	6.	.0194	1204.
%RSD	.4035	5.412	26.12	.1719	.4587	9.151	.1094
#1	517.6	-1.115	12.44	66060.	1247.	.1899	H1100000.
#2	518.9	-1.024	18.57	66180.	1255.	.2226	H1102000.
#3	521.7	-1.011	21.35	65950.	1259.	.2244	H1102000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.2639	-4.276	10.77	-2.147	11.43	688.8	1.937
SDev	.3705	2.183	.30	.166	2.52	4.2	.736
%RSD	140.4	51.06	2.807	7.748	22.07	.6152	38.02
#1	.2827	-1.875	10.46	-2.212	14.24	684.3	1.094
#2	-.1156	-4.812	11.06	-1.958	10.68	692.7	2.457
#3	.6246	-6.140	10.80	-2.272	9.364	689.3	2.259
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	28.43	7.535	13.36	4.140	.8261	708.6	678.9
SDev	2.74	2.743	2.56	1.101	.7015	2.0	7.3
%RSD	9.646	36.40	19.14	26.59	84.91	.2766	1.073
#1	25.39	10.68	16.00	3.163	.0508	710.9	671.0
#2	29.18	5.656	13.18	5.333	1.011	707.3	685.4
#3	30.72	6.266	10.90	3.925	1.417	707.6	680.2
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-137.6	3.123	9.361	5.823
SDev	2.8	1.033	.136	6.562
%RSD	2.013	33.07	1.457	112.7
#1	L-140.7	4.307	9.465	10.99
#2	L-135.4	2.659	9.411	-1.561
#3	L-136.6	2.404	9.207	8.039
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

M-thod: CLP3I Sample Name: 922056 #30 Operator:
I Time: 12/28/98 14:11:40
C nt: SDG:00001 ClientID:LEACHBLK 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2828	120.8	1.160	.3400	124.1	.1541	.5073
SDev	.2496	3.0	.094	.0176	31.9	.1286	.2498
%RSD	88.27	2.519	8.074	5.185	25.69	83.48	49.23
#1	-.0507	123.9	1.253	.3546	158.2	.2469	.2999
#2	-.2508	120.6	1.159	.3449	119.2	.0072	.7846
#3	-.5469	117.8	1.066	.3204	95.03	.2082	.4374
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.1021	-.8382	3.243	457.2	24.46	.6406	H1039000.
SDev	.6899	.2020	1.201	18.0	3.79	.0478	2010.
%RSD	675.8	24.10	37.03	3.932	15.49	7.462	.1934
#1	.8597	-.8425	2.191	473.6	25.23	.6842	H1038000.
#2	-.0632	-.6340	4.551	460.0	27.80	.6482	H1039000.
#3	-.4901	-1.038	2.987	438.0	20.34	.5895	H1042000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
its	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
ge	1.794	-4.933	.4086	-1.428	1.965	18.62	1.503
	.429	.849	.2209	.147	1.056	1.15	.332
	23.94	17.21	54.06	10.29	53.73	6.199	22.06
#1	2.205	-4.016	.5341	-1.582	2.734	18.26	1.816
#2	1.829	-5.092	.5382	-1.414	2.399	19.91	1.537
#3	1.348	-5.692	.1536	-1.289	.7611	17.69	1.156
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.012	1.646	2.114	2.893	.7992	41.77	7.052
SDev	.579	1.833	1.349	.766	.8750	5.53	4.215
%RSD	19.24	111.4	63.85	26.48	109.5	13.24	59.78
#1	2.476	3.745	2.219	2.080	1.674	47.15	3.829
#2	3.627	.3587	3.407	2.995	.7992	36.10	11.82
#3	2.934	.8343	.7145	3.602	-.0758	42.08	5.504
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	L-21.17	-.0536	-1.071	-4.740
SDev	1.90	1.2841	.243	12.636
%RSD	8.993	2397.	22.71	266.6
"1	L-23.02	.8554	-.8490	8.693
	L-21.27	.5065	-1.033	-6.521
#	-19.22	-1.523	-1.331	-16.39
Errors	LC Low	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

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M hod: CLP3I Sample Name: PDS922741 #31 Operator:
F Time: 12/28/98 14:18:34
Co nt: SDG:00001 ClientID:1174-8605A 1:1
Mo CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6833	88670.	187.3	.9656	2816.	-.5387	7.328
SDev	.3013	18.	.5	.0321	2.	.0873	.239
%RSD	44.09	.0201	.2538	3.319	.0736	16.20	3.256
#1	-.3365	88660.	187.9	1.003	2814.	-.4991	7.054
#2	-.8327	88680.	187.0	.9468	2818.	-.6388	7.440
#3	-.8807	88650.	187.0	.9475	2815.	-.4782	7.491
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	95.50	26.10	15730.	1607.	2446.	79.83	954.0
SDev	.65	.44	15.	8.	4.	.22	44.7
%RSD	.6858	1.678	.0929	.5074	.1575	.2717	4.683
#1	95.51	25.62	15720.	1616.	2441.	79.76	961.0
#2	96.15	26.19	15740.	1605.	2448.	80.07	994.8
#3	94.84	26.48	15740.	1601.	2448.	79.65	906.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	23.60	1.440	121.7	41.02	155.8	3.010	1.628
SDev	.69	1.163	.4	.20	.4	.997	.556
%RSD	2.907	80.75	.3639	.4753	.2764	33.13	34.14
#1	24.33	2.231	121.2	41.22	156.1	2.318	1.804
#2	23.50	.1048	121.8	41.03	156.0	2.558	2.074
#3	22.97	1.985	122.0	40.83	155.3	4.153	1.005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1.849	162.0	152.7	.6088	2.127	-3.027	6.013
SDev	.865	5.5	2.3	3.073	1.217	4.637	2.257
%RSD	46.81	3.384	1.530	504.8	57.24	153.2	37.54
#1	1.009	168.3	150.0	-1.493	3.440	-.1945	3.563
#2	1.799	159.3	154.3	4.136	1.035	-8.378	8.008
#3	2.737	158.3	153.8	-.8164	1.905	-.5072	6.469
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	15.44	.5183	.9986	1179.
SDev	1.25	.8739	.5322	20.
%RSD	8.077	168.6	53.29	1.667
#1	14.15	1.220	.8844	1201.
#2	15.53	.7956	.5328	1171.
#3	16.64	-.4606	1.579	1164.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS923300 #32 Operator:
Run Time: 12/28/98 14:25:28
Client: SDG:00001 ClientID:1174-8605A 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.6285	34110.	171.2	2.374	285800.	1.236	56.78
SDev	.2886	34.	.5	.011	1151.	.201	.38
%RSD	45.92	.0990	.3121	.4541	.4027	16.27	.6743
#1	-.3322	34140.	171.8	2.364	284500.	1.457	56.47
#2	-.6447	34110.	171.0	2.373	286500.	1.184	56.68
#3	-.9087	34080.	170.9	2.385	286500.	1.065	57.21
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	78.64	140.5	106000.	5454.	155900.	1918.	1670.
SDev	.35	.5	284.	22.	291.	3.	67.
%RSD	.4426	.3247	.2681	.3951	.1869	.1438	4.000
#1	79.02	140.0	105700.	5477.	155600.	1915.	1741.
#2	78.35	140.5	106200.	5450.	156100.	1920.	1662.
#3	78.54	140.9	106200.	5434.	156100.	1919.	1608.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	126.2	15.86	85.29	313.5	193.1	20.30	2.808
SDev	.4	2.45	.51	.8	1.0	2.33	1.379
%RSD	.3454	15.42	.6033	.2454	.5356	11.50	49.10
#1	126.0	14.91	84.95	312.6	192.0	17.61	4.318
#2	126.7	14.03	85.05	313.9	193.3	21.71	1.615
#3	125.9	18.64	85.88	314.1	194.1	21.58	2.491
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	37.62	199.7	189.8	1.590	3.406	5.189	27.84
SDev	1.24	2.3	2.6	.927	1.731	3.175	2.79
%RSD	3.294	1.164	1.379	58.32	50.81	61.18	10.03
#1	36.19	202.4	186.9	2.168	5.381	2.807	24.98
#2	38.36	198.0	191.0	.5203	2.152	3.967	30.56
#3	38.30	198.8	191.7	2.081	2.686	8.793	27.96
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	7.755	2.800	19.32	1216.
SDev	2.720	2.264	.18	30.
%RSD	35.08	80.86	.9187	2.448
#1	7.346	5.388	19.27	1250.
#2	5.263	1.822	19.51	1201.
#3	10.66	1.189	19.17	1196.
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: PDS923052 #33 Operator:
Analysis Time: 12/28/98 14:32:22
Client: SDG:00001 ClientID:1174-8605A 1:1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	969.1	123400.	3724.	6.796	229700.	82.50	141.0
SDev	3.6	244.	11.	.007	468.	.30	.1
%RSD	.3689	.1976	.3031	.1031	.2039	.3643	.0890
#1	965.1	123600.	3735.	6.799	229200.	82.82	141.0
#2	970.4	123400.	3723.	6.788	229900.	82.48	140.9
#3	971.9	123100.	3713.	6.801	230000.	82.22	141.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	4000.	650000.	50000.	10000.	600000.	30000.	50000.
Low	-10.00	-200.0	-200.0	-5.000	-5000.	-4.000	-50.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1437.	903.9	252900.	7930.	81910.	3314.	848.7
SDev	.	1.4	290.	42.	14.	2.	78.4
%RSD	.0205	.1526	.1145	.5266	.0173	.0456	9.242
#1	1437.	902.4	252500.	7975.	81910.	3314.	832.9
#2	1437.	904.4	253000.	7921.	81930.	3315.	933.9
#3	1437.	905.1	253100.	7893.	81900.	3312.	779.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	300000.	550000.	600000.	10000.	450000.
Low	-10.00	-25.00	-100.0	-5000.	-5000.	-15.00	-5000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	360.4	109.8	187.0	4666.	310.0	17.32	7.807
SDev	.3	1.2	.5	5.	.5	2.05	1.155
%RSD	.0784	1.135	.2520	.1018	.1722	11.84	14.79
#1	360.7	108.6	187.4	4661.	309.9	19.24	8.979
#2	360.3	109.7	186.5	4667.	309.5	15.16	6.671
#3	360.1	111.1	187.1	4670.	310.6	17.55	7.771
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	50000.	25000.	50000.	50000.	10000.
Low	-40.00	-10.00	-50.00	-10.00	-2.000	-5.000	-60.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	48.79	313.5	308.2	8.411	7.496	-6.817	29.36
SDev	.11	.9	1.2	3.721	1.986	2.287	2.17
%RSD	.2315	.2737	.3944	44.24	26.49	33.56	7.409
#1	48.88	313.4	308.1	7.996	9.461	-5.771	31.71
#2	48.67	314.5	307.0	4.916	7.538	-9.440	27.43
#3	48.84	312.7	309.5	12.32	5.490	-5.239	28.92
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	30000.						
Low	-5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	42.57	10.46	31.22	650.8
SDev	1.79	1.48	1.09	21.8
%RSD	4.203	14.15	3.507	3.350
#1	41.03	11.28	32.48	675.0
#2	42.16	11.34	30.68	644.5
#3	44.53	8.747	30.50	632.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass
High	10000.	10000.	30000.	10000.
Low	-20.00	-10.00	-10.00	-30.00

Method: CLP3I Sample Name: CRI Operator:
Run Time: 12/28/98 14:39:17
Client: CRI
Method CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	18.76	103.4	.4390	9.907	-33.26	10.09	97.06
SDev	.21	8.9	.1135	.024	8.85	.14	.21
%RSD	1.112	8.617	25.86	.2409	26.62	1.433	.2138
#1	18.71	112.9	.5696	9.909	-23.60	9.956	96.85
#2	18.59	102.1	.3829	9.882	-35.17	10.08	97.05
#3	18.99	95.18	.3645	9.930	-41.00	10.24	97.27
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	20.00			10.00			
Range	50.00			50.00			

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	19.72	45.76	28.01	5.983	14.69	29.56	-340.5
SDev	.14	.09	14.15	9.207	3.32	.02	167.7
%RSD	.7175	.2000	50.50	153.9	22.59	.0527	49.26
#1	19.88	45.85	40.82	14.04	16.95	29.56	-172.4
#2	19.61	45.66	30.38	-4.050	16.25	29.54	-507.8
#3	19.66	45.77	12.83	7.955	10.88	29.57	-341.3
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		50.00				30.00	
Range		50.00				50.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	78.46	20.99	99.14	33.38	5.831	10.62	111.4
SDev	1.23	.55	.14	.06	.371	.65	.3
%RSD	1.565	2.629	.1453	.1931	6.359	6.127	.2744
#1	78.91	21.27	99.16	33.32	5.833	10.59	111.6
#2	77.08	21.35	99.28	33.44	6.201	9.978	111.5
#3	79.41	20.36	98.99	33.37	5.460	11.28	111.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	80.00	20.00	100.0	40.00	6.000	10.00	120.0
Range	50.00	50.00	50.00	50.00	50.00	50.00	50.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	21.72	4.289	6.589	109.0	112.5	16.14	7.849
SDev	.84	.462	.515	.5	.6	1.94	1.889
%RSD	3.868	10.77	7.822	.4273	.5480	12.02	24.07
#1	21.39	4.784	6.344	109.2	112.8	15.18	8.296
#2	21.10	4.215	7.181	108.4	113.0	18.37	5.777
#3	22.68	3.869	6.242	109.3	111.8	14.87	9.475
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	20.00						
Range	50.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	36.28	37.64	22.52	56.66
SDev	2.58	.74	.61	4.77
%RSD	7.110	1.963	2.712	8.425
#1	33.47	38.37	22.85	61.01
#2	38.53	36.89	21.81	51.55
#3	36.85	37.66	22.89	57.41
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	40.00	40.00	20.00	60.00
Range	50.50	50.50	50.50	50.50

000606

Method: CLP3I Sample Name: ICSA Operator:
Run Time: 12/28/98 14:46:11
Comment: ICSA ICSA
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.2504	610500.	4.017	.2860	520500.	3.064	-2.197
SDev	.2219	660.	.081	.0126	64.	.221	.313
%RSD	88.64	.1082	2.022	4.402	.0123	7.213	14.23
#1	.0057	611300.	4.109	.2784	520500.	3.288	-2.192
#2	-.3864	610200.	3.956	.2792	520600.	3.060	-1.887
#3	-.3704	610000.	3.986	.3006	520400.	2.846	-2.512
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value		500000.			500000.		
Range		50.00			50.00		

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	5.015	.3130	204900.	8.876	535400.	-5.317	121.8
SDev	.606	.1393	33.	12.33	229.	.055	39.0
%RSD	12.08	44.51	.0162	138.9	.0428	1.043	31.99
#1	5.691	.1610	204900.	23.01	535200.	-5.254	166.3
#2	4.836	.4347	204900.	.3320	535400.	-5.345	93.56
#3	4.519	.3435	205000.	3.284	535600.	-5.354	105.6
Errors	NOCHECK	NOCHECK	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value			200000.		500000.		
Range			50.00		50.00		

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.6879	10.17	3.837	-.2533	7.283	5.974	6.697
SDev	.0597	2.77	.323	.1666	1.203	2.519	2.099
%RSD	8.682	27.27	8.429	65.76	16.51	42.16	31.34
#1	.6270	13.16	3.468	-.4439	6.265	6.462	7.389
#2	.7464	9.671	4.074	-.1809	8.610	8.214	4.339
#3	.6903	7.683	3.968	-.1352	6.974	3.248	8.363
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	3.937	-28.76	25.26	3.975	8.045	-12.03	14.95
SDev	1.895	.97	2.15	2.821	2.079	3.98	3.06
%RSD	48.12	3.372	8.503	70.97	25.84	33.08	20.48
#1	5.202	-27.65	23.18	3.141	9.499	-15.24	17.29
#2	1.759	-29.20	27.47	1.665	5.664	-7.579	16.09
#3	4.851	-29.43	25.14	7.119	8.973	-13.27	11.48
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.827	7.885	-.9479	.9048
SDev	.916	1.031	1.7025	24.48
%RSD	50.12	13.08	179.6	2706.
#1	-2.292	9.060	1.004	29.02
	-2.417	7.130	-1.720	-10.61
	-.7721	7.465	-2.127	-15.69
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value				
Range				

000607

Method: CLP3I Sample Name: ICSAB Operator:
Time: 12/28/98 14:53:04
Comment: ICSAB ICSAB
Mode: CONC Corr. Factor: 1

E 2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	195.5	Q610800.	542.5	490.7	524700.	971.6	492.5
SDev	.2	393.	.7	.3	131.	.1	.5
%RSD	.1233	.0643	.1296	.0634	.0251	.0124	.0931
#1	195.2	Q611200.	543.3	490.9	524600.	971.6	493.0
#2	195.5	Q610600.	542.1	490.7	524800.	971.4	492.4
#3	195.7	Q610500.	542.0	490.3	524600.	971.7	492.1
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	200.0	500000.	500.0	500.0	500000.	1000.	500.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	506.6	492.5	206900.	8.852	540100.	490.9	67.74
SDev	.5	1.3	94.	9.092	91.	.2	109.1
%RSD	.1083	.2561	.0452	102.7	.0168	.0492	161.1
#1	507.2	491.1	207000.	19.03	540100.	491.2	.2704
#2	506.2	492.9	207000.	5.990	540200.	490.9	9.318
#3	506.3	493.6	206800.	1.536	540000.	490.7	193.6
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	500.0	500.0	200000.		500000.	500.0	
Range	20.00	20.00	20.00		20.00	20.00	

