LOCKHEED MARTIN SERVICES GROUP
ONE STERLING PLAZA
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TEXAS 77074

MEMORANDUM

DATE: May 21, 1997

TO: Dr. Melvin Ritter, ESAT RPO, Region VI

FROM: Dr. Tom C.H. Chiang, ESAT Team Manager, Region VI

SUBJECT: CLP Data Review

REF: TDF # 6-7459A, ESAT File # I-2111
ESAT Contract No. 68-D6-0005

Attached is the data review summary for Case # 25393
SDG # MFHE85
Site TRINITY VALLEY

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF DATA PACKAGE:

The package was contractually compliant as determined by CCS and Regional review.

II. TECHNICAL/USABILITY ASSESSMENT OF DATA PACKAGE:

A total of 360 results were reviewed for this data package. The package is technically provisional because of the following problems.

A. The reviewer qualified 18 percent of the results.

B. The chromium matrix spike recovery and laboratory duplicate difference exceeded the QC limits.

C. One arsenic ICP coefficient of variation exceeded 20 percent.

D. One field duplicate pair had inconsistent chromium and lead results.

962437

LOCKHEED MARTIN SERVICES GROUP
ONE STERLING PLAZA
10101 SOUTHWEST FREEWAY, SUITE 500
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MEMORANDUM

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 25393
LABORATORY SWOK
CONTRACT# 68-D5-0136
SDG# MFHE85
SOW# RAS ILM04.0
ACCT# 7FAXJN58 SF# FAXUZZ

SITE TRINITY VALLEY
NO. OF SAMPLES 15
MATRIX soil
REVIEWER (IF NOT ESD) ESAT
REVIEWER'S NAME Mike Fertitta
COMPLETION DATE May 21, 1997

SAMPLE NO.'s:

MFH-E85	MFH-E89	MFH-E93	MFH-E97	
MFH-E86	MFH-E90	MFH-E94	MFH-E98	
MFH-E87	MFH-E91	MFH-E95	MFH-E99	
MFH-E88	MFH-E92	MFH-E96		

DATA ASSESSMENT SUMMARY

	ICP	HG	CN
1. HOLDING TIMES	O	O	O
2. CALIBRATIONS	O	O	O
3. BLANKS	O	O	O
4. MATRIX SPIKES	M	O	O
5. DUPLICATE ANALYSIS	M	O	O
6. ICP QC	M		
7. FAA QC			
8. LCS	O	O	O
9. SAMPLE VERIFICATION	O	O	O
10. OTHER QC	M	O	O
11. OVERALL ASSESSMENT	M	O	O

O = Data had no problems.
M = Data qualified because of minor or major problems.
Z = Data unacceptable.
N/A = Not applicable.

ACTION ITEMS:

AREAS OF CONCERN: The chromium, copper, and manganese matrix spike recoveries exceeded the QC limit. The chromium, copper, and iron laboratory duplicate differences exceeded the QC limit. One arsenic ICP coefficient of variation exceeded 20 percent. Chromium and lead results were inconsistent for one field duplicate pair.

NOTABLE PERFORMANCE: The data package arrived 2 days early for the 35-day contractual turnaround requirement.

INORGANIC QA REVIEW
CONTINUATION PAGE

CASE 25393 **SDG** MFHE85 **SITE** TRINITY VALLEY **LAB** SWOK

COMMENTS: The laboratory analyzed 15 soil samples for total metals and cyanide by SOW ILM04.0. The samplers identified samples MFH-E91/MFH-E94 and MFH-E96/MFH-E98 as field duplicate pairs and sample MFH-E95 as the laboratory QC sample. The laboratory met the contractual 35-day data package turnaround requirement.

Approximately 49 percent of the reported results were above the CRDL's. The data package is technically provisional because of problems with matrix spike recoveries, an ICP coefficient of variation, and laboratory and field duplicate precision. The technical usability of the sample results is discussed below, and any qualifications are listed in the attached Data Summary Table.

The reviewer conducted an Evidence Audit for the Complete Sample Delivery Group File (CSF), and the Evidence Inventory Checklist is attached to this report.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL ISSUES (BASED ON THE STATEMENT OF WORK) AND TECHNICAL ISSUES (BASED ON THE NATIONAL FUNCTIONAL GUIDELINES). THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS.

1. **Holding Times:** Acceptable. The samples arrived at the laboratory preserved to the proper temperature. The laboratory met contractual holding time criteria for all sample analyses. Technical holding time criteria have not yet been established for soil samples.

2. **Calibrations:** Acceptable. Instrument calibrations met contractual requirements. CRDL standard analyses indicated acceptable instrument performance near the CRDL's.

3. **Blanks:** Acceptable. All laboratory blanks met contractual criteria. The laboratory reported six analytes at concentrations below the CRDL's in the blanks. The arsenic results above the CRDL for samples MFH-E86, MFH-E87, MFH-E88, and MFH-E90 are biased high because of laboratory contamination.

CASE 25393 SDG MFHE85 SITE TRINITY VALLEY LAB SWOK

4. **Pre-digestion/Pre-distillation Matrix Spike Recovery:** Provisional. Most matrix spike recoveries were within the QC limits. The mercury recovery was marginally below the QC limit, so sample results were not qualified. The reviewer qualified all chromium, copper, and manganese results as estimated and biased high because recoveries exceeded the QC limit.

5. **Duplicate Analysis:** Provisional. The SOW required the laboratory to flag sample results for seven analytes because of outlying duplicate differences. Arsenic, manganese, nickel, and thallium results were not qualified because these duplicate differences met the technical QC limits. The reviewer qualified all chromium, copper, and iron results as estimated because the RPD's exceeded the technical QC limit.

6. **ICP Quality Control:**

   Interference Check Sample: Acceptable. Analyte recoveries for True Solution AB were within the QC limits. ICS analyses indicated acceptable application of interelement and background corrections.

   Serial Dilution: Acceptable. All serial dilution percent differences were acceptable.

   Coefficients of Variation: Provisional. Consistent replicate ICP readings indicated acceptable instrument precision for most analyses. The reviewer qualified as estimated the arsenic result for sample MFH-E86 because the coefficient of variation exceeded 20 percent.

7. **Furnace Atomic Absorption (FAA) Quality Control:** FAA was not used for this SDG.

8. **Laboratory Control Sample (LCS):** Acceptable. All LCS results were within the QC limits.

9. **Sample Verification:** The laboratory correctly reported all sample results.

CASE 25393 SDG MFHE85 SITE TRINITY VALLEY LAB SWOK

10. **Other QC:**

Field Duplicates: Provisional. The reviewer qualified the chromium and lead results for samples MFH-E91 and MFH-E94 as estimated because these field duplicate results had RPD's of 124 percent and 110 percent, respectively.

11. **Overall Assessment:** The data package is technically provisional with the following problems.

The reviewer qualified as estimated all chromium, copper, iron, and manganese results because of problems with matrix spike recovery and/or laboratory precision.

The reviewer qualified one arsenic result as estimated because the ICP coefficient of variation exceeded 20 percent.

The reviewer qualified as estimated the chromium and lead results for two samples because of poor field duplicate precision.

INORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT Region 6 qualifiers assigned to results in the inorganic data review process.

U Undetected at the laboratory reported detection limit (IDL).

L Reported concentration is between the IDL and the CRDL.

J Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, FAA spike recovery, etc.

R Result is unusable.

F A possibility of a false negative exists.

UC Reported concentration should be used as a raised detection limit because of apparent blank contamination.

^ High bias. Actual concentration may be lower than the concentration reported.

v Low bias. Actual concentration may be higher than the concentration reported.

DATA SUMMARY

Case No.: 25393 SDG. No.: MFHE85 Reviewer: M. FERTITTA

Laboratory: SWOK Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFH-E85	FLAG	MFH-E86	FLAG	MFH-E87	FLAG	MFH-E88	FLAG	MFH-E89	FLAG	COMMENTS
ALUMINUM	2880		4130		3910		3620		5530		
ANTIMONY	0.58	L	0.71	L	0.60	L	0.58	U	1.1	L	
ARSENIC	4.2		3.9	J^	4.0	J^	4.1	J^	5.7		
BARIUM	40.4	L	37.9	L	45.3	L	42.0	L	63.0	L	
BERYLLIUM	0.37	L	0.42	L	0.52	L	0.48	L	0.60	L	
CADMIUM	0.27	U	0.31	U	0.26	U	0.29	U	0.32	U	
CALCIUM	142000		114000		122000		148000		144000		
CHROMIUM	17.5	J^	7.8	J^	5.6	J^	6.3	J^	8.9	J^	
COBALT	2.3	L	2.3	L	2.4	L	2.3	L	3.2	L	
COPPER	17.0	J^	10.6	J^	5.0	LJ^	6.0	LJ^	11.0	J^	
IRON	5570	J	5260	J	5300	J	5540	J	7360	J	
LEAD	32.2		29.0		15.5		20.1		41.2		
MAGNESIUM	1680		1560		1690		1990		2300		
MANGANESE	161	J^	168	J^	196	J^	221	J^	329	J^	
MERCURY	0.13	U	0.15	U	0.13	U	0.14	U	0.16	U	
NICKEL	6.7	L	5.6	L	5.2	L	5.5	L	7.4	L	
POTASSIUM	545	L	671	L	827	L	793	L	1170	L	
SELENIUM	0.80	U	0.92	U	0.78	U	0.87	U	0.96	U	
SILVER	0.55	L	0.31	U	0.26	U	0.29	U	0.32	U	
SODIUM	417	L	367	L	341	L	423	L	423	L	
THALLIUM	0.95	L	0.69	L	0.52	U	0.58	U	0.64	U	
VANADIUM	10.1	L	10.2	L	12.4	L	11.7	L	14.6	L	
ZINC	59.2		44.3		18.0		29.1		47.8		
CYANIDE	0.27	U	0.31	U	0.26	U	0.29	U	0.32	U	
% SOLIDS	74.6		65.3		76.9		69.0		62.3		

DATA SUMMARY

Case No.: 25393 SDG. No.: MFHE85 Reviewer: M. FERTITTA

Laboratory: SWOK Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFH-E90	FLAG	MFH-E91	FLAG	MFH-E92	FLAG	MFH-E93	FLAG	MFH-E94	FLAG	COMMENTS
ALUMINUM	3570		2550		2120		6290		1270		
ANTIMONY	0.64	L	1.6	L	1.8	L	0.62	L	2.7	L	
ARSENIC	3.6	J^	7.7		7.8		5.8		12.7		
BARIUM	43.7	L	35.6	L	142		65.7		70.0		
BERYLLIUM	0.49	L	0.41	L	0.48	L	0.59	L	0.41	L	
CADMIUM	0.28	U	0.23	U	0.24	U	0.29	U	0.46	L	
CALCIUM	147000		225000		199000		108000		226000		
CHROMIUM	5.7	J^	23.5	J^	29.7	J^	13.4	J^	99.6	J^	
COBALT	2.2	L	2.8	L	9.7	L	3.3	L	4.9	L	
COPPER	5.1	LJ^	175	J^	55.9	J^	12.8	J^	268	J^	
IRON	5440	J	17500	J	21600	J	7940	J	18200	J	
LEAD	14.4		12.6	J	19.4		66.7		43.1	J	
MAGNESIUM	2020		1930		1850		1930		2420		
MANGANESE	212	J^	302	J^	1370	J^	261	J^	554	J^	
MERCURY	0.14	U	0.12	U	0.12	U	0.14	U	0.12	U	
NICKEL	5.1	L	15.4		31.4		7.9	L	29.3		
POTASSIUM	758	L	249	L	313	L	1270	L	292	L	
SELENIUM	0.84	U	0.70	U	0.72	U	0.86	U	0.70	U	
SILVER	0.28	U	0.23	U	0.24	U	0.29	U	0.23	U	
SODIUM	447	L	467	L	493	L	439	L	420	L	
THALLIUM	0.56	U	1.6	L	1.4	L	0.74	L	1.0	L	
VANADIUM	11.8	L	15.0		15.0		14.9		18.2		
ZINC	23.7		59.4		48.4		106		46.1		
CYANIDE	0.28	U	0.23	U	0.24	U	0.37	L	0.23	U	
% SOLIDS	71.8		86.3		83.4		69.7		85.6		

DATA SUMMARY

Case No.: 25393 SDG. No.: MFHE85 Reviewer: M. FERTITTA

Laboratory: SWOK Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFH-E95	FLAG	MFH-E96	FLAG	MFH-E97	FLAG	MFH-E98	FLAG	MFH-E99	FLAG	COMMENTS
ALUMINUM	1740		1930		1660		2350		5900		
ANTIMONY	3.4	L	22.9		3.3	L	22.4		0.87	L	
ARSENIC	3.5		10.4		3.7		5.9		4.6		
BARIUM	20.1	L	39.9	L	26.4	L	37.6	L	63.4		
BERYLLIUM	0.22	L	0.28	L	0.21	U	0.27	L	0.66	L	
CADMIUM	0.22	U	1.7		0.35	L	3.1		0.24	U	
CALCIUM	2820		4370		24700		4790		111000		
CHROMIUM	31.1	J^	42.0	J^	13.7	J^	26.1	J^	7.9	J^	
COBALT	2.2	L	3.6	L	1.8	L	2.7	L	3.6	L	
COPPER	38.9	J^	128	J^	39.0	J^	99.3	J^	9.2	J^	
IRON	19000	J	40600	J	13500	J	27300	J	8530	J	
LEAD	92.6		767		231		866		26.4		
MAGNESIUM	474	L	931	L	521	L	1340		1950		
MANGANESE	334	J^	985	J^	223	J^	892	J^	229	J^	
MERCURY	0.14		0.11	U	0.11	U	0.12		0.12	U	
NICKEL	22.4		38.6		13.5		22.5		7.9	L	
POTASSIUM	530	L	515	L	308	L	548	L	1650		
SELENIUM	1.3		3.1		0.63	U	2.5		0.73	U	
SILVER	0.22	U	1.8	L	0.21	U	2.3		0.24	U	
SODIUM	259	L	321	L	199	L	344	L	329	L	
THALLIUM	2.3		4.7		1.4	L	3.8		0.87	L	
VANADIUM	7.7	L	8.0	L	5.6	L	6.3	L	16.5		
ZINC	84.8		742		315		929		31.4		
CYANIDE	0.25	L	0.29	L	0.21	U	1.0		0.29	L	
% SOLIDS	91.7		90.6		94.7		88.8		82.0		

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 25393 SDG No. MFHE85 SDG Nos. To Follow _____ SAS No. _____ Date Rec 05/12/97

EPA Lab ID: SWOK

Lab Location: Broken Arrow, OK

Region: 6 Audit No.: 25393/MFHE85

Re_Submitted CSF? Yes _____ No X

Box No(s): 1

COMMENTS:

Over for additional comments.

ORIGINALS	YES	NO	N/A
CUSTODY SEALS			
1. Present on package?	X		
2. Intact upon receipt?	X		
FORM DC-2			
3. Numbering scheme accurate?	X		
4. Are enclosed documents listed?	X		
5. Are listed documents enclosed?	X		
FORM DC-1			
6. Present?	X		
7. Complete?	X		
8. Accurate?	X		
CHAIN-OF-CUSTODY RECORD(s)			
9. Signed?	X		
10. Dated?	X		
TRAFFIC REPORT(s) PACKING LIST(s)			
11. Signed?	X		
12. Dated?	X		
AIRBILLS/AIRBILL STICKER			
13. Present?	X		
14. Signed?	X		
15. Dated?	X		
SAMPLE TAGS			
16. Does DC-1 list tags as being included?	X		
17. Present?	X		
OTHER DOCUMENTS			
18. Complete?	X		
19. Legible?	X		
20. Original?		X	
20a. If "NO", does the copy indicate where original documents are located?	X		

	Signature	Printed Name/Title	Date
Audited by:	Michael J. Fertitta	Michael J. Fertitta/ ESAT Data Reviewer	05/16/97
Audited by:			
Audited by:			

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____ _____

Reviewed by: _____ _____

Signature Printed Name/Title

DC-2___

Rev. 3/97

FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME SOUTHWEST LAB. OF OKLAHOMA
CITY/STATE BROKEN ARROW, OK

CASE NO. 25393 SDG NO. MFHE85
SDG NOS. TO FOLLOW _____ _____ _____
SAS NO. _____

CONTRACT NO. 68-D5-0136
SOW NO. ILM04.0

All documents delivered in the Complete SDG File must be original documents where possible. (Reference Exhibit B, Section II F and Section III U.)

		Page Nos. From	Page Nos. To	(Please Check:) Lab	(Please Check:) Region
1.	Inventory Sheet (DC-2) (Do not number)			✓	✓
2.	Cover Page	1	1	✓	✓
3.	Inorganic Analysis Data Sheet (Form I-IN)	2	16	✓	✓
4.	Initial & Continuing Calibration Verification (Form IIA-IN)	17	19	✓	✓
5.	CRDL Standards For AA and ICP (Form IIB-IN)	20	21	✓	✓
	Blanks (Form III-IN)	22	23	✓	✓
	ICP Interference Check Sample (Form IV-IN)	24	25	✓	✓
8.	Spike Sample Recovery (Form VA-IN)	26	26	✓	✓
9.	Post Digest Spike Sample Recovery (Form VB-IN)	27	27	✓	✓
10.	Duplicates (Form VI-IN)	28	28	✓	✓
11.	Laboratory Control Sample (Form VII-IN)	29	29	✓	✓
12.	Standard Addition Results (Form VIII-IN)	30	30	✓	✓
13.	ICP Serial Dilutions (Form IX-IN)	31	31	✓	✓
14.	Instrument Detection Limits (Form X-IN)	32	34	✓	✓
15.	ICP Interelement Correction Factors (Form XIA-IN)	35	35	✓	✓
16.	ICP Interelement Correction Factors (Form XIB-IN)	36	37	✓	✓
17.	ICP Linear Ranges (Form XII-IN)	38	38	✓	✓
18.	Preparation Log (Form XIII-IN)	39	41	✓	✓
19.	Analysis Run Log (Form XIV-IN)	42	47	✓	✓
20.	ICP Raw Data	48	109	✓	✓
	Furnace AA Raw Data	NA	NA	✓	✓
	Mercury Raw Data	110	121	✓	✓
23.	Cyanide Raw Data	122	128	✓	✓
24.	Preparation Logs Raw Data	131	134	✓	✓
25.	Percent Solids Determination Log	129	130	✓	✓

	Page Nos. From	Page Nos. To	(Please Check:) Lab	(Please Check:) Region
Traffic Report	138	139	✓	✓
EPA Shipping/Receiving Documents	NA	NA	✓	✓
Airbill (No. of Shipments 1)	141	141	✓	✓
Chain-of-Custody Records	138	139	✓	✓
Sample Tags	143	158	✓	✓
Sample Log-in Sheet (Lab & DCI)	140	140	✓	✓
SDG Cover Sheet	137	137	✓	✓
28. Misc. Shipping/Receiving Records (list all individual records)				
Telephone Logs	NA	NA	✓	✓
_____				
_____			✓	✓
29. Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)				
Sample Tag Summary	143	143	✓	✓
_____	NA	NA	✓	✓
30. Internal Original Sample Prep & Analysis Records (describe or list)				
Prep Records _____			✓	✓
Analysis Records _____			✓	✓
Description _____			✓	✓
31. Other Records (describe or list)				
Telephone Communications Log			✓	✓
Case Narrative	142	142	✓	✓
stocks + standards	135	136 + 159	✓	✓

32. Comments:

_____

_____

Completed by (CLP Lab): Susan Pohl (Signature)

SUSAN POHL, Inorganic Data Clerk (Print Name & Title)

5/9/97 (Date)

Audited by (EPA): Michael J. Fertitta (Signature)

MICHAEL J. FERTITTA, ESAT DATA REVIEWER (Print Name & Title)

5/16/97 (Date)

BOOKMARK

U.S. EPA - CLP

001

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.:MFHE85

SOW No.: ILM04

EPA Sample No.	Lab Sample ID
MFHE85	29054.01
MFHE86	29054.02
MFHE87	29054.03
MFHE88	29054.04
MFHE89	29054.05
MFHE90	29054.06
MFHE91	29054.07
MFHE92	29054.08
MFHE93	29054.09
MFHE94	29054.10
MFHE95	29054.11
MFHE95D	29054.11D
MFHE95S	29054.11S
MFHE96	29054.12
MFHE97	29054.13
MFHE98	29054.14
MFHE99	29054.15

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: _____ Name: Deborah J. Beree for,.. Jason D. Ruckman

Date: May 9, 1997 Title: Inorganic Program Manager

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFHE85

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.01
Level (low/med): LOW Date Received: 04/09/97
% Solids: 74.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2880			P
7440-36-0	Antimony	0.58	B		P
7440-38-2	Arsenic	4.2		*	P
7440-39-3	Barium	40.4	B		P
7440-41-7	Beryllium	0.37	B		P
7440-43-9	Cadmium	0.27	U		P
7440-70-2	Calcium	142000			P
7440-47-3	Chromium	17.5		N*	P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	17.0		N*	P
7439-89-6	Iron	5570		*	P
7439-92-1	Lead	32.2			P
7439-95-4	Magnesium	1680			P
7439-96-5	Manganese	161		N*	P
7439-97-6	Mercury	0.13	U	N	CV
7440-02-0	Nickel	6.7	B	*	P
7440-09-7	Potassium	545	B		P
7782-49-2	Selenium	0.80	U		P
7440-22-4	Silver	0.55	B		P
7440-23-5	Sodium	417	B		P
7440-28-0	Thallium	0.95	B	*	P
7440-62-2	Vanadium	10.1	B		P
7440-66-6	Zinc	59.2			P
	Cyanide	0.27	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFHE86

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.02
Level (low/med): LOW Date Received: 04/09/97
% Solids: 65.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4130			P
7440-36-0	Antimony	0.71	B		P
7440-38-2	Arsenic	3.9		*	P
7440-39-3	Barium	37.9	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	0.31	U		P
7440-70-2	Calcium	114000			P
7440-47-3	Chromium	7.8		N*	P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	10.6		N*	P
7439-89-6	Iron	5260		*	P
7439-92-1	Lead	29.0			P
7439-95-4	Magnesium	1560			P
7439-96-5	Manganese	168		N*	P
7439-97-6	Mercury	0.15	U	N	CV
7440-02-0	Nickel	5.6	B	*	P
7440-09-7	Potassium	671	B		P
7782-49-2	Selenium	0.92	U		P
7440-22-4	Silver	0.31	U		P
7440-23-5	Sodium	367	B		P
7440-28-0	Thallium	0.69	B	*	P
7440-62-2	Vanadium	10.2	B		P
7440-66-6	Zinc	44.3			P
	Cyanide	0.31	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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EPA SAMPLE NO.

MFHE87

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.03
Level (low/med): LOW Date Received: 04/09/97
% Solids: 76.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3910			P
7440-36-0	Antimony	0.60	B		P
7440-38-2	Arsenic	4.0		*	P
7440-39-3	Barium	45.3	B		P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	0.26	U		P
7440-70-2	Calcium	122000			P
7440-47-3	Chromium	5.6		N*	P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	5.0	B	N*	P
7439-89-6	Iron	5300		*	P
7439-92-1	Lead	15.5			P
7439-95-4	Magnesium	1690			P
7439-96-5	Manganese	196		N*	P
7439-97-6	Mercury	0.13	U	N	CV
7440-02-0	Nickel	5.2	B	*	P
7440-09-7	Potassium	827	B		P
7782-49-2	Selenium	0.78	U		P
7440-22-4	Silver	0.26	U		P
7440-23-5	Sodium	341	B		P
7440-28-0	Thallium	0.52	U	*	P
7440-62-2	Vanadium	12.4	B		P
7440-66-6	Zinc	18.0			P
	Cyanide	0.26	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFHE88

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136
Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85
Matrix (soil/water): SOIL_ Lab Sample ID: 29054.04
Level (low/med): LOW__ Date Received: 04/09/97
% Solids: _69.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3620			P
7440-36-0	Antimony	0.58	U		P
7440-38-2	Arsenic	4.1		*	P
7440-39-3	Barium	42.0	B		P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	0.29	U		P
7440-70-2	Calcium	148000			P
7440-47-3	Chromium	6.3		N*	P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	6.0	B	N*	P
7439-89-6	Iron	5540		*	P
7439-92-1	Lead	20.1			P
7439-95-4	Magnesium	1990			P
7439-96-5	Manganese	221		N*	P
7439-97-6	Mercury	0.14	U	N	CV
7440-02-0	Nickel	5.5	B	*	P
7440-09-7	Potassium	793	B		P
7782-49-2	Selenium	0.87	U		P
7440-22-4	Silver	0.29	U		P
7440-23-5	Sodium	423	B		P
7440-28-0	Thallium	0.58	U	*	P
7440-62-2	Vanadium	11.7	B		P
7440-66-6	Zinc	29.1			P
	Cyanide	0.29	U		CA

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFHE89

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.05
Level (low/med): LOW Date Received: 04/09/97
% Solids: 62.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5530			P
7440-36-0	Antimony	1.1	B		P
7440-38-2	Arsenic	5.7		*	P
7440-39-3	Barium	63.0	B		P
7440-41-7	Beryllium	0.60	B		P
7440-43-9	Cadmium	0.32	U		P
7440-70-2	Calcium	144000			P
7440-47-3	Chromium	8.9		N*	P
7440-48-4	Cobalt	3.2	B		P
7440-50-8	Copper	11.0		N*	P
7439-89-6	Iron	7360		*	P
7439-92-1	Lead	41.2			P
7439-95-4	Magnesium	2300			P
7439-96-5	Manganese	329		N*	P
7439-97-6	Mercury	0.16	U	N	CV
7440-02-0	Nickel	7.4	B	*	P
7440-09-7	Potassium	1170	B		P
7782-49-2	Selenium	0.96	U		P
7440-22-4	Silver	0.32	U		P
7440-23-5	Sodium	423	B		P
7440-28-0	Thallium	0.64	U	*	P
7440-62-2	Vanadium	14.6	B		P
7440-66-6	Zinc	47.8			P
	Cyanide	0.32	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE90

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.06
Level (low/med): LOW Date Received: 04/09/97
% Solids: 71.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3570			P
7440-36-0	Antimony	0.64	B		P
7440-38-2	Arsenic	3.6		*	P
7440-39-3	Barium	43.7	B		P
7440-41-7	Beryllium	0.49	B		P
7440-43-9	Cadmium	0.28	U		P
7440-70-2	Calcium	147000			P
7440-47-3	Chromium	5.7		N*	P
7440-48-4	Cobalt	2.2	B		P
7440-50-8	Copper	5.1	B	N*	P
7439-89-6	Iron	5440		*	P
7439-92-1	Lead	14.4			P
7439-95-4	Magnesium	2020			P
7439-96-5	Manganese	212		N*	P
7439-97-6	Mercury	0.14	U	N	CV
7440-02-0	Nickel	5.1	B	*	P
7440-09-7	Potassium	758	B		P
7782-49-2	Selenium	0.84	U		P
7440-22-4	Silver	0.28	U		P
7440-23-5	Sodium	447	B		P
7440-28-0	Thallium	0.56	U	*	P
7440-62-2	Vanadium	11.8	B		P
7440-66-6	Zinc	23.7			P
	Cyanide	0.28	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE91

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.07
Level (low/med): LOW Date Received: 04/09/97
% Solids: 86.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2550			P
7440-36-0	Antimony	1.6	B		P
7440-38-2	Arsenic	7.7		*	P
7440-39-3	Barium	35.6	B		P
7440-41-7	Beryllium	0.41	B		P
7440-43-9	Cadmium	0.23	U		P
7440-70-2	Calcium	225000			P
7440-47-3	Chromium	23.5		N*	P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	175		N*	P
7439-89-6	Iron	17500		*	P
7439-92-1	Lead	12.6			P
7439-95-4	Magnesium	1930			P
7439-96-5	Manganese	302		N*	P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	15.4		*	P
7440-09-7	Potassium	249	B		P
7782-49-2	Selenium	0.70	U		P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	467	B		P
7440-28-0	Thallium	1.6	B	*	P
7440-62-2	Vanadium	15.0			P
7440-66-6	Zinc	59.4			P
	Cyanide	0.23	U		CA

Color Before: BROWN Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE92

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.08
Level (low/med): LOW Date Received: 04/09/97
% Solids: 83.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2120			P
7440-36-0	Antimony	1.8	B		P
7440-38-2	Arsenic	7.8		*	P
7440-39-3	Barium	142			P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	0.24	U		P
7440-70-2	Calcium	199000			P
7440-47-3	Chromium	29.7		N*	P
7440-48-4	Cobalt	9.7	B		P
7440-50-8	Copper	55.9		N*	P
7439-89-6	Iron	21600		*	P
7439-92-1	Lead	19.4			P
7439-95-4	Magnesium	1850			P
7439-96-5	Manganese	1370		N*	P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	31.4		*	P
7440-09-7	Potassium	313	B		P
7782-49-2	Selenium	0.72	U		P
7440-22-4	Silver	0.24	U		P
7440-23-5	Sodium	493	B		P
7440-28-0	Thallium	1.4	B	*	P
7440-62-2	Vanadium	15.0			P
7440-66-6	Zinc	48.4			P
	Cyanide	0.24	U		CA

Color Before: BROWN Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE93

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.09
Level (low/med): LOW Date Received: 04/09/97
% Solids: 69.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6290			P
7440-36-0	Antimony	0.62	B		P
7440-38-2	Arsenic	5.8		*	P
7440-39-3	Barium	65.7			P
7440-41-7	Beryllium	0.59	B		P
7440-43-9	Cadmium	0.29	U		P
7440-70-2	Calcium	108000			P
7440-47-3	Chromium	13.4		N*	P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	12.8		N*	P
7439-89-6	Iron	7940		*	P
7439-92-1	Lead	66.7			P
7439-95-4	Magnesium	1930			P
7439-96-5	Manganese	261		N*	P
7439-97-6	Mercury	0.14	U	N	CV
7440-02-0	Nickel	7.9	B	*	P
7440-09-7	Potassium	1270	B		P
7782-49-2	Selenium	0.86	U		P
7440-22-4	Silver	0.29	U		P
7440-23-5	Sodium	439	B		P
7440-28-0	Thallium	0.74	B	*	P
7440-62-2	Vanadium	14.9			P
7440-66-6	Zinc	106			P
	Cyanide	0.37	B		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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MFHE94

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.10
Level (low/med): LOW Date Received: 04/09/97
% Solids: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1270			P
7440-36-0	Antimony	2.7	B		P
7440-38-2	Arsenic	12.7		*	P
7440-39-3	Barium	70.0			P
7440-41-7	Beryllium	0.41	B		P
7440-43-9	Cadmium	0.46	B		P
7440-70-2	Calcium	226000			P
7440-47-3	Chromium	99.6		N*	P
7440-48-4	Cobalt	4.9	B		P
7440-50-8	Copper	268		N*	P
7439-89-6	Iron	18200		*	P
7439-92-1	Lead	43.1			P
7439-95-4	Magnesium	2420			P
7439-96-5	Manganese	554		N*	P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	29.3		*	P
7440-09-7	Potassium	292	B		P
7782-49-2	Selenium	0.70	U		P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	420	B		P
7440-28-0	Thallium	1.0	B	*	P
7440-62-2	Vanadium	18.2			P
7440-66-6	Zinc	46.1			P
	Cyanide	0.23	U		CA

Color Before: BROWN Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE95

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.11
Level (low/med): LOW Date Received: 04/09/97
% Solids: 91.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1740			P
7440-36-0	Antimony	3.4	B		P
7440-38-2	Arsenic	3.5		*	P
7440-39-3	Barium	20.1	B		P
7440-41-7	Beryllium	0.22	B		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	2820			P
7440-47-3	Chromium	31.1		N*	P
7440-48-4	Cobalt	2.2	B		P
7440-50-8	Copper	38.9		N*	P
7439-89-6	Iron	19000		*	P
7439-92-1	Lead	92.6			P
7439-95-4	Magnesium	474	B		P
7439-96-5	Manganese	334		N*	P
7439-97-6	Mercury	0.14		N	CV
7440-02-0	Nickel	22.4		*	P
7440-09-7	Potassium	530	B		P
7782-49-2	Selenium	1.3			P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	259	B		P
7440-28-0	Thallium	2.3		*	P
7440-62-2	Vanadium	7.7	B		P
7440-66-6	Zinc	84.8			P
	Cyanide	0.25	B		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE96

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.12
Level (low/med): LOW Date Received: 04/09/97
% Solids: 90.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1930			P
7440-36-0	Antimony	22.9			P
7440-38-2	Arsenic	10.4		*	P
7440-39-3	Barium	39.9	B		P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	1.7			P
7440-70-2	Calcium	4370			P
7440-47-3	Chromium	42.0		N*	P
7440-48-4	Cobalt	3.6	B		P
7440-50-8	Copper	128		N*	P
7439-89-6	Iron	40600		*	P
7439-92-1	Lead	767			P
7439-95-4	Magnesium	931	B		P
7439-96-5	Manganese	985		N*	P
7439-97-6	Mercury	0.11	U	N	CV
7440-02-0	Nickel	38.6		*	P
7440-09-7	Potassium	515	B		P
7782-49-2	Selenium	3.1			P
7440-22-4	Silver	1.8	B		P
7440-23-5	Sodium	321	B		P
7440-28-0	Thallium	4.7		*	P
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	742			P
	Cyanide	0.29	B		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

MFHE97

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.13
Level (low/med): LOW Date Received: 04/09/97
% Solids: 94.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1660			P
7440-36-0	Antimony	3.3	B		P
7440-38-2	Arsenic	3.7		*	P
7440-39-3	Barium	26.4	B		P
7440-41-7	Beryllium	0.21	U		P
7440-43-9	Cadmium	0.35	B		P
7440-70-2	Calcium	24700			P
7440-47-3	Chromium	13.7		N*	P
7440-48-4	Cobalt	1.8	B		P
7440-50-8	Copper	39.0		N*	P
7439-89-6	Iron	13500		*	P
7439-92-1	Lead	231			P
7439-95-4	Magnesium	521	B		P
7439-96-5	Manganese	223		N*	P
7439-97-6	Mercury	0.11	U	N	CV
7440-02-0	Nickel	13.5		*	P
7440-09-7	Potassium	308	B		P
7782-49-2	Selenium	0.63	U		P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	199	B		P
7440-28-0	Thallium	1.4	B	*	P
7440-62-2	Vanadium	5.6	B		P
7440-66-6	Zinc	315			P
	Cyanide	0.21	U		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

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EPA SAMPLE NO.

