U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

Please contact the Superfund Records Manager for further information.

I. Unscannable item due to format

___ Graph

_X_ Mail receipts

___ Sample tags

II. Image Quality (Pages follow / No. of pages ____)

___ Resolution / Contrast

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

Cooler # 134

PROJ. NO.	PROJECT NAME	Case #
FMN0187	Stern Rubber and Tool	14042

SAMPLERS: (Signature) [signature]

Superfund 7171

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Metals/CN (802)						REMARKS Tag Numbers	Low Conc. Matrix
S15S20	5.9.90	10:15		✓	S1	1	1						188029	Soil
S15S21	5.9.90	10:20	✓		S2	1	1						188033	Soil
S15S22	5.9.90	10:40		✓	S3	1	1						188037	Soil
S15S23	5.9.90	1040		✓	S4	1	1						188041	Soil
S15S24	5.9.90	11:00		✓	S5	1	1						188045	Soil
S15S25	5.9.90	11:50		✓	S6	1	1						188049	Soil
S15S26	5.9.90	12:10	✓		S7	1	1						188053	Soil
S15S27	5.9.90	12:40		✓	S8	1	1						188057	Soil
													802 Lot #'s F9250223	
													(CRL tracking form in cooler 134)	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5.9.90 1530	[signature]			
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) [signature]	Date / Time 5/10/90 3:39pm	Remarks Shipped FedEx to CRL Airbill: 7375438162 Custody Seals: 128915, 128916	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5- 08497

ENVIRONMENTAL PROTECTION AGENCY
FOR THE HEAVY METALS

TFA302

DIVISION/BRANCH FIT SUPERFUND SAMPLING DATE 5.9.90 LAB ARRIVAL DATE 5.10.90 DUE DATE 5.31.90

DO NUMBER TFA [redacted] DATASET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLIDS AS MG/KG (DRY WT.) MET403	SEDIMENTS SOLIDS SB MG/KG (DRY WT.) MET8203	SEDIMENTS SOLIDS BE MG/KG (DRY WT.) MET8213	SEDIMENTS SOLIDS TL MG/KG (DRY WT.) MET4223	
90F515520	S1	X	X	X	X	X	5-188029
21	S2	X	X	X	X	X	5-188033
22	S3	X	X	X	X	X	5-188037
23	S4	X	X	X	X	X	5-188041
24	S5	X	X	X	X	X	5-188045
25	S6	X	X	X	X	X	5-188049
26	S7	X	X	X	X	X	5-188053
27	S8	X	X	X	X	X	5-188057

Shipment is not Complete

CRL V.2; 3/85

JAN 25 '90 15:09 312 886 2591 PAGE.02

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

TFA 302

DIVISION/BRANCH FIT SUPERFUND SAMPLING DATE 5 9 90 LAB ARRIVAL DATE 5 10 90 DUE DATE 5 31 90

DU NUMBER TFA-[redacted] DATASET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S PB MG/KG (DRY WT.) MET4193	SEDIMENTS SOLID CD MG/KG (DRY WT.) MET	
90F515520	S1	X	X	5-188029
21	S2	X	X	5-188033
22	S3	X	X	5-188037
23	S4	X	X	5-188041
24	S5	X	X	5-188045
25	S6	X	X	5-188049
26	S7	X	X	5-188053
27	S8	X	X	5-188057

Shipment is Not Complete

(9)

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH: FIT SUPERFUND SAMPLING DATE: 5.9.90 LAB ARRIVAL DATE: 5.10.90 DUE DATE: 5.31.90

EU NUMBER: TFA[redacted] DATASET NUMBER: 7171 STUDY: Stern Rubber & Tool PRIORITY: N CONTRACTOR: N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS CHEMICAL OXYGEN DEMAND MG COD/KG (DRY) MIN43327	SEDIMENTS SOLIDS MERCURY UG HG/KG (DRY) MIN44728	SEDIMENTS SOLIDS PHENOLICS UG PHENOL/KG (DRY) MIN44829	SEDIMENTS SOLIDS CYANIDE MG CN/KG (DRY) MIN44930	
90FS15520	S1		X		X	5188029
21	S2		X		X	5188033
22	S3		X		X	5188037
23	S4		X		X	5188041
24	S5		X		X	5188045
25	S6		X		X	5188049
26	S7		X		X	5188053
27	S8		X		X	5188057