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	980.6	116.3	506.9	1037.	56.15	55.69	600.4
SDev	.7	1.9	.3	1.	.42	1.65	2.7
%RSD	.0694	1.648	.0599	.0528	.7391	2.963	.4559
#1	980.7	114.8	507.0	1037.	55.91	57.26	601.4
#2	981.2	115.6	507.2	1036.	55.91	55.85	602.5
#3	979.8	118.5	506.6	1037.	56.63	53.97	597.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	100.0	500.0	1000.	50.00	50.00	600.0
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	109.9	23.60	72.39	595.5	602.9	50.80	61.46
SDev	2.3	1.17	.96	4.4	5.0	6.92	2.59
%RSD	2.059	4.942	1.322	.7426	.8309	13.62	4.213
#1	108.5	24.90	71.38	590.4	606.8	58.02	61.87
#2	108.7	22.66	72.49	598.6	604.5	50.14	58.69
#3	112.5	23.23	73.29	597.5	597.2	44.23	63.82
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	100.0						
Range	20.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	956.9	1037.	1011.	974.0
SDev	2.2	2.	3.	34.5
%RSD	.2295	.1533	.2688	3.541
#1	957.7	1038.	1014.	1014.
#2	954.4	1037.	1011.	954.0
#3	958.5	1035.	1008.	954.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	20.00	20.00	20.00	20.00

Method: CLP3I Sample Name: CCV Operator:
Time: 12/28/98 15:00:04
Comment: CCV CVS1
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	96.91	Q2244.	1016.	995.6	51290.	989.5	994.4
SDev	.15	16.	.	.7	63.	.6	1.5
%RSD	.1569	.6970	.0418	.0681	.1225	.0579	.1460
#1	96.76	Q2260.	1016.	995.5	51230.	988.9	993.6
#2	97.06	Q2245.	1016.	995.0	51280.	990.0	993.5
#3	96.90	Q2228.	1016.	996.3	51360.	989.5	996.0
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	100.0	2000.	1000.	1000.	50000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	997.2	953.7	2067.	48580.	51290.	990.4	48780.
SDev	1.1	1.2	5.	32.	46.	1.1	134.
%RSD	.1109	.1224	.2605	.0649	.0892	.1145	.2752
#1	997.1	953.6	2064.	48600.	51260.	989.3	48650.
#2	996.1	954.9	2064.	48550.	51260.	990.3	48780.
#3	998.3	952.5	2073.	48600.	51340.	991.5	48920.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	2000.	50000.	50000.	1000.	50000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	982.3	1038.	1012.	1006.	1005.	1026.	960.8
SDev	.6	4.	1.	.	3.	3.	1.1
%RSD	.0627	.3488	.1114	.0335	.2764	.3290	.1140
#1	982.5	1035.	1010.	1006.	1002.	1026.	959.7
#2	982.8	1042.	1012.	1005.	1007.	1030.	961.9
#3	981.6	1037.	1012.	1006.	1006.	1023.	960.7
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00	10.00	10.00	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	1019.	1004.	1005.	950.5	965.9	1028.	1025.
SDev	4.	1.	5.	6.3	2.4	4.	3.
%RSD	.3545	.0953	.4617	.6632	.2506	.4322	.3259
#1	1019.	1005.	1000.0	943.6	967.7	1031.	1024.
#2	1022.	1003.	1009.	952.0	966.8	1031.	1029.
#3	1015.	1003.	1007.	956.0	963.1	1023.	1023.
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1000.						
Range	10.00						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	944.4	965.7	1016.	938.6
SDev	4.2	4.5	2.	15.0
%RSD	.4482	.4687	.2268	1.594
#1	944.4	970.7	1018.	955.9
#2	940.1	964.4	1014.	929.8
#3	948.6	961.9	1016.	930.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	1000.	1000.	1000.	1000.
Range	10.00	10.00	10.00	10.00

Method: CLP3I Sample Name: CCB Operator:
Run Time: 12/28/98 15:07:03
Comment:
Mode: CONC Corr. Factor: 1

2294

Elem	Ag3280	Al3082	Ba4934	Be3130	Ca3179	Cd2265	Co2286
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.4428	96.48	.1068	.4605	-48.33	.2716	.1894
SDev	.4743	2.77	.0707	.0311	6.78	.0858	.2798
%RSD	107.1	2.872	66.25	6.747	14.02	31.59	147.7
#1	-.0187	99.60	.1884	.4960	-40.50	.2573	.0714
#2	-.9550	95.51	.0676	.4382	-52.27	.3637	.5089
#3	-.3548	94.32	.0643	.4473	-52.20	.1939	-.0121
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	100.0	10.00	5.000	500.0	4.000	5.000

Elem	Cr2677	Cu3247	Fe2714	K 7664	Mg2790	Mn2576	Na3302
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-.1553	-1.603	-3.351	.1692	20.84	.1269	-325.7
SDev	.4382	.141	3.226	18.31	5.59	.0467	218.2
%RSD	282.1	8.769	96.28	10820.	26.80	36.85	67.00
#1	.3327	-1.442	-.3999	19.37	27.19	.1781	-79.66
#2	-.2835	-1.663	-2.858	-17.10	18.66	.1161	-401.6
#3	-.5152	-1.702	-6.796	-1.764	16.68	.0865	-495.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	5.000	100.0	1000.	1000.	10.00	2000.

Elem	Ni2316	Tl1908	V 2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	.3690	3.147	.4297	-4.382	-.4680	2.071	-.2060
SDev	.2867	.442	.1399	.054	.7688	1.839	.8171
%RSD	77.69	14.05	32.55	1.225	164.3	88.81	396.7
#1	.6256	2.903	.5512	-4.329	.3905	1.430	.2688
#2	.0596	3.657	.2768	-4.436	-.7017	4.144	-1.150
#3	.4219	2.880	.4609	-4.382	-1.093	.6376	.2628
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5.000	10.00	20.00	10.00	2.000	5.000	10.00

Elem	As1890	22031	22032	20681	20682	19601	19602
Units	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter	ug/liter
Avge	2.638	-2.505	.5391	-.4437	-.0971	5.437	.3801
SDev	.309	1.278	.7983	.9265	.9068	3.529	2.907
%RSD	11.73	51.03	148.1	208.8	934.3	64.90	764.9
#1	2.291	-1.189	1.170	-.5895	.6875	8.931	-2.325
#2	2.740	-3.742	.8064	-1.289	-1.090	5.506	3.454
#3	2.884	-2.583	-.3585	.5471	.1111	1.875	.0103
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						
Range	5.000						

Elem	Sn1899	Bi2230	Mo2020	Ti3349
Units	ug/liter	ug/liter	ug/liter	ug/liter
Avge	-1.292	1.212	.8527	-3.535
SDev	.583	2.807	.3284	9.970
%RSD	45.09	231.6	38.52	282.0
#1	-1.533	4.450	1.231	7.692
#2	-.6274	-.5264	.6445	-11.35
#3	-1.715	-.2879	.6823	-6.943
Errors	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000
Range	20.00	10.00	5.000	30.00

STANDARDS and REAGENTS TRACEABILITY

Date: 12-29-98

HNO3 [Baker Instra-analyzed Trace-Metals grade,	Ref#*: 1M2-153-4
HCl [Baker Instra-analyzed Trace-Metals grade,	Ref#: 1M2-152-17
XCL-11 multi-element standard mix	Ref#: 7M2-226-14
XCL-2 multi-element standard mix	Ref#: ↓ 15
XCL-3A multi-element standard mix	Ref#: ↓ 13
ICV1 multi-element standard mix	Ref#: 7M1-3-9
ICV2 multi-element standard mix	Ref#: ↓ 10
ICV3 multi-element standard mix	Ref#: ↓ 11
ICV4 multi-element standard mix	Ref#: ↓ 12
ICSA multi-element standard mix	Ref#: 7M1-3-21
ICSAB multi-element standard mix	Ref#: ↓ 24
LRS-1 multi-element standard mix	Ref#: 7M1-2-12
LRS-2 multi-element standard mix	Ref#: ↓ 13
Spex multi-element standard mix	Ref#: 7M1-1-13
COM Lab mix 5	Ref#: 7M1-3-4
CRDL-1 multi-element standard mix	Ref#: 7M1-4-9
ANTIMONY (Sb) 1,000 PPM single-element standard	Ref#: ↓ 5
BISMUTH (Bi) 1,000 PPM single-element standard	Ref#: 7M1-2-21
TITANIUM (Ti) 1,000 PPM single-element standard	Ref#: 7M1-1-6
TIN (Sn) 1,000 PPM single-element standard	Ref#: ↓ 8
IRON (Fe) 10,000 PPM single-element standard	Ref#: 7M2-225-3
ALUMINUM (Al) 10,000 PPM single-element standard	Ref#: 7M1-1-4
CALCIUM (Ca) 10,000 PPM single-element standard	Ref#: ↓ 1
MAGNESIUM (Mg) 10,000 PPM single-element standard	Ref#: ↓ 2
MOLYBDENUM (Mo) 1,000 PPM single-element standard	Ref#: 7M1-3-15
ARSENIC (As) 1, 000 PPM single-element standard	Ref#: 7M1-4-3

The following standard solutions are applicable only when dissolved samples are analyzed.

XCL-LCS multi-element standard mix Ref#: 7M2-226-2
XCL-20 multi-element standard mix Ref#: 7M1-3-5

Reviewed By: Thomas P. Cole
Date: 12-28-98

The following spaces are provided for non-CLP metals standards not previously identified.

~~NA~~ ml of ~~NA~~ 1,000 PPM standard Ref# NA
~~NA~~ ml of ~~NA~~ 1,000 PPM standard Ref#

*Ref# = Logbook ID, Page number and item number. from Materials Receipt Log

000611

229A

Standards/QC Preparation for Trace ICAP

Standard Lot Number*	Preparation instructions
SO/ICB/CCB- 122898-PW	Place in a 500-ml volumetric flask: 100 ml of deionized water 30 ml concentrated HNO_3, and 25 ml concentrated HCl. Bring up to volume with deionized water. Prepare weekly.
XCL-11- 122898-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml XCL-11 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-2- 122898-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of XCL-2 into flask. Bring up to volume with deionized water. Prepare weekly.
XCL-3A- 122898-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3, and 5 ml concentrated HCl. Pipet 1.0 ml of XCL-3A into flask. Bring up to volume with deionized water. Prepare weekly.
PLSB2-2X- 122898-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml of concentrated HNO_3, and 5 ml concentrated HCl. Pipet 0.2 ml of Sn, Bi, Ti, Sb, ___, ___, into flask. Bring up to volume with deionized water. Prepare weekly.
STD3- 122898-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 5 ml concentrated HCl 1.0 ml of 10,000-ppm Al, 0.5 ml of 10,000-ppm Fe, 1.0 ml of 10,000-ppm Mg 1.0 ml of 10,000-ppm Ca, Bring up to volume with deionized water. Prepare weekly.
CVS1- 122898-PW	Place in a 500-ml volumetric flask: 400 ml of deionized water 30 ml concentrated HNO_3 25 ml of concentrated HCl 0.5ml of Sb, 0.5 ml of Sn, 0.5 ml of Bi, 0.5 ml of Ti, 0.05 ml of Al, 0.05 ml of Fe 0.500 ml of XCL-2. 0.500 ml of XCL-11, 2.5 ml of XCL-3A Bring to volume with deionized water. Prepare weekly.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: Thomas R. Cole Date: 12-28-98

000621

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2294

Standard Lot Number*	Preparation instructions*
ICV1- 122899-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml of concentrated HNO_3 10 ml concentrated HCl, Pipet 20.0 ml of ICV1 into flask. Bring up to volume with deionized water. Prepare as needed.
ICV3- 122899-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated. HNO_3 10 ml concentrated HCl Pipet:20.0 ml of ICV3, 20.0 ml of ICV2, and 20.0 ml of ICV4 into flask. Bring to volume with deionized water. Prepare as needed.
SPEXAS- 122899-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 0.2 ml of CompuChem SPEX into flask. Bring up to volume with deionized water. Prepare as needed.
ICSA- 122899-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA into flask. Bring up to volume with deionized water. Prepare as needed.
ICSAB- 122899-PW	Place in a 200-ml volumetric flask: 50 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet 20.0 ml ICSA and 20.0 ml ICSB into flask. Pipet: 0.20 ml Bi standard — ml Sn standard — ml Ti standard — ml Mo standard into flask. Bring up to volume with deionized water. Prepare as needed.
LRS- 122899-PW	Place in a 100-ml volumetric flask: 50 ml of deionized water 6 ml concentrated HNO_3 and 5 ml concentrated HCl Pipet 0.10 ml LRS-1 and 0.10 ml LRS-2 into flask. Prepare as needed.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: [signature] Date: 12-28-98

Standards/Q... Preparation for Trace ICAP

Standard Lot Number*	Preparation instructions*
...1-122899-PW	Place in a 200-ml volumetric flask: 100 ml of deionized water 12 ml concentrated HNO_3 10 ml concentrated HCl Pipet: 0.20 CRDL-1 into flask. 0.005 ml Bi into flask. 0.005 ml Sn into flask. 0.004 ml Mo into flask. 0.012 ml Ti into flask. NA ml NA 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. ↓ ml ↓ 1000 standard into flask. Bring up to volume with deionized water. Prepare as needed.
Internal Standard-122899-PW	Place in a 2000-ml volumetric flask: 1000 ml of deionized water 20 ml of concentrated HNO_3 Pipet: 10 mL of COM LAB MIX #5 internal standard. Bring up to volume with DI water. Prepare as needed. Yttrium, introduced into the sample stream yielding a final concentration in the plasma of 1 ppm, is used as an internal standard. Cesium, introduced into the sample stream yielding a final concentration in the plasma of 50ppm, is used as a reducing agent.
As-122899-PW	Place 100 ml volumetric flask 50 ml DI water 1 ml concentrated HNO_3 0.1 ml 1000 ppm As Bring to volume. Prepare as needed.

	Prepared By	Date Prepared	Preparation Instructions
Dissolved Metals only: LCS	NA	NA	Add 1.0 ml of XCL-LCS solution to 9.0 ml of acidified water NA ml HNO_3 + NA ml HCl.
Prep Blank	↓	↓	Use acidified water (1% HNO_3 + 5% HCl NA ml HNO_3 + NA ml HCl
Sample Spike			Add 0.1 ml of XCL-20 to 10.0 ml of sample.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed by: [signature] Date: 12-28-98

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CompuChem a division of Liberty Analytical Corp.. LOGBOOK 1 BBB 24

34015/00003

Automated Mercury Runlog

Case name: 34012/FCGT2, 34020/35201, 34021/00001,

Method (Circle one.): CLP (SW-846) MCAWW Date: 12/16/98 Page 1 of 2

Operator: Uerske File name: LC1216 WSL name V2B1634

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	0 ppb			1	922028		
	0.2 ppb			2	123123		
	0.5 ppb			3	922446	PBW	
	1.0 ppb			4	922049	LCSW	
	5.0 ppb			5	922046	ORG	
	10.0 ppb			6	922050	DUP	
	ICV			7	922047	SS	
	ICB			8	922048	SSD	
	CRA			9	922051		
	CCV-1			10	922052		
	CCB-1				CCV-3		
	922448	PBW			CCB-3		
2	921826	LCSW		1	922053		
3	921819	ORG		2	922054		
4	922455	PBW		3	922055		
5	922026	LCSW		4	922056	LeachBlk	
6	922017	ORG		5	922445	PBW	
7	922027	DUP		6	922336	LCSW	
8	922024	SS		7	922322	ORG	
9	922025	SSD		8	922327	DUP	
10	922056	LeachBlk		9	922334	SS	
	CCV-2			10	922335	SSD	
	CCB-2				CCV-4		
					CCB-4		

COMMENTS

Reviewed By: [signature]

Date: 12/16/98

2294

Automated Mercury Runlog

Case name: same

Method (Circle one.): CLP SW-846 MCAWW Date: 12/16/98 Page 2 of 2

Operator: Cooke File name: LC1216 WSL name V2B1634

No	Sample ID	Comments	Action needed	No	Sample ID	Comments	Action Needed
	0 ppb			1			
	0.2 ppb			2			
	0.5 ppb			3			
	1.0 ppb			4			
	5.0 ppb			5			
	10.0 ppb			6			
	ICV			7			
	ICB			8			
	CRA			9			
	CCV			10			
	CCB				CCV - 6		
	922327				CCB - 6		
2	922457	Leach BLK		1			
3	922463	Carboy		2			
4	123123			3			
5	123123			4			
6	123123			5			
7	123123			6			
8				7			
9				8			
10				9			
	CCV - 5			10			
	CCB - 5				CCV		
					CCB		

Cooke 12/16/98

Cooke 12/16/98

Cooke 12/16/98

Cooke 12/16/98

COMMENTS

Reviewed By: Carol J. Yardano

Date: 12/16/98

Folder: LC1216
08:19:58 16 Dec 1998 Protocol: HG2

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 0 08:19:58 16 Dec 1998 HG

Hg .0000 PPB -642
Ave. Int. = -642 S. D. = 0

*** Standard: 2 Rep: 1 Seq: 1 08:22:15 16 Dec 1998 HG

Hg .2000 PPB 4530
Ave. Int. = 4530 S. D. = 0

*** Standard: 3 Rep: 1 Seq: 2 08:24:33 16 Dec 1998 HG

Hg .5000 PPB 11670
Ave. Int. = 11670 S. D. = 0

*** Standard: 4 Rep: 1 Seq: 3 08:26:51 16 Dec 1998 HG

Hg 1.000 PPB 24092
Ave. Int. = 24092 S. D. = 0

*** Standard: 5 Rep: 1 Seq: 4 08:29:09 16 Dec 1998 HG

Hg 5.000 PPB 123389
Ave. Int. = 123389 S. D. = 0

*** Standard: 6 Rep: 1 Seq: 5 08:31:30 16 Dec 1998 HG

Hg 10.00 PPB 244619
Ave. Int. = 244619 S. D. = 0

E 2294

Protocol: HG2

Rev: 2.005 Time: 09:31:36 16 Dec 1998

Folder: LC1216 Seq: 6 Print: On

User: Batch: Id: Std6Rep1 Cup: Gas: 0.30 LPM

State: Idle Macro AUTOCRA 81 : F3 Print Xmit: Off Autosampler: On

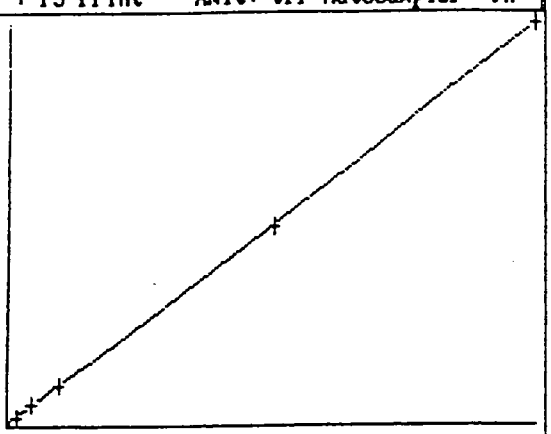
CALIBRATION: Line Calibration

Line: Hg

	Conc.	Calc.	Dev.	Accepted LiNear	
S1	.0000	-.0102	-.0102	Quadratic	
S2	.2000	.2004	.0004	WtdLinear	
S3	.5000	.4913	-.0088		C
S4	1.000	.9972	-.0028	Accept	o
S5	5.000	5.042	.0417		n
S6	10.00	9.980	-.0204	StdAdd	c