MFHE98

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136

Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85

Matrix (soil/water): SOIL Lab Sample ID: 29054.14

Level (low/med): LOW Date Received: 04/09/97

% Solids: 88.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2350			P
7440-36-0	Antimony	22.4			P
7440-38-2	Arsenic	5.9		*	P
7440-39-3	Barium	37.6	B		P
7440-41-7	Beryllium	0.27	B		P
7440-43-9	Cadmium	3.1			P
7440-70-2	Calcium	4790			P
7440-47-3	Chromium	26.1		N*	P
7440-48-4	Cobalt	2.7	B		P
7440-50-8	Copper	99.3		N*	P
7439-89-6	Iron	27300		*	P
7439-92-1	Lead	866			P
7439-95-4	Magnesium	1340			P
7439-96-5	Manganese	892		N*	P
7439-97-6	Mercury	0.12		N	CV
7440-02-0	Nickel	22.5		*	P
7440-09-7	Potassium	548	B		P
7782-49-2	Selenium	2.5			P
7440-22-4	Silver	2.3			P
7440-23-5	Sodium	344	B		P
7440-28-0	Thallium	3.8		*	P
7440-62-2	Vanadium	6.3	B		P
7440-66-6	Zinc	929			P
	Cyanide	1.0			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFHE99

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
Matrix (soil/water): SOIL Lab Sample ID: 29054.15
Level (low/med): LOW Date Received: 04/09/97
% Solids: 82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5900			P
7440-36-0	Antimony	0.87	B		P
7440-38-2	Arsenic	4.6		*	P
7440-39-3	Barium	63.4			P
7440-41-7	Beryllium	0.66	B		P
7440-43-9	Cadmium	0.24	U		P
7440-70-2	Calcium	111000			P
7440-47-3	Chromium	7.9		N*	P
7440-48-4	Cobalt	3.6	B		P
7440-50-8	Copper	9.2		N*	P
7439-89-6	Iron	8530		*	P
7439-92-1	Lead	26.4			P
7439-95-4	Magnesium	1950			P
7439-96-5	Manganese	229		N*	P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	7.9	B	*	P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	0.73	U		P
7440-22-4	Silver	0.24	U		P
7440-23-5	Sodium	329	B		P
7440-28-0	Thallium	0.87	B	*	P
7440-62-2	Vanadium	16.5			P
7440-66-6	Zinc	31.4			P
	Cyanide	0.29	B		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: IN.VEN._____

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
Aluminum	782.4	813.80	104.0	5000.0	4982.88	99.7	4966.59	99.3	P
Antimony	970.0	967.04	99.7	500.0	493.68	98.7	493.78	98.8	P
Arsenic	50.9	49.75	97.7	500.0	491.10	98.2	491.24	98.2	P
Barium	803.6	816.31	101.6	500.0	496.64	99.3	495.91	99.2	P
Beryllium	190.4	193.42	101.6	500.0	491.24	98.2	490.37	98.1	P
Cadmium	303.7	296.84	97.7	500.0	494.40	98.9	492.68	98.5	P
Calcium	20284.0	19725.30	97.2	5000.0	4900.60	98.0	4889.76	97.8	P
Chromium	188.4	192.07	101.9	500.0	493.84	98.8	493.66	98.7	P
Cobalt	208.0	211.79	101.8	500.0	489.56	97.9	488.87	97.8	P
Copper	198.8	198.28	99.7	500.0	498.37	99.7	499.08	99.8	P
Iron	794.0	811.41	102.2	5000.0	4920.90	98.4	4910.85	98.2	P
Lead	2074.0	2080.49	100.3	500.0	495.24	99.0	493.58	98.7	P
Magnesium	9835.2	9919.29	100.9	5000.0	4971.01	99.4	4976.70	99.5	P
Manganese	196.4	197.52	100.6	500.0	493.21	98.6	491.95	98.4	P
Mercury	4.9	4.53	92.4	5.0	4.75	95.0	4.65	93.0	CV
Nickel	198.8	197.65	99.4	500.0	496.28	99.3	493.74	98.7	P
Potassium	19841.0	19420.77	97.9	5000.0	5055.67	101.1	5058.38	101.2	P
Selenium	50.7	49.20	97.0	500.0	495.06	99.0	491.68	98.3	P
Silver	297.9	297.60	99.9	500.0	498.05	99.6	497.24	99.4	P
Sodium	19514.0	18625.44	95.4	5000.0	5155.10	103.1	5171.95	103.4	P
Thallium	98.9	100.09	101.2	500.0	497.36	99.5	491.55	98.3	P
Vanadium	196.8	198.04	100.6	500.0	495.31	99.1	494.44	98.9	P
Zinc	1204.8	1183.31	98.2	500.0	498.36	99.7	497.12	99.4	P
Cyanide	90.0	90.73	100.8	100.0	102.56	102.6	99.18	99.2	CA

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

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: IN.VEN._____

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
Aluminum				5000.0	4983.12	99.7	5000.04	100.0	P
Antimony				500.0	493.00	98.6	497.84	99.6	P
Arsenic				500.0	488.76	97.8	492.28	98.5	P
Barium				500.0	495.30	99.1	498.94	99.8	P
Beryllium				500.0	489.75	97.9	497.11	99.4	P
Cadmium				500.0	490.70	98.1	498.44	99.7	P
Calcium				5000.0	4896.99	97.9	4975.90	99.5	P
Chromium				500.0	492.89	98.6	500.23	100.0	P
Cobalt				500.0	489.98	98.0	497.69	99.5	P
Copper				500.0	497.37	99.5	501.36	100.3	P
Iron				5000.0	4907.23	98.1	4979.77	99.6	P
Lead				500.0	494.16	98.8	499.06	99.8	P
Magnesium				5000.0	4961.92	99.2	5008.53	100.2	P
Manganese				500.0	491.39	98.3	497.34	99.5	P
Mercury				5.0	4.57	91.4	4.56	91.2	CV
Nickel				500.0	491.38	98.3	499.98	100.0	P
Potassium				5000.0	5037.68	100.8	5064.02	101.3	P
Selenium				500.0	491.10	98.2	496.86	99.4	P
Silver				500.0	497.96	99.6	504.13	100.8	P
Sodium				5000.0	5146.87	102.9	5182.17	103.6	P
Thallium				500.0	493.74	98.7	502.04	100.4	P
Vanadium				500.0	494.62	98.9	500.33	100.1	P
Zinc				500.0	495.78	99.2	503.03	100.6	P
Cyanide				100.0	105.18	105.2	102.12	102.1	CA

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

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: IN.VEN._____

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
Aluminum				5000.0	4966.78	99.3			P
Antimony				500.0	491.49	98.3			P
Arsenic				500.0	483.83	96.8			P
Barium				500.0	495.87	99.2			P
Beryllium				500.0	484.89	97.0			P
Cadmium				500.0	487.51	97.5			P
Calcium				5000.0	4851.81	97.0			P
Chromium				500.0	489.22	97.8			P
Cobalt				500.0	483.63	96.7			P
Copper				500.0	497.03	99.4			P
Iron				5000.0	4877.71	97.6			P
Lead				500.0	491.78	98.4			P
Magnesium				5000.0	4953.96	99.1			P
Manganese				500.0	488.00	97.6			P
Mercury				5.0	4.60	92.0	4.61	92.2	CV
Nickel				500.0	491.24	98.2			P
Potassium				5000.0	5069.45	101.4			P
Selenium				500.0	488.41	97.7			P
Silver				500.0	496.90	99.4			P
Sodium				5000.0	5167.69	103.4			P
Thallium				500.0	493.87	98.8			P
Vanadium				500.0	491.30	98.3			P
Zinc				500.0	494.59	98.9			P
Cyanide									NR

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

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

AA CRDL Standard Source: PLASMACHEM__

ICP CRDL Standard Source: IN.VEN._____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony				120.0	117.20	97.7	115.62	96.3
Arsenic				20.0	20.81	104.0	20.39	101.9
Barium								
Beryllium				10.0	9.80	98.0	9.78	97.8
Cadmium				10.0	10.14	101.4	9.65	96.5
Calcium								
Chromium				20.0	19.81	99.0	19.28	96.4
Cobalt				100.0	96.77	96.8	95.18	95.2
Copper				50.0	50.30	100.6	50.04	100.1
Iron								
Lead				6.0	6.72	112.0	5.85	97.5
Magnesium								
Manganese				30.0	29.49	98.3	29.03	96.8
Mercury	0.2	0.27	135.0					
Nickel				80.0	79.80	99.7	77.86	97.3
Potassium								
Selenium				10.0	11.49	114.9	8.81	88.1
Silver				20.0	19.93	99.6	19.85	99.2
Sodium								
Thallium				20.0	19.03	95.1	17.99	89.9
Vanadium				100.0	97.49	97.5	96.13	96.1
Zinc				40.0	40.95	102.4	40.18	100.4
Cyanide								

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

AA CRDL Standard Source: PLASMACHEM__

ICP CRDL Standard Source: IN.VEN._____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony				120.0			115.69	96.4
Arsenic				20.0			20.83	104.1
Barium								
Beryllium				10.0			9.82	98.2
Cadmium				10.0			9.81	98.1
Calcium								
Chromium				20.0			19.50	97.5
Cobalt				100.0			96.70	96.7
Copper				50.0			49.98	100.0
Iron								
Lead				6.0			6.06	101.0
Magnesium								
Manganese				30.0			29.24	97.5
Mercury								
Nickel				80.0			79.27	99.1
Potassium								
Selenium				10.0			7.75	77.5
Silver				20.0			20.11	100.5
Sodium								
Thallium				20.0			19.64	98.2
Vanadium				100.0			96.53	96.5
Zinc				40.0			40.38	100.9
Cyanide								

3
BLANKS

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): 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
Aluminum	9.0	U	9.0	U	9.0	U	9.0	U	1.80	U	P
Antimony	2.4	B	2.0	U	2.0	U	2.0	U	0.40	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.48	B	P
Barium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Calcium	-7.2	B	-6.6	B	-9.0	B	-6.0	B	2.89	B	P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Cobalt	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Copper	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Iron	9.0	U	9.0	U	9.0	U	9.0	U	2.57	B	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.37	B	P
Magnesium	9.0	U	9.0	U	9.0	U	9.0	U	1.80	U	P
Manganese	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.10	U	CV
Nickel	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Potassium	15.0	U	15.0	U	-18.9	B	15.0	U	3.00	U	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	0.60	U	P
Silver	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Sodium	16.0	U	16.0	U	16.0	U	16.0	U	3.20	U	P
Thallium	2.0	U	-2.3	B	2.0	U	2.0	U	0.40	U	P
Vanadium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	0.27	B	P
Cyanide	4.0	U	4.0	U	4.0	U	4.0	U	0.20	U	CA

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3
BLANKS

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

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
Aluminum			9.0	U	9.0	U					P
Antimony			2.0	U	2.0	U					P
Arsenic			2.0	U	2.0	U					P
Barium			1.0	U	1.0	U					P
Beryllium			1.0	U	1.0	U					P
Cadmium			1.0	U	1.0	U					P
Calcium			-5.4	B	5.0	U					P
Chromium			1.0	U	1.0	U					P
Cobalt			1.0	U	1.0	U					P
Copper			1.0	U	1.0	U					P
Iron			9.9	B	9.0	U					P
Lead			1.0	U	1.0	U					P
Magnesium			9.0	U	9.0	U					P
Manganese			1.0	U	1.0	U					P
Mercury			0.2	U	0.2	U	0.2	U			CV
Nickel			1.0	U	1.0	U					P
Potassium			15.0	U	-28.9	B					P
Selenium			3.0	U	3.0	U					P
Silver			1.0	U	1.0	U					P
Sodium			16.0	U	16.0	U					P
Thallium			2.0	U	2.0	U					P
Vanadium			1.0	U	1.0	U					P
Zinc			1.0	U	1.0	U					P
Cyanide			4.0	U							CA

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4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No: _____ SDG No.: MFHE85

ICP ID Number: TJA ET2_____ ICS Source: EPA-LV91____

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
Aluminum	495800	505595	477769	474908.8	93.9	475471	479584.8	94.9
Antimony	0	541	5	536.3	99.1	7	537.0	99.3
Arsenic	0	97	3	86.5	89.2	0	88.9	91.6
Barium	0	467	-1	473.3	101.3	-1	477.8	102.3
Beryllium	0	444	0	420.7	94.8	1	422.6	95.2
Cadmium	0	871	0	807.9	92.8	0	809.5	92.9
Calcium	457200	467921	440943	437170.5	93.4	434814	439606.0	93.9
Chromium	38	456	34	437.9	96.0	33	440.2	96.5
Cobalt	0	427	4	412.5	96.6	4	413.8	96.9
Copper	0	507	17	523.9	103.3	17	530.9	104.7
Iron	186000	177250	172940	171008.4	96.5	170212	171980.2	97.0
Lead	0	47	-3	39.5	84.0	-2	39.6	84.3
Magnesium	490700	532422	461944	457387.8	85.9	459935	460979.9	86.6
Manganese	45	484	44	464.2	95.9	44	465.7	96.2
Mercury								
Nickel	0	857	8	807.8	94.3	8	809.8	94.5
Potassium	0	0	-22	-15.9		-27	-27.0	
Selenium	0	42	-8	37.6	89.5	-4	40.2	95.7
Silver	0	207	0	194.4	93.9	0	196.3	94.8
Sodium	0	0	136	140.2		132	143.7	
Thallium	0	91	9	87.2	95.8	5	86.9	95.5
Vanadium	0	460	0	427.6	93.0	0	430.8	93.7
Zinc	0	1008	18	893.0	88.6	18	897.9	89.1
Cyanide								

U.S. EPA - CLP

4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No: _____ SDG No.: MFHE85

ICP ID Number: TJA ET2_____ ICS Source: EPA-LV91____

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
Aluminum	495800	505595				475847	472706.5	93.5
Antimony	0	541				6	528.0	97.6
Arsenic	0	97				2	86.7	89.4
Barium	0	467				-1	473.0	101.3
Beryllium	0	444				1	413.6	93.2
Cadmium	0	871				0	793.3	91.1
Calcium	457200	467921				434695	430581.3	92.0
Chromium	38	456				33	431.8	94.7
Cobalt	0	427				3	406.5	95.2
Copper	0	507				17	524.1	103.4
Iron	186000	177250				170542	168631.8	95.1
Lead	0	47				-2	39.6	84.3
Magnesium	490700	532422				460842	455957.7	85.6
Manganese	45	484				44	457.5	94.5
Mercury								
Nickel	0	857				7	797.3	93.0
Potassium	0	0				-36	-35.5	
Selenium	0	42				2	36.0	85.7
Silver	0	207				0	194.2	93.8
Sodium	0	0				141	140.8	
Thallium	0	91				10	82.8	91.0
Vanadium	0	460				0	423.4	92.0
Zinc	0	1008				18	882.1	87.5
Cyanide								

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MFHE95S

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85
Matrix: __SOIL_____ Level (low/med): _LOW____
% Solids for Sample: _91.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	86.1250		3.3967	B	109.05	75.9		P
Arsenic	75-125	13.6214		3.5470		8.72	115.5		P
Barium	75-125	466.8286		20.1396	B	436.21	102.4		P
Beryllium	75-125	11.2220		0.2203	B	10.91	100.8		P
Cadmium	75-125	9.6944		0.2181	U	10.91	88.9		P
Calcium									NR
Chromium	75-125	115.7727		31.1306		43.62	194.0	N	P
Cobalt	75-125	108.4048		2.2124	B	109.05	97.4		P
Copper	75-125	134.0879		38.9080		54.53	174.5	N	P
Iron									NR
Lead		92.8971		92.6478		4.36	5.7		P
Magnesium									NR
Manganese	75-125	2639.4351		334.0475		109.05	2114.1	N	P
Mercury	75-125	0.5507		0.1434		0.55	74.1	N	CV
Nickel	75-125	143.5230		22.4323		109.05	111.0		P
Potassium									NR
Selenium	75-125	3.5734		1.3387		2.18	102.5		P
Silver	75-125	11.1385		0.2181	U	10.91	102.1		P
Sodium									NR
Thallium	75-125	14.2473		2.3326		10.91	109.2		P
Vanadium	75-125	120.5293		7.7027	B	109.05	103.5		P
Zinc	75-125	186.2766		84.7710		109.05	93.1		P
Cyanide	75-125	5.5942		0.2455	B	5.45	98.1		CA

Comments:

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5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MFHE95A

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

Matrix: ____SOIL_____ 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
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium		421.45		142.73		286.0	97.5		P
Cobalt									NR
Copper		523.02		178.39		356.0	96.8		P
Iron									NR
Lead									NR
Magnesium									NR
Manganese		4430.07		1531.61		3060.0	94.7		P
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

U.S. EPA - CLP

028

6
DUPLICATES

EPA SAMPLE NO.

MFHE95D

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

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

% Solids for Sample: _91.7 % Solids for Duplicate: __91.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		1743.7365		1900.7581		8.6		P
Antimony		3.3967	B	4.7239	B	32.7		P
Arsenic	2.1810	3.5470		6.7156		61.8	*	P
Barium		20.1396	B	30.2750	B	40.2		P
Beryllium		0.2203	B	0.2266	B	2.8		P
Cadmium		0.2181	U	0.2181	U			P
Calcium	1090.512	2822.4567		3190.2089		12.2		P
Chromium		31.1306		50.9302		48.3	*	P
Cobalt		2.2124	B	3.3644	B	41.3		P
Copper		38.9080		92.1993		81.3	*	P
Iron		18975.0408		37001.5402		64.4	*	P
Lead		92.6478		93.9784		1.4		P
Magnesium		474.0388	B	527.8393	B	10.7		P
Manganese		334.0475		428.2809		24.7	*	P
Mercury	0.1091	0.1434		0.1483		3.4		CV
Nickel	8.7241	22.4323		36.7518		48.4	*	P
Potassium		529.7610	B	571.4126	B	7.6		P
Selenium	1.0905	1.3387		1.4020		4.6		P
Silver		0.2181	U	0.2554	B	200.0		P
Sodium		258.9926	B	274.4957	B	5.8		P
Thallium	2.1810	2.3326		4.9215		71.4	*	P
Vanadium	10.9051	7.7027	B	11.3256		38.1		P
Zinc		84.7710		79.8857		5.9		P
Cyanide		0.2455	B	0.3465	B	34.1		CA

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7
LABORATORY CONTROL SAMPLE

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

Solid LCS Source: EPA0287_____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				325.0	301.4		193.1	424.2	92.7
Antimony				211.0	241.3		129.4	297.2	114.4
Arsenic				917.0	988.1		613.6	1247.2	107.8
Barium				4.8	4.9	B	2.5	8.1	102.1
Beryllium				19.4	17.9		15.3	22.2	92.3
Cadmium				45.4	38.3		32.1	51.1	84.4
Calcium				196200.0	182418.7		142933.0	225376.0	93.0
Chromium				99.6	91.1		77.8	115.2	91.5
Cobalt				144.0	130.6		115.4	165.6	90.7
Copper				6910.0	6595.1		5727.3	7633.1	95.4
Iron				22430.0	20323.6		16831.3	25193.0	90.6
Lead				236.0	205.0		167.6	280.5	86.9
Magnesium				118100.0	103923.2		97493.0	128886.0	88.0
Manganese				208.0	188.8		167.9	234.4	90.8
Mercury				12.7	10.6		7.8	16.9	83.5
Nickel				60.9	53.7		43.5	70.1	88.2
Potassium				50.0	74.0	B	0.0	379.3	148.0
Selenium				39.2	39.6		17.6	56.4	101.0
Silver				22.2	22.8		13.2	28.5	102.7
Sodium				50.0	238.2	B	0.0	277.4	476.4
Thallium				39.0	34.1		24.6	51.6	87.4
Vanadium				65.8	63.4		53.0	78.6	96.4
Zinc				187.0	174.5		127.7	222.1	93.3
Cyanide				5.6	6.1		4.1	7.1	108.9

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8
STANDARD ADDITION RESULTS

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract:68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.:_____ SDG No.:MFHE85

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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9
ICP SERIAL DILUTION

EPA SAMPLE NO.

MFHE95L

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136

Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	7995.03		7962.74		0.4		P
Antimony	15.57	B	17.55	B	12.7		P
Arsenic	16.26		17.38	B	6.9		P
Barium	92.34	B	91.73	B	0.7		P
Beryllium	1.01	B	5.00	U	100.0		P
Cadmium	1.00	U	5.00	U			P
Calcium	12940.96		12903.61	B	0.3		P
Chromium	142.73		142.91		0.1		P
Cobalt	10.14	B	12.14	B	19.7		P
Copper	178.39		181.14		1.5		P
Iron	87000.56		86896.55		0.1		P
Lead	424.79		428.08		0.8		P
Magnesium	2173.47	B	2205.29	B	1.5		P
Manganese	1531.61		1536.86		0.3		P
Mercury							NR
Nickel	102.85		104.90	B	2.0		P
Potassium	2428.95	B	2502.41	B	3.0		P
Selenium	6.14		15.00	U	100.0		P
Silver	1.00	U	5.00	U			P
Sodium	1187.48	B	1237.25	B	4.2		P
Thallium	10.69		20.27	B	89.6		P
Vanadium	35.32	B	35.14	B	0.5		P
Zinc	388.67		393.33		1.2		P
Cyanide							NR

10
Instrument Detection Limits (Quarterly)

Lab Name: SOUTHWEST_LABS_OF_OK Contract: 68-D5-0136
Lab Code: SWOK Case No.: 25393 SAS No.: SDG No.: MFHE85
ICP ID Number: TJA_ET2 Date: 04/16/97
Flame AA ID Number :
Furnace AA ID Number :

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	9.0	P
Antimony	206.83		60	2.0	P
Arsenic	189.04		10	2.0	P
Barium	493.41		200	1.0	P
Beryllium	313.04		5	1.0	P
Cadmium	226.50		5	1.0	P
Calcium	317.93		5000	5.0	P
Chromium	267.72		10	1.0	P
Cobalt	228.61		50	1.0	P
Copper	324.75		25	1.0	P
Iron	271.44		100	9.0	P
Lead	220.35		3	1.0	P
Magnesium	279.08		5000	9.0	P
Manganese	257.61		15	1.0	P
Mercury			0.2		NR
Nickel	231.60		40	1.0	P
Potassium	766.49		5000	15.0	P
Selenium	196.02		5	3.0	P
Silver	328.07		10	1.0	P
Sodium	588.99		5000	16.0	P
Thallium	190.68		10	2.0	P
Vanadium	292.40		50	1.0	P
Zinc	213.86		20	1.0	P
Cyanide			10		NR

Comments:

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10
Instrument Detection Limits (Quarterly)

Name: SOUTHWEST_LABS_OF_OK
Lab Code: SWOK Case No.: 25393
ICP ID Number:
Flame AA ID Number : PS200B
Furnace AA ID Number :

Contract: 68-D5-0136
SAS No.:
Date: 04/07/97
SDG No.: MFHE85

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	254.00		0.2	0.2	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide			10		NR

Comments:

10
Instrument Detection Limits (Quarterly)

Name: SOUTHWEST_LABS_OF_OK
Lab Code: SWOK Case No.: 25393
ICP ID Number:
Flame AA ID Number : LACHAT
Furnace AA ID Number :

Contract: 68-D5-0136
SAS No.:
SDG No.: MFHE85
Date: 04/14/97

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide	578.00		10	4.0	CA

Comments:

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035

11A

ICP Interelement Correction Factors (Annually)

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

ICP ID Number: TJA ET2_____ Date: 01/06/97

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	BA_
Aluminum_	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony_	206.83	0.0000000	0.0000000	0.0000240	0.0000000	0.0000000
Arsenic__	189.04	0.0000130	0.0000000	-0.0000560	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	0.0000710	0.0000000	0.0000000
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt___	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0003270
Copper___	324.75	0.0000000	0.0000000	-0.0001740	0.0000000	0.0000000
Iron____	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead____	220.35	0.0005160	0.0000000	0.0000520	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000050	0.0000000	0.0000210	0.0000210	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000120	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.02	0.0000000	0.0000000	0.0001890	0.0000000	0.0000000
Silver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium___	588.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.68	0.0000000	0.0000000	-0.0003220	0.0000000	0.0000000
Vanadium_	292.40	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Zinc____	213.86	0.0000000	0.0000000	0.0000990	0.0002490	0.0000000
Cyanide__						

Comments:

U.S. EPA - CLP

11B
ICP Interelement Correction Factors (Annually)

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

ICP ID Number: TJA ET2_____ Date: 01/06/97

Analyte	Wave-length (nm)	Interelement Correction Factors for : CO_	CR_	CU_	MN_	NI_
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.83	0.0000000	0.0091840	0.0000000	0.0000000	-0.0007480
Arsenic	189.04	0.0000000	0.0002210	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	-0.0001730	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0001120	0.0000000
Cobalt	228.61	0.0000000	-0.0001450	0.0000000	0.0000000	0.0001840
Copper	324.75	-0.0005060	-0.0001890	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0782430	0.0016450	0.0000000	0.0000000	0.0000000
Lead	220.35	-0.0031430	0.0000000	0.0000000	0.0000000	0.0001020
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						
Nickel	231.60	-0.0004220	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.02	0.0013350	0.0000000	0.0000000	0.0005850	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.68	0.0017470	0.0001640	0.0000000	-0.0001670	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	-0.0000380	0.0000000	0.0005400	0.0000000	0.0056960
Cyanide						

Comments:

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11B

ICP Interelement Correction Factors (Annually)

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

ICP ID Number: TJA ET2_____ Date: 01/06/97

Analyte	Wave-length (nm)	Interelement Correction Factors for : SN_	TI_	TL_	V__	___
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0215230	
Antimony	206.83	-0.0027830	0.0003160	0.0000000	-0.0156700	
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0002540	
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	
Chromium	267.72	0.0000000	-0.0000540	0.0000000	0.0000660	
Cobalt	228.61	0.0000000	0.0016440	0.0000000	0.0000000	
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0004260	
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0115230	
Lead	220.35	0.0000000	0.0002390	0.0000000	-0.0001750	
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	
Mercury						
Nickel	231.60	0.0000000	0.0000000	-0.0003650	0.0000000	
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196.02	0.0000000	0.0000000	0.0000000	0.0007890	
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	
Sodium	588.99	0.0000000	0.0000000	0.0000000	0.0000000	
Thallium	190.68	0.0000000	-0.0006930	0.0000000	0.0000000	
Vanadium	292.40	0.0000000	0.0006530	0.0000000	0.0000000	
Zinc	213.86	-0.0001000	0.0000000	0.0000000	0.0000000	
Cyanide						

Comments:

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12
ICP Linear Ranges (Quarterly)

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393 SAS No.: _____ SDG No.: MFHE85

ICP ID Number: TJA ET2_____ Date: 04/16/97

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	15.00	600000.0	P
Antimony	15.00	50000.0	P
Arsenic	15.00	50000.0	P
Barium	15.00	30000.0	P
Beryllium	15.00	20000.0	P
Cadmium	15.00	20000.0	P
Calcium	15.00	600000.0	P
Chromium	15.00	60000.0	P
Cobalt	15.00	50000.0	P
Copper	15.00	60000.0	P
Iron	15.00	600000.0	P
Lead	15.00	40000.0	P
Magnesium	15.00	600000.0	P
Manganese	15.00	30000.0	P
Mercury			NR
Nickel	15.00	60000.0	P
Potassium	15.00	60000.0	P
Selenium	15.00	50000.0	P
Silver	15.00	10000.0	P
Sodium	15.00	50000.0	P
Thallium	15.00	50000.0	P
Vanadium	15.00	60000.0	P
Zinc	15.00	10000.0	P
Cyanide			

Comments:

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PREPARATION LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.:_25393 SAS No.: _____ SDG No.:MFHE85

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	04/11/97	1.00	200
MFHE85	04/11/97	1.00	200
MFHE86	04/11/97	1.00	200
MFHE87	04/11/97	1.00	200
MFHE88	04/11/97	1.00	200
MFHE89	04/11/97	1.00	200
MFHE90	04/11/97	1.00	200
MFHE91	04/11/97	1.00	200
MFHE92	04/11/97	1.00	200
MFHE93	04/11/97	1.00	200
MFHE94	04/11/97	1.00	200
MFHE95	04/11/97	1.00	200
MFHE95D	04/11/97	1.00	200
MFHE95S	04/11/97	1.00	200
MFHE96	04/11/97	1.00	200
MFHE97	04/11/97	1.00	200
MFHE98	04/11/97	1.00	200
MFHE99	04/11/97	1.00	200
PBS	04/11/97	1.00	200

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PREPARATION LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.:_25393 SAS No.: _____ SDG No.:MFHE85

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	04/10/97	0.20	100
MFHE85	04/10/97	0.20	100
MFHE86	04/10/97	0.20	100
MFHE87	04/10/97	0.20	100
MFHE88	04/10/97	0.20	100
MFHE89	04/10/97	0.20	100
MFHE90	04/10/97	0.20	100
MFHE91	04/10/97	0.20	100
MFHE92	04/10/97	0.20	100
MFHE93	04/10/97	0.20	100
MFHE94	04/10/97	0.20	100
MFHE95	04/10/97	0.20	100
MFHE95D	04/10/97	0.20	100
MFHE95S	04/10/97	0.20	100
MFHE96	04/10/97	0.20	100
MFHE97	04/10/97	0.20	100
MFHE98	04/10/97	0.20	100
MFHE99	04/10/97	0.20	100
PBS	04/10/97	0.20	100

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PREPARATION LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.:_25393 SAS No.: _____ SDG No.:MFHE85

Method: CA

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	04/14/97	1.00	50
MFHE85	04/14/97	1.00	50
MFHE86	04/14/97	1.00	50
MFHE87	04/14/97	1.00	50
MFHE88	04/14/97	1.00	50
MFHE89	04/14/97	1.00	50
MFHE90	04/14/97	1.00	50
MFHE91	04/14/97	1.00	50
MFHE92	04/14/97	1.00	50
MFHE93	04/14/97	1.00	50
MFHE94	04/14/97	1.00	50
MFHE95	04/14/97	1.00	50
MFHE95D	04/14/97	1.00	50
MFHE95S	04/14/97	1.00	50
MFHE96	04/14/97	1.00	50
MFHE97	04/14/97	1.00	50
MFHE98	04/14/97	1.00	50
MFHE99	04/14/97	1.00	50
PBS	04/14/97	1.00	50

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393_ SAS No.: _____ SDG No.:MFHE85