Shipment is NOT Complete

U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

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I. Unscannable item due to format

___ Graph

_X_ Mail receipts

___ Sample tags

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___ Resolution / Contrast

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

Cooler # ~~157~~ 313 RMS 5.10.90

PROJ. NO.	PROJECT NAME
FMN0187	Stern Rubber and Tool Case 14042

SAMPLERS: (Signature) [signature]

Supersed 7171 5/11/90

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Metals (1L plastic/HNO3)	Cyanide (1L plast/NaOH)	Mercury (1L Plast/K2Cr2O7/HNO3)				REMARKS Tag Numbers	Low Conc Matrix
S15S16	5.10.90	10:20		✓	RW1	3	1	1	1				188107-188109	Dnk ~~H2O~~ Water RMS 5.10.90
S15S17	5.10.90	0945		✓	RW2	3	1	1	1				188126-188128	Dnk Water
S15S18	5.10.90	0950		✓	RW3	3	1	1	1				188144-188146	Dnk Water
S15D17	5.10.90	0945		✓	DUP	3	1	1	1				188135-188137	Dnk Water
S02R55	5.10.90	1050		✓	Blank	3	1	1	1				188064-188066	Dnk Water

Lot #'s 1L Plastic
0005043

(CRL Tracking Form in cooler # ~~15~~ 313) RMS 5.10.90

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5.10.90 1400	William Sanzo Jr.			
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		
		William Sanzo Jr.	5/11/90 10:48 am		

Remarks Shipped Fed Ex to CRL
Airbill 7375438184
Custody Seals: 128921, 128922

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5- 08488

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS · NUTRIENTS

TFA302

DIVISION/BRANCH FIT SUPERFUND SAMPLE DATE 5.10.90 LAB ARRIVAL DATE 5.11.90 DUE DATE ~~5.31.90~~ 6-1-90 5/11/90

DU NUMBER TFA [redacted] DATA SET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER PHENOLICS UG PHENOL/L MIN 74818	WATER CYANIDE UG CN/L MIN 74919	WATER GROSS ALPHA P CI/L MIN 75020	WATER CR^{+6} UG CR^{+6}/L MIN 74616	WATER MERCURY UG HG/L MIN 74717
90FS15S16	RW1 5-188108		X			[redacted]
17	RW2 5-188127		X			[redacted]
18	RW3 5-188145		X			[redacted]
~~19~~	~~RW4~~		X			[redacted]
D17	DUP 5-188136		X			[redacted]
90FS02R55	BLANK 5-188065		X			[redacted]
			Shipment is Complete			
90FS15S16	RW1 5-188109					X
90FS15S17	RW2 5-188128					X
90FS15D17	DUPLICATE 5-188137					X
90FS15S18	RW3 5-188146					X
90FS02R55	BLANK 5-188066					X

RWS 5.3.90

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

TFA302

DIVISION/BRANCH FIT SUPERFUND SAMPLE DATE 5.10.90 LAB ARRIVAL DATE 5 11 90 DUE DATE ~~5-31-90~~ 6-1-90 5/11/90 WA

DU NUMBER TFA-[redacted] DATA SET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	TOTAL METALS WATER Cd UG/L	TOTAL METALS WATER TOTAL ICAP UG/L MET111	TOTAL METALS WATER AS UG/L MET161	TOTAL METALS WATER PB UG/L MET1191	TOTAL METALS WATER SB UG/L MET1201	TOTAL METALS WATER SE UG/L MET1211	TOTAL METALS WATER TL UG/L MET1721
90FS15S16	RW1 5-188-107	X	X	X	X	X	X	X
17	RW2 5-188-126	X	X	X	X	X	X	X
18	RW3 5-188-144	X	X	X	X	X	X	X
~~19~~	~~RWH~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~
↓ D17	DUP 5-188-135	X	X	X	X	X	X	X
90FS02R55	BLANK 5-188-064	X	X	X	X	X	X	X

Run 539

Shipment is Complete

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: MAY 23 1990

SUBJECT: **Review of Region 5 data for** Stern Rubber & Tool

FROM: **Curtis Ross, Director** Chi Yang for
Region 5 Central Regional Laboratory

To: **Data User:**

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15S16-S18, D17, 90FS02R55
Parameter(s): ICP
Laboratory: CRL