A .0000000 r .999985

B 4.07315e-5 C 1.59148e-2



Relative Absorbance

	Mean	%RSD	
S1	-642	0	-642
S2	4530	0	4530
S3	11670	0	11670
S4	24092	0	24092
S5	123389	0	123389
S6	244619	0	244619

New cal coefficients stored

2294

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 3 Ck3ICV Seq: 6 08:33:58 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		93.89	3.850	4.100	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 7 08:36:17 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0377	.2000	PPB	.0000

*** Check Standard: 4 Ck4CRA Seq: 8 08:38:32 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		61.80	.1236	.2000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 9 08:40:49 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		100.8	5.040	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 10 08:43:14 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0160	.2000	PPB	.0000

*** Sample ID: 922448 Seq: 11 08:45:28 16 Dec 1998 HG

PBW 1:1

Hg	.0098	PPB	.0000	.0098

*** Sample ID: LCSW921826 Seq: 12 08:47:41 16 Dec 1998 HG

LCSW 1:1

Hg	2.591	PPB	.0000	2.591

*** Sample ID: 921819 Seq: 13 08:49:55 16 Dec 1998 HG

QAFB01 1:1

Hg	.0377	PPB	.0000	.0377

*** Sample ID: 922455 Seq: 14 08:52:08 16 Dec 1998 HG

PBW 1:1

Hg	.0626	PPB	.0000	.0626

*** Sample ID: LCSW922026 Seq: 15 08:54:21 16 Dec 1998 HG

LCSW 1:1

Hg	2.652	PPB	.0000	2.652

*** Sample ID: 922017 Seq: 16 08:56:35 16 Dec 1998 HG

DF-SOIL 1:1

Hg	-.0019	PPB	.0000	-.0019

*** Sample ID: 922027 Seq: 17 08:58:48 16 Dec 1998 HG

DF-SOILD 1:1

Hg	.0512	PPB	.0000	.0512

2294

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 922024 Seq: 18 09:01:01 16 Dec 1998 HG
DF-SOILS 1:1
Hg 1.051 PPB .0000 1.051

*** Sample ID: 922025 Seq: 19 09:03:15 16 Dec 1998 HG
DF-SOILM 1:1
Hg .9815 PPB .0000 .9815

*** Sample ID: 922056 Seq: 20 09:05:29 16 Dec 1998 HG
LEACKBLK 1:1
Hg .0097 PPB .0000 .0097

*** Check Standard: 2 Ck2CCV Seq: 21 09:07:44 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.0	5.048	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 22 09:10:05 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0031	.2000	PPB	.0000

*** Sample ID: 922028 Seq: 23 09:12:19 16 Dec 1998 HG
DF-PLANTS 1:1
Hg .0603 PPB .0000 .0603

*** Sample ID: ~~922056~~ 123123 VC 12/16/98 Seq: 24 09:14:33 16 Dec 1998 HG
LEACH BLANK 1:1
Hg .0281 PPB .0000 .0281

*** Sample ID: 922446 Seq: 25 09:16:47 16 Dec 1998 HG
PBW 1:1
Hg .0422 PPB .0000 .0422

*** Sample ID: LCSW922049 Seq: 26 09:19:01 16 Dec 1998 HG
LCSW 1:25
Hg 7.539 PPB .0000 7.539

*** Sample ID: 922046 Seq: 27 09:21:25 16 Dec 1998 HG
1174-8605 1:1
Hg .0095 PPB .0000 .0095

*** Sample ID: 922050 Seq: 28 09:23:38 16 Dec 1998 HG
1174-8605D 1:1
Hg -.0176 PPB .0000 -.0176

*** Sample ID: 922047 Seq: 29 09:25:50 16 Dec 1998 HG
1174-8605S 1:25
Hg 7.736 PPB .0000 7.736

2294

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 922048 Seq: 30 09:28:04 16 Dec 1998 HG
1174-8605M 1:25
Hg 7.699 PPB .0000 7.699

*** Sample ID: 922051 Seq: 31 09:30:19 16 Dec 1998 HG
1174-8705 1:1
Hg .0067 PPB .0000 .0067

*** Sample ID: 922052 Seq: 32 09:32:32 16 Dec 1998 HG
1174-8805 1:1
Hg -.0029 PPB .0000 -.0029

*** Check Standard: 2 Ck2CCV Seq: 33 09:34:46 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		~~102.6~~	5.130	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 34 09:37:04 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0090	.2000	PPB	.0000

*** Sample ID: 922053 Seq: 35 09:39:18 16 Dec 1998 HG
1174-8905 1:1
Hg .0338 PPB .0000 .0338

*** Sample ID: 922054 Seq: 36 09:41:31 16 Dec 1998 HG
1174-9005 1:1
Hg .0336 PPB .0000 .0336

*** Sample ID: 922055 Seq: 37 09:43:44 16 Dec 1998 HG
1174-9105 1:1
Hg .0323 PPB .0000 .0323

*** Sample ID: 922056 Seq: 38 09:45:57 16 Dec 1998 HG
LEACHBLK 1:1
Hg .0011 PPB .0000 .0011

*** Sample ID: 922445 Seq: 39 09:48:10 16 Dec 1998 HG
PBW 1:1
Hg .0083 PPB .0000 .0083

*** Sample ID: LCSW922336 Seq: 40 09:50:23 16 Dec 1998 HG
LCSW 1:25
Hg 7.758 PPB .0000 7.758

*** Sample ID: 922322 Seq: 41 09:52:40 16 Dec 1998 HG
WC01 1:1
Hg -.0114 PPB .0000 -.0114

Line Conc. Units SD/RSD 1 2 3 4 5

*** Sample ID: 922337 Seq: 42 09:54:54 16 Dec 1998 HG
WC01D 1:1
Hg .0336 PPB .0000 .0336

*** Sample ID: 922334 Seq: 43 09:57:08 16 Dec 1998 HG
WC01S 1:25
Hg 7.816 PPB .0000 7.816

*** Sample ID: 922335 Seq: 44 09:59:27 16 Dec 1998 HG
WC01M 1:25
Hg 7.615 PPB .0000 7.615

*** Check Standard: 2 Ck2CCV Seq: 45 10:01:47 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.5	5.125	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 46 10:04:02 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0035	.2000	PPB	.0000

*** Sample ID: 922327 Seq: 47 10:06:16 16 Dec 1998 HG
WC02 1:1
Hg .0125 PPB .0000 .0125

*** Sample ID: 922457 Seq: 48 10:08:30 16 Dec 1998 HG
LEACHBLK 1:1
Hg .0165 PPB .0000 .0165

*** Sample ID: 123123 Seq: 49 10:10:44 16 Dec 1998 HG

Hg .0084 PPB .0000 .0084

*** Sample ID: 123123 Seq: 50 10:12:58 16 Dec 1998 HG

Hg .0010 PPB .0000 .0010

*** Sample ID: 123123 Seq: 51 10:15:12 16 Dec 1998 HG

Hg .0027 PPB .0000 .0027

*** Check Standard: 1 Ck1ICB/CCB Seq: 52 10:17:27 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0360	.2000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 53 10:19:42 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		103.0	5.148	5.000	PPB	.0000

2294

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2CCV Seq: 54 10:22:00 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.5	5.127	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 55 10:24:17 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0091	.2000	PPB	.0000

*** Check Standard: 2 Ck2CCV Seq: 56 10:26:32 16 Dec 1998 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		102.9	5.144	5.000	PPB	.0000

*** Check Standard: 1 Ck1ICB/CCB Seq: 57 10:28:48 16 Dec 1998 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0032	.2000	PPB	.0000

Standards/QC Preparation Log for Cold Vapor Mercury

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK 1 NNN 24

STANDARDS AND REAGENTS TRACEABILITY	
ICV-5	Ref#: 7M1-2-26
Sulfuric Acid (H_2SO_4)	Ref#: 1M2-151-28
Nitric Acid (HNO_3)	Ref#: 1M2-153-5
Potassium ~~Persulfate~~ ($KMnO_4$) manganate 12/16/98	Ref#: 7M1-171-4
Hydrochloric Acid (HCl)	Ref#: 1M2-152-17
Mercury (20-ppm Hg)	Ref#: 7M1-37
Potassium Persulfate ($K_2S_2O_8$)	Ref#: 1M2-151-27
Hydroxylamine Hydrochloride (NH_2OH-HCl)	Ref#: 1M2-153-8
Stannous Chloride ($SnCl_2$-$2H_2O$)	Ref#: 1M2-153-1

STANDARD LOT NUMBER	PREPARATION INSTRUCTIONS
Hg 100 ppb- 1 2 0 7 9 8 - I C	Place in a 100-ml volumetric flask: 0.5 ml of 20-ppm Hg stock solution 5.0 ml of concentrated HNO_3 Baker instra-analyzed Trace Metals grad Dilute to 100 volume with DI water. Prepare as needed
$K_2S_2O_8$- 1 2 1 4 9 8 - J C Potassium persulfate	Place in a 1000-ml Erienmeyer flask: 50.0 g of $K_2S_2O_8$ Baker instra-analyzed Trace Metals grade Dilute to 1000 volume with DI water. Transfer a repippettor bottle. Prepare as needed
$KMnO_4$- 1 2 1 4 9 8 - J C Potassium permanganate	Place in a 1000-ml Erienmeyer flask: 50.0 g of $KMnO_4$ Baker instra-analyzed Trace Metals grade Dilute to 1000 volume with DI water. Transfer to a repipettor bottle. Prepare as needed
NH_2OH-HCl- 1 2 1 5 9 8 - L C Hydroxylamine hydrochloride	Place in a 1000-ml volumetric flask. 240.0 g of NH_2OH-HCl Baker analyzed Dilute to 1000 volume with DI water. Place solution in a repippetor bottle. Prepare as needed

•Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: [signature] Date: 12/16/98

4629-1
00065
00065

STANDARD LOT NUMBER	PREPARATION INSTRUCTIONS
$SnCl_2$- 120898-LC Stannous chloride	Place in a 1000-ml volumetric flask 100 g of $SnCl_2$-$2H_2O$ Baker Analyzed 250 ml of HCl Baker Analyzed, Dilute to 1000 ml with DI water Prepare as needed
0- 121598-LC 0.2- 121598-LC 0.5- 121598-LC 1.0- 121598-LC 5.0- 121598-LC 10.0- 121598-LC Standard Curve (0, 0.2, 0.5, 1.0, 5.0, 10.0 ppb)	Pipet into 250-ml fleakers: 0, 0.2, 0.5, 1.0, 5.0, 10.0 ml of 100-ppb Hg standard solution; dilute each to 100 mL with DI water. Add: 5.0 ml of H_2SO_4 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution. All standards are digested with samples and recorded on the appropriate logs submitted with this data. **Prepare** with each batch of samples.
ICV-5- 121598-LC	Pipet into 250-ml fleaker: 1.0 ml of ICV-5 and 99 ml of DI water. Add: 5.0 ml of H_2SO_4 2.5 ml of concentrated HNO_3 (Baker Instra-analyzed Trace Metals Grade 15 ml of $KMnO_4$ solution and 8 ml of $K_2S_2O_8$ solution Prepare with each batch of samples. This standard is digested with samples and recorded on the appropriate logs submitted with this data. **Prepare** with each batch of samples.

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Reviewed By: Carol J. Yandrisevits Date: 12/16/98

000625

~~300~~ ~~210~~

5. Digestion and Distillation Logs

Logs shall be submitted in the following order: digestion logs for ICP, flame AA (if used), furnace AA (if used), and mercury preparations, followed by a copy of the distillation log for cyanide.

Metals Preparation Log

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK ID 52

Method (Circle one.): CLP(ILM04.0) 200.7 3010A 3020A 3050B 3005A

Case/SDG No. 33937-00005 Digestion Temp.: 95° Prepared by J. Cole Date 12/17/98

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial Plasma (wt/vol)	Final Plasma (vol)	Initial Furnace (wt/vol)	Final Furnace (vol)	Description Before	Description After	pH
1	[redacted]475	T4-981207	12/12/98	50ml	50ml	N/A	N/A	Colorless/Clear	Colorless/Clear	6.8
2										
3		JM 12-29-98								
4										
5										
6									12/17/98	
7							12/17/98			
8										
9										
10					Bottle 2					
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21	Sample Spike: N/A	QC N/A	N/A	N/A	N/A	N/A	N/A	REF CCN: N/A)	QC N/A	
22	Duplicate Sample N/A	F Refs	↓	↓				REF CCN:(N/A)	P Ref#:	
23	Lab Ctrl Sample: 921760A	QC	50ml	50ml				Reviewed By:	QC 6.15 5.0ml XCCCCS	
24	Prep. Blank 921357A	F Refs	↓	↓	↓	↓	↓	Date: 12/17/98	P Ref#: 7mi-3-14	
25	Reagent Manufacturer & Lot #'s: HNO3 Bill Lot# M41025 (1mi2-153-5), HCL Bill Lot# M24024 (1mi2-152-17)									

9281 212

0006227

Metals Preparation Log

COMPUCHEM a division of Liberty Analytical Corp. LOGBOOK ID 52

Method (Circle one.): CLP(ILM04.0) 200.7 3010A 3020A 3050B ~~3005A~~

Case/SDG No. 34021-00001 Digestion Temp.: 95°C Prepared by J. Carter Date 12/17/98

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial Plasma (wt/vol)	Final Plasma (vol)	Initial Furnace (wt/vol)	Final Furnace (vol)	Description Before	Description After	pH
1	922046	1174-8605	12/10/98	50ml	50ml	N/A	N/A	Colorless/liq	Colorless/liq	22
2	922051	1174-8705	↓	↓	↓	↓	↓	↓	↓	↓
3	922052	1174-8805	↓	↓	↓	↓	↓	↓	↓	↓
4	922053	1174-8905	↓	↓	↓	↓	↓	↓	↓	↓
5	922054	1174-9005	↓	↓	↓	↓	↓	↓	↓	↓
6	922055	1174-9105	↓	↓	↓	↓	↓	↓	↓	↓
7	922056	TCLP BLK JS	↓	↓	↓	↓	↓	↓	↓	↓
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21	Sample Spike: 922047/922048	QC N/A		50ml	50ml	N/A	N/A			
22	Duplicate Sample 922050	F Refs		↓	↓	↓	↓			
23	Lab Ctrl Sample: 922049	QC								
24	Prep. Blank 922446	F Refs								
25	Reagent Manufacturer & Lot #'s: Ag: B/A Lot # M410231 (1mz-152-5), HCL: B/A Lot # M240241 (1mz-152-17)									

J. Carter 12/17/98

REF CCN: 922046)

REF CCN: (922046)

Reviewed By: Carol Hendrickson

Date: 12/17/98

QC 5.1/5.9 ✓ (0.5ml (Ag)) (0.5ml (std-500))

P Ref#: (7mz-225-13) (7mz-219-6)

QC LCS (0.5ml (Ag)) (0.5ml (std-500))

P Ref#: (7mz-225-13) (7mz-219-6)

000628 829000

Mercury Preparation Log

CompuChem a division of Liberty Analytical Corp. Logbook 1F 40

Method (Circle one.): MCAWW: 245.1 245.5 ILM04.0: 245.1-M 245.5-M SW846: 7470A 7471A

Case/SDG: 34021-00001

Prepared by J. Cortez Date 12/15/98

#	CCN (Lab ID)	Customer ID	Date Rec'd	Initial (wt/vol)	Final (vol)	Description Before	Description After	pH
1	922046	1174-8605	12/10/98	100ml	100ml	Colorless liquid	Violet	2.2
2	922051	1174-8705						
3	922052	1174-8805						
4	922053	1174-8905						
5	922054	1174-9005						
6	922055	1174-9105						
7	922056	1CLPBLKBJ5	12/10/98					
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
	922047 922048	Sample Spike	N/A	100ml	100ml	N/A	Ref CCN: (922046)	
	922050	Duplicate Sample					Ref CCN: (922046)	
	922049	Lab Ctrl Sample					Reviewed by: J. Williams	
	922046	Prep. Blank					Date: 12/15/98	

J. Cortez 12/15/98

Standard Curve

- 0 ml 100 ppb Hg to 100 ml
- 0.2 ml 100 ppb Hg to 100 ml
- 0.5 ml 100 ppb Hg to 100 ml
- 1.0 ml 100 ppb Hg to 100 ml
- 5.0 ml 100 ppb Hg to 100 ml
- 10.0 ml 100 ppb Hg to 100 ml
- ICV-5:
- 1.0 ml of ICV-5 to 100 ml

The standards listed above were digested in the same manner and at the same time as the associated samples. For all standards and QC preparations, and lot #s associated with this batch, refer to the attached Standard Preparation Logbook (1NNN), pages.

Time started: 9.00 A.M

Time finished: 11:00 A.M

Water bath temp: 95.6 °C

QC (SS): 1 ml Hg stock soln.

Ref#: 7M1-3-5

QC (LCS): 1 ml Hg stock soln.