Instrument ID Number: TJA ET2_____ Method: P_

Start Date: 04/23/97 End Date: 04/23/97

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1026		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
S	1.00	1032		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICV	1.00	1037		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICB	1.00	1043		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CRI	1.00	1049			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
ICSA	1.00	1055		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSAB	1.00	1100		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCV	1.00	1106		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1.00	1112		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
PBS	1.00	1117		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
LCSS	1.00	1123		X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
LCSS	5.00	1129								X																	
MFHE85	1.00	1134		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE86	1.00	1140		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE87	1.00	1146		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE88	1.00	1151		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE89	1.00	1157		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE95	1.00	1203		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE95L	5.00	1209		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCV	1.00	1214		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1.00	1220		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE95S	1.00	1226			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
MFHE95D	1.00	1231		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE90	1.00	1237		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE91	1.00	1243		X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE92	1.00	1248		X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE93	1.00	1254		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MFHE94	1.00	1300		X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CRI	1.00	1305			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
ICSA	1.00	1311		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSAB	1.00	1317		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCV	1.00	1323		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393_ SAS No.: _____ SDG No.:MFHE85

Instrument ID Number: TJA ET2_____ Method: P_

Start Date: 04/23/97 End Date: 04/23/97

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	1328		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
MFHE96	1.00	1334		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
MFHE97	1.00	1340		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
MFHE98	1.00	1350		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
MFHE99	1.00	1356		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
MFHE95A	1.00	1401									X		X				X	_									_
MFHE91	2.00	1407		_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
MFHE92	2.00	1413		_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
MFHE94	2.00	1418		_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
CCV	1.00	1424		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCB	1.00	1430		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZ	1.00	1435		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1441		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1447		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1452		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1458		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1504		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZ	1.00	1510		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
CRI	1.00	1515			X	X		X	X		X	X	X		X		X	_	X		X	X		X	X	X	_
ICSA	1.00	1521		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICSAB	1.00	1527		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCV	1.00	1532		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCB	1.00	1538		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
				_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393_ SAS No.: _____ SDG No.:MFHE85

Instrument ID Number: PS200B_____ Method: CV

Start Date: 04/11/97 End Date: 04/11/97

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1053																X									
S0.2	1.00	1056																X									
S0.5	1.00	1059																X									
S1	1.00	1101																X									
S5	1.00	1104																X									
S10	1.00	1107																X									
ICV	1.00	1110																X									
ICB	1.00	1113																X									
CRA	1.00	1115																X									
CCV	1.00	1118																X									
CCB	1.00	1121																X									
ZZZZZ	1.00	1126																									
ZZZZZ	1.00	1128																									
ZZZZZ	1.00	1131																									
ZZZZZ	1.00	1134																									
ZZZZZ	1.00	1136																									
ZZZZZ	1.00	1139																									
ZZZZZ	1.00	1142																									
ZZZZZ	1.00	1144																									
ZZZZZ	1.00	1147																									
ZZZZZ	1.00	1150																									
CCV	1.00	1152																X									
CCB	1.00	1155																X									
ZZZZZ	1.00	1158																									
ZZZZZ	1.00	1201																									
ZZZZZ	1.00	1203																									
ZZZZZ	1.00	1206																									
ZZZZZ	1.00	1208																									
ZZZZZ	1.00	1211																									
ZZZZZ	1.00	1214																									
ZZZZZ	1.00	1216																									
ZZZZZ	1.00	1219																									

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393_ SAS No.: _____ SDG No.:MFHE85

Instrument ID Number: PS200B_____ Method: CV

Start Date: 04/11/97 End Date: 04/11/97

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1222																									
CCV	1.00	1225																X									
CCB	1.00	1227																X									
ZZZZZZ	1.00	1230																									
CCV	1.00	1233																X									
CCB	1.00	1235																X									
PBS	1.00	1244																X									
LCSS	10.00	1246																X									
MFHE85	1.00	1249																X									
MFHE86	1.00	1252																X									
MFHE87	1.00	1254																X									
MFHE88	1.00	1257																X									
MFHE89	1.00	1300																X									
MFHE90	1.00	1302																X									
MFHE91	1.00	1305																X									
MFHE92	1.00	1308																X									
CCV	1.00	1311																X									
CCB	1.00	1313																X									
MFHE93	1.00	1316																X									
MFHE94	1.00	1319																X									
MFHE95	1.00	1321																X									
MFHE95D	1.00	1324																X									
MFHE95S	1.00	1327																X									
MFHE96	1.00	1329																X									
MFHE97	1.00	1332																X									
MFHE98	1.00	1335																X									
MFHE99	1.00	1338																X									
ZZZZZZ	1.00	1340																									
CCV	1.00	1343																X									
CCB	1.00	1346																X									

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393_ SAS No.: _____ SDG No.:MFHE85

Instrument ID Number: LACHAT_____ Method: CA

Start Date: 04/15/97 End Date: 04/15/97

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S200	1.00	1113																									X
S150	1.00	1114																									X
S100	1.00	1115																									X
S50	1.00	1116																									X
S20	1.00	1117																									X
S10	1.00	1118																									X
S0	1.00	1119																									X
ICV	1.00	1123																									X
ICB	1.00	1124																									X
CCV	1.00	1124																									X
CCB	1.00	1125																									X
[illegible]S	1.00	1127																									X
LCSS	1.00	1128																									X
MFHE85	1.00	1129																									X
MFHE86	1.00	1130																									X
MFHE87	1.00	1130																									X
MFHE88	1.00	1131																									X
CCV	1.00	1132																									X
CCB	1.00	1133																									X
MFHE89	1.00	1135																									X
MFHE90	1.00	1136																									X
MFHE91	1.00	1136																									X
MFHE92	1.00	1137																									X
MFHE93	1.00	1138																									X
MFHE94	1.00	1138																									X
MFHE95	1.00	1139																									X
MFHE95D	1.00	1140																									X
MFHE95S	1.00	1141																									X
MFHE96	1.00	1141																									X
CCV	1.00	1142																									X
CCB	1.00	1143																									X
MFHE97	1.00	1145																									X

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LABS_OF_OK_____ Contract: 68-D5-0136

Lab Code: SWOK__ Case No.: 25393_ SAS No.: _____ SDG No.:MFHE85

Instrument ID Number: LACHAT_____ Method: CA

Start Date: 04/15/97 End Date: 04/15/97

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MFHE98	1.00	1146																									X
MFHE99	1.00	1147																									X
CCV	1.00	1147																									X
CCB	1.00	1148																									X

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

ICP/TRACE ICP DATA REVIEW SHEET

Instrument: TJA#2 **Method:** ~~167342~~ ILM 4.0 4/24
Analyst: EV **Date:** 4/23/97
Reviewer: _____ **Date:** _____
File: T2042310.ASC **QC Ref. #:** 167342
Prep Batch(s): 970411I2, 970415I2
QC Standards Prep Batch ID: T2970405TD

Analyst	Reviewer	
EV		- Correct Instrument ID., Method, File was entered into the IDB.
		AS VERIFY
		- Review of every Run QC sample was made and elements that failed were noted on the Re-analyzes Log.
		- Review of the Prep Batch QC was made and elements that failed were noted on the Re-analyzes Log.
		- Matrix Spikes were checked for required post spikes and clearly marked on reanalyzes log.
		- Review was made to locate samples out of linear range. If interfering elements are high list samples and elements that might be affected: _____
		Reanalyzes Log and Runlog clearly identifies what needs to be reanalyzed and what passed QC requirements.
		PB VERIFY
		- All required elements for samples have been labeled as passing QC requirements.
		- Dilutions were checked against original samples for false positive or negative readings.
		UPLOAD
		Results uploaded to LIMS were double checked against Raw Data.

Comments: *No Problem / See attached Case Narrative / See attached Override Report / See attached Reanalyzes Log*

ICP Run Log T2042310.ASC Page 1
Inorganics Department American Analytical & Technical Services Inc.

Analyst: EV Date: 04/23/1997

QC Reference: 167342 Method: ILM04.0
Instrument: TJA ET2 Source: ?

Client ID	LAB ID	Time	DF	Analytes:
	STD0/50	10:26	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	STD1/5	10:32	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICV	10:37	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICB	10:43	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CRI	10:49	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICSA	10:55	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICSAB	11:00	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCV	11:06	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCB	11:12	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
PBS	PBS970411B	11:17	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn

ICP Run Log T2042310.ASC Page 2

Inorganics Department American Analytical & Technical Services Inc.

Analyst: EV Date: 04/23/1997

QC Reference: 167342 Method: ILM04.0

Instrument: TJA ET2 Source: ?

Client ID	LAB ID	Time	DF	Analytes:
LCSS	LCS970411B	11:23	1.00	Al,Sb,As,Ba,Be,Cd,Cr,Co,Cu, Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl, V,Zn
LCSS 5X	LCS970411B(5	11:29	5.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE85	29054.01	11:34	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE86	29054.02	11:40	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE87	29054.03	11:46	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE88	29054.04	11:51	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE89	29054.05	11:57	1.0.0	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE95	29054.11	12:03	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE95L	29054.11L	12:09	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCV	12:14	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn

ICP Run Log T2042310.ASC Page 3

Organics Department American Analytical & Technical Services Inc.

Analyst: EV Date: 04/23/1997

QC Reference: 167342 Method: ILM04.0

Instrument: TJA ET2 Source: ?

Client ID	LAB ID	Time	DF	Analytes:
	CCB	12:20	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE95S	29054.11S	12:26	1.00	Sb,As,Ba,Be,Cd,Ca,Co,Fe,Mg, Ni,K,Se,Ag,Na,Tl,V,Zn
MFHE95D	29054.11D	12:31	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE90	29054.06	12:37	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE91	29054.07	12:43	1.00	Al,Sb,As,Ba,Be,Cd,Cr,Co,Cu, Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl, V,Zn
MFHE92	29054.08	12:48	1.00	Al,Sb,As,Ba,Be,Cd,Cr,Co,Cu, Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl, V,Zn
MFHE93	29054.09	12:54	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE94	29054.10	13:00	1.00	Al,Sb,As,Ba,Be,Cd,Cr,Co,Cu, Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl, V,Zn
	CRI	13:05	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICSA	13:11	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn

ICP Run Log T2042310.ASC Page 4

Organics Department American Analytical & Technical Services Inc.

Analyst: EV Date: 04/23/1997

QC Reference: 167342 Method: ILM04.0

Instrument: TJA ET2 Source: ?

Client ID	LAB ID	Time	DF	Analytes:
	ICSAB	13:17	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCV	13:23	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCB	13:28	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni.,K,Se,Ag,Na, Tl,V,Zn
MFHE9C	29054.12	13:34	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE97	29054.13	13:40	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE98	29054.14	13:50	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE99	29054.15	13:56	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE95A	29054.11A	14:01	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, 35C - Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn (286, 3060)
MFHE91	2x29054.07(2)	14:07	2.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MFHE92	2x29054.08(2)	14:13	2.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn

ICP Run Log T2042310.ASC Page 5

Inorganics Department American Analytical & Technical Services Inc.

Analyst: EV Date: 04/23/1997

QC Reference: 167342 Method: ILM04.0

Instrument: TJA ET2 Source: ?

Client ID	LAB ID	Time	DF	Analytes:
MFHE94 2X	29054.10(2)	14:18	2.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCV	14:24	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCB	14:30	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
PBS	PBS970415B	14:35	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
LCSS	LCS970415B	14:41	1.00	Al,Sb,As,Ba,Be,Cd,Cr,Co,Cu, Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl, V,Zn
LCSS 5X	LCS970415B(5	14:47	5.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MX5480	29071.02	14:52	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MX5480L	29071.02L	14:58	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MX5480S	29071.02S	15:04	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
MX5480D	29071.02D	15:10	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn

ICP Run Log T2042310.ASC Page 6

Inorganics Department American Analytical & Technical Services Inc.

Analyst: EV Date: 04/23/1997

QC Reference: 167342 Method: ILM04.0

Instrument: TJA ET2 Source: ?

Client ID	LAB ID	Time	DF	Analytes:
	CRI	15:15	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICSA	15:21	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	ICSAB	15:27	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCV	15:32	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn
	CCB	15:38	1.00	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co, Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn

Standardization Rpt. Wed 04-23-97 10:32:10 AM page 1

Method: 61ET2 Standard: STD0/SD RT 1026 055

Elem	As	Tl	Al	Ba	Be	Cd	Ca
Avge	-.0513	-.0403	.8293	.0007	-7.649	.1010	.0520
SDev	.0451	.0140	.0051	.0006	.036	.0285	.0000
%RSD	87.82	34.74	.6188	86.60	.4679	28.23	.0000
#1	-.1030	-.0410	.8250	.0010	-7.638	.1020	.0520
#2	-.0200	-.0540	.8280	.0000	-7.620	.0720	.0520
#3	-.0310	-.0260	.8350	.0010	-7.689	.1290	.0520

Elem	Cr	Co	Cu	Fe	Mg	Mn	Ni
Avge	.0173	-.0047	.0667	-.0373	.0713	.0087	.0047
SDev	.0150	.0021	.0011	.0105	.0006	.0011	.0015
%RSD	86.79	44.61	1.732	28.14	.8094	13.32	32.73
#1	.0330	-.0030	.0660	-.0270	.0720	.0100	.0060
#2	.0160	-.0070	.0680	-.0370	.0710	.0080	.0050
#3	.0030	-.0040	.0660	-.0480	.0710	.0080	.0030

Elem	K	Ag	Na	V	Zn	220Pb1	220Pb2
Avge	4.208	-.0057	.1153	.0023	-.0083	.4100	-.0520
SDev	.027	.0081	.0011	.0015	.0006	.0387	.0461
%RSD	.6351	142.6	1.001	65.47	6.928	9.449	88.71
#1	4.239	.0030	.1160	.0040	-.0080	.3740	-.1000
#2	4.190	-.0130	.1140	.0020	-.0080	.4050	-.0080
#3	4.196	-.0070	.1160	.0010	-.0090	.4510	-.0480

Elem	196Se1	196Se2	206Sb1	206Sb2	B	Sc	Sr
Avge	-.2397	.1573	-.2570	.0217	.0770	-.0077	.0467
SDev	.0371	.0035	.0070	.0244	.0419	.0093	.0211
%RSD	15.47	2.232	2.724	112.7	54.47	121.2	45.17
#1	-.2690	.1610	-.2500	.0140	.1150	.0030	.0710
#2	-.1980	.1570	-.2570	.0020	.0840	-.0140	.0350
#3	-.2520	.1540	-.2640	.0490	.0320	-.0120	.0340

Elem	Ti	Sn
Avge	-.0840	.1293
SDev	.0154	.0270
%RSD	18.33	20.90
#1	-.0800	.1030
#2	-.0710	.1280
#3	-.1010	.1570

DATA REVIEWED BY 4/28

Method: 61ET2 Standard: STD1/5 R.T 1022 056

Elem	As	Tl	Al	Ba	Be	Cd	Ca
Avge	16.32	17.50	31.35	43.27	577.5	346.5	5.585
SDev	.15	.06	.01	.05	2.1	1.2	.022
%RSD	.9348	.3604	.0355	.1045	.3665	.3325	.3891
#1	16.20	17.44	31.34	43.28	576.6	346.1	5.569
#2	16.28	17.50	31.36	43.22	576.0	345.5	5.577
#3	16.50	17.56	31.36	43.31	579.9	347.8	5.610

Elem	Cr	Co	Cu	Fe	Mg	Mn	Ni
Avge	60.96	4.837	34.41	16.55	3.004	29.59	9.466
SDev	.24	.017	.02	.06	.003	.10	.032
%RSD	.3977	.3411	.0682	.3555	.1017	.3363	.3384
#1	60.81	4.824	34.39	16.54	3.003	29.52	9.457
#2	60.83	4.833	34.42	16.51	3.001	29.54	9.440
#3	61.24	4.856	34.43	16.62	3.007	29.70	9.502

Elem	K	Ag	Na	V	Zn	220Pb1	220Pb2
Avge	53.31	45.56	33.74	7.646	6.427	84.40	51.93
SDev	.06	.11	.02	.026	.019	.06	.28
%RSD	.1064	.2370	.0646	.3408	.2912	.0729	.5486
#1	53.37	45.50	33.75	7.633	6.414	84.37	51.60
#2	53.26	45.50	33.74	7.629	6.420	84.36	52.08
#3	53.28	45.68	33.71	7.676	6.449	84.47	52.11

Elem	196Se1	196Se2	206Sb1	206Sb2	B	Sc	Sr
Avge	13.37	16.70	60.84	34.90	172.7	365.9	1334.
SDev	.08	.04	.36	.13	.4	.8	2.
%RSD	.5798	.2684	.5975	.3725	.2573	.2258	.1738
#1	13.32	16.67	60.45	34.77	172.7	365.5	1333.
#2	13.33	16.69	60.93	34.90	172.2	365.3	1332.
#3	13.46	16.75	61.16	35.03	173.1	366.8	1336.

Elem	Ti	Sn
Avge	134.3	57.78
SDev	.2	.17
%RSD	.1543	.3028
#1	134.2	57.60
#2	134.2	57.81
#3	134.5	57.94

Analysis Report QC Standard Wed 04-23-97 10:43:35 AM page 1

Method: 61ET2 Sample Name: 1CV Operator: 057
Run Time: 04/23/97 10:37:57
mment:
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	49.75	100.1	2080.	49.20	967.0	813.8	816.3
SDev	.86	4.0	1.	3.44	4.4	1.3	1.0
%RSD	1.720	4.015	.0334	6.989	.4581	.1599	.1178
#1	49.48	104.3	2081.	45.50	964.5	812.5	815.2
#2	49.06	96.28	2080.	49.81	972.2	815.1	816.6
#3	50.71	99.69	2080.	52.29	964.5	813.8	817.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	50.90	98.90	2074.	50.70	970.0	782.4	803.6
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	193.4	296.8	19730.	192.1	211.8	198.3	811.4
SDev	.1	.7	41.	.4	.3	.5	4.8
%RSD	.0461	.2247	.2084	.2294	.1492	.2392	.5900
#1	193.4	297.0	19690.	191.8	211.4	197.7	813.2
#2	193.5	297.4	19770.	192.6	212.1	198.5	815.0
#3	193.4	296.1	19710.	191.8	211.9	198.6	806.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	190.4	303.7	20280.	188.4	208.0	198.8	794.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9919.	197.5	197.6	19420.	297.6	18630.	198.0
SDev	18.	.5	.8	58.	.7	43.	.5
%RSD	.1786	.2352	.4237	.2971	.2366	.2312	.2384
#1	9899.	197.1	197.3	19360.	296.8	18580.	197.6
#2	9930.	198.0	197.0	19440.	297.8	18640.	198.6
#3	9930.	197.4	198.6	19470.	298.2	18660.	197.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	9835.	196.4	198.8	19840.	297.9	19510.	196.8
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1183.	2068.	2087.	52.31	47.63	963.0	975.0
SDev	1.	2.	2.	5.27	5.05	5.0	3.4
%RSD	.1035	.0999	.0886	10.08	10.60	.5147	.3465
#1	1183.	2066.	2089.	48.53	43.97	960.1	973.1
#2	1185.	2070.	2085.	58.33	45.53	968.8	978.9
#3	1183.	2067.	2087.	50.07	53.39	960.2	973.0
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	1205.						

Analysis Report QC Standard Wed 04-23-97 10:49:17 AM page 1

Method: 61ET2 Sample Name: ICB Operator: 058
Run Time: 04/23/97 10:43:39
mment:
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.1831	-.0176	.1924	-1.275	2.408	-.2189	.0924
SDev	2.2511	1.3076	.5191	.749	.514	.6818	.0133
%RSD	1229.	7432.	269.8	58.69	21.35	311.5	14.37
#1	-2.728	-1.285	.1838	-2.092	2.924	.5452	.1000
#2	.6314	1.327	-.3223	-1.113	2.407	-.7650	.1000
#3	1.547	-.0953	.7158	-.6211	1.895	-.4369	.0771
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1123	.0416	-7.229	.1367	.2757	.2038	3.822
SDev	.0159	.1124	.000	.2470	.1195	.1850	3.136
%RSD	14.15	270.3	.0000	180.6	43.35	90.78	82.06
#1	.1077	-.0881	-7.229	.0109	.1377	.0969	5.632
#2	.0992	.1116	-7.229	-.0219	.3446	.0970	5.634
#3	.1299	.1013	-7.229	.4213	.3447	.4174	.2006
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	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-1.137	-.1127	-.0342	-6.382	.2414	.7931	-.0002
SDev	.000	.0195	.1212	2.663	.1105	.0000	.0756
%RSD	.0000	17.30	354.3	41.73	45.76	.0000	33980.
#1	-1.137	-.1240	.0355	-5.160	.3438	.7931	.0870
#2	-1.137	-.0902	-.1742	-4.549	.2561	.7931	-.0439
#3	-1.137	-.1240	.0361	-9.437	.1244	.7931	-.0437
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1036	-.3623	.4547	-1.254	-1.298	2.692	1.816
SDev	.0908	1.0350	.3278	2.554	1.483	1.170	.803
%RSD	87.62	285.7	72.09	203.7	114.3	43.46	44.19
#1	.0509	-.7471	.6341	-.9835	-2.658	3.832	1.083
#2	.2084	-1.150	.0764	-3.933	.2840	2.751	1.692
#3	.0515	.8100	.6537	1.154	-1.521	1.494	2.674
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						

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Method: 61ET2 Sample Name: CRI Operator: 059
Run Time: 04/23/97 10:49:21
mment:
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	20.81	19.03	6.721	11.49	117.2	407.5	399.4
SDev	3.67	.26	.602	1.11	2.0	2.3	1.4
%RSD	17.62	1.344	8.961	9.617	1.675	.5675	.3525
#1	17.72	18.77	6.816	11.78	115.0	405.0	398.6
#2	24.86	19.05	6.077	10.27	117.7	407.9	398.6
#3	19.86	19.28	7.270	12.43	118.9	409.5	401.1
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	30.00	9.000	15.00	180.0	600.0	600.0
Low	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9.800	10.14	9671.	19.81	96.77	50.30	205.8
SDev	.067	.10	71.	.10	.52	.25	1.5
%RSD	.6842	.9545	.7336	.4847	.5376	.4990	.7345
#1	9.729	10.04	9589.	19.70	96.22	50.35	204.2
#2	9.862	10.24	9712.	19.88	96.84	50.03	207.2
#3	9.810	10.13	9712.	19.85	97.25	50.52	206.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	15.00	15.00	15000.	30.00	150.0	75.00	300.0
Low	5.000	5.000	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9900.	29.49	79.80	9781.	19.93	9778.	97.49
SDev	35.	.22	.40	53.	.12	55.	.69
%RSD	.3585	.7350	.5024	.5396	.6063	.5582	.7106
#1	9872.	29.25	79.34	9783.	19.85	9778.	96.70
#2	9889.	29.59	80.08	9727.	19.87	9723.	97.75
#3	9940.	29.65	79.98	9833.	20.07	9832.	98.01
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	15000.	45.00	120.0	15000.	30.00	15000.	150.0
Low	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	40.95	8.681	5.723	13.53	10.46	116.2	119.1
SDev	.41	.444	.693	.60	1.36	2.7	.6
%RSD	1.005	5.117	12.11	4.458	12.96	2.312	.5151
#1	40.48	8.892	5.761	13.68	10.82	113.2	118.6
#2	41.10	8.171	5.012	12.87	8.964	117.1	118.9
#3	41.26	8.981	6.396	14.05	11.61	118.4	119.8
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	60.00						

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Method: 61ET2 Sample Name: 1CSA Operator: 060
Run Time: 04/23/97 10:55:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.191	8.673	-2.528	-8.388	5.194	477800.	-.9808
SDev	1.367	1.149	.367	3.227	3.671	1812.	.0182
%RSD	42.82	13.25	14.53	38.48	70.69	.3792	1.854
#1	3.101	9.959	-2.122	-4.826	1.390	475700.	-.9739
#2	4.601	8.311	-2.837	-9.218	8.716	479000.	-.9670
#3	1.872	7.749	-2.625	L-11.12	5.474	478600.	-1.001
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	20.00	6.000	10.00	120.0	595000.	400.0
Low	-20.00	-20.00	-6.000	-10.00	-120.0	396600.	-400.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4182	.1008	440900.	33.55	3.704	17.21	172900.
SDev	.0426	.1313	2140.	.38	.307	.10	601.
%RSD	10.20	130.2	.4854	1.141	8.294	.5728	.3475
#1	.4674	.0391	438800.	33.54	3.368	17.28	172300.
#2	.3922	.2516	441000.	33.17	3.772	17.26	173000.
#3	.3950	.0118	443000.	33.94	3.971	17.10	173500.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.00	10.00	548600.	45.60	100.0	50.00	223200.
Low	-10.00	-10.00	365800.	30.40	-100.0	-50.00	148800.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	461900.	44.39	7.938	-21.72	.0343	136.1	.2001
SDev	1113.	.24	.263	4.67	.1714	1.1	.3183
%RSD	.2410	.5476	3.307	21.51	500.1	.7878	159.1
#1	460700.	44.15	7.644	-23.90	-.0755	134.9	.1812
#2	462600.	44.37	8.148	-24.92	-.0535	137.0	-.1083
#3	462500.	44.64	8.023	-16.36	.2318	136.4	.5274
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass
High	588800.	54.00	80.00		20.00		100.0
Low	392600.	36.00	-80.00		-20.00		-100.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	18.36	-3.518	-2.044	-6.384	-9.401	7.391	.7744
SDev	.27	1.304	.197	6.999	4.121	6.537	2.079
%RSD	1.450	37.05	9.621	109.6	43.84	88.44	268.4
#1	18.05	-2.255	-2.067	-4.107	-5.198	.5427	3.061
#2	18.48	-4.859	-1.838	-.8066	-13.44	13.56	-1.001
#3	18.54	-3.441	-2.229	-14.24	-9.571	8.068	.2628
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	40.00						

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Method: 61ET2 Sample Name: 1CSAB Operator: 061
Run Time: 04/23/97 11:00:45
Comment:
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	86.55	87.18	39.54	37.60	536.3	474900.	473.3
SDev	4.21	5.98	.22	5.12	4.6	1746.	1.5
%RSD	4.862	6.865	.5528	13.63	.8542	.3677	.3124
#1	81.76	90.13	39.75	L31.73	531.1	472900.	471.6
#2	88.21	91.13	39.57	41.14	538.0	476200.	474.3
#3	89.67	80.30	39.31	39.94	539.8	475600.	473.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	116.4	109.2	56.40	50.40	649.2	606700.	560.4
Low	77.60	72.80	37.60	33.60	432.8	404500.	373.6

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	420.7	807.9	437200.	437.9	412.5	523.9	171000.
SDev	.5	.8	647.	.7	1.4	1.3	278.
%RSD	.1082	.0986	.1480	.1518	.3279	.2518	.1627
#1	420.2	807.1	436400.	437.3	411.3	522.6	170700.
#2	421.1	808.7	437700.	438.6	414.0	525.3	171300.
#3	420.9	808.0	437400.	437.7	412.3	523.8	171100.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	532.8	1045.	561500.	547.2	512.4	608.4	212700.
Low	355.2	696.8	374300.	364.8	341.6	405.6	141800.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	457400.	464.2	807.8	-15.89	194.4	140.2	427.6
SDev	1007.	1.0	1.7	1.53	.4	.7	1.0
%RSD	.2201	.2185	.2115	9.623	.2189	.4900	.2275
#1	456200.	463.0	805.9	-15.95	194.0	139.4	426.5
#2	458100.	464.9	809.1	-17.38	194.7	140.6	428.1
#3	457800.	464.7	808.4	-14.32	194.7	140.6	428.2
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass
High	638900.	580.8	1028.		248.4		552.0
Low	425900.	387.2	685.6		165.6		368.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	893.0	41.51	38.55	39.63	36.57	537.3	534.4
SDev	1.7	1.85	.74	4.84	7.43	8.5	3.7
%RSD	.1888	4.465	1.917	12.21	20.31	1.590	.6985
#1	891.1	43.61	37.81	38.81	28.17	527.5	538.5
#2	894.2	40.11	39.28	44.83	39.28	541.3	531.2
#3	893.8	40.82	38.55	35.26	42.27	543.0	533.5
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1210.						

Analysis Report QC Standard Wed 04-23-97 11:12:04 AM page 1

Method: 61FT2 Sample Name: CCV Operator: 062
Run Time: 04/23/97 11:06:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	491.1	497.4	495.2	495.1	493.7	4983.	496.6
SDev	3.2	.6	.8	2.9	3.1	2.	.4
%RSD	.6458	.1299	.1699	.5943	.6354	.0496	.0780
#1	487.7	497.8	494.3	493.1	490.1	4981.	496.2
#2	494.0	497.7	495.9	498.4	494.9	4986.	496.8
#3	491.6	496.6	495.6	493.6	496.0	4982.	496.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	500.0	500.0	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	491.2	494.4	4901.	493.8	489.6	498.4	4921.
SDev	2.0	1.6	18.	1.8	1.6	.5	22.
%RSD	.4139	.3287	.3767	.3635	.3297	.1059	.4439
#1	488.9	492.6	4880.	491.9	487.7	498.9	4901.
#2	492.6	495.6	4914.	495.5	490.4	498.4	4944.
#3	492.2	495.0	4908.	494.1	490.6	497.8	4918.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	5000.	500.0	500.0	500.0	5000.
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4971.	493.2	496.3	5056.	498.1	5155.	495.3
SDev	10.	1.8	1.6	8.	1.0	8.	1.7
%RSD	.2058	.3570	.3204	.1565	.1946	.1485	.3508
#1	4961.	491.2	494.4	5064.	496.9	5164.	493.3
#2	4981.	494.4	497.1	5054.	498.6	5151.	496.3
#3	4971.	494.0	497.3	5049.	498.6	5150.	496.3
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	5000.	500.0	500.0	5000.	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	498.4	494.1	495.8	492.2	496.5	494.7	491.6
SDev	1.5	.7	1.1	1.2	4.2	4.5	.8
%RSD	.2978	.1482	.2134	.2366	.8481	.9107	.1536
#1	496.7	493.4	494.7	490.9	494.2	489.5	491.2
#2	499.1	494.0	496.8	492.7	501.3	496.8	491.1
#3	499.3	494.9	495.9	493.1	493.9	497.8	492.4
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	500.0						

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Method: 61ET2 Sample Name: CCB Operator: 063
Run Time: 04/23/97 11:12:08
mment:
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.038	-2.327	-.0319	-1.606	1.575	7.010	.0307
SDev	1.466	2.953	.1770	1.472	.992	.828	.0001
%RSD	141.2	126.9	554.1	91.65	62.99	11.81	.2210
#1	.4480	-5.660	.0110	-2.762	2.701	6.133	.0308
#2	-.0408	-.0366	-.2265	.0509	1.194	7.118	.0308
#3	2.708	-1.284	.1197	-2.107	.8296	7.778	.0307
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.0490	.0869	-6.627	.0383	.1379	-.0583	4.025
SDev	.0513	.0667	1.043	.1815	.2070	.0170	3.098
%RSD	104.8	76.81	15.75	474.4	150.2	29.15	76.97
#1	-.0940	.1358	-5.422	-.1532	.3449	-.0484	1.409
#2	-.0598	.0109	-7.229	.2079	.1378	-.0485	3.219
#3	.0069	.1139	-7.229	.0601	-.0691	-.0779	7.446
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	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.273	-.1241	-.1417	-8.418	.1683	-.0000	-.0875
SDev	.000	.0338	.1232	1.810	.0791	.3434	.0757
%RSD	.0000	27.22	86.95	21.50	47.03	21e6	86.55
#1	2.273	-.1579	-.2840	-9.029	.1463	-.3966	-.0437
#2	2.273	-.1241	-.0700	-6.382	.1024	.1983	-.0438
#3	2.273	-.0903	-.0712	-9.844	.2561	.1983	-.1749
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.0521	-.2296	.0519	-.8850	-1.978	2.017	.6667
SDev	.0010	.7407	.3781	3.4152	1.148	.935	1.297
%RSD	2.015	322.6	728.9	385.9	58.00	46.35	194.5
#1	.0532	-.9602	.4815	-4.670	-1.820	3.090	1.897
#2	.0519	-.2495	-.2300	1.966	-.9184	1.384	.7904
#3	.0511	.5209	-.0959	.0493	-3.197	1.576	-.6875
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						

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Method: 61ET2 Sample Name: PBS970411B PBS Operator:

Run Time: 04/23/97 11:17:50 064

mment: PBS

de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.403	-.7883	1.849	-.5265	.4547	7.445	.0845
SDev	.688	.4907	.325	1.6817	.8277	1.969	.0354
%RSD	28.65	62.25	17.58	319.4	182.0	26.45	41.86
#1	3.197	-.8824	2.095	.6786	.9995	9.414	.0768
#2	1.975	-1.225	1.480	-2.448	.8624	7.446	.1231
#3	2.036	-.2574	1.971	.1896	-.4978	5.475	.0536
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.00	10.00	3.000	5.000	60.00	200.0	200.0
Low	-10.00	-20.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1573	.1223	14.46	.3226	-.0012	.2131	12.88
SDev	.0834	.0448	.00	.1282	.1195	.1008	2.18
%RSD	53.03	36.67	.0000	39.74	9966.	47.27	16.90
#1	.0923	.0980	14.46	.1749	-.0703	.1548	13.48
#2	.2513	.1740	14.46	.4047	.1368	.1551	10.46
#3	.1282	.0948	14.46	.3883	-.0701	.3295	14.69
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	5000.	10.00	50.00	25.00	100.0
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4.547	.0787	.0696	-2.173	.1463	14.38	-.0008
SDev	1.969	.0338	.1612	5.405	.1875	.75	.0756
%RSD	43.30	42.98	231.5	248.8	128.2	5.207	9514.
#1	5.684	.0786	-.0711	3.394	.3219	13.58	.0865
#2	5.684	.1125	.0345	-2.512	.1683	15.07	-.0444
#3	2.273	.0449	.2455	-7.400	-.0512	14.47	-.0445
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5000.	15.00	40.00	5000.	10.00	5000.	50.00
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.354	1.775	1.871	-.6639	-.4718	.6046	.1309
SDev	.091	1.058	.205	5.2178	2.8100	1.774	1.306
%RSD	6.713	59.62	10.96	786.0	595.6	293.4	997.4
#1	1.459	2.872	1.692	-3.490	2.751	1.310	.3550
#2	1.303	.7590	1.826	-3.859	-1.754	1.918	-1.272
#3	1.301	1.696	2.094	5.357	-2.412	-1.413	1.310
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	20.00						

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LCSS

Method: 61ET2 Sample Name: LCS970411B Operator: 065
Run Time: 04/23/97 11:23:31
mment: LCSS
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4940.	170.6	1025.	197.8	1206.	1507.	24.52
SDev	25.	5.6	8.	.9	2.	6.	.26
%RSD	.5110	3.306	.7473	.4402	.1374	.4030	1.069
#1	4913.	164.4	1017.	198.3	1205.	1500.	24.24
#2	4963.	171.9	1026.	196.8	1206.	1508.	24.57
#3	4945.	175.4	1032.	198.4	1208.	1512.	24.75
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	6236.	258.0	1403.	282.0	1486.	2121.	222.0
Low	3068.	123.0	838.0	88.00	647.0	965.5	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	89.42	191.7	762300.	455.7	653.0	32980.	101600.
SDev	.54	1.5	5258.	4.0	5.4	224.	914.
%RSD	.6060	.7620	.6897	.8829	.8316	.6786	.8999
#1	88.80	190.0	756300.	451.1	646.7	32720.	100600.
#2	89.61	192.5	765300.	458.2	655.8	33060.	102100.
#3	89.84	192.5	765400.	457.9	656.4	33140.	102200.
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	111.0	255.5		576.0	828.0	38170.	126000.
Low	76.50	160.5		389.0	577.0	28640.	84160.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	519600.	944.0	268.7	370.0	114.3	1191.	316.9
SDev	4931.	7.7	2.7	12.7	.7	16.	2.5
%RSD	.9489	.8112	.9927	3.434	.6078	1.341	.7943
#1	514000.	935.2	265.7	384.7	113.5	1209.	314.1
#2	521600.	948.2	269.8	363.1	114.6	1185.	318.1
#3	523200.	948.7	270.7	362.3	114.7	1179.	318.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	1172.	350.5	5000.	142.5	5000.	393.0
Low	487500.	839.5	217.5	-5000.	66.00	-5000.	265.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	872.3	1025.	1025.	201.5	196.0	1204.	1210.
SDev	5.1	6.	9.	1.3	.7	3.	4.
%RSD	.5885	.5860	.8539	.6522	.3785	.2263	.3660
#1	866.7	1018.	1017.	202.7	196.0	1204.	1207.
#2	873.4	1028.	1025.	200.1	195.2	1202.	1215.
#3	876.8	1028.	1034.	201.8	196.7	1207.	1209.
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1111.						