Results Status:

(✓) **DATA ACCEPTABLE FOR USE***
( ) **DATA QUALIFIED AS TO USE**
( ) **DATA UNACCEPTABLE FOR USE**

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, **the Quality Control Coordinator, at** 3-3805

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

TRANSMITTED BY
MAY 23 1990

U.S. EPA CENTRAL
REGIONAL LAB

RECEIVED BY/DATE:
Comments:

DATA SET	SITE	DU/ACT.
SF 71 71	Stern Rubber & Tool	TFA302

SAMPLES	PARAMETER(S)
90FS15S16-S18, D17, 90FS02R55	ICP

SAMPLED	RECEIVED	DUE	LAB
10 May 90	11 May 90	1 June 90	CRL

SHIPPED	DATA RECEIVED	CONTRACT
NA	18 May 90	ESAT

Comments By Reviewer:

(✓) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE John V. Moore 21 May 90

(✓) REVIEWED ( ) UNREVIEWED SECTION CHIEF/DATE Chi Yang 5/21/90

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED 5-23-90 TRANSMITTED 5-23-90 DATA MANAGEMENT COORDINATOR Griffin

CC: QUALITY CONTROL COORDINATOR

ESAT CONTRACT TID NO: 05-06
TASK NO: 2864

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on MAY 16, 1990 for:

DATASET NO: SF7171 SITE NAME: STERN RUBBER & TOOL

PARAMETER : ICAP

MATRIX : WATER SF DU/ACT NO: TFA 302 Y____ /C_____

SAMPLE NUMBERS: 90FS15S16-S18, D17, 90FS02R55

NUMBER OF SAMPLES: 5

ESAT APPROVALS:

R. Dilg	5-17-90	D. Kuse	5/18/90
(ANALYST	DATE)	(TEAM LEADER	DATE)
C. Sims Bender	5-17-90	[illegible]	5/18/90
(QC COORDINATOR	DATE)	(ESAT TEAM MANAGER	DATE)

COMMENTS: THIS FORM COVERS WATER SAMPLES ONLY. SOIL SAMPLE SAMPLES WILL BE COVERED SEPARATELY.

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

D. Kuse	5/18/90	[illegible]	18 May 90
(DELIVERED BY	DATE)	(RECEIVED BY	DATE)

EPA APPROVALS:

[illegible] V. Moore	21 May 90
(EPA TASK MONITOR	DATE)

[✓] Reviewed
[ ] Unreviewed
[✓] Accepted
[ ] Rejected
[ ] Returned/_____ (Date)

COMMENTS: _____

[illegible]	5/21/90	[✓] Reviewed	[ ] Unreviewed
(SECTION CHIEF	DATE)		
Jay Thielen	5-22-90	Sylvia Griffin 5-23-90	5-23-90
(ESAT DPO	DATE)	(DATA COORD'R REC'D	TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

R. Dilg
5-17-90

JM
21 May 90

SAMPLE REPORT

Sample SF7171 90FS15S16 Operator

Date analyzed 05/16/90 Correction 1.22000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	80.0 U	micrograms/liter
Barium	83.6	micrograms/liter
Beryllium	1.0 U	micrograms/liter
Calcium	77500.	micrograms/liter
Cobalt	6.0 U	micrograms/liter
Chromium	8.0 U	micrograms/liter
Copper	6.0 U	micrograms/liter
Magnesium	10300.	micrograms/liter
Iron	14200.	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	931.	micrograms/liter
Sodium	3590.	micrograms/liter
Nickel	15.0 U	micrograms/liter
Vanadium	6.7	micrograms/liter
Zinc	40.0 U	micrograms/liter

R. Dilg
5-17-90

JVM
21 May 90

SAMPLE REPORT

Sample SF7171 90FS15S17 Operator

Date analyzed 05/16/90 Correction 1.22000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	80.0 U	micrograms/liter
Barium	91.3	micrograms/liter
Beryllium	1.0 U	micrograms/liter
Calcium	44300.	micrograms/liter
Cobalt	6.0 U	micrograms/liter
Chromium	8.0 U	micrograms/liter
Copper	8.1	micrograms/liter
Magnesium	11300.	micrograms/liter
Iron	694.	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	2530.	micrograms/liter
Sodium	24500.	micrograms/liter
Nickel	15.0 U	micrograms/liter
Vanadium	5.0 U	micrograms/liter
Zinc	40.0 U	micrograms/liter