Ref#: 7M1-3-5

Reagent Manufacturer & Lot #s:
HNO3: P.A lot # L41025 (1M2-153-5), HCl: BIA: lot # 424024 (1M2-152-17)
KMnO4 lot # 7005 KCAS (7M2-177-4), K2S2O8: lot # J03776 (1M2-151-27)

000629

COMPUCHEM

ASSIGNED TO: Carl Hooker

DATE EXTRACTED 12/10/98

EMPLOYEE ID: 1787

TCLP WASTE CHARACTERIZATION LEACHATE

-814

QUEUE # 54

COMPUCHEM SAMPLE NUMBER	CASE #	CLIENT #	PRE-TEST pH VALUE START	PRE-TEST pH VALUE FINAL	EXTRACTION FLUID AND VOL. (mL) ADDED[1] 1	EXTRACTION FLUID AND VOL. (mL) ADDED[1] 2	PARTICLE REDUCT. DONE (Y/N)	SAMPLE WEIGHT (g)	FINAL LEACH. pH VALUE	FINAL VOLUME (ml)	Percent Solid	COMMENTS
922017	31020 35701	DF-SOIL	9.83	6.57		2000	N	100.0	4.33	1800	100	RFA 357
922028	↓	DF-PLANTS	8.49	3.62	2000		Y	100.0	5.19	500	100	↓
922046	31021 00001	1174-8605	10.79	8.58		2000	N	100.0	4.68	1800	100	
922051	↓	1174-8705	10.71	9.05		2000	N	100.0	4.43	1600	100	922017 metal
922052	↓	1174-8805	10.91	9.15		2000	N	100.0	5.04	1500	100	↓ SJ
922053	↓	1174-8905	10.72	1.94	2000		N	100.0	10.69	1500	100	
922054	↓	1174-9005	10.74	8.25		2000	N	100.0	4.56	1400	100	
922055	↓	1174-9105	10.52	2.06	2000		N	100.0	9.70	1300	100	
922056	BLANK	TCLPBLKJR	4.92	4.92	2000		N/A	100.0	4.90	1900	N/A	
922057	BLANK	TCLPBLKJS	2.89	2.89		2000	N/A	100.0	2.88	1900	N/A	

CH 12/10/98

LOADED TUMBLER CALIB. CHECK (MUST BE 30 rpm ± 2 rpm)	
TUMBLER #:	CALC. RPM
1A	31
1B	29

(CC[illegible]m FOR 30 sec. AND MUL[illegible]PLY NUMBER BY 2 TO [illegible]

MANUAL COUNTER 468/

ROATATION TIME ONLY

DATE/TIME STARTED 12/10/98 / 4:00PM

DATE/TIME COMPLETED 12/11/98 / 8:3[illegible]AM

Room Temp. 22°

Final Vol. Verified [illegible]

Reviewed By: [illegible]

Received By: Temp Storage 12/11/98

Ext. Fluid 1 pH 4.92 / 4.91 (4.93 ± 0.05)

Ext. Fluid 2 pH 2.89 / 2.90 (2.88 ± 0.05)

[1] Enter volume (mL) of Extraction Fluid added into appropriate column, e.g., enter volume into column 1 if Extraction Fluid # 1 is used. Ensure that the fluid volu[illegible] sample weight ratio is 20:1.

000630

C. Chain-of-Custody Documentation

2294

The laboratory shall include a copy of the Chain-of-Custody (CoC) Documentation for all of the samples in the SDG. The CoC documentation shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 426875
Page 1 of 1

Project Name/No. [1] FDF/POP 775743
Sample Team Members [2] GB, JY
Project Center No. [3] 6585001
Project Manager [4] Paul Lear
Purchase Order No. [6] 775743
Required Report Date [11] 14 day turn

Samples Shipment Date [7] 12/ /98
Lab Destination [8] CompuChem
Lab Contact [9] Marlene Swift
Project Contact/Phone [12] MARY HALL 423 694 7326
Carrier/Waybill No. [13]

Bill to: [5] IT Corp
312 Directors Dr
Knoxville, TN 37923

Report to: [10] Paul Lear / MARY HALL
304 Directors Dr
Knoxville, TN 37923
fax 423 694 9573

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Preservative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
1174-8605	POP Solidified Surrogate	12/8/98 4:00pm	16oz GLASS	1118.64g	NONE	TCLP + UTS list Ba, Cd, Cr, Pb, Hg Ag, Sb, Be, Ni, Tl	FOR LAB USE ONLY	
1174-8705		12/8/98 4:20pm		1042.97g				
1174-8805		12/8/98 4:50pm		843.1g				
1174-8905		12/8/98 5:30pm		1178.16g				
1174-9005		12/8/98 6:00pm		1079.8g			FOR LAB USE ONLY	
1174-9105		12/8/98 6:40pm		996.28g				

Special Instructions: [23] Please provide the 3 pH readings for the TCLP method add H_2O → pH add HCl → pH 18 N → pH

Possible Hazard Identification: [24] ~~Rad Screen 12/8/98~~
Non-hazard ☑ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☑ Archive (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☑ 14 day

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Marlyn Hall / ITCorp	Date: 12/9/98 Time: 4:30pm	1. Received by [28] (Signature/Affiliation)	Date: Time:
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation) Patrine Mly	Date: 12-10-98 Time: 9:05

Comments: [29] 10°C

*See back of form for special instructions.

MCA 3/15/91

APPENDIX F
TELEPHONE CONVERSATION LOGS

E 2294

Proof of Principle Contractor Weekly Report

Date of Report: June 9, 1998 **Period of Performance:** 06/03/98 to 06/10/98

To:

Ron Hiestand
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-4753
513-648-4850 (fax)

Phil Limerick
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-5331
513-648-4850 (fax)

From:

Paul Lear
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7316
423-694-9573 (fax)

Ernie Stine
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7347
423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

Received signed contract. Scheduled first teleconference call. Begin initial preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan for submittal to FDF.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Initial preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan underway

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Begin and complete internal draft of Work Plan and Testing Quality Assurance/Quality Control Plan

9) **ACTION ITEM LIST**

None to date

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment

E 2294

Proof of Principle Contractor Weekly Report

Date of Report: June 16, 1998 **Period of Performance:** 06/10/98 to 06/16/98

To:

Rod Hiestand
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-4753
513-648-4850 (fax)

Phil Limerick
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-5331
513-648-4850 (fax)

From:

Paul Lear
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7316
423-694-9573 (fax)

Ernie Stine
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7347
423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

C ompleted first teleconference call. Continuing preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan for submittal to FDF.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan underway

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete internal draft of Work Plan and Testing Quality Assurance/Quality Control Plan

9) **ACTION ITEM LIST**

None to date

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
001	Modification of Surrogate Composition	FDF	6/10/98	6/24/98		Increasing Pb in surrogate, changing lead species
002	Confirmation of Lead Time for Lead Carbonate	IT	6/10/98	6/18/98		Delivery lead time needs to be checked to minimize schedule impact
003	Addition of Teleconference Minutes to Weekly Report	IT	6/10/98	6/17/98	6/16/98	Addition will continue in future weekly reports

10) **MINUTES OF PRIOR TELECONFERENCE CALL - June 10, 1998**

FDF Attendeees: Rod Hiestand, Dennis Nixon, Phil Limerick, Rod Gimpel, John (missed last name), Mary Morris

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Schedule for Plans - IT indicated that it would have the plans ready for review by FDF 42 days from the date of award (June 3, 1998).

Change to Surrogate Composition - FDF announced that changes to the surrogate composition would be coming within the next two weeks. These cahnges would primarily increase the level of lead by the addition of PbO. IT asked if there were any changes considered for the levels of sulfates and carbonates. IT felt that these levels may be elevated as compared to the Silos 1 and 2 residues.

Shipment of Surrogate Slurry Samples to Fernald - IT promised that samples of the surrogate slurries for the formulation development phase would be sent to FDF within 5 days after approval of the work plan.

Procurement of Reagents - FDF reminded IT to allot sufficient time for procurement of the reagents for the surrogate slurries. In the past, FDF has seen lead time for lead carbonate to be 3-4 weeks. IT was also cautioned to make sure lead carbonate ($PbCO_3$) was procured. IT promised to verify the lead time with the proposed vendor.

Addition of Minutes to Weekly Report - FDF asked if IT would add the minutes of the previous teleconference call to the following weekly report. IT agreed to comply with this request.

Next Call - The next teleconference call was scheduled for Wednesday, June 17th, at 1:00 pm EDT. Rod Hiestand will be on vacation, so Phil Limerick will hosting the call for FDF.

E 2294

Proof of Principle Contractor Weekly Report

Date of Report: June 23, 1998 **Period of Performance:** 06/17/98 to 06/23/98

To:

Rod Hiestand
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-4753
513-648-4850 (fax)

Phil Limerick
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-5331
513-648-4850 (fax)

From:

Paul Lear
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7316
423-694-9573 (fax)

Ernie Stine
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7347
423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

Continuing preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan for submittal to FDF.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan underway.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete internal draft of Work Plan and Testing Quality Assurance/Quality Control Plan.

Incorporate FDF comments on the Testing QA/QC Plan submitted with proposal.

Examine clogged pipe sample supplied by FDF for impact on material handling

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
001	Modification of Surrogate Composition	FDF	6/10/98	6/24/98		Increasing Pb in surrogate, changing lead species
002	Confirmation of Lead Time for Lead Carbonate	IT	6/10/98	6/18/98		Delivery lead time needs to be checked to minimize schedule impact
003	Addition of Teleconference Minutes to Weekly Report	IT	6/10/98	6/17/98	6/16/98	Addition will continue in future weekly reports
004	Preliminary Review of the Testing QA/QC Plan submitted in IT's proposal	FDF	6/17/98	6/24/98		IT requested comments on this plan to improve the draft submittal

10) MINUTES OF PRIOR TELECONFERENCE CALL - June 17, 1998

FDF Attendees: Phil Limerick, Rod Gimpel, John Roberts, Mary Morse, Jeff Stone

IT Attendees: Paul Lear

Items Discussed

Clarification on Surrogate Chemicals - FDF indicated that a clarification on the diatomaceous earth, feldspar, and fumed silica would be faxed on 6/17. The fax would also cover when crystalline reagent forms could be substituted for powdered reagent forms. IT promised to incorporate this information into its procurement of chemicals for the surrogate slurries.

Change to Surrogate Composition - FDF updated their progress on the changes to the surrogate composition. The revised composite surrogate composition should be ready next week, while the revised Silo 1 and 2 surrogates should be ready in the next 2 to 3 weeks. It was understood that these dates are approximate due to laboratory turnaround times.

Shipment of Surrogate Slurry Samples to Fernald - IT promised that samples of the surrogate slurries for the formulation development phase would be sent to FDF within 5 days after approval of the work plan.

Background Information - FDF announced that an information package would be sent to IT, consisting of a number of treatability, incident, and final reports from for the vitrification pilot plant. The applicability of this information to the material handling properties of the slurry was discussed.

Lead Times for Surrogate Chemicals - IT mentioned that they had not had a reply from the vendor concerning the lead time requirements for the lead carbonate. FDF suggested that IT also look at the lead time for the lead sulfate.

Testing QA/QC Plan - IT asked that FDF review the QA/QC plan that was submitted with the proposal. IT plans to submit this plan to FDF and would like comments on its applicability. FDF promised to review the document.

Next Call - The next teleconference call was scheduled for Wednesday, June 23rd, at 1:00 pm EDT.

E 2294

Proof of Principle Contractor Weekly Report

Date of Report: June 30, 1998 **Period of Performance:** 06/24/98 to 06/30/98

To:

Rod Hiestand
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-4753
513-648-4850 (fax)

Phil Limerick
Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704
513-648-5331
513-648-4850 (fax)

From:

Paul Lear
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7316
423-694-9573 (fax)

Ernie Stine
IT Corporation
304 Directors Drive
Knoxville, TN 37923
423-694-7347
423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

Continuing preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan for submittal to FDF. Internal review starting July 3.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan underway and on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete internal draft review of Work Plan and Testing Quality Assurance/Quality Control Plan. Prepare for initial submittal of these plans.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
001	Modification of Surrogate Composition	FDF	6/10/98	6/24/98		Increasing Pb in surrogate, changing lead species
002	Confirmation of Lead Time for Lead Carbonate	IT	6/10/98	6/18/98	6/26/98	Delivery lead time was checked to minimize schedule impact. Alternative suppliers identified
005	Confirmation of Lead Time for Lead Oxide	IT	6/24/98	6/30/98	6/26/98	IT needs to confirm lead times to minimize schedule impacts
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers
007	Use of Supplier Document Submittal Form	IT	6/24/98	6/30/98	6/30/98	IT will used the form with every submittal

10) MINUTES OF PRIOR TELECONFERENCE CALL - June 23, 1998

FDF Attendees: Rod Hiestand, Phil Limerick, Rod Gimpel, Mary Morse, Jeff Stone

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Lead Time of Lead Carbonate and Lead Sulfate - IT discussed that its primary supplier (Aldrich Chemical) had severe lead time restrictions for supplying the PbCO3 and PbSO4. To avoid any schedule delay, IT was currently lining up secondary suppliers in order to avoid any delays in the schedule. IT promised to look into PbO lead times. Also, IT agreed to supply FDF will any information (lead times, quantities available) they obtain on chemical suppliers for distribution by FDF to other vendors.

Change to Surrogate Composition - FDF updated their progress on the changes to the surrogate composition. The revised composite surrogate composition should be ready Friday (June 26th). The major change would be the addition of PbO at approximately 4%. The revised Silo 1 and 2 surrogates should be ready in the next 1 to 2 weeks. It was understood that these dates are approximate due to laboratory turnaround times.

Shipment of Clogged Pipe Sample - FDF announced that the shipment of the clogged pipe sample has been delayed since the material is classified as a waste. They would inform IT when the sample would be shipped. IT promised that they would have the necessary internal paperwork in place to receive the sample.

Submittal Register - FDF asked that IT use the Supplier Document Submittal form, transmitted June 19th, with all submittals. This will include weekly reports. IT promised to begin using the form immediately. IT also asked for a new faxed copy of the form.

Next Call - The next teleconference call was scheduled for Wednesday, July 1st, at 1:00 pm EDT.

SUPPLIER DOCUMENT SUBMITTAL

FDF PROJECT NO. (1) 40720	CONTRACT NO: (2) 2234	SUBMITTAL NO: (3) C5-001	REV: (4) 1	DATE: (5) 6/30/98	PAGE 1 OF 1 - (6)

FROM: Paul R. Lear
IT Corporation
304 Directors Drive
Knoxville, TN 37923 (7)

40720-2234 C5-001

SIGNATURE: _____

TO: FDF ENGINEERING/CONSTRUCTION DOCUMENT CONTROL, MS 52 7 (8)

RECEIVED BY: _____ DATE: _____

			DOCUMENT FAMILY							RESUBMITTAL			SUBMITTAL TYPE			SUBMITTAL ACTION (17)		
QTY	DOCUMENT NUMBER	REV	PRO	H&S	MED	TRG	CON	ENG	QAC	YES	NO	TITLE DESCRIPTION	CFC	INF	ASSOCIATED SPECIFICATION	A	B	C
(9)	(10)	(11)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(13)	(13)	(14)	(15)	(15)	(16)			
1	WR-4		X								X	Weekly report - Week 4		X				

DISTRIBUTION

REVIEW DISTRIBUTION				CFC DISTRIBUTION			
DISTRIBUTION	MS	DISTRIBUTION	MS	DISTRIBUTION	MS	DISTRIBUTION	MS
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RECEIVED BY: _____ (20) DATE: _____ NO COMMENTS: _____ (21) COMMENTS ATTACHED _____

(SIGN/DATE AND RETURN A COPY TO EGDC, MS52 7)

(22)

SUBMITTAL ACTION CODE (BY SUPPLIER)

CFC - CERTIFIED FOR CONSTRUCTION
INF - INFORMATION/RECORD
"X" APPROPRIATE SUBMITTAL ACTION ABOVE

SUPPLIER ACTION CODE (EGDC) SUPPLIER ACTION ABOVE

A - ACCEPTED DOCUMENT: CONFORMS WITH REQUIREMENTS
B - MINOR COMMENTS. REVISE AND RESUBMIT AS CFC OR INF
C - REVISE AND RESUBMIT

006645

2229

Proof of Principle Contractor Weekly Report

2294

Date of Report: July 7, 1998 **Period of Performance:** 06/30/98 to 07/07/98

To:

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Phil Limerick
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From:

Paul Lear
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Ernie Stine
IT Corporation
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423-694-7347
423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

Continuing internal review of the Work Plan and Testing Quality Assurance/Quality Control Plan for submittal to FDF.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan underway and on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete internal draft review of Work Plan and Testing Quality Assurance/Quality Control Plan. Submit these plans to FDF.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
001	Modification of Surrogate Composition	FDF	6/10/98	6/24/98	6/26/98	Increasing Pb in surrogate, changing lead species
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers
007	Use of Supplier Document Submittal Form	IT	6/24/98	6/30/98	6/30/98	IT will used the form with every submittal

10) **MINUTES OF PRIOR TELECONFERENCE CALL - July 1, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick, Mary Morse, Dave Jacobowski

IT Attendees: Paul Lear

Items Discussed

Lead Time of Lead Carbonate and Lead Sulfate - IT informed FDF that it had lined up

alternative suppliers for lead carbonate and sulfate in order to avoid any delays in the schedule. IT also mentioned that the alternative suppliers had existing stock of lead oxide. Once the chemicals were ordered, IT agreed to supply FDF will any information (lead times, quantities available) they obtain on chemical suppliers for distribution by FDF to other vendors.

Change to Surrogate Composition - IT acknowledged the receipt of the contract modification, which updated the surrogate composition. IT mentioned that the revised composite surrogate composition would not adversely affect the cost or schedule.

Shipment of Clogged Pipe Sample - FDF verified that it would send the clogged pipe sampleas soon as the sample was collected and packaged for shipping.

Submittal Register - FDF confirmed that IT supplied a correct submittal form with the weekly report.

Next Call - The next teleconference call was scheduled for Wednesday, July 8th, at 1:00 pm EDT.