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LCSS

Method: 61ET2 Sample Name: LCS970411B(5) 1:4 Operator:

Run Time: 04/23/97 11:29:12 066

Comment: LCSS 5X

Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1046.	42.48	231.1	45.36	256.9	306.6	5.200
SDev	7.	.57	.9	1.50	.6	3.2	.035
%RSD	.6280	1.346	.3869	3.307	.2288	1.056	.6709
#1	1052.	42.16	230.1	46.61	257.1	308.8	5.232
#2	1039.	42.15	231.5	45.77	256.2	302.9	5.162
#3	1048.	43.14	231.7	43.70	257.3	308.2	5.205
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							
Low							

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	19.97	43.01	182400.	101.2	147.5	6867.	23000.
SDev	.17	.22	821.	.4	1.2	31.	102.
%RSD	.8305	.5028	.4501	.3974	.7801	.4479	.4426
#1	20.14	42.92	182200.	101.3	146.3	6845.	22940.
#2	19.81	42.85	181700.	100.7	147.7	6855.	22940.
#3	19.98	43.25	183300.	101.5	148.6	6902.	23120.
Errors	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High			225400.				
Low			142900.				

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	114300.	210.1	61.49	63.00	23.20	232.1	68.58
SDev	580.	.9	.74	5.50	.15	6.3	.22
%RSD	.5073	.4243	1.198	8.736	.6619	2.701	.3248
#1	113800.	210.1	61.18	68.36	23.14	239.0	68.45
#2	114300.	209.3	60.96	57.37	23.09	226.8	68.45
#3	114900.	211.1	62.33	63.27	23.38	230.4	68.84
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	128900.						
Low	97490.						

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	188.9	231.0	231.1	47.72	44.17	256.3	258.0
SDev	.8	1.8	1.2	1.48	1.60	.1	1.8
%RSD	.4238	.7885	.5045	3.111	3.613	.0235	.7107
#1	188.9	230.2	230.0	48.39	45.72	256.2	258.9
#2	188.1	229.7	232.3	48.75	44.27	256.3	255.9
#3	189.7	233.1	231.0	46.02	42.53	256.3	259.2
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							

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067

Method: 61ET2 Sample Name: 29054.01 Operator:
Run Time: 04/23/97 11:34:53
Comment: MFHE85
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	15.80	3.526	120.2	.1998	2.166	10730.	150.8
SDev	1.59	.216	2.0	.8542	.580	36.	.7
%RSD	10.03	6.126	1.656	427.5	26.78	.3391	.4640
#1	16.66	3.438	117.9	1.173	1.723	10760.	150.1
#2	13.98	3.772	121.1	-.1497	1.953	10690.	150.6
#3	16.78	3.367	121.6	-.4242	2.823	10740.	151.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.380	.6116	531200.	65.43	8.646	63.29	20780.
SDev	.096	.0560	2715.	.15	.240	.24	122.
%RSD	6.959	9.150	.5111	.2237	2.779	.3727	.5850
#1	1.489	.6282	528300.	65.36	8.786	63.34	20640.
#2	1.308	.5493	533700.	65.60	8.782	63.04	20860.
#3	1.344	.6575	531500.	65.34	8.368	63.50	20840.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	6267.	599.2	24.91	2034.	2.054	1556.	37.65
SDev	38.	2.8	.06	73.	.262	36.	.15
%RSD	.6060	.4640	.2548	3.599	12.76	2.301	.3887
#1	6226.	596.0	24.95	2118.	2.354	1596.	37.48
#2	6274.	601.1	24.83	1986.	1.937	1529.	37.74
#3	6301.	600.6	24.94	1998.	1.871	1542.	37.74
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	220.9	119.5	120.6	2.200	-.8120	2.703	1.068
SDev	.2	1.9	2.1	.679	.9485	.133	1.508
%RSD	.0766	1.621	1.749	30.86	116.8	4.931	141.2
#1	220.8	117.5	118.2	2.941	.2776	2.665	-.1872
#2	221.1	119.6	121.9	2.049	-1.261	2.593	.6497
#3	220.8	121.3	121.7	1.609	-1.452	2.851	2.742
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: 29054.02 Operator:
Run Time: 04/23/97 11:40:34
Comment: MFHE86
Mode: CONC Corr. Factor: 1

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Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	12.61	2.269	94.68	.3720	2.323	13470.	123.9
SDev	3.69	.752	1.49	2.686	.735	16.	1.5
%RSD	29.25	33.15	1.575	721.9	31.66	.1171	1.204
#1	9.737	1.411	93.55	-2.729	3.138	13470.	122.6
#2	11.33	2.579	94.13	1.899	2.120	13460.	123.5
#3	16.77	2.816	96.37	1.946	1.709	13490.	125.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.385	.2922	372200.	25.47	7.650	34.47	17180.
SDev	.171	.0360	3588.	.38	.115	.27	219.
%RSD	12.31	12.34	.9640	1.505	1.503	.7968	1.272
#1	1.526	.2541	368700.	25.09	7.586	34.27	16980.
#2	1.435	.2967	372100.	25.45	7.582	34.36	17160.
#3	1.195	.3257	375800.	25.86	7.783	34.79	17410.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5084.	547.2	18.28	2189.	.1691	1200.	33.42
SDev	80.	6.0	.43	133.	.2201	44.	.34
%RSD	1.582	1.105	2.378	6.072	130.2	3.634	1.012
#1	5015.	541.7	17.79	2308.	.3376	1240.	33.04
#2	5063.	546.2	18.63	2214.	.2496	1206.	33.56
#3	5172.	553.7	18.41	2046.	-.0800	1153.	33.68
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	144.8	94.51	94.75	3.585	-1.246	2.985	.9738
SDev	.8	1.59	1.45	.346	4.087	.696	.8379
%RSD	.5634	1.680	1.526	9.656	328.1	23.30	86.04
#1	144.0	93.41	93.60	3.715	-5.962	3.726	1.937
#2	144.7	93.79	94.29	3.193	1.241	2.884	.5681
#3	145.6	96.33	96.37	3.847	.9843	2.346	.4160
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61ET2 Sample Name: 29054.03 Operator: 069
Run Time: 04/23/97 11:46:15
Comment: MFHE87
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	15.25	.6827	59.50	.7801	2.306	15050.	174.1
SDev	1.43	2.138	.56	.6470	.865	34.	.6
%RSD	9.399	313.1	.9333	82.93	37.51	.2243	.3161
#1	16.90	-.4000	58.86	1.134	1.966	15070.	173.6
#2	14.28	3.145	59.84	1.173	1.662	15060.	174.7
#3	14.58	-.6972	59.79	.0334	3.288	15010.	174.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.986	-.0230	469500.	21.59	9.269	19.29	20360.
SDev	.087	.0384	1498.	.07	.431	.04	84.
%RSD	4.363	166.9	.3191	.3471	4.645	.2270	.4144
#1	2.076	-.0666	467800.	21.60	8.925	19.25	20270.
#2	1.977	.0057	470600.	21.65	9.129	19.27	20440.
#3	1.903	-.0081	470000.	21.50	9.752	19.33	20370.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	6502.	754.9	19.99	3179.	-.1856	1311.	47.60
SDev	29.	2.3	.10	62.	.0887	17.	.15
%RSD	.4481	.3104	.5184	1.938	47.81	1.322	.3181
#1	6472.	752.3	19.89	3250.	-.2001	1330.	47.69
#2	6529.	756.9	20.10	3147.	-.2661	1305.	47.69
#3	6506.	755.5	19.99	3141.	-.0905	1297.	47.43
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	69.23	58.64	59.90	6.234	-1.958	3.610	-.3271
SDev	.35	1.82	1.20	2.599	1.087	1.866	1.6609
%RSD	.5011	3.104	2.009	41.69	55.49	51.70	507.7
#1	69.04	58.63	58.95	4.886	-.7543	3.704	-1.536
#2	69.63	60.47	59.51	9.230	-2.866	1.698	1.567
#3	69.02	56.83	61.26	4.586	-2.255	5.427	-1.013
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61ET2 Sample Name: 29054.04 Operator: 070
Run Time: 04/23/97 11:51:56
Comment: MFHE88
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	14.15	1.576	69.38	1.248	1.874	12480.	145.0
SDev	1.48	1.115	.39	1.027	.235	33.	.5
%RSD	10.47	70.78	.5576	82.32	12.52	.2618	.3187
#1	14.95	.3628	69.62	2.383	1.633	12450.	144.5
#2	15.07	2.557	68.94	.3829	2.101	12480.	144.9
#3	12.44	1.808	69.59	.9774	1.888	12510.	145.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.656	.1427	510600.	21.73	8.082	20.84	19100.
SDev	.019	.0285	404.	.13	.240	.16	37.
%RSD	1.137	20.00	.0791	.6180	2.964	.7889	.1952
#1	1.657	.1516	510200.	21.77	8.359	20.71	19060.
#2	1.674	.1108	511000.	21.85	7.944	21.03	19130.
#3	1.637	.1657	510500.	21.59	7.944	20.80	19110.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	6864.	761.5	18.84	2737.	-.1420	1460.	40.33
SDev	22.	1.1	.12	5.	.2198	3.	.08
%RSD	.3258	.1473	.6462	.1758	154.8	.1925	.1869
#1	6840.	760.2	18.77	2738.	-.1566	1458.	40.29
#2	6867.	762.1	18.77	2731.	.0847	1459.	40.28
#3	6884.	762.1	18.98	2740.	-.3542	1463.	40.41
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	100.4	69.49	69.31	4.747	-.5135	2.525	.5473
SDev	.2	2.00	1.18	1.199	1.3145	.139	.9482
%RSD	.2314	2.878	1.698	25.26	256.0	5.521	173.3
#1	100.1	67.50	70.67	5.805	.6609	2.604	-.3328
#2	100.4	69.48	68.65	4.992	-1.933	2.364	1.551
#3	100.6	71.50	68.61	3.445	-.2679	2.608	.4233
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61FT2 Sample Name: 29054.05 Operator:
Run Time: 04/23/97 11:57:37
Comment: MFHE89
Mode: CONC Corr. Factor: 1

071

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	17.76	1.692	128.3	2.078	3.488	17240.	196.1
SDev	.96	1.396	2.0	1.857	.654	77.	1.0
%RSD	5.426	82.52	1.567	89.39	18.75	.4461	.5019
#1	18.59	1.054	126.0	2.863	3.712	17150.	195.0
#2	16.70	.7279	129.5	-.0433	2.751	17270.	196.7
#3	17.99	3.292	129.4	3.413	4.000	17300.	196.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.870	.1812	447100.	27.63	9.918	34.27	22920.
SDev	.060	.0590	2975.	.17	.204	.27	155.
%RSD	3.197	32.59	.6655	.6181	2.055	.7964	.6783
#1	1.939	.1180	443600.	27.47	9.716	33.99	22740.
#2	1.836	.2350	448900.	27.81	10.12	34.54	23000.
#3	1.834	.1906	448700.	27.63	9.915	34.28	23020.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	7179.	1026.	23.17	3642.	.0125	1318.	45.37
SDev	45.	7.	.21	30.	.1015	3.	.34
%RSD	.6308	.6392	.8899	.8341	812.4	.2563	.7499
#1	7126.	1018.	22.97	3677.	.0714	1322.	44.98
#2	7205.	1030.	23.38	3620.	.0708	1316.	45.62
#3	7205.	1029.	23.17	3630.	-.1047	1317.	45.49
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	148.7	127.5	128.7	3.341	1.434	4.815	.8109
SDev	1.0	1.1	2.5	2.240	1.675	1.566	1.283
%RSD	.6951	.8785	1.923	67.06	116.8	32.53	158.2
#1	147.6	126.2	125.8	4.528	2.019	4.975	1.163
#2	149.6	128.4	130.0	.7566	-.4552	3.174	1.882
#3	149.1	127.8	130.2	4.738	2.738	6.294	-.6115
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61ET2 Sample Name: 29054.11 Operator: 072
Run Time: 04/23/97 12:03:19
Comment: MFHE95
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	16.26	10.70	424.8	6.138	15.57	7995.	92.34
SDev	1.08	1.28	5.4	1.065	.38	16.	.96
%RSD	6.658	11.99	1.282	17.35	2.453	.1989	1.041
#1	17.22	10.84	418.5	5.196	15.16	7999.	91.26
#2	16.48	11.90	428.3	7.294	15.92	7977.	92.65
#3	15.09	9.346	427.6	5.925	15.64	8008.	93.11
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.010	-1.475	12940.	142.7	10.14	178.4	87000.
SDev	.140	.061	145.	1.7	.51	1.4	1175.
%RSD	13.87	4.162	1.123	1.168	4.988	.8004	1.351
#1	1.130	-1.412	12770.	140.8	9.686	176.8	85660.
#2	.8563	-1.478	13020.	143.6	10.69	178.7	87490.
#3	1.044	-1.535	13030.	143.8	10.06	179.6	87850.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2173.	1532.	102.9	2429.	.7617	1187.	35.32
SDev	23.	18.	1.3	124.	.0559	50.	.37
%RSD	1.068	1.195	1.278	5.124	7.343	4.212	1.059
#1	2147.	1511.	101.4	2573.	.8140	1245.	34.89
#2	2181.	1540.	103.4	2357.	.7027	1157.	35.47
#3	2192.	1544.	103.8	2357.	.7683	1161.	35.59
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	388.7	431.7	421.3	3.137	7.626	17.61	11.47
SDev	2.3	4.2	6.1	3.244	.520	.10	1.35
%RSD	.6025	.9797	1.447	103.4	6.821	.5922	11.81
#1	386.0	426.8	414.4	1.186	7.189	17.73	10.01
#2	390.0	433.7	425.6	6.881	7.488	17.52	12.69
#3	390.1	434.5	424.1	1.343	8.201	17.60	11.70
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 12:14:38 PM page 1

Method: 61ET2 Sample Name: 29054.11L Operator:
Run Time: 04/23/97 12:09:00
Comment: MFHE95L
Mode: CONC Corr. Factor: 1

073

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.476	4.055	85.62	1.233	3.511	1593.	18.35
SDev	1.153	1.566	.11	1.462	.127	5.	.06
%RSD	33.16	38.63	.1247	118.5	3.618	.2891	.3114
#1	3.210	3.312	85.74	.0942	3.431	1591.	18.29
#2	4.739	2.999	85.54	2.881	3.658	1589.	18.35
#3	2.480	5.855	85.56	.7240	3.444	1598.	18.40
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4487	-.1915	2581.	28.58	2.429	36.23	17380.
SDev	.0462	.0539	11.	.15	.317	.14	45.
%RSD	10.30	28.13	.4202	.5167	13.05	.3760	.2608
#1	.4339	-.2143	2570.	28.44	2.706	36.12	17330.
#2	.5005	-.1300	2592.	28.74	2.498	36.18	17390.
#3	.4117	-.2303	2581.	28.57	2.083	36.38	17420.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	441.1	307.4	20.98	500.5	.3205	247.4	7.029
SDev	2.0	1.0	.31	1.5	.1083	.3	.075
%RSD	.4464	.3131	1.457	.3000	33.78	.1388	1.072
#1	438.8	306.3	21.16	502.2	.3718	247.1	6.988
#2	442.2	307.6	20.63	499.3	.1962	247.6	7.116
#3	442.2	308.2	21.16	499.9	.3936	247.6	6.984
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	78.67	87.61	84.61	3.143	.2664	3.656	3.197
SDev	.24	.29	.30	2.286	2.374	.520	1.321
%RSD	.3008	.3332	.3599	72.73	891.5	14.22	41.34
#1	78.73	87.27	84.96	4.914	-2.327	4.251	1.768
#2	78.40	87.74	84.43	3.954	2.333	3.287	4.375
#3	78.87	87.81	84.43	.5623	.7928	3.431	3.448
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report QC Standard Wed 04-23-97 12:20:20 PM page 1

Method: 61FT2 Sample Name: CCV Operator:

Run Time: 04/23/97 12:14:42

074

mment:

de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	491.2	491.5	493.6	491.7	493.8	4967.	495.9
SDev	2.7	5.8	3.2	6.0	8.2	13.	1.4
%RSD	.5485	1.170	.6470	1.229	1.667	.2568	.2842
#1	490.4	485.8	490.1	484.7	484.5	4959.	495.2
#2	489.1	491.6	494.4	495.7	496.7	4959.	495.0
#3	494.3	497.3	496.3	494.6	500.1	4981.	497.5
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	500.0	500.0	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	490.4	492.7	4890.	493.7	488.9	499.1	4911.
SDev	3.7	3.4	41.	4.0	3.8	1.6	41.
%RSD	.7446	.6858	.8463	.8039	.7754	.3108	.8403
#1	486.3	489.2	4843.	489.3	484.6	498.1	4866.
#2	491.4	492.9	4903.	494.6	490.2	498.3	4919.
#3	493.4	495.9	4923.	497.1	491.8	500.9	4948.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	5000.	500.0	500.0	500.0	5000.
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4977.	491.9	493.7	5058.	497.2	5172.	494.4
SDev	17.	2.9	4.2	20.	2.7	20.	2.4
%RSD	.3449	.5989	.8582	.4036	.5351	.3924	.4822
#1	4961.	488.6	489.2	5069.	494.4	5179.	491.9
#2	4974.	493.0	494.6	5035.	497.7	5149.	494.9
#3	4995.	494.2	497.5	5071.	499.7	5188.	496.6
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	5000.	500.0	500.0	5000.	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	497.1	494.9	492.9	496.4	489.3	493.7	493.9
SDev	3.7	.7	4.6	3.8	7.2	9.6	5.5
%RSD	.7371	.1330	.9329	.7701	1.462	1.940	1.123
#1	493.1	494.2	488.0	492.1	481.1	482.9	487.7
#2	498.1	495.5	493.8	499.2	494.0	497.3	495.5
#3	500.2	494.8	497.0	498.0	492.8	501.0	498.4
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	500.0						

Analysis Report QC Standard Wed 04-23-97 12:26:02 PM page 1

Method: 61ET2 Sample Name: CCB Operator:
Run Time: 04/23/97 12:20:24
Comment:
Code: CONC Corr. Factor: 1

075

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.0406	-.3023	.7774	.0084	1.718	.5501	.0153
SDev	1.5000	1.1493	.5777	1.218	.845	1.137	.0134
%RSD	3696.	380.2	74.30	14470.	49.20	206.7	87.01
#1	1.242	-1.628	.8958	.9989	1.997	1.863	.0308
#2	-1.690	.3011	.1498	-1.352	.7686	-.1046	.0077
#3	.3261	.4197	1.287	.3781	2.388	-.1080	.0075
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2200	.0292	-9.036	.0547	.4828	.1263	3.421
SDev	.0512	.1096	.000	.1327	.1197	.1006	4.530
%RSD	23.25	374.7	.0000	242.7	24.79	79.69	132.4
#1	.1744	.1354	-9.036	.0766	.5519	.0681	3.220
#2	.2753	-.0835	-9.036	.1751	.5519	.0682	-1.004
#3	.2103	.0358	-9.036	-.0876	.3446	.2425	8.049
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	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-4.547	-.0676	-.1402	-18.94	.1390	-.9914	-.0875
SDev	.000	.0516	.2204	4.08	.2198	.0000	.0754
%RSD	.0000	76.41	157.2	21.51	158.2	.0000	86.26
#1	-4.547	-.1239	-.3873	-23.08	.3877	-.9914	-.0438
#2	-4.547	-.0563	.0360	-14.94	-.0293	-.9914	-.1746
#3	-4.547	-.0225	-.0693	-18.81	.0585	-.9914	-.0440
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1566	.3036	.9993	-1.525	.7629	2.145	.8406
SDev	.0894	1.026	.6050	.880	1.653	.523	1.670
%RSD	57.09	337.9	60.54	57.69	216.7	24.36	198.6
#1	.0533	-.3414	1.499	-1.795	2.384	2.559	.8500
#2	.2089	-.2343	.3268	-2.237	-.9211	1.558	-.8337
#3	.2074	1.486	1.172	-.5416	.8259	2.318	2.506
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						

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Method: 61ET2 Sample Name: 29054.11S Operator:

Run Time: 04/23/97 12:26:06

Comment: MFHE95S

Code: CONC Corr. Factor: 1

076

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	62.45	65.32	425.9	16.38	394.9	14970.	2140.
SDev	1.24	.67	2.4	.95	1.7	9.	2.
%RSD	1.990	1.020	.5700	5.794	.4359	.0603	.0878
#1	61.29	64.88	423.1	16.33	393.8	14970.	2141.
#2	62.30	65.00	427.3	15.46	393.9	14980.	2142.
#3	63.76	66.09	427.3	17.36	396.9	14960.	2138.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000 115%	50000 109%	400000 OK	50000 92%	500007 6%	600000 N/A	30000 102%
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	51.45	44.45	16040.	530.8	497.0	614.8	183600.
SDev	.15	.30	74.	1.7	2.5	.4	629.
%RSD	.3008	.6795	.4602	.3140	.5027	.0659	.3424
#1	51.33	44.17	15960.	528.9	494.4	614.8	182900.
#2	51.63	44.77	16090.	531.9	499.3	615.2	184000.
#3	51.40	44.41	16080.	531.7	497.4	614.4	183800.
Errors	LC Pass	LC Pass	LC Pass	LC Pass PDS	LC Pass	LC Pass PDS	LC Pass
High	20000 101%	20000 89%	600000 N/A	60000 194%	500009 7%	60000 175%	600000 N/A
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2582.	12100.	658.1	2685.	51.07	1391.	552.6
SDev	5.	37.	2.8	19.	.19	10.	1.0
%RSD	.2018	.3030	.4196	.6904	.3732	.7528	.1766
#1	2577.	12060.	655.0	2705.	50.94	1403.	551.6
#2	2587.	12130.	660.3	2681.	50.98	1387.	553.5
#3	2580.	12110.	658.9	2668.	51.29	1384.	552.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000 N/A	30000 PDS	60000 111%	60000 N/A	10000 102%	50000 N/A	60000 104%
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	854.1	439.4	419.2	9.695	19.72	398.1	388.4
SDev	1.8	2.6	2.9	1.557	2.17	1.4	3.0
%RSD	.2161	.5940	.6852	16.06	10.98	.3403	.7669
#1	852.0	437.3	416.0	9.092	19.94	396.8	387.9
#2	855.5	442.3	419.8	11.46	17.45	398.1	385.7
#3	854.8	438.6	421.7	8.529	21.76	399.5	391.6
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000 98%						

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Method: 61ET2 Sample Name: 29054.11D Operator:

Run Time: 04/23/97 12:31:48 077

Comment: MFHE95D

Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	30.79	22.57	430.9	6.428	21.66	8715.	138.8
SDev	1.42	.84	1.9	2.459	.56	35.	.4
%RSD	4.623	3.720	.4321	38.25	2.578	.4040	.3127
#1	31.30	21.68	428.9	5.231	22.08	8676.	138.3
#2	29.18	23.35	431.3	4.798	21.03	8725.	138.9
#3	31.89	22.67	432.5	9.256	21.87	8744.	139.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.040	-4.498	14630.	233.5	15.43	422.7	169700.
SDev	.026	.076	68.	.9	.31	1.5	790.
%RSD	2.457	1.693	.4656	.4049	1.999	.3613	.4658
#1	1.019	-4.555	14560.	232.5	15.37	421.3	168800.
#2	1.032	-4.411	14630.	233.6	15.15	422.6	169700.
#3	1.068	-4.527	14690.	234.4	15.76	424.3	170400.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2420.	1964.	168.5	2620.	1.171	1259.	51.93
SDev	9.	8.	.8	16.	.099	8.	.17
%RSD	.3728	.4297	.4564	.6070	8.433	.6398	.3272
#1	2413.	1955.	167.8	2603.	1.164	1249.	51.79
#2	2417.	1964.	168.4	2622.	1.076	1262.	51.88
#3	2430.	1972.	169.3	2635.	1.273	1264.	52.12
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	366.3	442.0	425.3	-2.219	10.74	24.64	15.68
SDev	1.9	2.2	1.7	3.421	3.87	1.31	1.20
%RSD	.5179	.4907	.4032	154.2	36.00	5.311	7.647
#1	364.6	439.7	423.4	-5.981	10.82	25.96	14.29
#2	366.0	442.2	425.8	.7050	6.832	23.35	16.36
#3	368.3	444.0	426.8	-1.380	14.56	24.61	16.38
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: 29054.06 Operator:
Run Time: 04/23/97 12:37:30
Comment: MFHE90
Code: CONC Corr. Factor: 1

078

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	12.82	.6467	51.73	.3384	2.307	12830.	157.0
SDev	1.32	1.420	.49	2.750	.108	51.	.7
%RSD	10.32	219.6	.9569	812.5	4.675	.4003	.4250
#1	14.35	.0716	52.17	-1.189	2.331	12800.	156.7
#2	12.08	2.264	51.82	-1.309	2.189	12810.	156.6
#3	12.03	-.3956	51.19	3.513	2.401	12890.	157.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.760	.0112	528700.	20.44	7.934	18.24	19530.
SDev	.010	.1067	1901.	.05	.205	.18	69.
%RSD	.5819	953.3	.3595	.2412	2.586	.9698	.3532
#1	1.759	-.0781	527300.	20.43	7.934	18.05	19510.
#2	1.770	-.0177	527900.	20.40	7.728	18.28	19460.
#3	1.749	.1294	530800.	20.50	8.139	18.39	19600.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	7234.	762.7	18.40	2722.	-.2738	1606.	42.45
SDev	31.	3.0	.44	18.	.1103	8.	.07
%RSD	.4277	.3946	2.377	.6733	40.30	.4705	.1731
#1	7212.	760.7	18.75	2743.	-.2883	1610.	42.49
#2	7222.	761.3	17.91	2707.	-.3761	1597.	42.36
#3	7270.	766.2	18.54	2717.	-.1569	1610.	42.49
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	85.09	52.01	51.57	3.138	-1.073	3.038	.8207
SDev	.62	1.19	.25	5.657	3.388	.364	.8224
%RSD	.7309	2.292	.4905	180.3	315.7	11.97	100.2
#1	84.52	53.29	51.59	-3.349	-.1207	3.441	.0861
#2	85.00	51.81	51.81	5.721	-4.835	2.938	.6670
#3	85.75	50.94	51.31	7.042	1.737	2.734	1.709
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 12:48:49 PM page 1

Method: 61ET2 Sample Name: 29054.07 Operator:

079

Run Time: 04/23/97 12:43:11
Comment: MFHE91
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	33.01	6.894	54.40	-.0544	6.695	11000.	153.7
SDev	2.41	1.189	.25	2.6683	1.016	32.	.3
%RSD	7.287	17.25	.4560	4906.	15.18	.2953	.2142
#1	33.42	7.291	54.11	-1.876	7.748	11020.	153.9
#2	35.18	5.557	54.52	-1.296	5.720	10970.	153.4
#3	30.43	7.834	54.56	3.008	6.617	11020.	153.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.778	.2360	H851700.	101.4	12.12	755.0	75410.
SDev	.050	.1961	2813.	.3	.24	2.4	206.
%RSD	2.814	83.11	.3302	.3283	2.003	.3242	.2729
#1	1.820	.3343	H854500.	101.6	11.84	756.4	75600.
#2	1.723	.3636	H848800.	101.0	12.26	752.2	75190.
#3	1.791	.0102	H851800.	101.5	12.26	756.5	75440.
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	8343.	1302.	66.27	1077.	.0128	2013.	64.72
SDev	20.	4.	.24	2.	.1336	5.	.07
%RSD	.2360	.3354	.3596	.2107	1045.	.2663	.1065
#1	8354.	1306.	66.55	1076.	.0784	2018.	64.80
#2	8320.	1297.	66.14	1074.	.1008	2007.	64.69
#3	8354.	1302.	66.13	1079.	-.1409	2015.	64.68
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	256.2	56.40	53.38	5.838	-3.011	8.691	2.682
SDev	.9	.73	.07	3.177	2.684	1.077	.933
%RSD	.3515	1.301	.1313	54.43	89.12	12.39	34.81
#1	257.1	55.58	53.36	2.564	-4.107	9.748	3.731
#2	255.4	56.62	53.46	6.040	-4.974	7.596	1.944
#3	256.1	56.99	53.33	8.908	.0470	8.728	2.371
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61ET2 Sample Name: 29054.08 Operator:
Run Time: 04/23/97 12:48:53
Comment: MFHE92
Code: CONC Corr. Factor: 1