2294

Proof of Principle Contractor Weekly Report

Date of Report: July 14, 1998 **Period of Performance:** 07/08/98 to 07/14/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Work Plan and Testing Quality Assurance/Quality Control Plan will be submitted to FDF on July 15.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Await FDF review of Work Plan and Testing Quality Assurance/Quality Control Plan. Begin ordering chemicals for surrogate slurries.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers

10) **MINUTES OF PRIOR TELECONFERENCE CALL - July 8, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick, Mary Morse, Jeff Stone, John Roberts

IT Attendees: Paul Lear, Mary Hall

Items Discussed

Change to Silo 1 and 2 Sluury Composition - FDF stated that update composition for the Silo 1 and 2 slurries is still forthcoming.

Shipment of Clogged Pipe Sample - FDF verified that it would send the clogged pipe sample as soon as the sample was collected and packaged for shipping.

Universal Treatment Standards - FDF ask IT to confirm that it would include thallium

(Tl), not thorium (Th), as part of the UTS testing. IT confirmed that thallium would be analyzed for as part of the UTS testing.

Technical Paper - FDF mentioned that a technical paper on vitrification by Rod Gimpel will be available. IT requested a copy of the paper when it is available.

Bi-weekly Report - IT inquired about the removal of the bi-weekly report section of the Work Plan. FDF mentioned that the requirement had been removed in the contract modification.

Next Call - The next teleconference call was scheduled for Wednesday, July 15th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: July 21, 1998 **Period of Performance:** 07/15/98 to 07/21/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Work Plan and Testing Quality Assurance/Quality Control Plan were submitted to FDF on July 16.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan was on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Await FDF review of Work Plan and Testing Quality Assurance/Quality Control Plan. Begin ordering chemicals for surrogate slurries.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers
008	TCLP Extract pH	FDF	7/15/98	8/15/98		TCLP extract final pH for surrogate slurry

10) **MINUTES OF PRIOR TELECONFERENCE CALL - July 15, 1998**

FDF Attendees: Phil Limerick, Mary Morse, Rod Gimpel, John Roberts

IT Attendees: Ernie Stine, Mary Hall

Items Discussed

Weekly Report - FDF reminded IT that the weekly report was due by 4:00 pm the day before the weekly teleconference call.

Work Plan and QA Plan - FDF indicated that Work Plan and QA Plan were overdue. IT stated that plans were to be Fed-exed to FDF for delivery on the morning of July 16.

Surrogate slurry pH -It asked FDF to confirm that the pH for the surrogate slurry was a water pH. FDF indicated that it was a water pH.

Final pH of the Surrogate Slurry TCLP Extract - IT asked if the pH of the TCLP extract of the surrogate slurry was available. FDF said they would check for the information.

Vitrification Paper - FDF indicated that Rod Gimpel's paper on vitrification was available.

Clarification of Chemical Sources - FDF notified IT of a forthcoming clarification on the sources of selected reagents.

Shipment of Clogged Pipe Sample - FDF indicated that the shipment of the clogged pipe sample would be delay due to packaging.

Next Call - The next teleconference call was scheduled for Wednesday, July 22th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: July 28, 1998 **Period of Performance:** 07/22/98 to 07/28/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Work Plan and Testing Quality Assurance/Quality Control Plan were submitted to FDF on July 16.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward. To date, the project is 17% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan was on schedule. FDF Review is on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Await FDF review of Work Plan and Testing Quality Assurance/Quality Control Plan. Continue ordering chemicals for surrogate slurries.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers
008	TCLP Extract pH	FDF	7/15/98	8/15/98		TCLP extract final pH for surrogate slurry
009	Milestone Table	IT	7/23/98	7/30/98	7/28/98	Milestone Table will document submittal and completion dates
010	Chain-of -Custody Form	IT	7/23/98	7/30/98	7/28/98	Fax to FDF will assess legibility
011	% Completion	IT	7/23/98	7/30/98	7/29/98	IT will add % completion to Item 4 of the Weekly Report

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
012	Video Tape	IT	7/23/98	7/30/98		Availability of video showing treatment process

10) MINUTES OF PRIOR TELECONFERENCE CALL - July 22, 1998

FDF Attendees: Rod Hiestand, Mary Morse, Brian Kaufman, John Roberts

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Work Plan and QA Plan Submittal - IT promised to do a better job of informing FDF of its submittal dates. FDF suggested the IT put together a milestone table listing its submittal dates. IT agreed to supply the table.

Chain-of-Custody Form - FDF requested that IT provide a faxed copy of a filled-out chain of custody form to John Roberts to check legibility.

DOE Monthly Status Report - FDF asked IT to add the % completion to Item 4 of the Weekly Report. IT agreed to comply.

Community Monthly Status Report - FDF asked if IT had a video showing the process we propose to employ. IT promised to make internal inquiries concerning any videotapes.

Next Call - The next teleconference call was scheduled for Wednesday, July 29th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: August 4, 1998 **Period of Performance:** 07/28/98 to 08/04/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Awaiting FDF comments on Work Plan and Testing Quality Assurance/Quality Control Plan submitted on July 16.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward. To date, the project is 19% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan was on schedule. FDF Review is on schedule.

6) ISSUES

None

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Await FDF review of Work Plan and Testing Quality Assurance/Quality Control Plan. Continue ordering chemicals for surrogate slurries.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers
008	TCLP Extract pH	FDF	7/15/98	8/15/98	7/28/98	TCLP extract final pH for surrogate slurry
009	Milestone Table	IT	7/23/98	7/30/98	7/28/98	Milestone Table will document submittal and completion dates
010	Chain-of -Custody Form	IT	7/23/98	7/30/98	7/29/98	Fax to FDF will assess legibility
011	% Completion	IT	7/23/98	7/30/98	7/28/98	IT will add % completion to Item 4 of the Weekly Report

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
012	Video Tape	IT	7/23/98	7/30/98	8/03/98	No video tape available showing treatment process

10) MINUTES OF PRIOR TELECONFERENCE CALL - July 22, 1998

FDF Attendees: Rod Hiestand, Phil Limerick, Mary Morse, John Roberts

IT Attendees: Mary Hall

Items Discussed

Work Plan and QA Plan Submittal - FDF said it was pulling the comments together and would probably send the comments to IT in advance of the August 12th scheduled date.

Chain-of-Custody Form - FDF requested that IT write larger, print in block letters, and use thicker ink when preparing C-O-C forms which will be faxed to FDF. This should improve legibility of the faxed copy of a filled-out chain of custody form. IT promised to look into using the fine resolution when faxing the forms and making a darker copy prior to faxing.

TCLP pH Values - FDF supplied the pH values from the TCLP testing of the demonstration surrogate slurry. During TCLP extraction fluid determination, the pH obtained with DI water and after HCl addition was 9.46 and 1.98, respectively. After the TCLP extraction, the pH of the sample extraction fluid was 5.24.

Milestone Table - FDF acknowledged receipt of the milestone table compiled by IT.

Process Video Tape - IT indicated that it has been unable to locate a video showing the process we propose to employ. IT promised to make additional internal inquiries concerning any videotapes.

Slurry Pipe Sample - FDF indicated that the clogged slurry pipe would not be sent due to the costs associated with packaging and shipment of the sample.

Next Call - The next teleconference call was scheduled for Wednesday, August 5th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: August 11, 1998 **Period of Performance:** 08/04/98 to 08/11/98

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423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

Awaiting FDF comments on Work Plan and Testing Quality Assurance/Quality Control Plan submitted on July 16.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward. To date, the project is 22% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Preparation of the Work Plan and Testing Quality Assurance/Quality Control Plan was on schedule. FDF Review is on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Await FDF review of Work Plan and Testing Quality Assurance/Quality Control Plan and make the required corrections/changes. Begin receiving chemicals for surrogate slurries.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98		FDF can inform other vendors about reagent suppliers
012	Video Tape	IT	7/23/98	7/30/98	8/03/98	No video tape available showing treatment process
013	Photographs	IT	8/04/98	8/18/98		Photographs of the treatment process
014	Fumed Silica Specifications	IT	8/04/98	8/07/98	08/07/98	

10) **MINUTES OF PRIOR TELECONFERENCE CALL - July 22, 1998**

FDF Attendees: Rod Hiestand, John Roberts, Jeff Stone

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Work Plan and QA Plan Submittal - FDF said it was continuing to pull the comments together and would probably send the comments to IT in advance of the August 13th scheduled date.

Chain-of-Custody Form - FDF mentioned that the fine resolution was best when faxing.

Surrogate Slurry Formulation- IT inquired into the differences between the surrogate slurry formulations for the Silos 1 and 2 Proof of Principle testing and for the Silos 1 and 2 Accelerated Waste Removal Request for Proposal. FDF explained that the formulation used for settling tests at Florida International University was designed to simulate the physical aspects of the Silos 1 and 2 residuals.

Process Video Tape - IT indicated that it has been unable to locate a video showing the process we propose to employ. FDF asked if IT could provide still photographs of the process. IT promised to provide photographs.

Fumed Silica Source - IT discussed observations made while preparing practice surrogate slurries. IT noticed that the Cab-o-Sil fumed silica source had an impact on the viscosity of the 30 wt% solids slurry. Certain Cab-o-Sil fumed silica sources caused the surrogate slurry to become gelatinous. No reason for the difference was apparent. FDF asked IT to provide technical specification on the Cab-o-Sil fumed silica materials.

Radon Emission - FDF asked how IT envisioned transferring the stabilized material from the mixer to the metal box. IT stated that a sealed transfer chamber would be used to minimize radon and dust emissions and that the lid would be remotely placed on the box within the chamber. FDF asked about the size and air flow in the transfer chamber. IT did not have the specifics on the chamber at this time.

Next Call - The next teleconference call was scheduled for Wednesday, August 12th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: August 18, 1998 **Period of Performance:** 08/12/98 to 08/18/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received FDF comments on Work Plan and Testing Quality Assurance/Quality Control Plan on August 13.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward. To date, the project is 24% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

FDF review of the Work Plan and Testing Quality Assurance/Quality Control Plan was on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Respond to comments generated by the FDF review of Work Plan and Testing Quality Assurance/Quality Control Plan and make the required corrections/changes. Receive chemicals for surrogate slurries.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
006	Identification of Reagent Suppliers with Excess Capacity	IT	6/24/98	7/8/98	8/12/98	FDF can inform other vendors about reagent suppliers
013	Photographs	IT	8/04/98	8/18/98		Photographs of the treatment process

10) **MINUTES OF PRIOR TELECONFERENCE CALL - August 12, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Work Plan and QA Plan Submittal - FDF said it would send its comments by e-mail and Federal Express.

Silo 1 Surrogate Formulation - FDF mentioned that Modification #3 would be out soon. The modification would list the revised Silo 1 surrogate and the in-situ density values for

the Silo 1, Silo 2, and demonstration surrogate slurries.

Next Call - The next teleconference call was scheduled for Wednesday, August 19th, at 1:00 pm EDT.

E 2294

Proof of Principle Contractor Weekly Report

Date of Report: August 25, 1998 **Period of Performance:** 08/19/98 to 08/25/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Issuing revised Work Plan and Testing Quality Assurance/Quality Control Plan on August 27.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward. To date, the project is 26% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Revision of the Work Plan and Testing Quality Assurance/Quality Control Plan was on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Respond to comments generated by the FDF review of revised Work Plan and Testing Quality Assurance/Quality Control Plan and make the required corrections/changes.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
013	Photographs	IT	8/04/98	8/18/98	8/21/98	Photographs of the treatment process

10) **MINUTES OF PRIOR TELECONFERENCE CALL - August 19, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick

IT Attendees: Stuart Shealy

Items Discussed

Contract Modification #3 - FDF said that Contract Modification #3 would be out by the end of the week. The modification would list the revised Silo 1 surrogate and the in-situ density values for the Silo 1, Silo 2, and demonstration surrogate slurries.

Pictures of Stabilization Process - FDF asked that pictures of the process be sent to them by e-mail. IT agreed to comply.

Next Call - The next teleconference call was scheduled for Wednesday, August 26th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

E 2294

Date of Report: September 1, 1998 **Period of Performance:** 08/26/98 to 09/01/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Revised Work Plan and Testing Quality Assurance/Quality Control Plan were sent to Fdf on August 26. Delivery on these plans was on August 28.

3) RESULTS

None to date

4) SCHEDULE

Plans were delivered ot FDF one day late due to shipping address error by IT. On schedule at this time; no schedule issues going forward. To date, the project is 28% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Review of the revised Work Plan and Testing Quality Assurance/Quality Control Plan is on schedule.

2294

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Respond to comments generated by the FDF review of revised Work Plan and Testing Quality Assurance/Quality Control Plan and make the required corrections/changes. Make sure mailroom and copy center follow instructions.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
013	Photographs	IT	8/04/98	8/18/98	8/26/98	Photographs of the treatment process

10) **MINUTES OF PRIOR TELECONFERENCE CALL - August 26, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick, Brian Kaufman, Rod Gimpel, Mary Moris

IT Attendees: Ernie Stine, Mary Hall

Items Discussed

Technical Guidance - FDF said that they received the notice from IT asking for technical guidance based on comments to the Work Paln and QA Plan.

Pictures of Stabilization Process - IT e-mailed additional pictures of the process to FDF. FDF was having trouble opening the e-mail. IT offered to resend the e-mail if necessary.

Next Call - The next teleconference call was scheduled for Wednesday, September 2nd, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: September 8, 1998 **Period of Performance:** 09/02/98 to 09/08/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Awaiting FDF comments on Revised Work Plan and Testing Quality Assurance/Quality Control Plan. Received letter from FDF concerning technical direction. Scheduled a meeting for September 9 to discuss technical direction.

3) RESULTS

None to date

4) SCHEDULE

On schedule at this time; no schedule issues going forward. To date, the project is 30% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Review of the revised Work Plan and Testing Quality Assurance/Quality Control Plan is on schedule.

6) **ISSUES**

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Respond to comments generated by the FDF review of revised Work Plan and Testing Quality Assurance/Quality Control Plan and make the required corrections/changes. Clarify technical direction from FDF.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	No open action items					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - September 2, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick, Brian Kaufman, Rod Gimpel, Mary Morse, John Roberts

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Technical Guidance - FDF said their reply on the issue of technical guidance should be sent to IT by the end of the week.

Pictures of Stabilization Process - FDF confirmed that the additional pictures of the process were received.

Review of Revised Work Plan and QA Plan - FDF stated that the review of the revised plans was proceeding as scheduled.

Next Call - The next teleconference call was scheduled for Wednesday, September 9th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: September 15, 1998 **Period of Performance:** 09/09/98 to 09/15/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Held meeting at Fernald to discuss issues on the Work Plan. Awaiting FDF comments on Revised Work Plan and Testing Quality Assurance/Quality Control Plan.

3) RESULTS

None to date

4) SCHEDULE

One week behind schedule at this time; no schedule issues going forward. To date, the project is 33% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Review of the revised Work Plan and Testing Quality Assurance/Quality Control Plan was delayed to ensure that FDF and IT are in agreement moving forward.

6) ISSUES

None

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Respond to comments generated by the FDF review of revised Work Plan and Testing Quality Assurance/Quality Control Plan and make the required corrections/changes. Submit analysis sheets and moisture content data for reagents.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
014	Automated Filter Press	IT	09/09/98	09/16/98	09/14/98	Not necessary

10) MINUTES OF PRIOR TELECONFERENCE CALL - September 9, 1998

In place of the teleconference call, a meeting at Fernald was held.

FDF Attendees: Rod Hiestand, Phil Limerick, Bill Hensley, Rod Gimpel, Jeff Stone, Dennis Nixon

IT Attendees: Paul Lear, Stuart Shealy, Dave Sabloski

Items Discussed

Reagent Addition - FDF said they would like to have the reagents added through a feed hopper with a gate or valve. IT agreed that this could be done within the Demonstration system.

Placement of the Full-Scale Processing Equipment - IT indicated that during full-scale processing the filter press would be located on top of the mixer to eliminate conveying the filter cake from the filter press to the mixer. IT agreed to mention this in the Work Plan.

Dust Control - FDF asked that IT add additional information to the Work Plan on dust control from a worker safety standpoint. IT agreed to add such information and offered to add a layout drawing of the ETDC where the Demonstration Testing will be conducted.

Off-Gassing of Treated Material - FDF asked IT to mention the anticipate composition of the off-gas from the treated material. IT agreed to mention that only water vapor would be expected.

ALARA Consideration - FDF and IT discussed ALARA considerations for the potential full-scale processing and methods for mitigating worker exposure.

Sampling During Full-Scale Processing - FDF asked that IT provide information in the Work Plan on sampling of the treated material during full-scale processing. IT promised to add the information.

Automation of the Filter Press - FDF asked about automation of the filter press for the Demonstration testing. IT agreed to look into the feasibility of an automatic filter press.

Next Call - The next teleconference call was scheduled for Wednesday, September 16th, at 1:00 pm EDT.

2294

Proof of Principle Contractor Weekly Report

Date of Report: September 22, 1998 **Period of Performance:** 09/16/98 to 09/22/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received FDF comments on Revised Work Plan and Testing Quality Assurance/Quality Control Plan. Revised the Work Plan as accordance with the FDF comments.

3) RESULTS

None to date

4) SCHEDULE

One week behind schedule at this time; no schedule issues going forward. To date, the project is 35% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Awaiting final approval of Work Plan.

6) ISSUES

None

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Respond to comments generated by the FDF review of revised Work Plan and make any required corrections/changes. Submit analysis sheets and moisture content data for reagents. Begin preparations for laboratory-scale testing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None open					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - September 16, 1998**

FDF Attendees: Rod Hiestand, John Roberts

IT Attendees: Mary Hall

Items Discussed

FDF Comments - FDF said they would e-mail comments on the Work Plan and the QA Plan by Thursday AM. IT promised to quickly respond to the FDF comments.

Reagent Analyses - FDF asked that the certificates of analysis for the reagents be sent the attention of Melissa Crews and theat John Roberts would be responsible for their review.

Next Call - The next teleconference call was scheduled for Wednesday, September 22th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: September 29, 1998 **Period of Performance:** 09/23/98 to 09/29/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received FDF comments on Revised Work Plan and Testing Quality Assurance/Quality Control Plan. Submitted certificates of analysis for reagents.

3) RESULTS

None to date

4) SCHEDULE

One week behind schedule at this time; no schedule issues going forward. To date, the project is 37% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Awaiting final approval of Work Plan.