080

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	32.59	6.014	80.73	.4521	7.361	8832.	591.2
SDev	1.05	.527	.80	1.391	.478	41.	3.5
%RSD	3.229	8.764	.9965	307.7	6.489	.4620	.6000
#1	31.50	6.623	79.85	-.9678	6.996	8787.	587.2
#2	33.59	5.732	81.43	1.813	7.901	8843.	592.5
#3	32.69	5.689	80.91	.5111	7.185	8866.	593.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.017	-.0469	H755400.	124.0	40.54	233.2	89910.
SDev	.054	.1427	3223.	.7	.54	1.7	564.
%RSD	2.700	304.3	.4266	.5720	1.327	.7397	.6274
#1	2.079	-.1363	H751900.	123.2	39.94	231.3	89290.
#2	1.987	-.1219	H756000.	124.5	40.96	233.5	90030.
#3	1.983	.1176	H758300.	124.4	40.74	234.7	90400.
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	7723.	5695.	131.0	1305.	-.4571	2054.	62.44
SDev	42.	28.	1.2	8.	.2867	13.	.40
%RSD	.5426	.4951	.9407	.5901	62.74	.6481	.6427
#1	7675.	5664.	129.5	1296.	-.1702	2039.	61.99
#2	7740.	5701.	131.7	1311.	-.4574	2062.	62.74
#3	7754.	5719.	131.6	1308.	-.7436	2062.	62.60
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	201.7	85.84	78.16	2.910	-.7885	9.234	3.589
SDev	1.1	.99	.88	2.637	2.3042	.880	.787
%RSD	.5268	1.159	1.121	90.63	292.2	9.527	21.93
#1	200.6	84.76	77.38	1.117	-2.022	8.965	3.033
#2	201.8	86.05	79.11	1.675	1.870	10.22	3.244
#3	202.7	86.72	77.99	5.937	-2.214	8.521	4.489
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: 29054.09 Operator:
Run Time: 04/23/97 12:54:34
Comment: MFHF93
Code: CONC Corr. Factor: 1

081

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	20.31	2.565	232.5	-.5503	2.163	21900.	228.9
SDev	1.98	1.224	.7	1.0294	.779	41.	.5
%RSD	9.736	47.72	.3187	187.1	36.00	.1865	.2239
#1	22.08	3.916	232.0	-1.738	1.456	21860.	228.3
#2	20.68	1.529	232.2	.0030	2.997	21920.	229.0
#3	18.18	2.251	233.4	.0842	2.035	21930.	229.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.060	.7909	376300.	46.58	11.41	44.77	27660.
SDev	.073	.0694	1358.	.35	.12	.19	98.
%RSD	3.525	8.773	.3609	.7562	1.049	.4234	.3547
#1	2.017	.8521	374800.	46.23	11.48	44.59	27550.
#2	2.144	.8050	376700.	46.94	11.27	44.97	27670.
#3	2.019	.7155	377400.	46.57	11.48	44.73	27750.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	6717.	910.8	27.44	4425.	.2672	1529.	52.03
SDev	15.	3.2	.38	7.	.3177	2.	.20
%RSD	.2213	.3521	1.390	.1527	118.9	.1266	.3801
#1	6700.	907.3	27.33	4418.	.4722	1527.	51.99
#2	6724.	911.7	27.86	4431.	.4281	1531.	51.85
#3	6727.	913.5	27.11	4426.	-.0987	1529.	52.24
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	369.2	232.2	232.6	3.817	-2.746	2.595	1.273
SDev	1.4	1.8	.9	1.840	1.545	.499	1.369
%RSD	.3753	.7638	.4037	48.20	56.28	19.22	107.5
#1	367.6	230.2	232.8	3.108	-4.173	2.083	.1756
#2	370.1	233.5	231.6	5.906	-2.960	3.080	2.806
#3	369.9	233.1	233.5	2.438	-1.104	2.622	.8374
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61ET2 Sample Name: 29054.10 Operator:

Run Time: 04/23/97 13:00:15

Comment: MFHF94

Code: CONC Corr. Factor: 1

082

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	54.48	4.332	184.3	-.0587	11.65	5437.	299.7
SDev	1.30	1.002	.4	1.0410	.57	10.	.6
%RSD	2.390	23.12	.2289	1773.	4.917	.1776	.2048
#1	54.90	3.253	184.7	.3789	11.48	5435.	299.8
#2	53.02	4.513	183.9	-1.247	12.29	5448.	300.3
#3	55.51	5.231	184.4	.6920	11.18	5429.	299.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.764	1.958	H866800.	426.5	21.17	1146.	78080.
SDev	.014	.076	1465.	.3	.12	3.	138.
%RSD	.7894	3.904	.1691	.0790	.5533	.2831	.1763
#1	1.752	1.973	H865700.	426.2	21.10	1146.	78080.
#2	1.760	2.026	H868500.	426.8	21.30	1149.	78220.
#3	1.779	1.875	H866200.	426.4	21.10	1143.	77940.
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	10360.	2373.	125.3	1249.	.0814	1796.	77.91
SDev	20.	4.	.2	4.	.2039	7.	.23
%RSD	.1929	.1648	.1760	.2976	250.3	.3975	.2911
#1	10350.	2372.	125.5	1251.	-.1526	1798.	77.65
#2	10380.	2377.	125.1	1251.	.1763	1802.	78.04
#3	10350.	2370.	125.2	1245.	.2206	1788.	78.05
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	197.1	186.7	183.1	3.118	-1.659	14.98	4.964
SDev	1.7	.8	.8	3.393	1.336	1.19	.777
%RSD	.8725	.4283	.4100	108.8	80.51	7.912	15.66
#1	195.3	186.0	184.0	1.349	-.1182	14.36	5.693
#2	198.7	186.4	182.6	.9749	-2.370	16.34	4.146
#3	197.4	187.6	182.9	7.030	-2.488	14.23	5.052
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: CRI Operator:
Run Time: 04/23/97 13:05:56
Comment:
Code: CONC Corr. Factor: 1

083

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	20.39	17.99	5.853	8.811	115.6	398.5	397.1
SDev	1.37	.89	.448	1.655	3.1	2.4	.9
%RSD	6.736	4.972	7.649	18.78	2.713	.6061	.2238
#1	18.88	17.29	6.064	10.05	112.0	400.4	398.1
#2	21.57	19.00	5.339	9.457	117.4	399.4	397.0
#3	20.71	17.69	6.156	6.931	117.5	395.8	396.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	30.00	9.000	15.00	180.0	600.0	600.0
Low	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9.785	9.651	9481.	19.28	95.18	50.04	199.2
SDev	.050	.144	30.	.03	.62	.27	6.7
%RSD	.5152	1.492	.3138	.1472	.6525	.5409	3.339
#1	9.783	9.717	9499.	19.24	95.18	50.35	191.5
#2	9.837	9.486	9497.	19.29	94.56	49.85	203.6
#3	9.736	9.750	9446.	19.29	95.80	49.91	202.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	15.00	15.00	15000.	30.00	150.0	75.00	300.0
Low	5.000	5.000	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9845.	29.03	77.86	9794.	19.85	9762.	96.13
SDev	18.	.05	.74	40.	.30	40.	.20
%RSD	.1777	.1773	.9484	.4127	1.532	.4113	.2082
#1	9865.	29.04	78.39	9840.	20.03	9807.	96.31
#2	9841.	29.08	78.18	9775.	20.03	9748.	96.18
#3	9831.	28.98	77.02	9766.	19.50	9730.	95.91
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	15000.	45.00	120.0	15000.	30.00	15000.	150.0
Low	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	40.18	7.309	5.107	14.18	6.117	114.5	117.8
SDev	.15	.793	.692	3.52	1.222	4.3	1.1
%RSD	.3829	10.85	13.55	24.82	19.98	3.792	.9640
#1	40.18	8.210	4.973	15.09	7.513	109.5	116.9
#2	40.33	6.997	4.492	17.15	5.599	116.5	119.1
#3	40.02	6.719	5.856	10.29	5.239	117.5	117.4
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	60.00						

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Method: 61FT2 Sample Name: 1CSA Operator: 084
Run Time: 04/23/97 13:11:38
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.4946	5.016	-2.028	-3.526	7.248	475500.	-1.010
SDev	4.194	3.105	.508	3.934	1.452	1578.	.042
%RSD	847.9	61.90	25.06	111.5	20.04	.3319	4.130
#1	-3.863	8.303	-1.442	-5.535	7.957	473700.	-.9748
#2	4.502	2.133	-2.344	-6.051	5.577	476100.	-1.000
#3	.8439	4.612	-2.298	1.006	8.210	476600.	-1.056
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	20.00	6.000	10.00	120.0	595000.	400.0
Low	-20.00	-20.00	-6.000	-10.00	-120.0	396600.	-400.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.7077	.4911	434800.	33.14	3.814	17.44	170200.
SDev	.0576	.1946	2209.	.25	.216	.02	792.
%RSD	8.140	39.63	.5081	.7473	5.652	.0930	.4654
#1	.7304	.6892	432300.	33.04	4.034	17.45	169300.
#2	.6422	.3002	435600.	33.42	3.603	17.42	170400.
#3	.7504	.4840	436500.	32.95	3.804	17.44	170900.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.00	10.00	548600.	45.60	100.0	50.00	223200.
Low	-10.00	-10.00	365800.	30.40	-100.0	-50.00	148800.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	459900.	43.66	7.650	-27.16	.0050	131.7	.2628
SDev	1139.	.17	.275	2.87	.1979	.6	.1116
%RSD	.2476	.3908	3.591	10.58	3923.	.4518	42.47
#1	458600.	43.49	7.333	-29.80	-.1852	131.1	.1662
#2	460400.	43.67	7.815	-27.56	.2099	132.3	.3850
#3	460700.	43.83	7.802	-24.10	-.0096	131.7	.2372
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass
High	588800.	54.00	80.00		20.00		100.0
Low	392600.	36.00	-80.00		-20.00		-100.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	18.17	-2.894	-1.609	2.160	-6.382	10.02	1.688
SDev	.10	2.008	1.354	10.66	10.902	2.51	.817
%RSD	.5423	69.38	84.16	493.3	170.8	25.09	48.40
#1	18.07	-3.145	-.6021	12.11	-14.37	10.97	1.899
#2	18.27	-.7725	-3.148	3.458	-10.82	7.164	2.380
#3	18.17	-4.765	-1.077	-9.086	6.039	11.91	.7866
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	40.00						

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Method: 61ET2 Sample Name: 1CSAB Operator: 085
Run Time: 04/23/97 13:17:19
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	88.95	86.89	39.61	40.16	537.0	479600.	477.8
SDev	1.71	3.54	.35	4.18	5.3	282.	.9
%RSD	1.923	4.072	.8713	10.41	.9923	.0587	.1881
#1	89.03	90.40	39.26	36.56	531.5	479400.	478.8
#2	87.20	83.32	39.60	39.17	542.1	479500.	477.3
#3	90.62	86.95	39.95	44.75	537.4	479900.	477.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	116.4	109.2	56.40	50.40	649.2	606700.	560.4
Low	77.60	72.80	37.60	33.60	432.8	404500.	373.6

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	422.6	809.5	439600.	440.2	413.8	530.9	172000.
SDev	.3	.7	952.	.4	.4	1.6	52.
%RSD	.0687	.0837	.2166	.0957	.0866	.3042	.0300
#1	422.9	810.3	438600.	439.8	413.5	532.7	172000.
#2	422.6	809.4	439700.	440.6	413.5	530.0	171900.
#3	422.4	808.9	440500.	440.3	414.2	529.8	172000.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	532.8	1045.	561500.	547.2	512.4	608.4	212700.
Low	355.2	696.8	374300.	364.8	341.6	405.6	141800.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	461000.	465.7	809.8	-26.95	196.3	143.7	430.8
SDev	222.	.3	1.4	1.87	.5	.7	.2
%RSD	.0482	.0702	.1738	6.926	.2747	.5210	.0462
#1	461200.	465.4	811.0	-28.99	196.7	144.4	431.0
#2	460800.	466.0	810.1	-26.54	195.7	143.0	430.6
#3	460900.	465.7	808.2	-25.32	196.5	143.6	430.7
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass
High	638900.	580.8	1028.		248.4		552.0
Low	425900.	387.2	685.6		165.6		368.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	897.9	40.59	39.11	46.26	37.10	536.6	537.8
SDev	1.1	2.13	1.58	9.47	9.78	9.6	4.8
%RSD	.1240	5.252	4.048	20.47	26.38	1.791	.8867
#1	898.8	42.75	37.51	56.90	26.38	525.8	542.7
#2	896.6	40.52	39.13	38.77	39.36	544.4	537.5
#3	898.2	38.49	40.68	43.12	45.55	539.4	533.2
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1210.						

Method: 61ET2 Sample Name: CCV Operator: 086
Run Time: 04/23/97 13:23:01
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	488.8	493.7	494.2	491.1	493.0	4983.	495.3
SDev	1.6	4.5	1.3	1.7	4.5	7.	.2
%RSD	.3314	.9040	.2561	.3439	.9049	.1316	.0350
#1	488.7	498.9	493.4	492.4	487.9	4983.	495.5
#2	490.4	491.3	495.6	489.2	495.9	4990.	495.3
#3	487.2	491.0	493.5	491.7	495.2	4976.	495.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	500.0	500.0	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	489.7	490.7	4897.	492.9	490.0	497.4	4907.
SDev	.5	.6	5.	.9	1.6	.5	14.
%RSD	.1059	.1290	.1065	.1807	.3352	.1015	.2835
#1	489.9	490.6	4894.	492.4	489.4	497.8	4906.
#2	490.2	491.4	4903.	493.9	491.8	497.5	4922.
#3	489.2	490.1	4894.	492.4	488.7	496.8	4894.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	5000.	500.0	500.0	500.0	5000.
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4962.	491.4	491.4	5038.	498.0	5147.	494.6
SDev	2.	.4	.6	6.	.9	9.	.6
%RSD	.0397	.0757	.1198	.1121	.1837	.1684	.1212
#1	4961.	491.4	492.0	5035.	497.8	5148.	494.5
#2	4964.	491.8	490.9	5044.	499.0	5155.	495.3
#3	4961.	491.0	491.3	5034.	497.2	5138.	494.1
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	5000.	500.0	500.0	5000.	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	495.8	492.8	494.8	494.2	489.5	493.4	492.2
SDev	1.3	1.7	1.4	3.9	1.4	6.7	2.2
%RSD	.2529	.3534	.2780	.7940	.2796	1.357	.4460
#1	495.9	493.1	493.5	494.9	491.1	485.7	492.2
#2	497.0	494.4	496.2	490.0	488.8	496.7	494.4
#3	494.5	491.0	494.8	497.7	488.7	497.8	490.0
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	500.0						

Method: 61ET2 Sample Name: CCB Operator: 087
Run Time: 04/23/97 13:28:43
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.262	-.9434	-.5109	1.515	.6802	.8782	.0307
SDev	.347	.8014	.4315	1.571	1.702	1.140	.0001
%RSD	27.51	84.95	84.46	103.7	250.2	129.8	.2525
#1	1.364	-1.681	-.9984	-.0592	2.621	2.194	.0306
#2	1.547	-1.059	-.3561	3.083	-.0247	.2236	.0308
#3	.8757	-.0904	-.1782	1.520	-.5561	.2164	.0307
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1533	.0660	-6.024	.0765	-.0693	.2811	6.037
SDev	.0188	.0396	1.043	.2017	.3585	.1212	3.324
%RSD	12.24	60.02	17.32	263.6	517.7	43.13	55.06
#1	.1744	.0644	-5.422	.2242	.1377	.4170	9.257
#2	.1385	.1065	-5.422	.1587	.1378	.2426	2.617
#3	.1470	.0272	-7.229	-.1533	-.4833	.1839	6.236
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	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.137	-.1241	.0346	-10.86	.0366	-1.091	-.0876
SDev	1.969	.0338	.1056	1.02	.0760	.172	.1512
%RSD	173.2	27.20	305.0	9.375	207.8	15.75	172.6
#1	2.273	-.1242	.0349	-9.844	-.0073	-.9914	-.1750
#2	-1.137	-.1578	-.0711	-11.88	-.0073	-1.289	-.1748
#3	2.273	-.0903	.1401	-10.86	.1244	-.9914	.0870
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2593	-.3056	-.6285	-.4914	2.506	.4238	1.169
SDev	.1816	.8244	.7730	3.1109	.823	1.556	2.125
%RSD	70.03	269.8	123.0	633.1	32.86	367.1	181.8
#1	.0496	-.4863	-1.269	-3.416	1.607	2.219	3.401
#2	.3650	.5943	-.8461	2.777	3.224	-.5169	.9360
#3	.3633	-1.025	.2300	-.8347	2.686	-.4312	-.8299
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						

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Method: 61FT2 Sample Name: 29054.12 Operator: 088
Run Time: 04/23/97 13:34:24
mment: MFHF96
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	47.09	21.11	3477.	14.16	103.5	8727.	180.9
SDev	1.77	1.20	42.	2.21	.9	24.	1.1
%RSD	3.765	5.706	1.216	15.59	.9020	.2734	.6308
#1	47.54	20.59	3429.	14.68	104.6	8712.	179.7
#2	48.60	20.25	3492.	16.07	102.8	8715.	181.1
#3	45.14	22.49	3509.	11.74	103.2	8755.	181.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.253	7.734	19780.	190.3	16.27	580.0	184000.
SDev	.012	.019	157.	1.7	.46	3.6	1682.
%RSD	.9938	.2411	.7962	.9052	2.825	.6210	.9145
#1	1.264	7.713	19600.	188.5	16.02	576.2	182100.
#2	1.257	7.741	19830.	190.3	15.98	580.3	184500.
#3	1.239	7.748	19900.	191.9	16.80	583.4	185300.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4218.	4464.	174.8	2331.	7.961	1455.	36.02
SDev	34.	34.	.8	57.	.090	28.	.28
%RSD	.8098	.7699	.4588	2.428	1.129	1.902	.7780
#1	4180.	4425.	173.9	2396.	8.015	1487.	35.70
#2	4231.	4476.	175.4	2295.	8.012	1437.	36.13
#3	4245.	4490.	175.1	2301.	7.858	1442.	36.23
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3359.	3495.	3467.	6.176	18.15	105.7	99.09
SDev	18.	19.	54.	2.188	2.39	1.0	1.17
%RSD	.5503	.5380	1.560	35.43	13.16	.9203	1.184
#1	3338.	3475.	3406.	5.521	19.25	106.9	100.0
#2	3366.	3500.	3488.	8.617	19.78	105.3	97.77
#3	3374.	3511.	3507.	4.391	15.41	105.1	99.49
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61ET2 Sample Name: 29054.13 Operator: 089
Run Time: 04/23/97 13:40:06
mment: MFHE97
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	17.53	6.441	1094.	2.517	15.39	7851.	125.1
SDev	.43	2.426	4.	.883	.30	5.	.2
%RSD	2.463	37.66	.3930	35.07	1.963	.0670	.1699
#1	17.61	3.954	1089.	2.799	15.74	7851.	124.8
#2	17.06	6.569	1097.	3.224	15.27	7856.	125.2
#3	17.92	8.800	1096.	1.528	15.18	7846.	125.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.8648	1.646	117100.	64.98	8.301	184.7	63830.
SDev	.0250	.102	102.	.36	.240	.4	61.
%RSD	2.888	6.227	.0871	.5499	2.893	.1950	.0954
#1	.8540	1.535	117000.	65.12	8.579	184.3	63780.
#2	.8934	1.665	117200.	64.58	8.162	184.9	63900.
#3	.8471	1.737	117100.	65.25	8.164	184.9	63810.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2466.	1056.	63.88	1457.	.7206	939.9	26.45
SDev	7.	1.	.22	13.	.0457	6.4	.13
%RSD	.2879	.0896	.3406	.8721	6.338	.6818	.5013
#1	2458.	1055.	63.82	1472.	.7060	947.2	26.45
#2	2468.	1056.	64.13	1451.	.6840	937.7	26.32
#3	2471.	1056.	63.71	1449.	.7717	935.0	26.58
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1490.	1094.	1094.	-1.047	4.286	17.41	11.34
SDev	1.	3.	5.	.881	1.690	.74	.59
%RSD	.0489	.2997	.4422	84.15	39.42	4.277	5.177
#1	1491.	1091.	1089.	-.6524	4.513	18.26	10.67
#2	1490.	1096.	1098.	-2.056	5.851	17.05	11.69
#3	1491.	1096.	1096.	-.4318	2.495	16.91	11.68
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 01:55:59 PM page 1

Method: 61ET2 Sample Name: 29054.14 Operator: 090
Run Time: 04/23/97 13:50:21
mment: MFHE98
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	26.15	17.08	3846.	11.23	99.58	10440.	167.0
SDev	1.61	1.32	2.	1.99	1.28	48.	.4
%RSD	6.141	7.724	.0608	17.69	1.287	.4618	.2354
#1	25.08	15.72	3846.	9.226	99.38	10490.	167.3
#2	25.38	18.35	3848.	11.27	100.9	10440.	167.1
#3	28.00	17.17	3843.	13.20	98.41	10390.	166.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.198	13.96	21260.	116.1	12.18	441.0	121100.
SDev	.058	.16	30.	.4	.23	1.8	212.
%RSD	4.807	1.137	.1420	.3138	1.928	.4040	.1750
#1	1.263	14.08	21280.	116.5	12.32	442.3	121300.
#2	1.177	14.01	21260.	115.8	12.32	441.7	121200.
#3	1.153	13.78	21220.	115.9	11.91	439.0	120900.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5961.	3960.	100.1	2433.	10.29	1529.	28.15
SDev	13.	6.	.5	35.	.07	20.	.07
%RSD	.2166	.1487	.5233	1.427	.6828	1.287	.2599
#1	5967.	3965.	100.6	2473.	10.32	1551.	28.10
#2	5970.	3961.	100.2	2420.	10.34	1524.	28.23
#3	5946.	3953.	99.57	2408.	10.21	1513.	28.11
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4124.	3848.	3844.	6.127	13.77	100.9	96.97
SDev	10.	4.	1.	3.522	2.32	1.2	1.56
%RSD	.2369	.1121	.0351	57.49	16.86	1.236	1.609
#1	4134.	3848.	3845.	5.433	11.11	101.0	96.03
#2	4123.	3852.	3846.	3.003	15.39	102.0	98.77
#3	4115.	3843.	3843.	9.944	14.82	99.54	96.10
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 02:01:40 PM page 1

Method: 61ET2 Sample Name: 29054.15 Operator: 091
Run Time: 04/23/97 13:56:03
mment: MFHE99
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	18.86	3.549	108.3	1.701	3.574	24180.	259.8
SDev	.95	2.272	.5	1.185	.757	43.	.3
%RSD	5.038	64.02	.4904	69.64	21.18	.1776	.1016
#1	17.88	5.751	108.8	.3469	3.577	24200.	259.7
#2	19.78	1.213	108.5	2.545	4.330	24200.	260.0
#3	18.92	3.683	107.7	2.212	2.815	24130.	259.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.721	-.0648	454100.	32.58	14.96	37.80	34960.
SDev	.032	.1406	1028.	.13	.43	.23	92.
%RSD	1.164	217.0	.2265	.4091	2.875	.6023	.2630
#1	2.753	.0932	453900.	32.62	14.48	38.06	34930.
#2	2.690	-.1115	455200.	32.70	15.30	37.68	35060.
#3	2.719	-.1760	453100.	32.44	15.10	37.66	34880.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	7995.	938.1	32.52	6760.	-.0854	1350.	67.50
SDev	10.	2.0	.31	31.	.1341	5.	.30
%RSD	.1303	.2087	.9435	.4556	157.1	.3974	.4441
#1	7986.	937.2	32.87	6794.	-.2316	1356.	67.68
#2	8006.	940.3	32.34	6754.	-.0562	1350.	67.67
#3	7992.	936.7	32.35	6733.	.0318	1345.	67.16
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	128.8	108.7	108.1	4.105	.4875	5.262	.1739
SDev	.4	2.1	.7	3.612	.9384	1.344	.5902
%RSD	.2786	1.908	.6314	87.98	192.5	25.54	339.3
#1	128.4	111.1	107.6	.8385	.0892	5.006	.6960
#2	129.0	107.6	108.9	7.984	-.1860	6.715	-.4665
#3	129.0	107.5	107.8	3.493	1.559	4.065	.2923
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 02:07:22 PM page 1

Method: 61ET2 Sample Name: 29054.11A Operator: 092
Run Time: 04/23/97 14:01:44
Comment: MFHF95A
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	38.33	28.53	427.7	13.95	131.7	8316.	496.8
SDev	.98	1.40	.8	3.65	2.8	32.	1.6
%RSD	2.544	4.922	.1896	26.17	2.147	.3790	.3137
#1	39.11	27.05	427.2	17.21	128.7	8290.	495.8
#2	38.64	28.69	427.2	10.00	131.9	8307.	496.0
#3	37.24	29.84	428.6	14.64	134.4	8351.	498.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr -286	Co	Cu -356	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	11.08	8.625	22700.	421.5	107.2	523.0	86610.
SDev	.02	.090	75.	1.6	.3	1.8	304.
%RSD	.2232	1.044	.3302	.3868	.2913	.3384	.3511
#1	11.06	8.521	22620.	419.8	106.9	521.6	86290.
#2	11.08	8.685	22720.	421.5	107.5	522.4	86650.
#3	11.10	8.668	22760.	423.1	107.3	525.0	86900.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn -3060	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	12020.	4430.	181.7	11960.	20.11	10950.	135.9
SDev	24.	12.	.3	38.	.22	37.	.2
%RSD	.1993	.2687	.1414	.3190	1.101	.3382	.1387
#1	11990.	4417.	181.4	11940.	20.35	10930.	135.7
#2	12010.	4433.	181.7	11940.	19.91	10930.	135.8
#3	12040.	4441.	181.9	12010.	20.08	11000.	136.1
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	424.5	432.6	425.2	14.53	13.65	133.9	127.2
SDev	1.3	2.0	2.0	6.04	3.97	4.0	1.9
%RSD	.3177	.4651	.4751	41.57	29.07	2.977	1.478
#1	423.1	434.9	423.3	21.48	15.06	129.4	127.4
#2	424.6	431.8	424.9	11.66	9.166	135.2	125.3
#3	425.8	431.1	427.3	10.47	16.71	137.0	129.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 02:13:03 PM page 1

Method: 61ET2 Sample Name: 29054.07(2) Operator: 093
Run Time: 04/23/97 14:07:26
mment: MFHE91 2X
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	16.86	4.964	28.94	1.711	3.777	5530.	78.88
SDev	1.12	2.487	.20	.714	.807	6.	.07
%RSD	6.624	50.11	.7005	41.75	21.36	.1154	.0913
#1	17.84	3.808	29.11	1.157	2.850	5536.	78.90
#2	17.11	7.820	28.99	1.459	4.158	5532.	78.94
#3	15.65	3.266	28.72	2.518	4.323	5523.	78.80
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.9692	-.4860	485800.	54.39	6.593	379.5	40480.
SDev	.0291	.1360	1584.	.65	.520	.8	86.
%RSD	3.002	27.99	.3261	1.187	7.886	.2194	.2133
#1	.9983	-.4219	484300.	53.84	6.663	380.1	40400.
#2	.9692	-.6422	485600.	54.24	6.042	379.8	40480.
#3	.9401	-.3938	487400.	55.10	7.074	378.5	40570.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4344.	693.4	35.59	497.5	.1029	946.5	33.78
SDev	.	1.6	.22	2.0	.1557	4.5	.00
%RSD	.0000	.2352	.6084	.4094	151.2	.4707	.0102
#1	4344.	692.1	35.41	497.5	.1323	950.1	33.78
#2	4344.	693.0	35.52	495.5	-.0653	947.8	33.78
#3	4344.	695.2	35.83	499.5	.2418	941.5	33.77
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	133.0	30.19	28.30	4.386	.3624	4.898	1.511
SDev	.4	.28	.44	3.955	.9197	.777	.917
%RSD	.3297	.9124	1.559	90.18	253.8	15.86	60.68
#1	132.5	29.94	28.68	1.709	.8694	4.002	.5225
#2	133.2	30.17	28.39	2.519	.9171	5.386	1.678
#3	133.2	30.48	27.82	8.928	-.6992	5.306	2.334
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

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Method: 61FT2 Sample Name: 29054.08(2) Operator: 094
Run Time: 04/23/97 14:13:06
Comment: MFHE92 2X 1:1
Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	16.88	3.365	41.99	.8100	3.934	4421.	301.4
SDev	.86	2.632	.81	.9737	.787	8.	.3
%RSD	5.103	78.22	1.931	120.2	19.99	.1783	.0848
#1	16.35	3.473	41.16	-.0113	3.336	4430.	301.7
#2	17.88	.6803	42.02	.5556	4.825	4418.	301.2
#3	16.42	5.941	42.78	1.886	3.642	4415.	301.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.209	-.5410	414600.	64.17	21.47	116.9	47180.
SDev	.054	.0339	483.	.13	.43	.4	99.
%RSD	4.472	6.262	.1166	.2014	2.006	.3155	.2091
#1	1.213	-.5472	414800.	64.27	21.96	116.7	47210.
#2	1.153	-.5714	414100.	64.02	21.34	116.7	47070.
#3	1.261	-.5045	415000.	64.22	21.13	117.3	47260.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3980.	3001.	68.58	605.2	-.2292	974.6	32.11
SDev	2.	4.	.42	1.8	.1537	2.5	.27
%RSD	.0495	.1209	.6194	.3035	67.07	.2559	.8271
#1	3982.	3002.	68.97	605.0	-.1195	977.5	32.11
#2	3979.	2996.	68.13	603.4	-.1631	973.3	32.38
#3	3979.	3003.	68.65	607.1	-.4049	973.0	31.85
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	102.7	44.14	40.89	2.312	.0474	5.127	1.525
SDev	.2	.82	1.14	3.799	1.469	1.361	.629
%RSD	.1582	1.856	2.791	164.3	3102.	26.55	41.26
#1	102.8	44.28	39.59	2.531	-1.294	4.350	1.282
#2	102.7	43.27	41.38	-1.592	1.617	6.699	1.054
#3	102.5	44.89	41.72	5.996	-.1813	4.332	2.239
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report Wed 04-23-97 02:24:25 PM page 1

Method: 61ET2 Sample Name: 29054.10(2) Operator:
Run Time: 04/23/97 14:18:47 095
mment: MFHE94 2X 1:1
de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	29.84	4.912	96.41	-.1637	5.315	2719.	153.2
SDev	.36	1.666	1.09	1.2376	.523	5.	.1
%RSD	1.210	33.92	1.130	756.1	9.836	.2006	.0954
#1	29.57	2.995	95.28	.6617	5.399	2714.	153.1
#2	29.69	5.731	97.46	.4340	5.791	2718.	153.1
#3	30.25	6.009	96.49	-1.587	4.755	2725.	153.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.9521	.5214	483300.	222.6	11.07	574.1	41150.
SDev	.0757	.0166	1310.	.4	.12	.6	122.
%RSD	7.949	3.189	.2711	.1915	1.065	.1112	.2972
#1	.9795	.5039	482200.	222.6	11.00	573.7	41020.
#2	1.010	.5369	483100.	222.1	11.00	573.6	41160.
#3	.8665	.5233	484800.	223.0	11.20	574.8	41270.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5390.	1246.	65.95	579.6	.0303	851.8	40.27
SDev	7.	3.	.34	.9	.0885	1.2	.20
%RSD	.1265	.2397	.5103	.1532	292.0	.1411	.4852
#1	5384.	1243.	65.81	579.0	-.0500	850.5	40.10
#2	5390.	1245.	65.70	579.2	.0157	852.0	40.23
#3	5397.	1249.	66.33	580.6	.1253	852.9	40.48
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	99.75	98.67	95.26	3.528	-2.021	7.114	1.693
SDev	.39	1.32	1.06	1.194	1.731	.851	.659
%RSD	.3907	1.341	1.110	33.84	85.66	11.96	38.93
#1	99.31	97.15	94.34	2.771	-.4032	7.618	.9397
#2	99.91	99.51	96.42	4.905	-1.813	7.593	2.162
#3	100.0	99.36	95.04	2.910	-3.847	6.132	1.978
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Analysis Report QC Standard Wed 04-23-97 02:30:06 PM page 1

Method: 61ET2 Sample Name: CCV Operator:

096

Run Time: 04/23/97 14:24:29

Comment:

Mode: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	492.3	502.0	499.1	496.9	497.8	5000.	498.9
SDev	.2	1.4	1.2	2.7	2.7	11.	.6
%RSD	.0312	.2781	.2496	.5382	.5501	.2181	.1291
#1	492.1	502.0	497.8	499.6	494.7	4988.	498.2
#2	492.3	500.7	499.2	494.3	499.4	5010.	499.4
#3	492.4	503.5	500.3	496.7	499.4	5002.	499.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	500.0	500.0	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	497.1	498.4	4976.	500.2	497.7	501.4	4980.
SDev	.5	1.2	6.	.7	.8	1.3	5.
%RSD	.1024	.2404	.1275	.1489	.1680	.2624	.0974
#1	496.9	498.0	4975.	500.1	497.8	499.8	4980.
#2	497.7	499.8	4983.	501.0	498.5	502.0	4975.
#3	496.8	497.5	4970.	499.6	496.8	502.2	4984.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	5000.	500.0	500.0	500.0	5000.
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	5009.	497.3	500.0	5064.	504.1	5182.	500.3
SDev	7.	.7	.2	13.	.6	14.	.5
%RSD	.1362	.1405	.0325	.2644	.1112	.2620	.1057
#1	5002.	497.1	499.8	5049.	503.6	5169.	499.8
#2	5015.	498.1	499.9	5075.	504.7	5196.	500.9
#3	5009.	496.8	500.2	5068.	504.0	5181.	500.2
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	5000.	500.0	500.0	5000.	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	503.0	499.3	498.9	502.0	494.3	497.4	498.7
SDev	.8	2.8	.8	4.4	2.2	4.1	2.2
%RSD	.1560	.5675	.1577	.8859	.4356	.8333	.4337
#1	503.0	497.2	498.1	505.3	496.7	492.8	498.4
#2	503.8	498.3	499.6	497.0	492.9	498.7	500.9
#3	502.2	502.5	499.1	503.8	493.1	500.8	496.6
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	500.0						

Analysis Report QC Standard Wed 04-23-97 02:35:48 PM page 1

Method: 61ET2 Sample Name: CCB Operator:
Run Time: 04/23/97 14:30:10
mment:
de: CONC Corr. Factor: 1

097

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-.6512	-.7146	-.1721	.1444	1.795	-.2212	.0075
SDev	2.1194	.7240	.2595	.6391	.582	2.3039	.0230
%RSD	325.5	101.3	150.8	442.6	32.43	1041.	307.9
#1	-1.750	-1.508	-.2873	.2035	1.431	2.184	.0073
#2	-1.995	-.5467	.1251	.7519	2.467	-2.408	-.0155
#3	1.792	-.0893	-.3542	-.5222	1.488	-.4402	.0306
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1071	.0083	-5.422	-.0603	.0686	.0968	9.858
SDev	.0171	.0826	.000	.0904	.4307	.1269	6.357
%RSD	16.01	1000.	.0000	149.8	627.8	131.2	64.49
#1	.1059	.1034	-5.422	.0271	.5514	.1550	15.89
#2	.1248	-.0443	-5.422	-.0547	-.2762	.1841	3.220
#3	.0906	-.0344	-5.422	-.1533	-.0694	-.0489	10.46
rrors	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	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2.273	-.0791	.0704	-6.721	.2195	-.8922	.0869
SDev	.000	.0195	.0604	1.892	.1411	.1717	.1307
%RSD	.0000	24.61	85.82	28.16	64.29	19.24	150.5
#1	2.273	-.0566	.1401	-7.604	.2780	-.9914	.2176
#2	2.273	-.0903	.0357	-8.011	.0585	-.9914	-.0438
#3	2.273	-.0904	.0354	-4.549	.3219	-.6940	.0868
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.0498	-.6214	.0375	1.155	-.3737	1.816	1.732
SDev	.0015	.6820	.0513	3.247	.7374	.538	.986
%RSD	2.938	109.8	137.0	281.2	197.3	29.65	56.94
#1	.0482	-.8890	-.0014	2.407	-.9099	1.260	1.750
2	.0511	.1539	.0957	3.589	-.6783	2.334	2.708
#3	.0500	-1.129	.0181	-2.531	.4672	1.854	.7366
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						

Analysis Report Wed 04-23-97 02:41:29 PM page 1

Method: 61ET2 Sample Name: PBS970415B PBS Operator:

Run Time: 04/23/97 14:35:52 098

mment: PBS

de: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.8757	-.7149	.3328	-1.032	.8944	-1.859	.0846
SDev	.5826	.8195	.8042	1.947	.4896	.381	.0353
%RSD	66.53	114.6	241.7	188.7	54.74	20.50	41.74
#1	1.486	-1.398	-.5958	-1.708	1.373	-2.076	.0769
#2	.3260	-.9412	.7903	-2.551	.9153	-1.419	.0537
#3	.8148	.1940	.8038	1.163	.3946	-2.082	.1230
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.00	10.00	3.000	5.000	60.00	200.0	200.0
Low	-10.00	-20.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.3226	.0826	21.08	.3063	.2750	1.601	9.658
SDev	.0324	.1197	3.76	.1566	.2389	.160	2.439
%RSD	10.06	144.9	17.84	51.14	86.89	10.02	25.25
#1	.3214	-.0334	18.07	.3884	.1370	1.523	6.842
#2	.2907	.2057	19.88	.4047	.1370	1.494	11.07
#3	.3555	.0756	25.30	.1257	.5509	1.785	11.06
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.000	5.000	5000.	10.00	50.00	25.00	100.0
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.137	-.0903	.1757	4.277	.1390	38.17	-.0879
SDev	1.969	.0895	.3995	3.785	.1867	.45	.1511
%RSD	173.2	99.03	227.3	88.49	134.3	1.190	171.9
#1	-1.137	-.1241	.4571	-.0679	-.0512	38.27	-.1751
#2	2.273	-.1580	.3515	6.857	.1463	37.67	-.1752
#3	2.273	.0111	-.2815	6.042	.3219	38.56	.0866
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5000.	15.00	40.00	5000.	10.00	5000.	50.00
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	3.128	.2147	.3768	-2.532	-.2937	.9354	.7884
SDev	.182	1.630	1.365	.798	3.1184	.6902	1.630
%RSD	5.823	759.2	362.2	31.50	1062.	73.79	206.7
#1	3.023	-.0468	-.8853	-3.195	-.9760	1.567	.9615
#2	3.022	1.959	.1908	-1.647	-3.014	.1987	2.325
#3	3.338	-1.269	1.825	-2.754	3.109	1.040	-.9211
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	20.00						

Analysis Report Wed 04-23-97 02:47:10 PM page 1

LCSS

Method: 61ET2 Sample Name: LCS970415B Operator:
Run Time: 04/23/97 14:41:33
Comment: LCSS
Code: CONC Corr. Factor: 1

099

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4622.	163.4	991.3	191.6	1120.	1388.	23.00
SDev	7.	.8	4.7	1.7	4.	2.	.03
%RSD	.1511	.5107	.4714	.8853	.3517	.1575	.1475
#1	4626.	162.8	986.3	192.6	1116.	1388.	23.00
#2	4614.	163.0	991.9	189.6	1120.	1387.	22.97
#3	4626.	164.3	995.6	192.5	1124.	1391.	23.04
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	6236.	258.0	1403.	282.0	1486.	2121.	222.0
Low	3068.	123.0	838.0	88.00	647.0	965.5	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	85.22	182.9	736000.	438.8	645.2	31790.	94260.
SDev	.10	.3	477.	.8	1.6	9.	63.
%RSD	.1198	.1743	.0648	.1851	.2490	.0287	.0671
#1	85.20	182.7	735500.	438.0	643.9	31780.	94230.
#2	85.14	182.8	736000.	438.7	644.8	31800.	94230.
#3	85.34	183.3	736400.	439.6	647.0	31800.	94340.
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	111.0	255.5		576.0	828.0	38170.	126000.
Low	76.50	160.5		389.0	577.0	28640.	84160.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	501800.	910.7	256.8	305.0	104.7	1097.	303.2
SDev	434.	.6	.5	2.0	.1	2.	.5
%RSD	.0866	.0705	.1788	.6589	.1274	.2053	.1632
#1	501300.	910.5	257.3	304.0	104.7	1098.	302.7
#2	501900.	910.3	256.5	307.3	104.7	1094.	303.6
#3	502100.	911.5	256.6	303.6	104.9	1098.	303.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	1172.	350.5	5000.	142.5	5000.	393.0
Low	487500.	839.5	217.5	-5000.	66.00	-5000.	265.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	818.6	992.4	990.7	197.9	188.4	1117.	1126.
SDev	.9	5.4	4.3	1.2	2.0	4.	5.
%RSD	.1061	.5416	.4364	.6175	1.063	.3307	.4531
#1	819.2	986.8	986.1	198.1	189.8	1113.	1123.
#2	817.6	992.9	991.4	196.6	186.1	1118.	1124.
#3	819.0	997.5	994.7	199.1	189.2	1120.	1132.
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1111.						

Analysis Report LCSS(5X) Wed 04-23-97 02:52:51 PM page 1

Method: 61FT2 Sample Name: LCS970415B(5) Operator:
Run Time: 04/23/97 14:47:14
Comment: LCSS 5X 1.4 100
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1010.	40.47	228.6	41.72	242.2	289.5	4.978
SDev	.	.70	1.4	2.56	1.8	1.0	.024
%RSD	.0446	1.728	.6100	6.132	.7515	.3415	.4736
#1	1009.	40.58	227.1	39.67	241.2	290.5	5.001
#2	1010.	39.72	229.9	40.89	244.3	288.5	4.978
#3	1010.	41.10	228.9	44.58	241.2	289.5	4.954
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							
Low							

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	19.73	42.68	180400.	100.8	148.8	6730.	21920.
SDev	.04	.19	364.	.1	.7	14.	25.
%RSD	.2161	.4428	.2020	.1087	.4816	.2094	.1141
#1	19.78	42.53	180000.	100.9	148.0	6743.	21900.
#2	19.71	42.89	180400.	100.8	149.2	6732.	21900.
#3	19.71	42.63	180800.	100.7	149.2	6715.	21940.
Errors	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High			225400.				
Low			142900.				

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	111800.	208.4	60.96	60.08	21.75	214.1	67.66
SDev	76.	.3	.74	4.71	.11	.7	.20
%RSD	.0682	.1479	1.216	7.836	.5079	.3495	.2946
#1	111800.	208.0	60.26	55.13	21.64	214.0	67.45
#2	111800.	208.4	60.89	60.63	21.86	214.9	67.71
#3	111700.	208.7	61.73	64.50	21.73	213.4	67.84
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	128900.						
Low	97490.						

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	182.2	228.4	228.7	44.45	40.34	241.3	244.0
SDev	.4	1.6	1.4	1.59	4.05	1.8	2.0
%RSD	.2196	.7219	.5943	3.577	10.04	.7521	.8099
#1	181.8	226.5	227.4	45.98	36.51	240.6	242.3
#2	182.6	229.4	230.1	42.80	39.92	243.4	246.2
#3	182.1	229.4	228.6	44.57	44.58	240.0	243.5
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High							

Method: 61ET2 Sample Name: 29071.02 Operator:
Run Time: 04/23/97 14:52:55
Comment: MX5480
Code: CONC Corr. Factor: 1

101

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	166.1	3.154	157.1	48.15	457.8	10190.	787.8
SDev	2.3	.614	1.4	.35	2.5	38.	3.3
%RSD	1.397	19.46	.8805	.7299	.5377	.3713	.4158
#1	168.7	2.793	155.6	48.55	455.0	10200.	785.8
#2	165.1	3.863	157.5	47.88	459.5	10230.	791.5
#3	164.4	2.806	158.3	48.03	459.0	10150.	785.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	49.83	.3393	5052.	111.5	152.1	208.4	12920.
SDev	.19	.0514	22.	.3	1.4	1.7	53.
%RSD	.3728	15.16	.4268	.2514	.8896	.8125	.4140
#1	49.79	.3605	5037.	111.7	150.9	207.1	12880.
#2	50.04	.3768	5077.	111.7	153.5	210.3	12980.
#3	49.67	.2807	5042.	111.2	151.9	207.8	12910.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1875.	186.9	168.5	1602.	193.8	954.2	293.6
SDev	10.	.7	.6	31.	.7	16.2	.8
%RSD	.5458	.3627	.3564	1.939	.3408	1.693	.2604
#1	1864.	186.5	168.0	1635.	193.4	971.3	293.0
#2	1885.	187.7	169.1	1597.	194.5	952.2	294.4
#3	1875.	186.6	168.3	1573.	193.3	939.1	293.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	29.81	157.6	156.8	50.84	46.79	455.9	461.7
SDev	.15	1.4	1.5	3.14	2.07	3.2	1.0
%RSD	.4907	.8898	.9718	6.170	4.418	.7027	.2202
#1	29.82	156.1	155.3	47.85	48.88	452.2	460.6
#2	29.95	158.8	156.8	54.11	44.75	458.2	462.2
#3	29.66	158.1	158.4	50.57	46.74	457.2	462.5
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: 29071.02L Operator:
Run Time: 04/23/97 14:58:37
Comment: MX5480L
Code: CONC Corr. Factor: 1

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Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	32.53	.2137	31.84	9.826	91.51	2038.	157.2
SDev	2.33	1.685	.76	.977	.20	10.	.5
%RSD	7.152	788.5	2.384	9.947	.2198	.5008	.3169
#1	33.59	1.783	31.60	10.94	91.36	2030.	156.6
#2	34.14	.4258	31.23	9.404	91.74	2035.	157.2
#3	29.86	-1.567	32.69	9.131	91.43	2049.	157.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	10.15	.0724	1006.	22.24	30.43	42.09	2568.
SDev	.03	.0781	4.	.34	.12	.18	6.
%RSD	.3109	108.0	.4149	1.535	.3922	.4165	.2512
#1	10.11	.1610	1001.	22.03	30.36	41.92	2564.
#2	10.17	.0136	1008.	22.64	30.36	42.27	2576.
#3	10.17	.0424	1008.	22.06	30.57	42.07	2565.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	375.1	37.25	33.68	333.2	38.57	200.1	58.05
SDev	2.0	.14	.66	1.9	.21	1.2	.15
%RSD	.5249	.3667	1.959	.5777	.5527	.5947	.2599
#1	374.0	37.10	33.47	331.7	38.33	198.9	57.96
#2	374.0	37.38	34.42	335.4	38.62	200.1	58.22
#3	377.4	37.27	33.15	332.5	38.75	201.3	57.96
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	7.322	32.10	31.69	14.02	7.718	91.53	91.45
SDev	.153	1.10	.66	2.89	.334	.56	1.71
%RSD	2.092	3.419	2.075	20.58	4.329	.6091	1.868
#1	7.167	32.22	31.27	17.34	7.736	92.05	89.95
#2	7.474	30.95	31.35	12.10	8.043	90.94	93.31
#3	7.325	33.13	32.45	12.62	7.376	91.60	91.08
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: 29071.02S Operator:
Run Time: 04/23/97 15:04:19
mment: MX5480S
de: CONC Corr. Factor: 1

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Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	202.8	45.44	180.6	58.26	911.7	13220.	2719.
SDev	2.1	1.40	1.4	1.08	7.6	18.	6.
%RSD	1.060	3.080	.7789	1.862	.8323	.1341	.2136
#1	200.8	43.85	179.0	57.03	903.2	13240.	2712.
#2	205.0	46.50	181.0	59.10	914.0	13200.	2720.
#3	202.5	45.95	181.7	58.65	917.8	13220.	2723.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000 82%	50000 87%	40000 120%	50000 101%	50000 91%	600000 N/A	30000 96%
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	100.2	48.13	5137.	303.2	621.6	454.6	13740.
SDev	.2	.30	18.	.8	2.4	.6	69.
%RSD	.2012	.6183	.3471	.2655	.3823	.1381	.5036
#1	99.99	47.79	5116.	302.3	619.2	454.0	13670.
#2	100.4	48.36	5145.	303.7	621.5	454.6	13750.
#3	100.3	48.25	5149.	303.7	624.0	455.3	13800.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000 100%	20000 96%	600000 N/A	60000 96%	50000 94%	60000 99%	600000 N/A
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	2043.	671.0	648.0	1722.	243.8	1076.	774.6
SDev	7.	2.5	3.1	30.	.5	17.	1.9
%RSD	.3475	.3738	.4818	1.732	.2138	1.582	.2389
#1	2035.	668.1	644.8	1756.	243.2	1096.	772.4
#2	2045.	672.4	648.2	1704.	244.2	1069.	775.7
#3	2048.	672.5	651.0	1705.	244.1	1065.	775.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000 N/A	30000 97%	600000 96%	60000 N/A	10000 100%	50000 N/A	60000 96%
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	505.6	181.5	180.1	59.29	57.73	908.5	918.0
SDev	1.8	.9	1.7	.95	1.68	10.3	2.5
%RSD	.3536	.4882	.9269	1.595	2.909	1.130	.2730
#1	504.0	180.5	178.2	59.03	56.02	897.2	915.2
#2	505.4	181.7	180.7	58.50	59.38	911.1	919.9
#3	507.5	182.3	181.4	60.34	57.80	917.3	919.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000 95%						

Method: 61ET2 Sample Name: 29071.02D Operator:
Run Time: 04/23/97 15:10:00
Comment: MX5480D
Code: CONC Corr. Factor: 1

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Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	161.4	.8856	160.5	48.67	463.5	10190.	782.0
SDev	.8	1.437	1.7	1.17	2.1	31.	2.9
%RSD	.4919	162.2	1.034	2.412	.4522	.3017	.3744
#1	160.9	.5357	158.8	47.67	461.1	10160.	778.6
#2	162.3	-.3438	160.8	48.39	465.0	10210.	783.7
#3	160.9	2.465	162.1	49.96	464.4	10210.	783.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	50000.	50000.	40000.	50000.	50000.	600000.	30000.
Low	-10.00	-10.00	-3.000	-5.000	-60.00	-200.0	-200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	49.51	.2359	4858.	111.8	150.3	211.3	12580.
SDev	.18	.0456	23.	.5	.6	1.0	56.
%RSD	.3659	19.33	.4750	.4729	.4186	.4707	.4444
#1	49.32	.2013	4833.	111.2	149.6	210.2	12520.
#2	49.52	.2188	4863.	111.8	150.8	211.7	12590.
#3	49.68	.2876	4878.	112.2	150.4	212.1	12640.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20000.	20000.	600000.	60000.	50000.	60000.	600000.
Low	-5.000	-5.000	-5000.	-10.00	-50.00	-25.00	-100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1885.	185.5	169.0	1686.	192.4	997.1	292.6
SDev	9.	.9	1.4	3.	.7	3.0	1.1
%RSD	.4787	.4959	.8403	.1858	.3718	.3027	.3653
#1	1875.	184.6	167.9	1684.	191.8	994.5	291.4
#2	1888.	185.3	168.6	1689.	192.2	1000.	292.9
#3	1892.	186.5	170.6	1683.	193.2	996.5	293.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600000.	30000.	60000.	60000.	10000.	50000.	60000.
Low	-5000.	-15.00	-40.00	-5000.	-10.00	-5000.	-50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	28.35	160.8	160.4	52.31	46.85	461.7	467.0
SDev	.31	2.7	1.3	2.63	1.72	2.5	1.9
%RSD	1.088	1.669	.8051	5.037	3.662	.5473	.4000
#1	28.01	157.7	159.3	53.24	44.87	459.0	465.3
#2	28.46	162.2	160.1	49.33	47.91	464.1	466.9
#3	28.60	162.5	161.8	54.34	47.76	462.1	469.0
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	10000.						

Method: 61ET2 Sample Name: CRI Operator: 105
Run Time: 04/23/97 15:15:42
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	20.83	19.64	6.062	7.747	115.7	403.6	398.4
SDev	2.36	.69	.297	.859	2.5	1.9	1.5
%RSD	11.34	3.495	4.896	11.09	2.197	.4610	.3653
#1	21.51	19.56	5.990	7.276	113.4	403.0	397.2
#2	22.79	18.99	6.388	8.739	115.2	405.6	400.0
#3	18.21	20.36	5.808	7.226	118.4	402.0	397.8
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	30.00	30.00	9.000	15.00	180.0	600.0	600.0
Low	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9.820	9.811	9563.	19.50	96.70	49.98	202.0
SDev	.018	.055	16.	.24	.32	.16	6.1
%RSD	.1859	.5600	.1629	1.241	.3273	.3201	3.009
#1	9.799	9.755	9546.	19.59	97.04	49.79	196.3
#2	9.831	9.814	9577.	19.23	96.42	50.06	201.2
#3	9.830	9.864	9566.	19.69	96.63	50.08	208.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	15.00	15.00	15000.	30.00	150.0	75.00	300.0
Low	5.000	5.000	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	9865.	29.24	79.27	9811.	20.11	9801.	96.53
SDev	30.	.02	.40	66.	.15	60.	.27
%RSD	.3073	.0690	.5050	.6740	.7666	.6161	.2825
#1	9841.	29.25	79.55	9761.	20.09	9759.	96.44
#2	9899.	29.21	78.81	9886.	19.96	9870.	96.83
#3	9854.	29.25	79.45	9787.	20.27	9773.	96.31
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	15000.	45.00	120.0	15000.	30.00	15000.	150.0
Low	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	40.38	6.231	5.959	11.74	5.739	115.3	116.4
SDev	.18	1.246	.872	1.74	1.340	2.5	3.7
%RSD	.4461	20.01	14.63	14.84	23.35	2.206	3.190
#1	40.17	4.989	6.472	9.773	6.015	112.5	115.2
#2	40.48	6.221	6.453	12.35	6.919	116.1	113.4
#3	40.48	7.482	4.953	13.09	4.282	117.4	120.5
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	60.00						

Method: 61ET2 Sample Name: ICSA Operator:
Run Time: 04/23/97 15:21:24
Comment:
Code: CONC Corr. Factor: 1

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Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.599	9.605	-1.563	1.574	5.938	475800.	-.9873
SDev	2.143	2.765	.320	2.259	1.953	1023.	.0249
%RSD	134.0	28.79	20.47	143.5	32.89	.2149	2.524
#1	3.843	11.48	-1.865	3.068	3.972	475700.	-.9585
#2	-.4251	10.90	-1.596	2.678	7.878	474900.	-1.001
#3	1.378	6.430	-1.228	-1.025	5.965	476900.	-1.002
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	20.00	20.00	6.000	10.00	120.0	595000.	400.0
Low	-20.00	-20.00	-6.000	-10.00	-120.0	396600.	-400.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.7359	.2880	434700.	32.85	3.464	17.41	170500.
SDev	.0278	.1171	631.	.09	.120	.23	79.
%RSD	3.785	40.65	.1451	.2852	3.468	1.348	.0463
#1	.7051	.4223	434500.	32.82	3.393	17.68	170600.
#2	.7434	.2072	435400.	32.96	3.602	17.24	170500.
#3	.7593	.2346	434200.	32.78	3.395	17.30	170500.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.00	10.00	548600.	45.60	100.0	50.00	223200.
Low	-10.00	-10.00	365800.	30.40	-100.0	-50.00	148800.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	460800.	43.76	7.429	-36.19	.0782	140.6	.3372
SDev	645.	.01	.426	5.49	.2312	.8	.2751
%RSD	.1399	.0329	5.739	15.17	295.7	.5598	81.57
#1	460800.	43.76	7.813	-37.34	.1001	141.2	.1156
#2	460200.	43.78	7.503	-30.21	.2977	139.7	.6451
#3	461500.	43.75	6.970	-41.01	-.1632	140.9	.2510
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass
High	588800.	54.00	80.00		20.00		100.0
Low	392600.	36.00	-80.00		-20.00		-100.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	18.18	-1.275	-1.719	-1.509	3.103	6.683	4.426
SDev	.26	1.050	.222	7.628	1.738	3.014	.637
%RSD	1.445	82.34	12.92	505.7	56.00	45.10	14.40
#1	17.90	-2.468	-1.576	-.3062	4.743	3.840	4.213
#2	18.42	-.8615	-1.975	5.447	1.282	9.843	3.922
#3	18.22	-.4946	-1.606	-9.667	3.284	6.364	5.143
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	40.00						

Method: 61ET2 Sample Name: ICSAB Operator:
Run Time: 04/23/97 15:27:06 **107**
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	86.69	82.82	39.62	36.01	528.0	472700.	473.0
SDev	1.38	2.58	.31	4.90	6.0	1164.	1.4
%RSD	1.589	3.110	.7783	13.62	1.134	.2463	.2947
#1	85.56	79.96	39.94	34.05	521.9	472100.	473.4
#2	86.30	84.96	39.32	132.38	528.1	472000.	471.4
#3	88.22	83.54	39.60	41.59	533.9	474000.	474.1
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	116.4	109.2	56.40	50.40	649.2	606700.	560.4
Low	77.60	72.80	37.60	33.60	432.8	404500.	373.6

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	413.6	793.3	430600.	431.8	406.5	524.1	168600.
SDev	.3	.4	1112.	1.2	.5	2.0	187.
%RSD	.0784	.0558	.2581	.2772	.1170	.3730	.1107
#1	413.4	792.8	429400.	430.4	405.9	524.7	168400.
#2	413.6	793.7	431600.	432.4	406.8	521.9	168700.
#3	414.0	793.2	430800.	432.5	406.8	525.6	168800.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	532.8	1045.	561500.	547.2	512.4	608.4	212700.
Low	355.2	696.8	374300.	364.8	341.6	405.6	141800.

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	456000.	457.5	797.3	-35.51	194.2	140.8	423.4
SDev	731.	.6	.4	5.12	.2	.7	.3
%RSD	.1604	.1401	.0499	14.41	.1239	.4879	.0634
#1	455600.	456.8	796.8	-38.56	194.0	141.2	423.3
#2	455400.	457.8	797.6	-29.60	194.4	140.0	423.1
#3	456800.	458.0	797.5	-38.36	194.3	141.2	423.7
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass
High	638900.	580.8	1028.		248.4		552.0
Low	425900.	387.2	685.6		165.6		368.0

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	882.1	40.48	39.17	43.79	32.10	525.3	533.3
SDev	1.1	1.04	.12	3.69	8.71	9.4	6.7
%RSD	.1290	2.572	.2957	8.422	27.13	1.786	1.250
#1	880.8	41.43	39.18	47.73	27.21	518.3	529.2
#2	882.6	39.37	39.28	43.22	26.94	521.7	541.0
#3	882.9	40.65	39.05	40.42	42.16	536.0	529.7
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	1210.						

Analysis Report QC Standard Wed 04-23-97 03:38:25 PM page 1

Method: 61ET2 Sample Name: CCV Operator: 108
Run Time: 04/23/97 15:32:47
Comment:
Code: CONC Corr. Factor: 1

Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	483.8	493.9	491.8	488.4	491.5	4967.	495.9
SDev	4.0	1.8	.8	1.1	3.4	12.	.8
%RSD	.8166	.3575	.1673	.2349	.6889	.2504	.1616
#1	479.7	491.8	491.0	487.4	488.8	4959.	495.4
#2	487.6	494.7	492.6	488.1	490.4	4961.	495.5
#3	484.2	495.0	491.8	489.7	495.3	4981.	496.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	500.0	500.0	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	484.9	487.5	4852.	489.2	483.6	497.0	4878.
SDev	1.6	1.6	17.	1.8	2.1	1.2	25.
%RSD	.3259	.3313	.3579	.3738	.4282	.2430	.5109
#1	483.3	485.8	4836.	487.2	481.5	496.0	4857.
#2	484.9	487.7	4849.	489.6	483.8	496.7	4870.
#3	486.5	489.1	4870.	490.9	485.6	498.4	4905.
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0	500.0	5000.	500.0	500.0	500.0	5000.
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	4954.	488.0	491.2	5069.	496.9	5168.	491.3
SDev	12.	1.4	1.5	12.	1.8	16.	1.5
%RSD	.2385	.2841	.3047	.2446	.3572	.3092	.3063
#1	4947.	486.6	490.3	5056.	495.5	5155.	489.8
#2	4947.	488.0	490.4	5072.	496.4	5162.	491.3
#3	4968.	489.4	493.0	5080.	498.9	5186.	492.8
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	5000.	500.0	500.0	5000.	500.0	5000.	500.0
Range	10.50	10.50	10.50	10.50	10.50	10.50	10.50

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	494.6	490.6	492.3	489.7	487.8	492.6	489.2
SDev	2.0	1.4	1.6	2.4	1.7	4.4	2.1
%RSD	.3959	.2865	.3338	.4891	.3556	.8968	.4379
#1	492.8	491.9	490.5	487.2	487.5	488.5	489.3
#2	494.3	490.8	493.5	492.0	486.2	492.1	487.0
#3	496.7	489.1	493.0	489.8	489.6	497.3	491.2
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	500.0						

Analysis Report QC Standard Wed 04-23-97 03:44:06 PM page 1

Method: 61ET2 Sample Name: CCB Operator:

Run Time: 04/23/97 15:38:29

Comment:

Code: CONC Corr. Factor: 1

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Elem	As	Tl	Pb	Se	Sb	Al	Ba
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	1.548	.5334	-.5749	-.8445	1.407	.7666	.0075
SDev	2.328	1.479	.7957	.5921	1.442	.3774	.0230
%RSD	150.5	277.3	138.4	70.11	102.5	49.23	306.5
#1	4.235	2.013	.3203	-.1735	2.771	.5453	.0305
#2	.2648	-.9452	-1.202	-1.294	1.552	1.202	.0076
#3	.1427	.5322	-.8433	-1.066	-.1025	.5522	-.0155
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	10.00	10.00	3.000	5.000	60.00	200.0	200.0

Elem	Be	Cd	Ca	Cr	Co	Cu	Fe
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.2940	.0289	-3.614	.1531	.4137	-.0194	8.852
SDev	.0465	.0913	.000	.0934	.1195	.1540	5.608
%RSD	15.82	316.2	.0000	61.01	28.88	792.6	63.35
#1	.3436	-.0759	-3.614	.0764	.3445	-.0779	15.29
#2	.2513	.0916	-3.614	.1258	.5517	-.1357	5.028
#3	.2873	.0709	-3.614	.2571	.3450	.1552	6.239
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	5000.	10.00	50.00	25.00	100.0

Elem	Mg	Mn	Ni	K	Ag	Na	V
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	-4.547	-.0789	-.1752	-28.92	.0951	-2.280	-.0004
SDev	.000	.0195	.2801	3.31	.0507	.172	.1511
%RSD	.0000	24.66	159.8	11.45	53.29	7.531	39330.
#1	-4.547	-.0564	.0373	-25.32	.1244	-2.181	.0866
#2	-4.547	-.0901	-.0703	-29.60	.0366	-2.181	.0870
#3	-4.547	-.0902	-.4926	-31.84	.1244	-2.478	-.1748
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
Range	5000.	15.00	40.00	5000.	10.00	5000.	50.00

Elem	Zn	220Pb1	220Pb2	196Se1	196Se2	206Sb1	206Sb2
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avge	.1036	-1.843	.0441	-1.009	-.7745	1.519	1.158
SDev	.0908	1.980	.3266	1.256	.3937	1.322	1.717
%RSD	87.64	107.5	741.4	124.6	50.84	87.03	148.2
#1	.0493	.2033	.3638	.1954	-.3700	2.675	2.939
#2	.2085	-3.750	.0574	-2.311	-.7970	1.805	1.023
#3	.0531	-1.982	-.2890	-.9100	-1.156	.0776	-.4867
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.0000						

DATA REVIEWED BY DSP 4-15-97

ICP Run Log PSB0411.PRN Page 1

Inorganics Department American Analytical & Technical Services Inc.

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Analyst: SR Date: 04/11/1997

QC Reference: 164691 Method: ILM04.0

Instrument: LEEMAN B Source: ?

Client ID	LAB ID	Time	DF	Analytes:
S0 ug/l	Std1Rep1	10:53	1.00	Hg
S0.2	Std2Rep1	10:56	1.00	Hg
S0.5	Std3Rep1	10:59	1.00	Hg
S1	Std4Rep1	11:01	1.00	Hg
S5	Std5Rep1	11:04	1.00	Hg
S10	Std6Rep1	11:07	1.00	Hg
ICV	Ck2ICV	11:10	1.00	Hg
ICB	Ck3ICB	11:13	1.00	Hg
CRA	Ck4CRA	11:15	1.00	HG
CCV	Ck5CCV	11:18	1.00	Hg
CCB	Ck6CCB	11:21	1.00	Hg
PBW	PBW970410A	11:26	1.00	Hg
MDMJ21	29010.13	11:28	1.00	Hg
MDMJ21D	29010.13D	11:31	1.00	Hg
MDMJ21S	29010.13S	11:34	1.00	Hg
PBS	PBS970411B	11:36	1.00	Hg
LCSS	LCS970411B	11:39	1.00	Hg 10X
MDMJ08	28996.01	11:42	1.00	Hg
MDMJ09	29010.01	11:44	1.00	Hg
MDMJ10	29010.02	11:47	1.00	Hg

COPY

ORIGINALS FILED WITH CSF MDMJ08

5-2-97 UM

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ICP Run Log PSB0411.PRN Page 2

Organics Department American Analytical & Technical Services Inc.