6) ISSUES

None

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Respond to comments generated by the FDF review of revised Work Plan and make any required corrections/changes. Complete preparations for and begin laboratory-scale testing.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
015	None open	IT	9/25/98	9/30/98		Source a coarser fine silica material

10) MINUTES OF PRIOR TELECONFERENCE CALL - September 23, 1998

FDF Attendees: Rod Hiestand, Phil Limerick, Jeff Stone

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Certificates of Analysis - IT mentioned that the certificates of analysis for the reagents were faxed to FDF.

Schedule for Laboratory Testing - IT discussed its schedule for the laboratory testing phase. IT plans to make the 70 wt % solids slurries on October 5th. The slurries would be adjusted with bentonite and additional water to produce the 30 wt% solids slurries on October 7th. The 30 wt% solids slurries would be dewatered on either October 9th or 12th. Stabilization testing would begin October 12th. FDF tentatively agreed to visit on October 12th and 13th.

Document for Interface on Design - FDF indicated that the document will be revised. A conference call on the revised document was scheduled on October 20th at 2 pm.

Next Call - The next teleconference call was scheduled for Wednesday, September 30th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: October 6, 1998 **Period of Performance:** 09/30/98 to 10/06/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received FDF comments on Work Plan (Rev2). Submitted additional certificates of analysis for reagents. Made 30 wt % moisture Silo 1, Silo 2, and Demonstration surrogates.

3) RESULTS

None to date

4) SCHEDULE

One week behind schedule at this time; no schedule issues going forward. To date, the project is 39% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Awaiting final approval of Work Plan.

6) ISSUES

None

2294

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Send hard copy of Final Work Plan (Rev 0) to FDF. Prepare 70 wt % moisture slurries and begin Formulation Development testing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None open					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - September 30, 1998**

FDF Attendees: Rod Hiestand, Rod Gimpel, John Roberts

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Reagents - IT discussed the status on the particle size for the lead sulfate. The material is holding up on the 100 mesh sieve either by agglomeration or static charge. Running a gloved hand over the 100 mesh sieve allows 90-95% of the material to pass through the sieve. The fine silica requirements were also discussed.

Schedule for Laboratory Testing - IT reviewed its schedule for the laboratory testing phase. IT plans to make the 70 wt % solids slurries on October 5th. Samples would be sent to FDF on October 6th. The slurries would be adjusted with bentonite and additional water to produce the 30 wt% solids slurries on October 7th. The 30 wt% solids slurries would be dewatered on either October 9th or 12th. Stabilization testing would begin October 12th. FDF tentatively agreed to visit on October 12th and 13th.

Final Approval of the Work Plan - FDF indicated that the comments to Rev 2 of the Work Plan would be out in the next two days. Approval of the Final Work Plan (Rev0) would be given based on IT's responses to the comments.

Next Call - The next teleconference call was scheduled for Wednesday, October 7th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: October 13, 1998 **Period of Performance:** 10/07/98 to 10/13/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Submitted Final Work Plan. Made 30 wt % solids Silo 1, Silo 2, and Demonstration surrogate slurries. Performed dewatering testing on those slurries. Started formulation development testing on the dewatered material.

3) RESULTS

None to date

4) SCHEDULE

One week behind schedule at this time; no schedule issues going forward. To date, the project is 41% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Awaiting final approval of Work Plan.

6) ISSUES

None

2294

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete formulation development testing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - October 7, 1998**

FDF Attendees: Rod Hiestand, Dennis Nixon, Jeff Stone, Mary Morris, Rod Gimpel, Dave Yackman (DOE)

IT Attendees: Paul Lear

Items Discussed

Surrogate materials - IT discussed the production of the 70 wt % solids Silo 1, Silo 2, and Demonstration surrogates. IT discussed the schedule for the production of the 30 wt % solids slurries and the dewatering of those slurries.

70 wt % solids samples - FDF indicated that the verifications samples of the 70 wt % solids Silo 1, Silo 2, and Demonstration surrogates were received. [Note: This was later found to be incorrect; Federal Express found and delivered the samples to FDF on 10/12 instead.]

Schedule for FDF Visit - IT reviewed its schedule for the laboratory testing phase. FDF confirmed that Rod Hiestand and Rod Gimpel would visit Knoxville on October 12th and

13th to view the formulation development testing.

Next Call - The next teleconference call was scheduled for Wednesday, October 21st, at 1:00 pm EDT. No conference call was planned for October 14th due to the FDF visit.

Proof of Principle Contractor Weekly Report

2294

Date of Report: October 20, 1998 **Period of Performance:** 10/14/98 to 10/20/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Completed formulation development testing on the dewatered material from the Silo 1, Silo 2, and Demonstration 30 wt % solids slurries. Awaiting TCLP and UCS results.

3) RESULTS

The 70 wt % solids Silo 1, Silo 2, and Demonstration surrogate materials had pH values of 9.13, 8.93, and 8.31 s.u., plasticity limits of 50.5%, 58.7%, and 53.3%moisture (dry weight basis), and compacted bulk densities of 1.67, 1.68, and 1.81 g/cm^3, respectively. Still awaiting TCLP lead results.

The 30 wt % solids slurries dewatered well when amended with 0.1 pounds/gallon of hydrated lime and recessed chamber filter pressed at 100 psi. The filter cake from the Silo 1 surrogate had 54.2% solids and a bulk density of 1.64 g/cm^3, the filter cake from the Silo 2 surrogate had 60.1% solids and a bulk density of 1.54 g/cm^3, and the filter cake from the Demonstration surrogate had 53.5% solids and a bulk density of 1.64 g/cm^3.

The formulations made using the filter cake material from the Silo 2 and Demonstration surrogate compacted well and developed strength within 5 days. Formulations made with

the filter cake material from the Silo 1 surrogate required additional water to produce a non-tacky treated material and took longer to develop strength.

4) **SCHEDULE**

On schedule at this time; need to know if surrogate materils were acceptable to remain on schedule. To date, the project is 43% complete.

5) **STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN**

Formulation development testing was completed as per the Final Work Plan.

6) **ISSUES**

Need to know if the surrogate materials were acceptable to FDF.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Compile formulation development testing results. Select stabilization formulation for Demonstration. Continue planning and preparation for Demonstration.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - October 14, 1998**

There was no teleconference call on October 14 due to the FDF visit on October 12 and 13.

Next Call - The next teleconference call was scheduled for Wed. October 21st, at 1:00 pm

Proof of Principle Contractor Weekly Report

Date of Report: October 27, 1998 **Period of Performance:** 10/21/98 to 10/27/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Awaiting TCLP and UCS results from formulation development testing on the dewatered material from the Silo 1, Silo 2, and Demonstration 30 wt % solids slurries. Receiving equipment for Demonstration.

3) RESULTS

No additional results to date.

4) SCHEDULE

On schedule at this time; need to know if surrogate materials were acceptable to remain on schedule. To date, the project is 46% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was completed as per the Final Work Plan. On schedule for Demonstration.

6) **ISSUES**

Need to know if the surrogate materials were acceptable to FDF.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Compile formulation development testing results. Select stabilization formulation for Demonstration. Continue planning and preparation for Demonstration.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - October 20, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick, Jeff Stone, Mary Morse, Rod Gimpel, Brian Kaufmann

IT Attendees: Paul Lear, Ernie Stine

Items Discussed

FDF Surrogate Testing - FDF discussed the surrogate testing it was conducting with the lead compounds submitted by the vendors.

Results to Date - IT discussed the formulation development testing results to date.

Next Call - The next teleconference call was scheduled for Tues. October 27th, at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: November 3, 1998 **Period of Performance:** 10/28/98 to 11/03/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Receiving equipment for Demonstration. Preparing to make 30 wt % solid slurries.

3) RESULTS

Received formulation development TCLP data; verifying QA prior to release. 14 day UCS data indicate that all but 2 formulation will exceed 50 psi UCS.

4) SCHEDULE

On schedule at this time; need to know if surrogate materials were acceptable to remain on schedule. To date, the project is 48% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was completed as per the Final Work Plan. On schedule for Demonstration.

6) ISSUES

Need to know if the surrogate materials were acceptable to FDF.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Compile formulation development testing results. Select stabilization formulation for Demonstration. Continue planning and preparation for Demonstration.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - October 27, 1998**

FDF Attendees: Rod Hiestand, Phil Limerick

IT Attendees: Paul Lear

Items Discussed

FDF Surrogate Testing - FDF discussed the surrogate testing it was conducting with the reagents submitted by the vendors.

Results to Date - IT discussed the formulation development testing results to date.

Automated Filter Press - IT promised to continue contacting the filter press supplier for the location of an automated filter press which FDF could observe.

Next Call - The next teleconference call scheduled for Wed. Nov. 4th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: November 10, 1998 **Period of Performance:** 11/04/98 to 11/10/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Preparing for Demonstration. Determining changes to surrogate composition as per FDF instructions.

3) RESULTS

Received formulation development TCLP data. Formulations for Silo 1 and Silo 2 met TC and UTS criteria. Formulations for Demonstration surrogate met TC, but slightly exceeded chromium UTS criteria. 14 day UCS data indicate that all but 4 formulation will exceed 50 psi UCS.

4) SCHEDULE

On schedule at this time; will assess impact of FDF instructions as to schedule. To date, the project is 50% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was completed as per the Final Work Plan. On

schedule for Demonstration.

6) **ISSUES**

Awaiting instruction by FDF on modification of surrogate composition.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Compile formulation development testing results. Determine modifications to surrogate composition as per FDF instructions.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - November 4, 1998**

FDF Attendees: Rod Hiestand, Rod Gimpel, Phil Limerick, Jeff Stone, John Roberts

IT Attendees: Paul Lear, Ernie Stine

Items Discussed

FDF Surrogate Modification - FDF indicated that the verification samples supplied by IT was not in compliance as far as TCLP-leachable lead. FDF indicated that they were looking at total lead concentrations also and IT's appeared to be lower than anticipated. FDF anticipated getting a letter out by Friday to the vendors instructing them as to how to proceed.

Demonstration Test Observation - FDF inquired about viewing from the work floor

during the Demonstration testing. IT indicated that this should be possible during lulls in processing.

Formulation Development Results - IT mentioned that the results to date are still under QA review.

Automated Filter Press - IT promised to continue contacting the filter press supplier for the location of an automated filter press which FDF could observe. JWI promised a video tape for FDF to review in the meantime.

Next Call - The next teleconference call scheduled for Thurs. Nov. 12th, at 10:30 am EST.

Proof of Principle Contractor Weekly Report

Date of Report: November 17, 1998 **Period of Performance:** 11/11/98 to 11/17/98

To:

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1) SAFETY ISSUES

None

2) ACTIVITIES

Preparing for Demonstration. Determining changes to surrogate composition as per FDF instructions.

3) RESULTS

Initial TCLP data indicate that reducing the $Mg_3(PO_4)_2$ content in the surrogate compositions may result in TCLP lead values within 650 to 850 mg/L for the Silo 2 and Demonstrations surrogates. Silo 1 surrogate composition may need further work.

4) SCHEDULE

One week behind schedule at this time; constructing new schedule to meet May 3rd deadline. To date, the project is 52% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Making change to surrogate composition to meet TCLP lead criteria. Formulation development testing will be repeated using the revised surrogate compositions.

Demonstration will follow as soon as possible.

6) **ISSUES**

Modification of surrogate compositions on-going.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Determine modifications to surrogate composition as per FDF instructions. Repeat formulation development testing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - November 4, 1998**

FDF Attendees: Rod Hiestand, Rod Gimpel, Phil Limerick, Jeff Stone, Bob Vogel

IT Attendees: Paul Lear, Ernie Stine

Items Discussed

FDF Surrogate Modification - IT indicated that they were modifying the $Mg_3(PO_4)_2$ level in the surrogate compositions to verify the effect on the TCLP-leachable lead. IT said that preliminary data should be available late Friday. FDF indicated that decreasing the $Mg_3(PO_4)_2$ level in the demonstration surrogate should result in a TCLP-leachable lead level of 800 mg/L. The difference in the TCLP-leachable lead levels for the 70 wt % solids material and the 30 wt % solids slurry was discussed. FDF indicated that there would be no real difference in the TCLP-leachable lead levels for these materials.

Schedule - IT discussed the impact to schedule. IT believes it can still meet a May 3rd deadline, especially if FDF and IT can work together to expedite the review of the draft Final Report.

Formulation Development Results - IT discussed the TCLP results to date and their implications for moving forward.

Analytical Testing Laboratories - FDF indicated that a letter allowing the use of Quanterra as an analytical laboratory would be sent to IT.

Public Viewing of Work Plan - FDF mentioned that the DOE had sent the Work Plan and QA Plan on the EPA. A copy was released by the DOE for public review. IT said that these plan contained not proprietary or confidential business information.

Next Call - The next teleconference call scheduled for Wednesday Nov. 18th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: November 24, 1998 **Period of Performance:** 11/17/98 to 11/24/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Preparing for formulation development on Demonstration surrogate.

3) RESULTS

TCLP data indicate that reducing the $Mg_3(PO_4)_2$ content 40% in the surrogate compositions would result in TCLP lead values within 650 to 850 mg/L for the Demonstration surrogate. A 75% reduction in the $Mg_3(PO_4)_2$ content of the Silo 1 surrogate and reductions in the $Mg_3(PO_4)_2$, $CaCO_3$, and $MgCO_3$ content in the Silo 2 surrogate were necessary to produce the desired TCLP-leachable lead level.

4) SCHEDULE

Two weeks behind schedule at this time; constructing new schedule to meet May 3rd deadline. To date, the project is 54% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing will be repeated using the revised surrogate

compositions. Demonstration will follow as soon as possible.

6) **ISSUES**

Modification of surrogate compositions on-going.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Repeat formulation development testing for the demonstration surrogate.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - November 11, 1998**

FDF Attendees: Rod Hiestand, Rod Gimpel, Don Lukin, John Roberts

IT Attendees: Paul Lear, Ernie Stine

Items Discussed

FDF Surrogate Modification - IT discussed their results to date on the modifications to the surrogate compositions. IT indicated that they could adjust the TCLP leachable lead level in the Silo 1 and Demonstration surrogates by modifying the $Mg_3(PO_4)_2$ level. Modification of the $Mg_3(PO_4)_2$, $MgCO_3$, and $CaCO_3$ content in the Silo 2 surrogate composition in order to modify the TCLP-leachable lead. FDF indicated that $BaSO_4$ content had no effect on the TCLP-leachable lead level, but that the carbonates may have

an effect. FDF also stated that they have seen little effect of curing on the TCLP lead levels of the 70% solids materials.

Schedule - IT indicated that a response to FDF on the technical direction of November 13 to discuss the impact to schedule. IT believes it can still meet a May 3rd deadline, especially if FDF and IT can work together to expedite the review of the draft Final Report.

Next Call - The next teleconference call scheduled for Wednesday Nov. 25th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: December 1, 1998 **Period of Performance:** 11/25/98 to 12/01/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Preparing for formulation development on Demonstration surrogate.

3) RESULTS

Preliminary TCLP data on the 70 wt % solids Demonstration surrogate indicate that the TCLP lead value is within 650 to 850 mg/L range.

4) SCHEDULE

Three weeks behind original schedule. With the surrogate composition modifications and testing durations, both required by FDF, schedule delays of 96 days are anticipated. IT is operating on an expedited schedule which allows completion by May 3, 1999. IT is on schedule with the expedited schedule, however waiting for the CES data on the 70 wt % solids Demonstration surrogate will cause a one week slip in the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing will be repeated using the revised surrogate

compositions. Demonstration will follow as soon as possible.

6) **ISSUES**

Waiting for the CES results will result in delays to the expedited schedule.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Repeat formulation development testing for the demonstration surrogate.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - November 25, 1998**

FDF Attendees: Rod Hiestand, Rod Gimpel

IT Attendees: Ernie Stine, Dave Sablosky

Items Discussed

Demonstration Surrogate - FDF acknowledged receipt of demonstration surrogate. IT discussed their TCLP results (733 +/- 150 mg/L) for the material. IT acknowledged that the technical direction to reduce the magnesium phosphate by 38% was implemented.

Schedule - FDF indicated that they may be able to shorten their review of the Draft Final

Report. IT offered to provide office space in Knoxville if necessary. FDF was preparing a response to IT's letter requesting a schedule extension and was interested to know the cost impact for acceleration of the schedule to have the presentation of the Final Report by May 3, 1999.

Silo 1 and Silo 2 Surrogate - FDF indicated that FDF would provide these surrogate materials to IT and the other vendors. FDF would prepare the 70 wt % solids materials, conduct the physical and TCLP testing. FDF promised to let IT know next week as to when the surrogate materials would be available.

Stabilization - The effect of surrogate composition materials on the stabilization of the dewatered material was discussed. IT indicated that the silica fume may be scavenging calcium from the stabilization reagents. IT stated that it provide FDF with the formulations for the second round of formulation development testing upon review of FDF's data on the Silo 1 and silo 2 surrogates.

Next Call - The next teleconference call scheduled for Wednesday Dec. 9th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: December 8, 1998 **Period of Performance:** 12/02/98 to 12/08/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Preparing for formulation development on Demonstration surrogate.

3) RESULTS

Preliminary TCLP data on the 70 wt % solids Demonstration surrogate indicate that the TCLP lead value is within 650 to 850 mg/L range. CELS data indicated that the 70 wt % solids Demonstration surrogate had a TCLP-leachable lead level of 600 mg/L. FDF verification testing indicated that the pH and moisture content were acceptable, but the plastic limit was below the acceptable range. FDF requested that IT increase the silica fume level by 2% in the Demonstration surrogate composition and reduce the fine silica by an equal weight.

4) SCHEDULE

Four weeks behind original schedule. With the surrogate composition modifications and testing durations, both required by FDF, schedule delays of 96 days are anticipated. IT is operating on an expedited schedule which allows completion by May 3, 1999. IT is five days behind the expedited schedule, due to waiting on the CES data on the 70 wt % solids

Demonstration surrogate.