Analyst: SR Date: 04/11/1997

Instrument: LEEMAN B COPY QC Reference: 164691 Method: ILM04.0

Source: ?

Client ID	LAB ID	Time	DF	Analytes:
MDMJ11	29010.03	11:50	1.00	Hg
CCV	Ck5CCV	11:52	1.00	Hg
CCB	Ck6CCB	11:55	1.00	Hg
MDMJ12	29010.04	11:58	1.00	Hg
MDMJ13	29010.05	12:01	1.00	Hg
MDMJ14	29010.06	12:03	1.00	Hg
MDMJ15	29010.07	12:06	1.00	Hg
MDMJ16	29010.08	12:08	1.00	Hg
MDMJ17	29010.09	12:11	1.00	Hg
MDMJ18	29010.10	12:14	1.00	Hg
MDMJ19	29010.11	12:16	1.00	Hg
MDMJ19D	29010.11D	12:19	1.00	Hg
MDMJ19S	29010.11S	12:22	1.00	Hg
CCV	Ck5CCV	12:25	1.00	Hg
CCB	Ck6CCB	12:27	1.00	Hg
MDMJ20	29010.12	12:30	1.00	Hg
CCV	Ck5CCV	12:33	1.00	Hg
CCB	Ck6CCB	12:35	1.00	Hg
PBS	PBS970410B	12:44	1.00	Hg

ICP Run Log PSB0411.PRN Page 3

Inorganics Department American Analytical & Technical Services Inc. ~~111~~ 5/9/97

Analyst: SR Date: 04/11/1997

COPY

Instrument: LEEMAN B QC Reference: 164691 Method: ILM04.0
Source: ?

Client ID	LAB ID	Time	DF	Analytes:
LCSS	LCS970410B	12:46	1.00	Hg 10X
MFHE85	29054.01	12:49	1.00	Hg
MFHE86	29054.02	12:52	1.00	Hg
MFHE87	29054.03	12:54	1.00	Hg
MFHE88	29054.04	12:57	1.00	Hg
MFHE89	29054.05	13:00	1.00	Hg
MFHE90	29054.06	13:02	1.00	Hg
MFHE91	29054.07	13:05	1.00	Hg
MFHE92	29054.08	13:08	1.00	Hg
CCV	Ck5CCV	13:11	1.00	Hg
CCB	Ck6CCB	13:13	1.00	Hg
MFHE93	29054.09	13:16	1.00	Hg
MFHE94	29054.10	13:19	1.00	Hg
MFHE94S 8-4-1997	29054.11	13:21	1.00	Hg
MFHE95D	29054.11D	13:24	1.00	Hg
MFHE95S	29054.11S	13:27	1.00	Hg
MFHE96	29054.12	13:29	1.00	Hg
MFHE97	29054.13	13:32	1.00	Hg
MFHE98	29054.14	13:35	1.00	Hg

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ICP Run Log PSB0411.PRN Page 4

rganics Department American Analytical & Technical Services Inc.

Analyst: SR Date: 04/11/1997

COPY

Instrument: LEEMAN B QC Reference: 164691 Method: ILM04.0
Source: ?

Client ID	LAB ID	Time	DF	Analytes:
MFH E99	29054.15	13:38	1.00	Hg
PBS	PBS970411A	13:40	1.00	Hg
CCV	Ck5CCV	13:43	1.00	Hg
CCB	Ck6CCB	13:46	1.00	Hg
LCS	LCS970411A	13:48	1.00	Hg
LDS	LDS970411A	13:51	1.00	Hg
93204	28932.04	13:54	1.00	Hg
93205	28932.05	13:57	1.00	Hg
93205S	28932.05S	13:59	1.00	Hg
93205SD	28932.05SD	14:02	1.00	Hg
PBW	PBW970410C	14:05	1.00	Hg
LCW	LCW970410C	14:08	1.00	Hg
LDW	LDW970410C	14:10	1.00	Hg
06001	29060.01	14:13	1.00	Hg
CCV	Ck5CCV	14:16	1.00	Hg
CCB	Ck6CCB	14:19	1.00	Hg
06002	29060.02	14:21	1.00	Hg
06003	29060.03	14:24	1.00	Hg
06001S	29060.01S	14:27	1.00	Hg

data not used 5/6/97 SS

4-11-97
8

SWLD / PATS Sample Digestion Record

Date: [illegible] Batch: [illegible] PS20013 Analyst: [illegible]
[illegible] Microwave Acid Digestion - Solid Phase Client: [illegible] Matrix: W

LAB ID	Client ID	TYP	Initial Wt/Vol		Final Wt/Vol		Color Before	Color After	Texture	pH	Comments
PBW9704100	29060.01	LB	100	ML	100	ML					
LCW9704100	29060.01	BS	100	ML	100	ML					1.0 ML HG1-1-91-4
LCW9704100	29060.01	BS	100	ML	100	ML					1.0 ML HG1-1-91-4
29060.01	UPSTREAM	[illegible]	100	ML	100	ML					
29060.02	DOWNSTREAM		100	ML	100	ML					
29060.03	WELL		100	ML	100	ML					
29060.04	UPSTREAM		100	ML	100	ML					1.0 ML HG1-1-91-4
29060.05	UPSTREAM		100	ML	100	ML					1.0 ML HG1-1-91-4

Data Not Used. Copy to light 5-2-97 LM

10:53:37 11 Apr 1997 Protocol: MERCURY PRP7470

115

Line	Conc.	Units	SD/RSD	1	2	3	4	5

COPY

*** Standard: 1 Rep: 1 Seq: 0 10:53:37 11 Apr 1997 HG

Hg .000 ppb -468
S0 Ave. Int. = -468 S. D. = 0

*** Standard: 2 Rep: 1 Seq: 1 10:56:21 11 Apr 1997 HG

Hg .200 ppb 7038
S0.2 Ave. Int. = 7038 S. D. = 0

*** Standard: 3 Rep: 1 Seq: 2 10:59:06 11 Apr 1997 HG

Hg .500 ppb 17717
S0.5 Ave. Int. = 17717 S. D. = 0

*** Standard: 4 Rep: 1 Seq: 3 11:01:51 11 Apr 1997 HG

Hg 1.00 ppb 31938
S1 Ave. Int. = 31938 S. D. = 0

*** Standard: 5 Rep: 1 Seq: 4 11:04:36 11 Apr 1997 HG

Hg 5.00 ppb 164854
S5 Ave. Int. = 164854 S. D. = 0

*** Standard: 6 Rep: 1 Seq: 5 11:07:23 11 Apr 1997 HG

Hg 10.0 ppb 351201
S10 Ave. Int. = 351201 S. D. = 0

Protocol: MERCURY FRP7470
Rev: 3.005 Time: 11:07:32 11 Apr 1997
Folder: PSB0411 Seq: 6 Print: On
User: Batch: Id: Std6Repl Cup: 1 23 Gas: 0.30 LPM
State: Idle Macro STANDARD 44: F3 Print Xmit: Off Autosampler: On

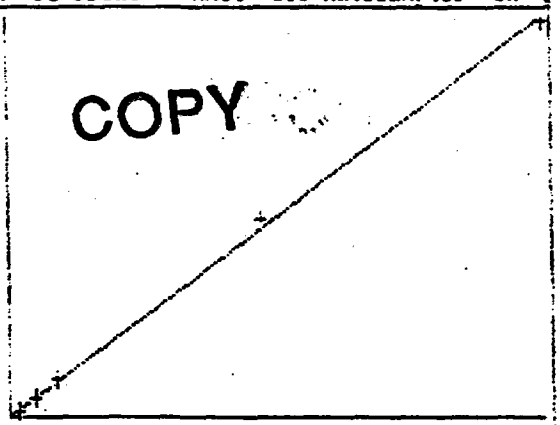
CALIBRATION: Line Calibration

Line: Hg

	Conc.	Calc.	Dev.	Accepted
S1	.300	.040	.340	LiNear
S2	.200	.255	.055	Quadratic
S3	.500	.560	.060	WtdLinear
S4	1.00	.967	-.033	Accept
S5	5.00	4.77	-.228	
S6	10.0	10.1	.106	StdAdd

A .0000000 r .999546
B 2.86239e-5 C 5.31855e-2

Correlation



Relative Absorbance

	Mean	%RSD	
S1	-468	0	-468
S2	7038	0	7038
S3	17717	0	17717
S4	31938	0	31938
S5	164854	0	164854
S6	351201	0	351201

New calibration coefficients stored

COPY

Folder: PSB0411 Page 2
11:10:18 11 Apr 1997 COPY Protocol: ~~MERCURY~~ PRP7470

117

Line	Conc.	Units	SD/RSD	1	2	3	4	5

ICV

*** Check Standard: 2 Ck2ICV Seq: 6 11:10:18 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		92.4	4.53	4.90	ppb	.000

92.4%

ICB

*** Check Standard: 3 Ck3ICB Seq: 7 11:13:01 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	733000	.073	.000	ppb	.000

CRA

*** Check Standard: 4 Ck4CRA Seq: 8 11:15:43 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		134.	.267	.200	ppb	.000

134%

CCV

*** Check Standard: 5 Ck5CCV Seq: 9 11:18:26 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.9	4.75	5.00	ppb	.000

95%

CCB

*** Check Standard: 6 Ck6CCB Seq: 10 11:21:12 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	745000	.075	.000	ppb	.000

~~10:30~~ DSB 4-15-97

*** Sample ID: PBW970410A Seq: 11 11:26:13 11 Apr 1997 HG

PBW

Hg .098 L ppb .000 .098

*** Sample ID: 29010.13 Seq: 12 11:28:52 11 Apr 1997 HG

MDMJ21

Hg .065 L ppb .000 .065

*** Sample ID: 29010.13D Seq: 13 11:31:31 11 Apr 1997 HG

MDMJ21D

Hg .116 L ppb .000 .116

*** Sample ID: 29010.13S Seq: 14 11:34:11 11 Apr 1997 HG

MDMJ21S Missed cup so will Rerun At END 3-4-11-97

Hg .102 L ppb .000 .102

PBS

*** Sample ID: PBS970411B Seq: 15 11:36:51 11 Apr 1997 HG

PBS

Hg .067 L ppb .000 .067

LCSS

*** Sample ID: LCS970411B Seq: 16 11:39:31 11 Apr 1997 HG

1:9 LCS

Hg 2.15 ppb .000 2.15 10X 118%

*** Sample ID: 28996.01 Seq: 17 11:42:12 11 Apr 1997 HG

MDMJ08

Hg .748 ppb .000 .748

Line Conc. Units SD/RSD 1 2 3 4 5

*** Sample ID: 29010.01 Seq: 18 11:44:52 11 Apr 1997 HG
MDM309
Hg .256 ppb .000 .256

*** Sample ID: 29010.02 Seq: 19 11:47:32 11 Apr 1997 HG
MDM310
Hg .197 L ppb .000 .197

*** Sample ID: 29010.03 Seq: 20 11:50:12 11 Apr 1997 HG
MDM311
Hg .340 ppb .000 .340

CCV
*** Check Standard: 5 Ck5CCV Seq: 21 11:52:54 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		93.1	4.65	5.00	ppb	.000

93.1%

CCB
*** Check Standard: 6 Ck6CCB Seq: 22 11:55:38 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	701000	.070	.000	ppb	.000

*** Sample ID: 29010.04 Seq: 23 11:58:21 11 Apr 1997 HG
MDM312
Hg .125 L ppb .000 .125

*** Sample ID: 29010.05 Seq: 24 12:01:01 11 Apr 1997 HG
MDM313
Hg .152 L ppb .000 .152

*** Sample ID: 29010.06 Seq: 25 12:03:39 11 Apr 1997 HG
MDM314
Hg .120 L ppb .000 .120

*** Sample ID: 29010.07 Seq: 26 12:06:19 11 Apr 1997 HG
MDM315
Hg .142 L ppb .000 .142

*** Sample ID: 29010.08 Seq: 27 12:08:59 11 Apr 1997 HG
MDM316
Hg .153 L ppb .000 .153

*** Sample ID: 29010.09 Seq: 28 12:11:39 11 Apr 1997 HG
MDM317
Hg .310 ppb .000 .310

*** Sample ID: 29010.10 Seq: 29 12:14:19 11 Apr 1997 HG
MDM318
Hg .196 L ppb .000 .196

119

Line Conc. Units SD/RSD 1 2 3 4 5

*** Sample ID: 29010.11 Seq: 30 12:16:59 11 Apr 1997 HG
MDMJ19
Hg .200 L ppb .000 .200

*** Sample ID: 29010.11D Seq: 31 12:19:39 11 Apr 1997 HG
MDMJ19D
Hg .191 L ppb .000 .191

*** Sample ID: 29010.11S Seq: 32 12:22:19 11 Apr 1997 HG
MDMJ19S
Hg 1.08 ppb .000 1.08 0.89%

CCV
*** Check Standard: 5 Ck5CCV Seq: 33 12:25:00 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		91.4	4.57	5.00	ppb	.000

91.4%

CCB
*** Check Standard: 6 Ck6CCB Seq: 34 12:27:44 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	687000	.069	.000	ppb	.000

*** Sample ID: 29010.12 Seq: 35 12:30:26 11 Apr 1997 HG
MDMJ20
Hg .196 L ppb .000 .196

CCV
*** Check Standard: 5 Ck5CCV Seq: 36 12:33:07 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		91.2	4.56	5.00	ppb	.000

91.2%

CCB
*** Check Standard: 6 Ck6CCB Seq: 37 12:35:53 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	642000	.064	.000	ppb	.000

PBS
*** Sample ID: PBS970410B Seq: 38 12:44:13 11 Apr 1997 HG
PBS
Hg .088 L ppb .000 .088

LCSS
*** Sample ID: LCS970410B Seq: 39 12:46:53 11 Apr 1997 HG
1:9 LCS
Hg 2.12 ppb .000 2.12 10X 119%

*** Sample ID: 29054.01 Seq: 40 12:49:33 11 Apr 1997 HG
MFHE85
Hg .089 L ppb .000 .089

*** Sample ID: 29054.02 Seq: 41 12:52:13 11 Apr 1997 HG
MFHE86
Hg .110 L ppb .000 .110

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 29054.03 Seq: 42 12:54:53 11 Apr 1997 HG
MFHE87
Hg .102 L ppb .000 .102

*** Sample ID: 29054.04 Seq: 43 12:57:34 11 Apr 1997 HG
MFHE88
Hg .111 L ppb .000 .111

*** Sample ID: 29054.05 Seq: 44 13:00:15 11 Apr 1997 HG
MFHE89
Hg .171 L ppb .000 .171

*** Sample ID: 29054.06 Seq: 45 13:02:56 11 Apr 1997 HG
MFHE90
Hg .149 L ppb .000 .149

*** Sample ID: 29054.07 Seq: 46 13:05:38 11 Apr 1997 HG
MFHE91
Hg .122 L ppb .000 .122

*** Sample ID: 29054.08 Seq: 47 13:08:19 11 Apr 1997 HG
MFHE92
Hg .174 L ppb .000 .174

CCV
*** Check Standard: 5 Ck5CCV Seq: 48 13:11:01 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		91.9	4.60	5.00	ppb	.000

92%

CCB
*** Check Standard: 6 Ck6CCB Seq: 49 13:13:45 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	770000	.077	.000	ppb	.000

*** Sample ID: 29054.09 Seq: 50 13:16:27 11 Apr 1997 HG
MFHE93
Hg .139 L ppb .000 .139

*** Sample ID: 29054.10 Seq: 51 13:19:08 11 Apr 1997 HG
MFHE94
Hg .124 L ppb .000 .124

*** Sample ID: 29054.11 Seq: 52 13:21:50 11 Apr 1997 HG
MFHE95
Hg .263 ppb .000 .263

*** Sample ID: 29054.11D Seq: 53 13:24:32 11 Apr 1997 HG
MFHE95D
Hg .272 ppb .000 .272

COPY

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Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 29054.11S Seq: 54 13:27:14 11 Apr 1997 HG
MFHE95S
Hg 1.01 ppb .000 1.01 75%

*** Sample ID: 29054.12 Seq: 55 13:29:56 11 Apr 1997 HG
MFHE96
Hg .175 L ppb .000 .175

*** Sample ID: 29054.13 Seq: 56 13:32:39 11 Apr 1997 HG
MFHE97
Hg .172 L ppb .000 .172

*** Sample ID: 29054.14 Seq: 57 13:35:22 11 Apr 1997 HG
MFHE98
Hg .213 ppb .000 .213

*** Sample ID: 29054.15 Seq: 58 13:38:05 11 Apr 1997 HG
MFHE99
Hg .124 L ppb .000 .124

PBS
*** Sample ID: PBS970411A Seq: 59 13:40:47 11 Apr 1997 HG
PBS
Hg .087 L ppb .000 .087

CCV
*** Check Standard: 5 Ck5CCV Seq: 60 13:43:30 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		92.2	4.61	5.00	ppb	.000

92.2%

CCB
*** Check Standard: 6 Ck6CCB Seq: 61 13:46:13 11 Apr 1997 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	H	688000	.069	.000	ppb	.000

LCS
~~*** Sample ID: LCS970411A Seq: 62 13:48:56 11 Apr 1997 HG~~
~~LCS~~
~~Hg .937 ppb .000 .937~~ 94%

LDS
~~*** Sample ID: LDS970411A Seq: 63 13:51:39 11 Apr 1997 HG~~
~~LDS~~
~~Hg .933 ppb .000 .933~~ 93.7%

~~*** Sample ID: 28932.04 Seq: 64 13:54:22 11 Apr 1997 HG~~
~~93204~~
~~Hg .957 ppb .000 .957~~

~~*** Sample ID: 28932.05 Seq: 65 13:57:06 11 Apr 1997 HG~~
~~93205~~
~~Hg .963 ppb .000 .963~~

data not used 5/6/97 gp

ICP Run Log 97041503.RPC Page 1
Inorganics Department American Analytical & Technical Services Inc.

Analyst: TG Date: 04/15/1997 **122**

QC Reference: 165111 Method: ILM04.0
Instrument: LACHAT Source: ?

R = 0.9998

DATA REVIEWED BY DB 4-15-97

Client ID		LAB ID	Time	DF	Analytes:
S200	4.0 LH-71-6	Standard A	11:13	1.00	Cn 0.0495
S150	3.0	Standard B	11:14	1.00	Cn 0.0372
S100	2.0	Standard C	11:15	1.00	Cn 0.0250
S50	1.0	Standard D	11:16	1.00	Cn 0.0125
S20	0.4	Standard E	11:17	1.00	Cn 0.0048
S10	0.2	Standard F	11:18	1.00	Cn 0.0028
S0.0000	0.0	Standard G	11:19	1.00	Cn 0.0007
	ICV970414B	ICV	11:23	1.00	Cn
		ICB	11:24	1.00	Cn
		CCV	11:24	1.00	Cn
		CCB	11:25	1.00	Cn
	PBS	PBS970414B	11:27	1.00	Cn
	LCSS	LCS970414B	11:28	1.00	Cn
	MFHE85	29054.01	11:29	1.00	Cn
	MFHE86	29054.02	11:30	1.00	Cn
	MFHE87	29054.03	11:30	1.00	Cn
	MFHE88	29054.04	11:31	1.00	Cn
		CCV	11:32	1.00	Cn
		CCB	11:33	1.00	Cn

Inorganics Department American Analytical & Technical Services Inc.

Analyst: TG Date: 04/15/1997

123

QC Reference: 165111 Method: ILM04.0

Instrument: LACHAT Source: ?

Client ID	LAB ID	Time	DF	Analytes:
MFHE89	29054.05	11:35	1.00	Cn
MFHE90	29054.06	11:36	1.00	Cn
MFHE91	29054.07	11:36	1.00	Cn
MFHE92	29054.08	11:37	1.00	Cn
MFHE93	29054.09	11:38	1.00	Cn
MFHE94	29054.10	11:38	1.00	Cn
MFHE95	29054.11	11:39	1.00	Cn
MFHE95D	29054.11D	11:40	1.00	Cn
MFHE95S	29054.11S	11:41	1.00	Cn
MFHE96	29054.12	11:41	1.00	Cn
	CCV	11:42	1.00	Cn
	CCB	11:43	1.00	Cn
MFHE97	29054.13	11:45	1.00	Cn
MFHE98	29054.14	11:46	1.00	Cn
MFHE99	29054.15	11:47	1.00	Cn
	CCV	11:47	1.00	Cn
	CCB	11:48	1.00	Cn

QuikChem AE Calibration Report for Calibration 97041503
Method: CYANIDE
This calibration was done on 04/15/97 at 11:20
This report prepared on 04/15/97 at 11:51
{Inst: Lachat Quikchem}

Routine 4/15/97 TG

	Analyte	Units	Known	Determined	% Residual	Baseline Corrected Average Absorbance	
Standard A,	CYANIDE S_{200}	ug/l	S 200.000	199.453	0.27	0.0495	1113
Standard B,	CYANIDE S_{150}	ug/l	S 150.000	149.938	0.04	0.0372	1114
Standard C,	CYANIDE S_{100}	ug/l	S 100.000	100.806	-0.81	0.0250	1115
Standard D,	CYANIDE S_{50}	ug/l	S 50.000	50.556	-1.11	0.0125	1116
Standard E,	CYANIDE S_{20}	ug/l	S 20.000	19.695	1.53	0.0048	1117
Standard F,	CYANIDE S_{10}	ug/l	S 10.000	11.643	-16.43	0.0028	1118
Standard G,	CYANIDE S_0	ug/l	S 0.000	-2.091	***.**	-0.0007	1119

End of Calibration Report For Calibration 97041503

Calibration Statistics Report

Cal Ref: 97041503 04/15/97 11:51 am
Method: CYANIDE

Channel: CYANIDE

Correlation Coefficients

Seg	Stds	Full	Chord 1	Chord 2	Chord 3	Chord 4	Chord 5
1	A-G	0.9998	0.9895 ?	0.9994	0.9998	0.9998	0.9898 ?

Percent Standard Deviation in Slope

1	A-G	0.7	4.6	1.1	0.6	0.6	14.1

```
==========================================================================

QuikChem AE Runtime Report for Tray 97041504.RS
Method: CYANIDE

    This tray was started on 04/15/97 at 11:20   .
    This report was prepared on 04/15/97 at 11:21   .

    Operator: T GILLLUND                          Tray Template: 970415A
    Calibration now in effect is Ref: 97041503, 04/15/97, 11:20

    KCN SOURCE: ALDRICH LOT #JN04320CN STOCK DATE: 03-10-1997

=======================(Inst: Lachat Quikchem)=================================

-- Page  1 of report for tray 97041504.RS ---------------------------------

*** QC Set Check Standards Report for QC Sample: ICV                    11:23
Ch1, CYANIDE          Known:    90.000 Det:    90.731ug/1        Diff:   0.81%
*** ICV PASSED (Relative % ( +/- 15%)
*** Action To Be Taken: Just Message Given          101%

*** QC Set Check Standards Report for QC Sample: ICB                    11:24
Ch1, CYANIDE          Known:     0.000 Det:     2.633ug/1        Diff:   2.63
*** ICB PASSED (Absolute diff. ( 10.0 ug/1)
*** Action To Be Taken: Just Message Given

*** QC Set Check Standards Report for QC Sample: CCV                    11:24
Ch1, CYANIDE          Known:   100.000 Det:   102.563ug/1        Diff:   2.56%
*** CCV PASSED (Relative % ( +/- 15%)
*** Action To Be Taken: Just Message Given          103%

*** QC Set Check Standards Report for QC Sample: CCB                    11:25
Ch1, CYANIDE          Known:     0.000 Det:    -0.638ug/1        Diff:   0.64
*** CCB PASSED (Absolute diff. ( 10.0 ug/1)
*** Action To Be Taken: Just Message Given

Cup 105, Sample: PBS970414B   PBS                     Dil:  1.00    11:27
 Ch. 1: CYANIDE                    ;      1.066ug/1        PIF=0.00 Abs= 0.0001
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.

Cup 106, Sample: LCS970414B  LCSS                     Dil:  1.00    11:28
 Ch. 1: CYANIDE                    ;    122.174ug/1  109%  PIF=0.98 Abs= 0.0303

-- Report for tray 97041504.RS continued on next page . . .
```

Cup 107, Sample: 29054.01 MFHE85 Dil: 1.00 11:29
Ch. 1: CYANIDE ; -0.432ug/l PIF=0.00 Abs=-0.0002
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

Cup 108, Sample: 29054.02 MFHE86 Dil: 1.00 11:30
Ch. 1: CYANIDE ; 1.641ug/l PIF=0.00 Abs= 0.0003
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

Cup 109, Sample: 29054.03 MFHE87 Dil: 1.00 11:30
Ch. 1: CYANIDE ; -1.587ug/l PIF=0.00 Abs=-0.0005
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

Cup 110, Sample: 29054.04 MFHE88 Dil: 1.00 11:31
Ch. 1: CYANIDE ; 0.336ug/l PIF=0.00 Abs=-0.0000
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

*** QC Set Check Standards Report for QC Sample: CCV 11:32
Ch1, CYANIDE Known: 100.000 Det: 99.181ug/l Diff: 0.82%
*** CCV PASSED (Relative % < +/- 15%)
*** Action To Be Taken: Just Message Given

99%

*** QC Set Check Standards Report for QC Sample: CCB 11:33
Ch1, CYANIDE Known: 0.000 Det: 1.053ug/l Diff: 1.05
*** CCB PASSED (Absolute diff. < 10.0 ug/l)
*** Action To Be Taken: Just Message Given

Cup 111, Sample: 29054.05 MFHE89 Dil: 1.00 11:35
Ch. 1: CYANIDE ; 3.211ug/l PIF=0.31 Abs= 0.0007
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

Cup 112, Sample: 29054.06 MFHE90 Dil: 1.00 11:36
Ch. 1: CYANIDE ; 2.760ug/l PIF=0.23 Abs= 0.0006
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

-- Report for tray 97041504.RS continued on next page . . .

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Cup 113, Sample: 29054.07 MFHE91                          Dil:  1.00    11:36
 Ch. 1: CYANIDE                  ;      0.691ug/l         PIF=0.00 Abs= 0.0000
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.

Cup 114, Sample: 29054.08 MFHE92                          Dil:  1.00    11:37
 Ch. 1: CYANIDE                  ;      3.831ug/l         PIF=0.42 Abs= 0.0008
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.

Cup 115, Sample: 29054.09 MFHE93                          Dil:  1.00    11:38
 Ch. 1: CYANIDE                  ;      5.185ug/l         PIF=0.43 Abs= 0.0012
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.

Cup 116, Sample: 29054.10 MFHE94                          Dil:  1.00    11:38
 Ch. 1: CYANIDE                  ;      0.171ug/l         PIF=0.00 Abs=-0.0001
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.

Cup 117, Sample: 29054.11 MFHE95                          Dil:  1.00    11:39
 Ch. 1: CYANIDE                  ;      4.503ug/l         PIF=0.77 Abs= 0.0010
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.

Cup 118, Sample: 29054.11D MFHE95D                        Dil:  1.00    11:40
 Ch. 1: CYANIDE                  ;      6.355ug/l         PIF=0.93 Abs= 0.0015

Cup 119, Sample: 29054.11S MFHE95S                        Dil:  1.00    11:41
 Ch. 1: CYANIDE                  ;    102.597ug/l         PIF=0.99 Abs= 0.0254
                                                 103%
Cup 120, Sample: 29054.12 MFHE96                          Dil:  1.00    11:41
 Ch. 1: CYANIDE                  ;      5.260ug/l         PIF=0.89 Abs= 0.0012
 ** Above conc. is significantly less than the lowest non-zero std's conc.
 ** If sample was diluted, concentration after dilution is shown.