5) **STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN**

Formulation development testing will be repeated using the revised surrogate compositions. Demonstration will follow as soon as possible.

6) **ISSUES**

Waiting for the CES results will result in delays to the expedited schedule.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Repeat formulation development testing for the demonstration surrogate. Make preparations for the Process Demonstration.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - December 2, 1998**

The conference call was canceled due to the Vortec Demonstration

E 2294

Proof of Principle Contractor Weekly Report

Date of Report: December 15, 1998 **Period of Performance:** 12/09/98 to 12/15/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Prepared formulation development samples on Demonstration surrogate. Awaiting initial TCLP results. Meeting held in Knoxville to discuss expedited schedule.

3) RESULTS

None this week.

4) SCHEDULE

Five weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently 4 days behind the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration will follow as soon as possible.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Gather formulation development testing results for the demonstration surrogate.
Continue making preparations for the Process Demonstration.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) MINUTES OF PRIOR TELECONFERENCE CALL - December 8, 1998

FDF Attendees: Rod Hiestand, Rod Gimpel

IT Attendees: Ernie Stine, Mary hall, Dave Sablosky

Items Discussed

Demonstration Surrogate Formulation Development - IT discussed the dewatering of the 30 wt % solids slurry. Ferrous sulfate and calcium hydroxide were added to the slurry and the slurry dewatered. The filtrate was clear and colorless, suggesting that the hexavalent chromium was converted to trivalent by the ferrous iron. Cement, triple superphosphate and other reagents were added to the filter cake during formulation development testing, though no water was added. IT indicated that samples of the

stabilized material were being sent off for TCLP analysis. Waste loading and fis calculation was discussed.

Schedule - FDF indicated that they would visit Knoxville next Monday to discuss schedule.

Next Call - The next teleconference call scheduled for Wednesday Dec. 16th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: December 22, 1998 **Period of Performance:** 12/16/98 to 12/22/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Began preparing 30 wt% solids Demonstration slurry.

3) RESULTS

None this week.

4) SCHEDULE

Six weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently 2 days behind the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration will follow as soon as possible.

6) ISSUES

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Continue making preparations for the Process Demonstration.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - December 8, 1998**

FDF Attendees: Rod Hiestand, Rod Gimpel

IT Attendees: Paul Lear, Ernie Stine, Mary Hall

Items Discussed

Demonstration Surrogate Formulation Development - IT reviewed the Formulation Development testing and indicated that it was awaiting TCLP and UCS data. . that the hexavalent chromium was converted to trivalent by the ferrous iron.

Schedule - IT reviewed modification of expedited schedule, weighing the reagents during the week of December 21 and making the 30 wt% slurries on December 28th. FDF indicated that they would visit Knoxville during these days to monitor the process.

Silo 1 and 2 Surrogates - IT and FDF discussed the amount of Silo 1 and 2 surrogate

materials required for formulation development testing. The consensus was 20 kg (dry weight) of surrogate material for each would be suitable.

Next Call - The next teleconference call scheduled for Wednesday Dec. 23rd, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: December 29, 1998 **Period of Performance:** 12/23/98 to 12/29/98

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1) SAFETY ISSUES

None

2) ACTIVITIES

Completed preparation of 30 wt% solids Demonstration slurry. Verification samples shipped to CELS and FDF.

3) RESULTS

None this week.

4) SCHEDULE

Seven weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently 3 days ahead of the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration will follow as soon as possible.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Make final preparations for the Process Demonstration. Start the Process Demonstration.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
16	Automated Filter Press	IT	10/12/98	10/30/98		Identify a site with an automated filter press for viewing

10) MINUTES OF PRIOR TELECONFERENCE CALL - December 23, 1998

Note: no teleconference call since FDF personnel were in Knoxville

Next Call - The next teleconference call scheduled for Wednesday December 30th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

E 2294

Date of Report: January 5, 1999 **Period of Performance:** 12/30/98 to 1/05/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Continue preparations for Proof of principle Demonstration.

3) RESULTS

None this week.

4) SCHEDULE

Eight weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently 1 day ahead of the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration will follow as soon as possible.

6) ISSUES

None.

E 2294

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete Proof of Principle Demonstration.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98	1/4/99	Identify a site with an automated filter press for viewing

10) **MINUTES OF PRIOR TELECONFERENCE CALL - December 30, 1998**

Note: no teleconference call due to Paul Lear's illness

Next Call - The next teleconference call scheduled for Wednesday December 30th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: January 12, 1999 **Period of Performance:** 1/06/99 to 1/12/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Completed final preparations for Proof of Principle Demonstration. Started Demonstration.

3) RESULTS

None this week.

4) SCHEDULE

Nine weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated for the Demonstration surrogate using the revised surrogate compositions. Demonstration, though delayed, has been started.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete Proof of Principle Demonstration. Start report writing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
016	Automated Filter Press	IT	10/12/98	10/30/98	1/4/99	Tape on automated filter press delivered to FDF

10) **MINUTES OF PRIOR TELECONFERENCE CALL - January 6, 1999**

FDF Attendees: Rod Hiestand, Rod Gimpel

IT Attendees: Paul Lear

Items Discussed

Refax of Weekly Report - FDF requested that IT refax the weekly report to a second fax number.

Bentonite Analysis Information - IT indicated that the chemical analysis data for the bentonite used for the Demonstration surrogate would be forwarded to FDF as required.

Demonstration Schedule - IT affirmed that the Demonstration was still on schedule for January 12th. FDF indicated that their personnel would begin arriving on Monday, January

11th and other visitors would arrive on the 12th and 13th.

Full-Scale Design - FDF asked that a full-scale design meeting be held on the 13th, during the Demonstration. The purpose of the meeting was to review design criteria and anticipated full-scale design requirements.

Disposition of Excess Reagents - IT indicated that the final disposition of any excess reagents from the Demonstration had not been decided. The cost of disposal of the hazardous materials was being weighed against the added cost of further processing and disposal.

Next Call - The next teleconference call scheduled for Wednesday January 20th, at 1:00 pm EST.

2294

Proof of Principle Contractor Weekly Report

Date of Report: January 19, 1999 **Period of Performance:** 1/13/99 to 1/19/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Completed Proof of Principle Demonstration.

3) RESULTS

None this week.

4) SCHEDULE

Ten weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated for the Demonstration surrogate using the revised surrogate compositions. Demonstration has been completed.

000721

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Prepare for formulation development on Silo 1 and 2 surrogates. Start report writing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - January 13, 1999**

Note: no teleconference due to Proof of Principle Demonstration

Next Call - The next teleconference call scheduled for Wednesday January 20th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: January 26, 1999 **Period of Performance:** 1/20/99 to 1/26/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received Silo 1 surrogate reagents. Showed cured material to FDF personnel. Began testing on samples from Process Demonstration. Began work on Draft Final Report.

3) RESULTS

None this week.

4) SCHEDULE

Ten weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated for the Demonstration surrogate using the revised surrogate compositions. Demonstration has been completed.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Prepare for formulation development on Silo 1 and 2 surrogates. Continue report writing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - January 20, 1999**

Process Demonstration Cleanup - IT indicated that cleanup of the Process Demonstration equipment was completed. FDF asked that their personnel be allowed to view the treated material to verify that it is hardening. IT said it would gladly comply.

Silo 1 and 2 Surrogate Material - IT confirmed that the Silo 1 surrogate reagent material had been received. FDF mentioned that mixing instructions were included in the container. The bentonite should be added to an appropriate amount of water. The reagents should be mixed and added to the hydrated bentonite slurry.

Alternate Fax Number - IT indicated that the fax number given (513-648-4850) did not appear operational. FDF suggested that an alternate fax number (513-648-4900) be used instead. IT agreed to use the alternate fax number until further notice.

Next Call - The next teleconference call scheduled for Wednesday January 27th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: February 2, 1999 **Period of Performance:** 1/27/99 to 2/2/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received Silo 2 surrogate reagents. Made 30 wt % solids Silo 1 and Silo 2 surrogate materials. Performed formulation development work on the surrogate slurries. Continued work on Draft Final Report.

3) RESULTS

Initial TCLP results for the Process Demonstration indicated that the Pb leaching was well below the TC level. 14-day UCS results were mostly greater than 50 psi. Initial filtrate metals results indicated that the filtrate contained high levels of lead.

4) SCHEDULE

Ten weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated for the Demonstration surrogate using the revised surrogate compositions. Demonstration has been completed.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Finish up formulation development testing on Silo 1 and 2 surrogates. Continue report writing.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) MINUTES OF PRIOR TELECONFERENCE CALL - January 27, 1999

No conference call was held due to FDF schedule.

Proof of Principle Contractor Weekly Report

2294

Date of Report: February 9, 1999 **Period of Performance:** 2/3/99 to 2/9/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Performed analytical testing for formulation development on the surrogate slurries. Continued work on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

Ten weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated for the Demonstration surrogate using the revised surrogate compositions. Demonstration has been completed.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Continue formulation development testing on Silo 1 and 2 surrogates. Continue report writing.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) MINUTES OF PRIOR TELECONFERENCE CALL - February 3, 1999

FDF Attendees: Rod Hiestand

IT Attendees: Paul Lear

Formulation Development - IT discussed the progress with the formulation development. IT mentioned that the 30 wt % solid surrogate slurries appeared thicker than previous 30 wt % solids slurries. The thickness may have been an artifact of preparation, since previous slurries were produced by adding 70wt % solids material to addition water and

bentonite slurry. IT was planning to use stabilization formulations similar to those used for the Demonstration surrogate.

Accerelation Cost Adjustment - FDF promised to process the paperwork required for the cost adjustment due to acceleration.

Demonstration Results - IT discussed the preliminary TCLP and UCS results for the Demonstration Testing batches. All batches appeared to be below the TC limit and 9 of the 11 appeared to be below the UTS level. One of the batches which exceeded the UTS level was Batch 05 which had the additional water added to it during stabilization.

Next Call - The next teleconference call scheduled for Wednesday Feb. 10th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: February 16, 1999 **Period of Performance:** 2/10/99 to 2/16/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Completing analytical testing for formulation development on the surrogate slurries. Continued work on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

Ten weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated for the Demonstration surrogate using the revised surrogate compositions. Demonstration has been completed.

6) **ISSUES**

None.

2294

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Complete formulation development testing on Silo 1 and 2 surrogates. Continue report writing.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - February 3, 1999**

FDF Attendees: Rod Hiestand

IT Attendees: Stuart Shealy

Design Basis Change - FDF informed IT that, for the full-scale design effort, the solids content of the influent slurry should be assumed to be 10%. Also, the thickener overflow should be assumed to be filtered then discharged.
Acceleration Cost Adjustment - FDF indicated that a contract modification was sent on the cost adjustment due to acceleration.

Next Call - The next teleconference call scheduled for Wednesday Feb. 17th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: February 23, 1999 **Period of Performance:** 2/17/99 to 2/23/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Finalizing analytical testing for formulation development on the surrogate slurries. Continued work on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

Ten weeks behind original schedule. IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration has been completed.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Continue final report preparation.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - February 17, 1999**

FDF Attendees: Rod Hiestand

IT Attendees: Stuart Shealy, Ernie Stine

Final Report - Discussed contents of the design sections of the final report. FDF promised to supply CD with preliminary drawings. The criteria for the disposal container was also discussed.

Schedule - FDF requested IT include % complete on the schedule section of weekly report.

Process Demonstration Results - IT discussed the 14-day strength results for the stabilization batches.

Next Call - The next teleconference call scheduled for Wednesday Feb. 24th, at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

E 2294

Date of Report: March 2, 1999 **Period of Performance:** 2/24/99 to 3/2/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Finalizing analytical testing for formulation development on the surrogate slurries. Continued work on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule. Project is 77% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration has been completed.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Continue final report preparation.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - February 24, 1999**

FDF Attendees: Rod Hiestand, Phil Limerick

IT Attendees: Paul Lear, Stuart Shealy

Final Report - Discussed contents of the final report. IT agreed to provide one unbound copy of the draft final report to FDF on March 19.

Process Demonstration Results - IT discussed the 28-day strength results for the stabilization batches. Indicated that preliminary 28-day TCLP results indicated that all batches would meet TC limits.

Next Call - The next teleconference call scheduled for Wednesday Mar.3rd at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

Date of Report: March 9, 1999 **Period of Performance:** 3/3/99 to 3/9/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Continued work on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule. Project is 79% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration has been completed.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Continue final report preparation and submit Draft Final Report to FDF on March 19th.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - February 24, 1999**

FDF Attendees: Rod Hiestand, Phil Limerick, Rod Gimpel

IT Attendees: Ernie Stine, Mary Hall

Final Report - IT discussed progress on the final report. IT agreed to provide two unbound copy of the draft final report to FDF on March 19.

Lead Leachability - IT and FDF discussed the effect of reagents in the surrogate and their effect on lead leachability.

Next Call - The next teleconference call scheduled for Wednesday Mar.10th at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: March 16, 1999 **Period of Performance:** 3/10/99 to 3/16/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Completed work on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule. Project is 81% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demostration has been completed. Final report preparation underway.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Continue final report preparation and submit 2 unbound copies of the Draft Final Report to FDF on March 18th.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - March 9, 1999**

FDF Attendees: Rod Hiestand, Rod Gimpel

IT Attendees: Paul Lear, Ernie Stine

Final Report - IT discussed progress on the final report. IT agreed to provide two unbound copy of the draft final report to FDF on March 18.

Final Presentation - IT agreed to present the final report finding on Tuesday , May 4th.

Comments Discussion Meeting - FDF suggested that the meeting to discuss the comments on the draft final report tentatively be held the week of April 12th. IT agreed to the request.

Next Call - The next teleconference call scheduled for Wednesday Mar.17th at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: March 23, 1999 **Period of Performance:** 3/17/99 to 3/23/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Submitted on Draft Final Report. Awaiting comments

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule. Project is 83% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demostration has been completed. Final report preparation underway.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Await comments on Draft Final Report. Begin making modifications on the Draft Final Report based on comments.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - March 16, 1999**

FDF Attendees: Rod Hiestand

IT Attendees: Paul Lear

Final Report - IT discussed progress on the final report. IT indicated that two unbound copy of the Draft Final Report would be sent to FDF on March 17.

Archive Samples - IT agreed to ship the archive samples to FDF in mid-April.

Final Presentation - IT agreed to present the final report finding on Thursday , May 6th.

Next Call - The next teleconference call scheduled for Wednesday Mar.17th at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: March 30, 1999 **Period of Performance:** 3/24/99 to 3/30/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Awaiting comments on Draft Final Report.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 3, 1999 and is currently on schedule with the expedited schedule. Project is 85% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation development testing was repeated using the revised surrogate compositions. Demonstration has been completed. Draft Final Report issued.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Begin work on Draft Final Report comments. Met with FDF to review comments.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - March 24, 1999**

FDF Attendees: Rod Hiestand, Phil Limerick

IT Attendees: Paul Lear

Draft Final Report Comments - Discussed preliminary comments on the Draft Final Report. FDF indicated that the comments should be collected and sent to IT by 4/2. Meeting on the comments still scheduled for week of April 12th.

Archive Samples - IT indicated that the 2"x2" molds from the Formulation Development and Process Demonstration would be shipped to FDF in mid April.

Next Call - The next teleconference call scheduled for Wednesday March 31st at 1:00 pm EST.

Proof of Principle Contractor Weekly Report

2294

Date of Report: April 6, 1999 **Period of Performance:** 3/31/99 to 4/6/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received preliminary comments on Draft Final Report and prepared responses. Awaiting final comments

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 6, 1999 and is currently on schedule with the expedited schedule. Project is 87% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demonstration has been completed. Final report preparation underway.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Await final comments on Draft Final Report. Complete modifications on the Draft Final Report based on comments. Met with FDF personnel to discuss and resolve comments.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) MINUTES OF PRIOR TELECONFERENCE CALL - March 31, 1999

FDF Attendees: Rod Hiestand

IT Attendees: Ernie Stine, Mary Hall

Final Report - FDF informed IT that preliminary comments on the Draft Final Report would be e-mailed today. FDF indicated that final comments would be available early next week.

Final Presentation - FDF issued the agenda for the presentation of the final report finding on Thursday , May 6th.

Next Call - The next teleconference call scheduled for Wednesday April 7th at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: April 13, 1999 **Period of Performance:** 4/7/99 to 4/13/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received preliminary comments on Draft Final Report and prepared responses. Awaiting final comments

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 6, 1999 and is currently on schedule with the expedited schedule. Project is 88% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demonstration has been completed. Final report preparation underway.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Await final comments on Draft Final Report. Complete modifications on the Draft Final Report based on comments. Met with FDF personnel to discuss and resolve comments.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) MINUTES OF PRIOR TELECONFERENCE CALL - April 7, 1999

FDF Attendees: Rod Hiestand, Phil Limerick

IT Attendees: Paul Lear, Ernie Stine

Final Report Comments - FDF discussed some areas of concern in the final report. IT promised to look into the concerns. FDF indicated that final comments would be available by the end of the week.

Next Call - The next teleconference call scheduled for Wednesday April 14th at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

2294

Date of Report: April 20, 1999 **Period of Performance:** 4/14/99 to 4/20/99

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1) SAFETY ISSUES

None

2) ACTIVITIES

Received final comments on Draft Final Report and prepared responses. Awaiting meeting with FDF to resolve final comments

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 6, 1999 and is currently on schedule with the expedited schedule. Project is 90% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demonstration has been completed. Final report preparation underway.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Receive final comments on Draft Final Report. Complete modifications on the Draft Final Report based on comments. Meet with FDF personnel to discuss and resolve comments.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - April 14, 1999**

FDF Attendees: Rod Hiestand, Mike Conners

IT Attendees: Paul Lear, Ernie Stine

Final Report Comments - FDF discussed some areas of concern in the final report. IT promised to look into the concerns. IT asked for and reeived additional clarification on the cost comments. FDF indicated that final comments would be available by the end of the week.

Contract Extension - Due to the delay with FDF engineering comments, IT discussed requesting additional time to complete the final report. FDF indicated that the final report could be submitted after the final report presentation on May 6.