*** QC Set Check Standards Report for QC Sample: CCV                    11:42
Ch1, CYANIDE          Known:   100.000 Det:   105.182ug/l        Diff:   5.18%
*** CCV PASSED (Relative % ( +/- 15%)
*** Action To Be Taken: Just Message Given
                                                 105%
```

-- Report for tray 97041504.RS continued on next page . . .

*** QC Set Check Standards Report for QC Sample: CCB 11:43
Ch1, CYANIDE Known: 0.000 Det: -0.239ug/l Diff: 0.24
*** CCB PASSED (Absolute diff. < 10.0 ug/l)
*** Action To Be Taken: Just Message Given

Cup 121, Sample: 29054.13 MFHE97 Dil: 1.00 11:45
Ch. 1: CYANIDE ; 3.832ug/l PIF=0.62 Abs= 0.0008
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

Cup 122, Sample: 29054.14 MFHE98 Dil: 1.00 11:46
Ch. 1: CYANIDE ; 18.168ug/l PIF=0.48 Abs= 0.0044

Cup 123, Sample: 29054.15 MFHE99 Dil: 1.00 11:47
Ch. 1: CYANIDE ; 4.720ug/l PIF=0.72 Abs= 0.0010
** Above conc. is significantly less than the lowest non-zero std's conc.
** If sample was diluted, concentration after dilution is shown.

*** QC Set Check Standards Report for QC Sample: CCV 11:47
Ch1, CYANIDE Known: 100.000 Det: 102.119ug/l Diff: 2.12%
*** CCV PASSED (Relative % < +/- 15%)
*** Action To Be Taken: Just Message Given

102%

*** QC Set Check Standards Report for QC Sample: CCB 11:48
Ch1, CYANIDE Known: 0.000 Det: 1.894ug/l Diff: 1.89
*** CCB PASSED (Absolute diff. < 10.0 ug/l)
*** Action To Be Taken: Just Message Given

--------- End of Report for Tray 97041504.RS ----------

INORGANICS DEPARTMENT

INORGANICS PERCENT SOLIDS DETERMINATION

ANALYST: Tw

DATE: 4-11-97

EPA CASE NO: SDG NO: LAB BATCH NO:

EPA Sample #	Lab Sample #	Crucible (g)	Crucible + Sample (g)	Crucible + Dry Sample (g)	Dry Weight	% Solids
MDMT08	28996.01	PE	PE	PE	PE	PE
MDMJ09	29010.01	1.10	11.10	8.69	7.59	75.9
MDMJ10	.02	1.09	11.09	9.11	8.02	80.2
MDMJ11	.03	1.07	11.07	8.75	7.66	76.6
MDMJ12	.04	1.08	11.08	9.27	8.19	81.9
MDMJ13	.05	1.07	11.07	8.94	7.87	78.7
MDMJ14	.06	1.06	11.06	9.21	8.15	81.5
MDMJ15	.07	1.07	11.07	8.95	7.88	78.8
MDMJ16	.08	1.07	11.07	8.99	7.92	79.2
MDMJ17	.09	1.08	11.08	8.52	7.44	74.4
MDMJ18	.10	1.10	11.10	8.54	7.44	74.4
MDMJ19	.11	1.08	11.08	9.45	8.37	83.7
MDMJ19	.11D	1.05	11.05	9.50	8.45	84.5
MDMJ20	.12	1.08	11.08	8.66	7.58	75.8
MEHE85	29054.01	1.07	11.07	8.53	7.46	74.6
MEHE86	.02	1.07	11.07	7.60	6.53	65.3
MEHE87	.03	1.09	11.09	8.78	7.69	76.9
MEHE88	.04	1.08	11.08	7.98	6.90	69.0
MEHE89	.05	1.08	11.08	7.31	6.23	62.3
MEHE90	.06	1.09	11.09	8.27	7.18	71.8
MEHE91	.07	1.10	11.10	9.73	8.63	86.3
MEHE92	.08	1.08	11.08	9.42	8.34	83.4

SAMPLE TRANSFER

REMOVED FROM STORAGE:	RETURNED TO STORAGE:
Area #: walk in	Area #: walk in
By: Tw	By: Tw
On: 4-11-97	On: 4-11-97

Received by _____ Date 4-11-97 Logbook No: 13 Page No: 3

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 WEST ALBANY • BROKEN ARROW, OK 74012 • OFFICE (918) 251-2858 • FAX (918) 251-2599

INORGANICS PERCENT SOLIDS DETERMINATION

ANALYST: TW

DATE: 4-11-97

EPA CASE NO: SDG NO: LAB BATCH NO:

EPA Sample #	Lab Sample #	Crucible (g)	Crucible + Sample (g)	Crucible + Dry Sample (g)	Dry Weight	% Solids
MFHE93	29054.09	1.10	11.10	8.07	6.97	69.7
MFHE 94	.10	1.11	11.11	9.67	8.56	85.6
MFHE95	.11	1.10	11.10	10.27	9.17	91.7
MFHE95	.110	1.08	11.08	10.18	9.10	91.0
MFHE 96	.12	1.10	11.10	10.16	9.06	90.6
MFHE97	.13	1.08	11.08	10.55	9.47	94.7
MFHE 98	.14	1.09	11.09	9.97	8.88	88.8
MFHE99	.15	1.10	11.10	9.30	8.20	82.0

4-11-97
TW

SAMPLE TRANSFER

REMOVED FROM STORAGE:	RETURNED TO STORAGE:
Area #: walkin	Area #: walkin
By: TW	By: TW
On: 4-11-97	On: 4-11-97

Received by _____ Date 4-11-97 Logbook No: 13 Page No: 4

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 WEST ALBANY • BROKEN ARROW, OK 74012 • OFFICE (918) 251-2858 • FAX (918) 251-2599

SWLO / AATS Sample Digestion Record

Date : 04/11/1997 Batch: 970411I2 Analyst: TW 4-11-97

: MT600 ACID DIGESTION - ICP/AA Client: EPAMT136 Matrix: S

LAB ID	Client ID	TYP	Initial Wt/Vol		Final Wt/Vol		Color Before	Color After	Texture	pH	Comments
PBS970411B	PBS	LB1	1.0	GM	200	ML					
LCS970411B	LCSS	BS	1.0	GM	200	ML					M1-30-16
29054.01	MFHE85 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.02	MFHE86 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.03	MFHE87 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.04	MFHE88 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.05	MFHE89 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.06	MFHE90 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.07	MFHE91 (CASE#25		1.0	GM	200	ML	BR	YE/CL	C		
29054.08	MFHE92 (CASE#25		1.0	GM	200	ML	BR	YE/CL	C		
29054.09	MFHE93 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.10	MFHE94 (CASE#25		1.0	GM	200	ML	BR	YE/CL	C		
29054.11	MFHE95 *QA/QC		1.0	GM	200	ML	BR	YE/CL	M		
29054.11D	MFHE951 *QA/QC		1.0	GM	200	ML	BR	YE/CL	M		
29054.11S	MFHE955 *QA/QC		1.0	GM	200	ML	BR	YE/CL	M		2.0 ML DS1-1-91,-94
29054.12	MFHE96 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.13	MFHE97 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.14	MFHE98 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		
29054.15	MFHE99 (CASE#25		1.0	GM	200	ML	BR	YE/CL	M		

4-11-97

SWLD / AATS Sample Digestion Record

Date : 04/11/1997 Batch: 97041112 Analyst: TW
: MT600 ACID DIGESTION - ICP/AA Client: EPAMT136 Matrix: S

LAB ID	Client ID	TYP	Initial Wt/Vol		Final Wt/Vol		Color Before	Color After	Texture	pH	Comments
PBS970411B	PBS	LB1	1.0	GM	200	ML					
LCS970411B	LCSS	BS	1.0	GM	200	ML	BR	YELL	M		M1-30-16
29054.01	MFHE85 (CASE#25		1.0	GM	200	ML					
29054.02	MFHE86 (CASE#25		1.0	GM	200	ML					
29054.03	MFHE87 (CASE#25		1.0	GM	200	ML					
29054.04	MFHE88 (CASE#25		1.0	GM	200	ML					
29054.05	MFHE89 (CASE#25		1.0	GM	200	ML					
29054.06	MFHE90 (CASE#25		1.0	GM	200	ML					
29054.07	MFHE91 (CASE#25		1.0	GM	200	ML			C		
29054.08	MFHE92 (CASE#25		1.0	GM	200	ML			I		
29054.09	MFHE93 (CASE#25		1.0	GM	200	ML			M		
29054.10	MFHE94 (CASE#25		1.0	GM	200	ML			E		
29054.11	MFHE95 *QA/QC		1.0	GM	200	ML			N		
29054.11D	MFHE95D*QA/QC		1.0	GM	200	ML					
29054.11S	MFHE95S*QA/QC		1.0	GM	200	ML					2.0 ML DS1-1-91,-94
29054.12	MFHE96 (CASE#25		1.0	GM	200	ML					
29054.13	MFHE97 (CASE#25		1.0	GM	200	ML					
29054.14	MFHE98 (CASE#25		1.0	GM	200	ML					
29054.15	MFHE99 (CASE#25		1.0	GM	200	ML					

4-11-97
TW

4-11-97

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SWLD / AATS Sample Digestion Record

: 04/10/1997 Batch: 970410HG2 Analyst: SR
Type : MT620 ACID DIGESTION - COLD VAPOR Client: EPA Matrix: S

LAB ID	Client ID	TYP	Initial Wt/Vol	Final Wt/Vol	Color Before	Color After	Texture	pH	Comments
PBS970410B	29054.01 PBS	LB	0.2 GM	100 ML					
LCS970410B	29054.01 LCSS	BS	0.2 GM	100 ML					EPA-LCSS M1-30-16
29054.01	MFHE85 (CASE#25		0.2 GM	100 ML					
29054.02	MFHE86 (CASE#25		0.2 GM	100 ML					
29054.03	MFHE87 (CASE#25		0.2 GM	100 ML					
29054.04	MFHE88 (CASE#25		0.2 GM	100 ML					
29054.05	MFHE89 (CASE#25		0.2 GM	100 ML					
29054.06	MFHE90 (CASE#25		0.2 GM	100 ML					
29054.07	MFHE91 (CASE#25		0.2 GM	100 ML					
29054.08	MFHE92 (CASE#25		0.2 GM	100 ML					
29054.09	MFHE93 (CASE#25		0.2 GM	100 ML					
29054.10	MFHE94 (CASE#25		0.2 GM	100 ML					
29054.11	MFHE95 #QA/QC		0.2 GM	100 ML					
29054.11D	MFHE95D QA/QC		0.2 GM	100 ML					
29054.11S	MFHE95S QA/QC		0.2 GM	100 ML					1.0 ML HG1-1-91-4
29054.12	MFHE96 (CASE#25		0.2 GM	100 ML					
29054.13	MFHE97 (CASE#25		0.2 GM	100 ML					
29054.14	MFHE98 (CASE#25		0.2 GM	100 ML					
29054.15	MFHE99 (CASE#25		0.2 GM	100 ML					

134
4-14-97
DSF

SWLO / AATS Sample Distillation Record

Date : 04/14/1997 Batch: 9704141203 Analyst: DSF
Type : IM120 Distillation Client: EPAMT136 EPA-CLP Matrix: S

LAB ID	Client ID	TYP	Initial Wt/Vol	Final Wt/Vol	Color Before	Color After	Texture	pH	Comments
ICV970414B	ICV	LB1	50.0 ML	50.0 ML					0.5ML M1-14-14
PBS970414B	PBS PBS	LB1	50.0 ML	50.0 ML					
LCS970414B	LCS091 LCSS	BS1	1.00 G	50.0 ML					1.00G M1-30-13
29054.01	MFHE85 (CASE#25		1.00 G	50.0 ML					
29054.02	MFHE86 (CASE#25		1.00 G	50.0 ML					
29054.03	MFHE87 (CASE#25		1.00 G	50.0 ML					
29054.04	MFHE88 (CASE#25		1.00 G	50.0 ML					
29054.05	MFHE89 (CASE#25		1.00 G	50.0 ML					
29054.06	MFHE90 (CASE#25		1.00 G	50.0 ML					
29054.07	MFHE91 (CASE#25		1.00 G	50.0 ML					
29054.08	MFHE92 (CASE#25		1.00 G	50.0 ML					
29054.09	MFHE93 (CASE#25		1.00 G	50.0 ML					
29054.10	MFHE94 (CASE#25		1.00 G	50.0 ML					
29054.11	MFHE95 #QA/QC		1.00 G	50.0 ML					
29054.11D	MFHE95D #QA/QC		1.00 G	50.0 ML					
29054.11S	MFHE95S #QA/QC		1.00 G	50.0 ML					0.5ML WD2-111-2
29054.12	MFHE96 (CASE#25		1.00 G	50.0 ML					
29054.13	MFHE97 (CASE#25		1.00 G	50.0 ML					
29054.14	MFHE98 (CASE#25		1.00 G	50.0 ML					
29054.15	MFHE99 (CASE#25		1.00 G	50.0 ML					

SWOK / AATS

TRACE 2 Current Standard List

Standards Batch ID# _T2970406STD_

ANALYST EV DATE 4/6/97

STANDARD NAME	SWLO ID#	DATE PREPPED	EXP. DATE
S,STD-1, STDHI	T2-2-25	04/06/97	06/06/97
STD-2(CCV)	T2-2-26	04/06/97	06/06/97
STD-3	T2-2-27	04/06/97	06/06/97
ICV (SWLO)	T2-2-21	03/20/97	05/20/97
ICSA (SWLO)	T2-2-22	03/21/97	05/21/97
ICSAB (SWLO)	T2-2-23	03/21/97	05/21/97
ICV (EPA only)	T2-2-30	04/06/97	06/06/97
ICSA (EPA only)	T2-2-28	04/06/97	06/06/97
ICSAB (EPA only)	T2-2-29	04/06/97	06/06/97
CRI (ILM0 protocol only)	T2-2-24	03/21/97	05/21/97
CRI (SWLO protocol only)	T2-2-32	04/06/97	06/06/97

4-11-97
SR

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SWLO / AATS Sample Digestion Record

: 04/11/1997 Batch: 970411HG0 Analyst: SR
Type : MT620 ACID DIGESTION - COLD VAPOR Client: STANDARD Matrix: ST

LAB ID	Client ID	TYP	Initial Wt/Vol	Final Wt/Vol	Color Before	Color After	Texture	pH	Comments
STD-0	S 0.0	LB	100 ML	100 ML					
STD-1	S 0.2	BS	100 ML	100 ML					0.2 ML HG1-1-91-5
STD-2	S 0.5	BS	100 ML	100 ML					0.5 ML HG1-1-91-5
STD-3	S 1.0	BS	100 ML	100 ML					1.0 ML HG1-1-91-5
STD-4	S 5.0	BS	100 ML	100 ML					5.0 ML HG1-1-91-5
STD-5	S 10.0	BS	100 ML	100 ML					10.0 ML HG1-1-91-5
ICV	1.0	BS	100 ML	100 ML					1.0 ML M1-4-17
ICB	0.0	LB	100 ML	100 ML					
CRA	0.2	BS	100 ML	100 ML					0.2 ML HG1-1-91-5
CCV	5.0	BS	100 ML	100 ML					5.0 ML HG1-1-91-5
CCB	0.0	LB	100 ML	100 ML					
HG1-1-91	100	BS	100 ML	100 ML					1.0 ML HG1-1-91-5

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

SAMPLE DELIVERY GROUP (SDG)
TRAFFIC REPORT (TR) COVER SHEET

LAB NAME: *Southwest Laboratory of Oklahoma, Inc.*

LAB CODE: *SWOK* **CONTRACT No.:** *68-D3-0136*

SAMPLE ANALYSIS PRICE: *$78.90*

SDG 1 of 1 **RAS No.:** *25393*

SDG No./First Sample in SDG: *MFHE85*
(Lowest EPA Sample Number
in first shipment of samples) RECEIPT DATE: *04/09/97*

Last Sample in SDG: *MFHE99*
(Highest EPA Sample Number
in last shipment of samples) RECEIPT DATE: *04/09/97*

EPA Sample Numbers in the SDG (listed in alphanumeric order by Rec'd date)

1.	*MFHE85*	*29054.01*	11.	*MFHE95*	*29054.11*
2.	*MFHE86*	*29054.02*	12.	*MFHE96*	*29054.12*
3.	*MFHE87*	*29054.03*	13.	*MFHE97*	*29054.13*
4.	*MFHE88*	*29054.04*	14.	*MFHE98*	*29054.14*
5.	*MFHE89*	*29054.05*	15.	*MFHE99*	*29054.15*
6.	*MFHE90*	*29054.06*	16.		
7.	*MFHE91*	*29054.07*	17.		
8.	*MFHE92*	*29054.08*	18.		
9.	*MFHE93*	*29054.09*	19.		
10.	*MFHE94*	*29054.10*	20.		

NOTE: There are a maximum of 20 field samples in SDG. Attach Traffic Reports to this form in alphanumberic order (i.e., the order listed on this form)

Deborah J. Beree
Inorganic Data Supervisor

April 10, 1997
Date

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EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analyis)

Case No. 25393

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not preserved

2. Region No.: 6
Sampling Co.: TNRCC
4. Date Shipped: 4/8/97
Carrier: Airborne Express
6. Date Received – Received by: [illegible] 4-9-97
Sampler (Name): J.D. Thompson
Airbill Number: 6063337033
Laboratory Contract Number: 68-D5-0136
Unit Price: $78.90
Sampler Signature: [illegible]
5. Ship To: SWOK, 1700 West Albany, Suite C, Broken Arrow, OK 74012
ATTN: Chuck Hoover
7. Transfer to:
Date Received
Received by
Contract Number
Price

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MFHE85	5	low	grab	6		X	X					6-161105 - 106	SE-1	4/8/97 0930	FFL28	JT			
MFHE86	5	low	grab	6		X	X					6-161111 - 112	SE-2	4/8/97 0936	FFL29	JT			
MFHE87	5	low	grab	6		X	X					6-161117 - 118	SE-3	4/8/97 0941	FFL30	JT			
MFHE88	5	low	grab	6		X	X					6-161123 - 124	SE-4	4/8/97 0952	FFL31	JT			
MFHE89	5	low	grab	6		X	X					6-161129 - 130	SE-5	4/8/97 1009	FFL32	JT			
MFHE90	5	low	grab	6		X	X					6-161135 - 136	SE-6	4/8/97 1018	FFL33	JT			
MFHE91	5	low	grab	6		X	X					6-161141 - 142	SE-7	4/8/97 1151	FFL34	JT			
MFHE92	5	low	grab	6		X	X					6-161147 - 148	SE-8	4/8/97 1215	FFL35	JT			
MFHE93	5	low	grab	6		X	X					6-161153 - 154	SE-9	4/8/97 1055	FFL36	JT			
MFHE94	5	low	grab	6		X	X					6-161159 - 160	SE-10	4/8/97 1158	FFL37	JT			

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible] Mattats	4/8/97 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		[illegible]	4/9/97 0900	intact	

MFHE85

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-14 REV.

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368987

EPA United States Environmental Protection Agency Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 25393

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not preserved

2. Region No.: 6
Sampling Co.: TNRCC
4. Date Shipped: 4/8/97
Carrier: Airborne Express
6. Date Received -- Received by: [illegible] 4-9-97
Sampler (Name): J. D. Thompson
Airbill Number: 6063336930
Laboratory Contract Number: 68-D5-0136
Unit Price: $78.90
Sampler Signature: [signature]
5. Ship To: SWOK, 1700 West Albany, Suite C, Broken Arrow, OK 74012
ATTN: Chuck Hoover
7. Transfer to:
Date Received
Received by
Contract Number
Price

3. Purpose*
Lead: [X] SF, [ ] PRP, [ ] ST, [ ] FED
Early Action: [ ] CLEM, [ ] PA, [ ] REM, [ ] RI, [X] SI, [ ] ESI
Long-Term Action: [ ] FS, [ ] RD, [ ] RA, [ ] O&M, [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MFHE95	5	low	grab	6		X	X					6-161165 - 166	SO-1	4/8/97 1338	FFL38	JT			
MFHE96	5	low	grab	6		X	X					6-161171 - 172	SO-2	4/8/97 1400	FFL39	JT			
MFHE97	5	low	grab	6		X	X					6-161177 - 178	SO-3	4/8/97 1416	FFL40	JT			
MFHE98	5	low	grab	6		X	X					6-161183 - 184	SO-4	4/8/97 1408	FFL41	JT			
MFHE99	5	low	grab	6		X	X					6-161189 - 190	SO-5	4/8/97 1041	FFL42	JT			

*last sample rec'd in SDG [illegible] 4-10-97

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MFHE95
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Judith Mattocks	4/8/97 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		[signature]	4/9/97 0900	intact	

MFHEB5

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-14 REV. 1

368128

SAMPLE LOG-IN SHEET

Name: SOUTHWEST LABORATORY OF OKLAHOMA

Page 1 of 1

Received by (Print Name): KIM WILLISON/MATT MCCOMBER

Log-in Date: 4-9-97

Received by (Signature): K Willison

Case Number: 25393

Sample Delivery Group No.: MFHE85

SAS Number:

Remarks:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos. — NA
3. Chain-of Custody Records — Present/Absent*
4. Traffic Reports or Packing Lists — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
   Airbill No. — 606 333 7033; 606 333 6930
7. Sample Tags — Present/Absent
   Sample Tag Numbers — Listed/Not Listed on Chain-of-Custody
8. Sample Condition 3°C-4°C — Intact/Broken*/Leaking
9. Does information on custody records, traffic reports, and sample tags agree? — Yes/No*
10. Date Received at Lab — 4-9-97
11. Time Received — 0900

EPA Sample #	Corresponding Sample Tag # (6-)	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
MFHE85	161105-106	29054.01	Intact 3°
MFHE86	161111-12	29054.02	4°
MFHE87	161117-18	29054.03	
MFHE88	16123-124	29054.04	
MFHE89	16129-130	29054.05	
MFHE90	161135-34	29054.06	
MFHE91	161141-42	29054.07	
MFHE92	161147-48	29054.08	
MFHE93	161153-54	29054.09	
MFHE94	161159-60	29054.10	
MFHE95	161165-66	29054.11	
MFHE96	161171-72	29054.12	
MFHE97	161177-78	29054.13	
MFHE98	161183-84	29054.14	
MFHE99	161189-90	29054.15	

Sample Transfer

Fraction*	Fraction
Area #	Area #
By: KW	By: KW
On	On

* Contact SMO and attach record of resolution.

Reviewed by: Logbook No.

Date: Logbook Page No.

FROM
TNRCC-POLLUTION CLEAN
UP DIVISION BLDG D
12100 PARK 35 CIR 2ND FLR
AUSTIN TX 78753
JUDIE HATTOCKS 512-239-5674

TO
SWOK
1700 West Albany, Suite C
Broken Arrow, OK 74012
Attn: Chuck Hoover
(918) 251-2858

Hullinson 4-9-97 0900

6063337033

Preprint Format No. 005992625 | Origin GTN | Airbill Number 6063337033

Method of Payment (Assumed sender unless otherwise noted)
[X] Bill Sender
[ ] Bill Receiver
[ ] Bill 3rd Party
[ ] Paid in Advance

AIRBORNE EXPRESS.

EXP [X]
NAS Letter - 5 lbs
SDS

Billing Reference will appear on invoice: LINE 3 PCA 76160

No. of Pkgs: 1 | Weight LBS (Subject to correction) | Check if: [ ] Letter Express [ ] Exp. Pack

Special Instructions
[ ] SAT [ ] HAA
[ ] LAB [ ]

PEEL BACK FROM OTHER SIDE

TUL 8L

FROM
TNRCC-POLLUTION CLEAN
UP DIVISION BLDG D
12100 PARK 35 CIR 2ND FLR
AUSTIN TX 78753
JUDIE HATTOCKS 512-239-5674

TO
SWOK
1700 West Albany, Suite C
Broken Arrow, OK 74012
Attn: Chuck Hoover
(918) 251-2858

Hullinson 4-9-97 0900

6063336930

Preprint Format No. 005992625 | Origin GTN | Airbill Number 6063336930

Method of Payment (Assumed sender unless otherwise noted)
[X] Bill Sender
[ ] Bill Receiver
[ ] Bill 3rd Party
[ ] Paid in Advance

AIRBORNE EXPRESS.

EXP [X]
NAS Letter - 5 lbs
SDS

Billing Reference will appear on invoice: LINE 3 PCA 76160

No. of Pkgs: 1 | Weight LBS (Subject to correction) | Check if: [ ] Letter Express [ ] Exp. Pack

Special Instructions
[ ] SAT [ ] HAA
[ ] LAB [ ]

PEEL BACK FROM OTHER SIDE

TUL 8L

PLEASE PRINT OR TYPE
FOR SHIPMENTS WITHIN U.S. ONLY

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

SDG NARRATIVE

CONTRACT: 68-D5-0136 **DATE: 05/08/97**
CASE: 25393 **SOW NO.: ILM04.0**
SDG: MFHE85 **EPISODE NO.: 29054**

INORGANIC METAL FRACTION:

Fifteen water samples plus one MS/DUP were submitted for ICP, CN and Hg analysis. The samples' analyses were completed according to SOW ILM04.0.

No major problems occurred during the digestion or analyses of these samples.

Initial and Continuing Calibration Checks: No problems.

Initial and Continuing Calibration Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Calibration Blanks: Sb, Ca, Tl, K. No action required.

Linearity near the CRDL (CRA & CRI): The CRI standard was outside of our in-house warning limits of 70 - 130%R for the following element: Hg. No action required.

Preparation Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Preparation Blank: As, Ca, Fe, Pb, Zn. No action required.

Lab Control Spikes: No problems.

Matrix Spike: The following elements were outside the control limits of 75-125% recovery: MFHE95S/Cr, Cu, Mn, Hg. All associated samples were flagged with a "N" on Form I's. No action required.

Duplicate: The following elements were outside the control limits of 0-20% RPD: MFHE95D/As, Cr, Cu, Fe, Mn, Ni, Tl. All associated samples were flagged with a "*" on Form I's. No action required.

Serial Dilution (ICP): MFHE95L/no problems.

Sincerely,

Deborah J. Beree for...
Jason D. Ruckman
Inorganic Program Manager

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

SAMPLE DELIVERY GROUP (SDG)
SAMPLE TAG SUMMARY

LAB CODE: *SWOK* CONTRACT No.: *68-D5-0136*

SDG 1 of 1 *MFHE85* RAS No.: *25393*

1.	*MFHE85*	144	21.		
2.	*MFHE86*	145	22.		
3.	*MFHE87*	146	23.		
4.	*MFHE88*	147	24.		
5.	*MFHE89*	148	25.		
6.	*MFHE90*	149	26.		
7.	*MFHE91*	150	27.		
8.	*MFHE92*	151	28.		
9.	*MFHE93*	152	29.		
10.	*MFHE94*	153	30.		
11.	*MFHE95*	154	31.		
12.	*MFHE96*	155	32.		
13.	*MFHE97*	156	33.		
14.	*MFHE98*	157	34.		
15.	*MFHE99*	158	35.		
16.			36.		
17.			37.		
18.			38.		
19.			39.		
20.			40.		

May 28, 1996

INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET PART A (0194) WITH PART B (0596)

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma spectrometers. This reference material consists of two concentrated solutions. The Part A (0194) solution contains the four interferent elements: Al, Ca, Fe and Mg. The Part B (0596) solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn.

The "True Value" concentrations of the elements are listed in Table 1. These are the concentrations that result when the solutions are prepared and analyzed according to the following instructions:

Part A (0194), Interferents: Pipet 10 mL of the Part A solution into a 100-mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. A, by ICP-OES.

Part B (0596), Analytes, mixed with Part A (0194), Interferents: Pipet 10 mL of the Part A solution and 10 mL of the Part B solution into a 100-mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. AB, by ICP-OES.

The ICS Part A and B solutions were prepared from nitrate salts. The solutions are stable at room temperature and should not be frozen. To insure the stability of silver, which is contained in the Part B solution, the solution-set should be stored in the dark.

The ICS Part A and B solutions were prepared under contract to the EPA. If there are any questions regarding this reference material, please call the MDCO (702) 895-8714.

Table 1. "TRUE VALUE" CONCENTRATIONS FOR THE ELEMENTS IN INTERFERENCE CHECK SAMPLE PART A (0194) MIXED WITH PART B (0596)

Element	Concentration (µg/L)	
Al	495800	505595
Sb	–	541
As	–	97
Ba	–	467
Be	–	444
Cd	–	871
Ca	457200	467921
Cr	38	456
Co	–	427
Cu	–	507
Fe	186000	177250
Pb	–	47
Mg	490700	532422
Mn	45	484
Ni	–	857
Se	–	42
Ag	–	207
Tl	–	91
V	–	460
Zn	–	1008

Designate: Grab / Comp.

Time: 9:30

Month/Day/Year: 4/8/97

Station No.: SE-1

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE-1

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TDT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE85

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161105

Lab Sample No.

☆ U.S.GPO:1996 761 527

Designate: Grab / Comp.

Time: 9:30

Month/Day/Year: 4/8/97

Station No.: SE-1

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE-1

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE85

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161106

Lab Sample No.

☆ U.S.GPO:1996 - 761 527

Designate: Grab / Comp.

Time: 9:30

Month/Day/Year: 4/8/97

Station No.: SE-2

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE-2

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TDT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE86

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161111

Lab Sample No.

☆ U.S.GPO:1996 - 761 527

Designate: Grab (circled) / Comp.

Time: 9:36

Month/Day/Year: 4/8/97

Station No.: SE.2

Project Code / CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.2

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE86

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161112

Lab Sample No.:

☆ U.S.GPO:1996 - 761-527

Designate: Grab (circled) / Comp.

Time: 9:11

Month/Day/Year: 4/8/97

Station No.: SE.3

Project Code / CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.3

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE87

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161117

Lab Sample No.:

☆ U.S.GPO:1996 – 761 527

Designate: Grab (circled) / Comp.

Time: 9:11

Month/Day/Year: 4/8/97

Station No.: SE.3

Project Code / CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.3

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE87

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161118

Lab Sample No.:

☆ U.S.GPO:1996 – 761-527

Designate: Grab (O) Comp.

Time: 9:52

Month/Day/Year: 4/8/97

Station No.: SE.4

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.4

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE88

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161123

Lab Sample No.

☆U.S.GPO:1996 761-527

Designate: Grab (O) Comp.

Time: 9:52

Month/Day/Year: 4/8/97

Station No.: SE.4

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.4

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE88

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161124

Lab Sample No.

☆U.S.GPO:1996 761 527

Designate: Grab (O) Comp.

Time: 10:09

Month/Day/Year: 4/8/97

Station No.: SE.5

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.5

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE89

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161129

Lab Sample No.

☆U.S.GPO:1996 · 761-527

Designate: Grab (●) Comp.

Time: 10:09

Month/Day/Year: 4/8/97

Station No.: SE.5

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.5

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE89

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161130

Lab Sample No.

☆U.S.GPO:1996 – 761-527

Designate: Grab (●) Comp.

Time: 10:18

Month/Day/Year: 4/8/97

Station No.: SE.6

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.6

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE90

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161135

Lab Sample No.

☆U.S.GPO:1996 – 761-527

Designate: Grab (●) Comp.

Time: 10:18

Month/Day/Year: 4/8/97

Station No.: SE.6

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.6

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE90

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161136

Lab Sample No.

☆U.S.GPO:1996 – 761 527

Designate: Grab (O) Comp.

Time: 11:51

Month/Day/Year: 4/8/97

Station No.: SE.7

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.7

Preservative: ice

Yes [X] No [ ]

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
[ ] VOA	
[ ] ABN	
[ ] METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE91

Concentration: [X] L [ ] M [ ] H

Tag Number: 6-161141

Lab Sample No.

☆U.S.GPO:1996 - 761-527

Designate: Grab (O) Comp.

Time: 11:51

Month/Day/Year: 4/8/97

Station No.: SE.7

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.7

Preservative: ice

Yes [X] No [ ]

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
[ ] VOA	
[ ] ABN	
[ ] METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE91

Concentration: [X] L [ ] M [ ] H

Tag Number: 6-161142

Lab Sample No.

☆U.S.GPO:1996 761-527

Designate: Grab (O) Comp.

Time: 12:15

Month/Day/Year: 4/8/97

Station No.: SE.8

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SE.8

Preservative: ice

Yes [X] No [ ]

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
[ ] VOA	
[ ] ABN	
[ ] METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE92

Concentration: [X] L [ ] M [ ] H

Tag Number: 6-161147

Lab Sample No.

☆U.S.GPO:1996 761-527

Designate: Grab ● Comp.

Time 12:15

Month/Day/Year 4/8/97

Station No. SE.8

CLP Case No. 25393

Samplers (Signatures)

Station Location SE.8

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE92

Concentration: ☒ L ☐ M ☐ H

Tag Number 6-161148

Lab Sample No.

☆ U.S.GPO:1996 – 761 527

Designate: Grab ● Comp.

Time 10:55

Month/Day/Year 4/8/97

Station No. SE.9

Project Code CLP Case No. 25393

Samplers (Signatures)

Station Location SE.9

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE93

Concentration: ☒ L ☐ M ☐ H

Tag Number 6-161153

Lab Sample No.

☆ U.S.GPO:1996 – 761-527

Designate: Grab ● Comp.

Time 10:55

Month/Day/Year 4/8/97

Station No. SE.9

Project Code CLP Case No. 25393

Samplers (Signatures)

Station Location SE.9

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE93

Concentration: ☒ L ☐ M ☐ H

Tag Number 6-161154

Lab Sample No.

☆ U.S.GPO:1996 – 761-527

Designate: Grab (O) Comp.

Time 11:58

Month/Day/Year 4/8/97

Station No. SE.10

Project Code CLP Case No. 25393

Samplers (Signatures)

Station Location SE.10

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE94

Concentration: ☒ L ☐ M ☐ H

Tag Number 6-161159

Lab Sample No.

☆ U.S.GPO:1996 761-527

Designate: Grab (O) Comp.

Time 11:58

Month/Day/Year 4/8/97

Station No. SE.10

Project Code CLP Case No. 25393

Samplers (Signatures)

Station Location SE.10

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE94

Concentration: ☒ L ☐ M ☐ H

Tag Number 6-161160

Lab Sample No.

☆ U.S.GPO:1996 761-527

Designate: Grab (O) Comp.

Time 13:36

Month/Day/Year 4/8/97

Station No. SD-1

Project Code CLP Case No. 25393

Samplers (Signatures)

Station Location SD-1

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE95

Concentration: ☒ L ☐ M ☐ H

Tag Number 6-161165

Lab Sample No.

☆ U.S.GPO:1996 761 527

Designate: Grab (✓) Comp.

Time: 13:30

Month/Day/Year: 4/8/97

Station No.: SO-1

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SO-1

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE95

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161166

Lab Sample No.

U.S.GPO:1996 - 761-527

Designate: Grab (✓) Comp.

Time: 14:00

Month/Day/Year: 4/8/97

Station No.: SO-2

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SO-2

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE96

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161171

Lab Sample No.

U.S.GPO:1996 - 761-527

Designate: Grab (✓) Comp.

Time: 14:00

Month/Day/Year: 4/8/97

Station No.: SO-2

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: SO-2

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE96

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161172

Lab Sample No.

U.S.GPO:1996 - 761-527

Designate: Grab (circled) / Comp.

Time: 14:16

Month/Day/Year: 4/8/97

Station No.: 50.3

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: 50.3

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE97

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161177

Lab Sample No.

☆ U.S.GPO:1996 – 761 527

Designate: Grab (circled) / Comp.

Time: 14:16

Month/Day/Year: 4/8/97

Station No.: 50.3

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: 50.3

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE97

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161178

Lab Sample No.

☆ U.S.GPO:1996 – 761-527

Designate: Grab (circled) / Comp.

Time: 14:06

Month/Day/Year: 4/8/97

Station No.: 50.4

Project Code CLP Case No.: 25393

Samplers (Signatures): [signature]

Station Location: 50.4

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE98

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6-161183

Lab Sample No.

☆ U.S.GPO:1996 761-527

Designate: Grab / Comp.

Time: 14:08

Month/Day/Year: 4/8/97

Station No.: SO-4

Station Location: SO-4

Samplers (Signatures):

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE98

Concentration: ☒ L ☐ M ☐ H

Project Code CLP Case No.: 25393

Tag Number: 6-161184

Lab Sample No.:

☆ U.S.GPO:1996 – 761-527

Designate: Grab / Comp.

Time: 10:41

Month/Day/Year: 4/8/97

Station No.: SO-5

Station Location: SO-5

Samplers (Signatures):

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
TOT Metals	X
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE99

Concentration: ☒ L ☐ M ☐ H

Project Code CLP Case No.: 25393

Tag Number: 6-161189

Lab Sample No.:

☆ U.S.GPO:1996 – 761-527

Designate: Grab / Comp.

Time: 10:41

Month/Day/Year: 4/8/97

Station No.: SO-5

Station Location: SO-5

Samplers (Signatures):

Preservative: ice

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	
Pesticides/PCB	
Metals	
Cyanide	X
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: MFHE99

Concentration: ☒ L ☐ M ☐ H

Project Code CLP Case No.: 25393

Tag Number: 6-161190

Lab Sample No.:

☆ U.S.GPO:1996 – 761-527

BOOKMARK

TRINITY HALEY

25393

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Houston, TX 77099-4303

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CASE: 25393
SDG: MF-HE85

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