Next Call - The next teleconference call scheduled for Wednesday April 14th at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: April 27, 1999 **Period of Performance:** 4/21/99 to 4/27/99

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From:

Paul Lear
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Ernie Stine
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1) SAFETY ISSUES

None

2) ACTIVITIES

Received final comments on Draft Final Report. Met with FDF representatives to resolve comments. Began revising final report and preparing for the presentation on May 6.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 6, 1999 and is currently on schedule with the expedited schedule. Project is 93% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demonstration has been completed. Final report preparation underway.

6) ISSUES

None.

7) CONCLUSIONS

None to date

8) PLANS FOR THE NEXT TWO WEEKS

Present finding on May 6. Submit final report on May 14.

9) ACTION ITEM LIST

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) MINUTES OF PRIOR TELECONFERENCE CALL - April 21, 1999

FDF Attendees: Rod Hiestand

IT Attendees: Paul Lear

Final Report Comments - FDF discussed some areas of concern in the final report. IT promised to look into the concerns. IT asked for and reeived additional clarification on the cost comments.

Contract Extension - Due to the delay with FDF engineering comments, IT discussed requesting additional time to complete the final report. FDF indicated that the final report could be submitted after the final report presentation on May 6. FDF agreed to prepare a contract extension.

Next Call - The next teleconference call scheduled for Wednesday April 21th at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: May 4, 1999 **Period of Performance:** 4/27/99 to 5/04/99

To:

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1) SAFETY ISSUES

None

2) ACTIVITIES

Revising final report and preparing for the presentation on May 6.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 14, 1999 and is currently on schedule with the expedited schedule. Project is 95% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demonstration has been completed. Final report preparation underway.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Present finding on May 6. Submit final report on May 14.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - April 21, 1999**

FDF Attendees: Rod Hiestand

IT Attendees: Paul Lear

Final Report Presentation - FDF and IT discussed format and content of final report preparation.

Contract Extension - FDF indicated that a contract modification for time extension would be forthcoming.

Next Call - The next teleconference call scheduled for Wednesday May 5th at 1:00 pm EDT.

Proof of Principle Contractor Weekly Report

Date of Report: May 11, 1999 **Period of Performance:** 5/05/99 to 5/011/99

To:

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From:

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Ernie Stine
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423-694-7347
423-694-9573 (fax)

1) SAFETY ISSUES

None

2) ACTIVITIES

Gave final report presentation on May 6.

3) RESULTS

None

4) SCHEDULE

IT is operating on an expedited schedule which allows completion by May 14, 1999 and is currently on schedule with the expedited schedule. Project is 98% complete.

5) STATUS OF THE PROJECT RELATIVE TO THE WORK PLAN

Formulation Development and Process Demonstration has been completed. Final report preparation will conclude on May 14.

6) **ISSUES**

None.

7) **CONCLUSIONS**

None to date

8) **PLANS FOR THE NEXT TWO WEEKS**

Submit final report on May 14.

9) **ACTION ITEM LIST**

PROOF OF PRINCIPLE PROJECT ACTION ITEM LIST

No.	Action Item/Issue	Responsible Party	Open Date	Due Date	Close Date	Comment
	None					

10) **MINUTES OF PRIOR TELECONFERENCE CALL - May 5, 1999**

FDF Attendees: Rod Hiestand

IT Attendees: Paul Lear

Final Report Presentation - FDF and IT discussed format and content of final report preparation.

Contract Extension - FDF acknowlegded IT's reply to the contract modification for time extension.

Next Call - The next teleconference call scheduled for Wednesday May 12th at 1:00 pm EDT.

APPENDIX G
STABILIZATION SUMMARY TABLE

Summary of Reagent Information and Testing Results for Stabilization Formulation Development

Dewatered Surrogate Slurry	Formulation Number	Portland Cement	Hydrated Lime	Calcium Sulfate	Class F Fly Ash	Ferrous Sulfate	Triple Superphosphate	Water	Temperature Rise (C)	Liquid Bleed	Bulk Density (g/cm3)	UCS Day 7	UCS Day 14 (psi)	UCS Day 28	TCLP Extraction Fluid	Final TCLP pH	TCLP Leaching Results (mg/L) Sb	As	Ba	Be	Cd	Cr	Pb	Hg	Ni	Se	Ag	Tl	Initial TCLP Pb (mg/L)
Silo 1	1174-35-01	0.1				0.01		0.225	3.2	No	1.37		8.8		1	7.11	<0.0035	0.0033	0.2	<0.0001	0.000424	0.0214	1.26	<0.0001	0.0018	0.74	0.00083	0.0032	231
Silo 1	1174-36-01	0.1				0.01	0.02	0.225	3.2	No	1.48		4.9		1	7.61	<0.0035	<0.0028	0.199	<0.0001	0.00043	0.0255	0.0305	<0.0001	<0.0015	0.359	0.0016	<0.0028	231
Silo 1	**1174-37-01**	0.2				0.01		0.225	4.9	No	1.43	123	274		1	6.18	<0.0035	<0.0028	0.272	<0.0001	<0.0004	0.2	1.18	<0.0001	<0.0015	0.902	0.0025	<0.0028	231
Silo 1	1174-38-01	0.2				0.01	0.02	0.225	6.6	No	1.43	41	159		1	8.14	<0.0035	<0.0028	0.292	<0.0001	<0.0004	0.163	6.03	<0.0001	0.0016	0.0816	0.0018	<0.0028	231
Silo 1	1174-39-01	0.4				0.01		0.225	4.9	No	1.53	527	877		1	6.17	<0.0035	0.0047	1.93	<0.0001	<0.0004	0.04	9.61	<0.0001	<0.0015	0.0466	<0.0005	<0.0028	231
Silo 1	1174-40-01	0.4				0.01	0.02	0.225	7	No	1.52	356	725		1	7.17	<0.0035	<0.0028	2.25	<0.0001	0.00054	0.0388	6.85	0.00015	<0.0015	0.0467	0.0016	<0.0028	231
Silo 1	***1179-52-01***	0.01	0.05			0.01	0.02		0	No	1.56		83.2		2	10.37	<0.005	0.0087	0.218	<0.0025	0.0202	0.111	0.11	<0.0001	0.0105	0.529	0.0087	<0.012	
Silo 1	1179-53-01	0.01			0.05	0.01	0.02		3	No	1.54		16	27.5	2	5.73	<0.001	0.0045	0.213	<0.0005	0.0198	0.0068	1.88	<0.0001	0.293	0.282	0.0045	<0.0024	
Silo 1	1179-54-01	0.01			0.01	0.01	0.02		2	No	1.55		16.7	34.4	2	5.47	<0.001	0.0074	0.168	<0.0005	0.015	0.0032	0.12	<0.0001	0.0148	0.528	0.0074	<0.0024	
Silo 1	1179-55-01	0.01		0.05		0.01	0.02		2	No	1.57		28.1	33.3	2	5.51	0.001	0.0076	0.222	<0.0005	0.0155	0.0134	0.626	<0.0001	0.0604	0.394	0.0076	<0.0024	
Silo 1	1179-56-01	0.01				0.01	0.02		2	No	1.56		27.8	41.2	2	5.26	0.0022	0.0364	0.426	<0.0005	0.0229	0.0044	5.76	<0.0001	0.434	0.326	0.0364	<0.0024	
Silo 1	***1179-57-01***	0.125				0.01	0.02		2	No	1.55		54.7	110.7	2	11.02	<0.001	0.0045	0.201	<0.0005	0.0144	0.174	0.0878	<0.0001	0.0022	0.576	0.0045	<0.0024	
Silo 1	1179-58-01	0.125	0.05			0.01	0.02		3	No	1.56		172		2	10.2	<0.001	0.0039	0.284	<0.0005	0.0193	0.175	0.147	<0.0001	0.0025	0.239	0.0039	<0.0024	
Silo 2	***1174-41-01***	0.1				0.01			3.3	No	1.33	63.4	121		1	7.86	<0.0028	0.128	0.135	<0.0001	<0.0004	0.35	0.0929	<0.0001	<0.0015	0.29	0.0016	<0.0028	22
Silo 2	***1174-42-01***	0.1				0.01	0.02		7.3	No	1.38	79.1	130		1	7.62	<0.0028	0.118	0.136	<0.0001	0.0056	0.193	0.002	<0.0001	0.0022	0.275	0.0017	<0.0028	22
Silo 2	**1174-43-01**	0.2				0.01			5.4	No	1.42	110	226		1	6.11	<0.0028	0.0399	0.177	<0.0001	<0.0004	0.27	2.15	0.00029	<0.0015	0.0716	0.0015	<0.0028	22
Silo 2	**1174-44-01**	0.2				0.01	0.02		7.3	No	1.4	142	259		1	7.26	<0.0028	0.0377	0.172	<0.0001	0.00053	0.344	0.923	<0.0001	0.0017	0.0876	0.0019	<0.0028	22
Silo 2	**1174-45-01**	0.4				0.01		0.075	7.2	No	1.61	561	>900		1	6.76	<0.0028	0.0146	1.33	<0.0001	<0.0004	0.689	3.64	<0.0001	<0.0015	0.0507	<0.0005	<0.0028	22
Silo 2	**1174-46-01**	0.4				0.01	0.02	0.075	7.9	No	1.58	301	591		1	6.94	<0.0028	0.0144	0.39	<0.0001	<0.0004	0.158	2.52	<0.0001	<0.0015	0.0359	<0.0005	<0.0028	22
Silo 2	***1179-59-01***	0.1	0.05			0.01	0.02		3	No	1.56		>300		2	10.85	0.002	0.149	0.196	<0.0005	0.0201	0.11	0.391	<0.0001	0.0409	0.46	<0.0004	<0.0024	
Silo 2	1179-60-01	0.1			0.05	0.01	0.02		3	No	1.52		104		2	4.67	<0.005	0.0135	0.0582	<0.0005	0.0239	0.0134	160	<0.0001	0.768	0.198	<0.002	<0.012	
Silo 2	1179-61-01	0.1			0.1	0.01	0.02		4.5	No	1.55		97.1		2	5.02	<0.001	0.0407	0.371	<0.0005	0.0202	0.0068	13.1	<0.0001	0.463	0.31	<0.0004	<0.0024	
Silo 2	1179-62-01	0.1		0.05		0.01	0.02		4	No	1.55		106		2	4.77	<0.005	0.0616	0.398	<0.0025	0.0236	0.0098	55.3	<0.0001	0.642	0.301	<0.002	<0.012	
Silo 2	1179-63-01	0.1				0.01	0.02		4	No	1.55		122		2	4.8	<0.005	0.0471	0.162	<0.0025	0.0231	0.0058	13.7	<0.0001	0.522	0.292	<0.002	<0.012	
Silo 2	***1179-64-01***	0.125				0.01	0.02		4	No	1.54		163		2	10.35	<0.005	0.112	0.235	<0.0025	0.0205	0.0591	0.507	<0.0001	0.0591	0.502	<0.002	<0.012	
Silo 2	***1179-65-01***	0.125	0.05			0.01	0.02		4	No	1.56		>300		2	10.58	0.0021	0.151	0.362	<0.0005	0.0168	0.129	0.461	<0.0001	0.0229	0.424	<0.0004	<0.0024	
Demonstration	1174-47-01	0.1				0.01			4.2	No	1.4	10.4	15.4		1	7.11	<0.0035	0.0154	0.266	<0.0001	<0.0004	0.373	5.87	<0.0001	<0.0015	0.453	0.0021	<0.0028	17.2
Demonstration	1174-48-01	0.1				0.01	0.02		4.8	No	1.48	18.3	19.9		1	6.56	<0.0035	0.0244	0.175	<0.0001	<0.0004	0.655	0.178	<0.0001	<0.0015	0.623	<0.0005	<0.0028	17.2
Demonstration	1174-49-01	0.2				0.01			6	No	1.53		103		1	6.41	<0.0035	0.0075	0.302	<0.0001	0.00099	0.463	25.9	<0.0001	<0.0015	0.124	0.0019	<0.0028	17.2
Demonstration	1174-50-01	0.2				0.01	0.02		7.9	No	1.55	29.4	87.9		1	7.61	<0.0035	0.008	0.244	<0.0001	<0.0004	0.693	9.73	<0.0001	<0.0015	0.13	0.00081	<0.0028	17.2
Demonstration	1174-51-01	0.4				0.01			7.7	No	1.64	405	>900		1	7.82	<0.0035	0.0089	0.438	<0.0001	<0.0004	0.501	26.1	<0.0001	<0.0015	0.064	0.00081	<0.0028	17.2
Demonstration	1174-52-01	0.4				0.01	0.02		9.2	No	1.68	53.8	>900		1	7.14	<0.0035	0.0089	0.316	<0.0001	<0.0004	0.582	20.6	<0.0001	<0.0015	0.0609	0.00098	<0.0028	17.2
Demonstration	1174-86-01	0.2		0.1		0.01	0.02		6	No	1.66		>300		2	4.68	0.0276	0.102	1.16	0.0035	0.0404	0.675	341	<0.0001	0.14	0.35	<0.0004	<0.0029	733
Demonstration	1174-87-01	0.15		0.1		0.01	0.02		4	No	1.62		196		2	4.43	<0.034	0.0766	0.94	0.0063	0.0299	1.72	666	<0.0001	0.115	0.306	<0.008	<0.058	733
Demonstration	1174-88-01	0.15	0.05			0.01	0.02		5	No	1.57		>300		2	5.04	<0.017	0.0803	1.21	0.0033	0.0469	0.448	301	<0.0001	0.133	0.324	<0.0004	<0.0029	733
Demonstration	1174-89-01	0.15			0.1	0.01	0.02		7	No	1.6		102		1	10.69	0.0028	0.0052	0.277	0.00027	0.0099	0.813	4.41	<0.0001	<0.0007	0.303	<0.0004	<0.0029	733
Demonstration	1174-90-01	0.15			0.05	0.01	0.02		5	No	1.59		139		2	4.56	<0.017	0.155	1.19	0.0036	0.0315	0.878	381	<0.0001	0.122	0.364	<0.0004	<0.0029	733
Demonstration	***1174-91-01***	0.1	0.05			0.01	0.02		4	No	1.57		38.2	63.9	1	9.7	0.0019	0.0284	0.156	0.0003	0.0156	0.519	0.0114	<0.0001	<0.0007	0.689	<0.0004	<0.0029	733

Note: Formulation Numbers in bold met TCLP TC limits for Pb and had >50 psi UCS
Note: Formulation Numbers in bold and italics met TCLP UTS limits for Pb and had >50 psi UCS

Summary of Reagent Information and Testing Results for Process Demonstration Batches

Batch Number	Sample Number	Portland Cement	Hydrated Lime	Calcium Sulfate	Class F Fly Ash	Ferrous Sulfate	Triple Superphosphate	Water	Temperature Rise (C)	Liquid Bleed	Bulk Density (g/cm3)	UCS Day 7	UCS Day 14 (psi)	UCS Day 28	TCLP Extraction Fluid	Final TCLP pH	TCLP Leaching Results (mg/L) Sb	As	Ba	Be	Cd	Cr	Pb	Hg	Ni	Se	Ag	Tl	Initial TCLP Pb (mg/L)
1	1179-17-01	0.1	0.05			0.01	0.02		7	No	1.48		57.9	>300	2	7.17	0.0268	0.0737	0.473	<0.0025	0.0193	1.02	0.25	<0.0001	<0.004	0.338	<0.002	<0.012	
2	1179-18-01	0.1	0.05			0.01	0.02		8	No	1.46		69	>300	2	9.11	0.011	0.0881	0.445	<0.0025	0.0214	0.502	2.24	<0.0001	<0.004	0.401	<0.002	<0.012	
3	1179-19-01	0.1	0.05			0.01	0.02		7	No	1.52		65.6	>300	2	7.46	0.0129	0.0554	0.287	<0.0025	0.019	0.8	0.0288	<0.0001	<0.004	0.351	<0.002	<0.012	
4	1179-20-01	0.1	0.05			0.01	0.02		5.5	No	1.51		13.8	77.9	2	10	<0.005	0.0387	0.704	<0.0025	0.0204	0.729	0.0069	<0.0001	0.0112	0.311	<0.002	<0.012	
5	1179-21-01	0.1	0.05			0.01	0.02	0.12	6.5	No	1.46		108	>300	2	10.6	<0.005	0.0453	0.557	<0.0025	0.0191	0.217	0.0688	<0.0001	0.0077	0.329	<0.002	<0.012	
6	1179-22-01	0.1	0.05			0.01	0.02		6.5	No	1.47		35.7	92.2	2	9.03	<0.005	0.0693	0.436	<0.0025	0.0217	0.597	0.0737	0.00015	<0.004	0.354	<0.002	<0.012	
7	1179-23-01	0.1	0.05			0.01	0.02		7	No	1.51		9.5	63	2	10.59	0.006	0.0437	0.578	<0.0025	0.0206	0.534	0.0874	<0.0001	<0.004	0.25	<0.002	<0.012	
8	1179-24-01	0.1	0.05			0.01	0.02		7	No	1.44		63.9	>300	2	8.83	0.0097	0.0425	0.362	<0.0025	0.0201	0.686	0.0122	<0.0001	<0.004	0.302	<0.002	<0.012	
9	1179-25-01	0.1	0.05			0.01	0.02		7.5	No	1.5		56	>300	2	8	0.0106	0.0216	0.4	<0.0025	0.0206	0.642	0.0792	<0.0001	<0.004	0.27	<0.002	<0.012	
10	1179-26-01	0.1	0.05			0.01	0.02		7.5	No	1.51		49.4	>300	2	10.33	0.0098	0.032	0.427	<0.0025	0.019	0.716	0.184	<0.0001	<0.004	0.246	<0.002	<0.012	
11	1179-28-01	0.1	0.05			0.01	0.02		7	No	nd		13.8	73.7	2	10.49	<0.005	0.0326	0.438	<0.0025	0.0209	0.661	0.0151	<0.0001	<0.004	0.304	<0.002	<0.012	

Note: Sample Numbers in bold met TCLP TC limits for Pb and had >50 psi UCS
Note: Sample Numbers in bold and italics met TCLP UTS limits for Pb and had >50 psi UCS