R. Dily
5-17-90

MM
21 May 90

SAMPLE REPORT

Sample SF7171 90F515D17 Operator

Date analyzed 05/16/90 Correction 1.22000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	80.0 U	micrograms/liter
Barium	90.9	micrograms/liter
Beryllium	1.0 U	micrograms/liter
Calcium	44300.	micrograms/liter
Cobalt	7.4	micrograms/liter
Chromium	8.1	micrograms/liter
Copper	6.8	micrograms/liter
Magnesium	11300.	micrograms/liter
Iron	664.	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	2550.	micrograms/liter
Sodium	24300.	micrograms/liter
Nickel	15.0 U	micrograms/liter
Vanadium	5.0 U	micrograms/liter
Zinc	40.0 U	micrograms/liter

L. Dilg
5-17-90

JVM
21 May 90

SAMPLE REPORT

Sample SF7171 90FS15S18 Operator

Date analyzed 05/16/90 Correction 1.22000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	80.0 U	micrograms/liter
Barium	194.	micrograms/liter
Beryllium	1.0 U	micrograms/liter
Calcium	42300.	micrograms/liter
Cobalt	6.0 U	micrograms/liter
Chromium	8.0 U	micrograms/liter
Copper	6.0 U	micrograms/liter
Magnesium	20300.	micrograms/liter
Iron	681.	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	8.0	micrograms/liter
Sodium	42600.	micrograms/liter
Nickel	15.0 U	micrograms/liter
Vanadium	5.0 U	micrograms/liter
Zinc	40.0 U	micrograms/liter

R. Dilg
5-21-90

JM
22 May 90

SAMPLE REPORT

Sample SF7171 90FS02R55 Operator

Date analyzed 05/16/90 Correction 1.22000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	80.0 U	micrograms/liter
Barium	6.0 U	micrograms/liter
Beryllium	3.0 U	micrograms/liter
Calcium	500. U	micrograms/liter
Cobalt	6.0 U	micrograms/liter
Chromium	8.0 U	micrograms/liter
Copper	6.0 U	micrograms/liter
Magnesium	100. U	micrograms/liter
Iron	80.0 U	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	5.0 U	micrograms/liter
Sodium	1000. U	micrograms/liter
Nickel	15.0 U	micrograms/liter
Vanadium	5.0 U	micrograms/liter
Zinc	40.0 U	micrograms/liter

R. Dilg
5-17-90

Samples analyzed by SED5 on 05/16/90 stored in file RUN784 .

Data set	Sample id	Correction Factor	Dig QC	Ins QC
	INSTR BLANK 1	1.00000		B
	AQC 1	1.00000		Q
	HIGH AQC 1	1.00000		Q
	AG AQC 1	1.00000		Q
INITIAL	ICSA - VENTURES	1.00000		S
SF7171	90FS15S16	1.22000		S
SF7171	90FS15S17	1.22000		S
SF7171	90FS15D17	1.22000		S
SF7171	90FS15S18	1.22000	SMP1	S
SF7171	90FS02R55	1.22000		S
SF7171	90FS15S18 DUP	1.22000	DUP1	S
SF7171	90FS15S18 SPIKE	1.52000	SPK1	S
	DIGESTION BLANK	1.22000		B
FINAL	ICSA - VENTURES	1.00000		S
	INSTR BLANK 2	1.00000		B
	AQC 2	1.00000		Q
	HIGH AQC 2	1.00000		Q
	AG AQC 2	1.00000		Q

R. Dilg
5-17-90

DIGESTION RECORD

Prepared by R. DILG Date 5-15-90 Run Number 784

Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
85	SF7171	90FS15S16					
40		S17					
84		D17					
53		S18					
68		90FS02R55					
83		90FS15S18	DUP				
65		S18	SPIKE 5ml A,B,C				
42		DIGEST BLANK					

COMMENTS:

D. Dirby
5-17-90

BLANK REPORT

Blank name INSTR BLANK 1

Date analyzed 05/16/90 File name RUN764

Element	Blank Value	Detection limit	Units
Ag	1.40	6.0	ug/L
Alhigh	-22.40	20000.0	ug/L
Allow	2.03	80.0	ug/L
Ba	0.08	6.0	ug/L
Be	0.25	1.0	ug/L
Cahigh	-7.40	20000.0	ug/L
Calow	-5.30	500.0	ug/L
Co	1.91	6.0	ug/L
Cr	-1.72	8.0	ug/L
Cu	-0.30	6.0	ug/L
Mghigh	26.20	20000.0	ug/L
Mglow	6.50	100.0	ug/L
Felow	2.27	80.0	ug/L
Fehigh	-38.50	20000.0	ug/L
K	823.70	5000.0	ug/L
Mn	-0.48	5.0	ug/L
Na	-18.10	1000.0	ug/L
Ni	2.96	15.0	ug/L
V	-0.01	5.0	ug/L
Znlow	0.51	40.0	ug/L
Znhigh	-37.00	20000.0	ug/L

All values for the blank are less than detection limit.

Q. Dilg
5-17-90

BLANK REPORT

Blank name INSTR BLANK 2

Date analyzed 05/16/90 File name RUN784

Element	Blank Value	Detection limit	Units
Ag	0.70	6.0	ug/L
Alhigh	-7.50	20000.0	ug/L
Allow	9.00	80.0	ug/L
Ba	-0.03	6.0	ug/L
Be	0.19	1.0	ug/L
Cahigh	3.20	20000.0	ug/L
Calow	3.60	500.0	ug/L
Co	1.27	6.0	ug/L
Cr	-0.52	8.0	ug/L
Cu	0.69	6.0	ug/L
Mghigh	-17.40	20000.0	ug/L
Mglow	15.30	100.0	ug/L
Felow	4.96	80.0	ug/L
Fehigh	-25.60	20000.0	ug/L
K	618.80	5000.0	ug/L
Mn	-0.29	5.0	ug/L
Na	-9.60	1000.0	ug/L
Ni	6.09	15.0	ug/L
V	-0.59	5.0	ug/L
Znlow	-1.66	40.0	ug/L
Znhigh	73.90	20000.0	ug/L

All values for the blank are less than detection limit.

Q. Dilg
5-17-90

BLANK REPORT

Blank name DIGESTION BLANK

Date analyzed 05/16/90 File name RUN784

Element	Blank Value	Detection limit	Units
Ag	-2.55	6.0	ug/L
Alhigh	-45.60	20000.0	ug/L
Allow	4.18	80.0	ug/L
Ba	0.16	6.0	ug/L
Be	-0.13	1.0	ug/L
Cahigh	55.70	20000.0	ug/L
Calow	64.50	500.0	ug/L
Co	0.61	6.0	ug/L
Cr	1.57	8.0	ug/L
Cu	0.46	6.0	ug/L
Mghigh	-19.00	20000.0	ug/L
Mglow	20.90	100.0	ug/L
Felow	10.80	60.0	ug/L
Fehigh	-84.50	20000.0	ug/L
K	-230.00	5000.0	ug/L
Mn	-0.52	5.0	ug/L
Na	27.50	1000.0	ug/L
Ni	8.71	15.0	ug/L
V	-0.81	5.0	ug/L
Znlow	2.10	40.0	ug/L
Znhigh	-100.60	20000.0	ug/L

All values for the blank are less than detection limit.

Q. Dil
5-17-90

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 1 Operator

Date analyzed 05/16/90 File name RUN784

Element	Found Value	True Value	Percent Deviation	Units
Allow	4920.9	5000.0	1.6%	ug/L
Ba	4953.1	5000.0	0.9%	ug/L
Be	5108.0	5000.0	2.2%	ug/L
Calow	5016.9	5000.0	0.3%	ug/L
Co	5086.4	5000.0	1.7%	ug/L
Cr	4994.7	5000.0	0.1%	ug/L
Cu	5031.8	5000.0	0.6%	ug/L
Mglow	5054.7	5000.0	1.1%	ug/L
Felow	5040.0	5000.0	0.8%	ug/L
Mn	5072.9	5000.0	1.5%	ug/L
Ni	5177.6	5000.0	3.6%	ug/L
V	4916.8	5000.0	1.7%	ug/L
Znlow	5007.9	5000.0	0.2%	ug/L

All elements within 5 % of the true value.

L. Bilg
5-17-90

QUALITY CONTROL SAMPLE REPORT

QC ID ADC 2 Operator

Date analyzed 05/16/90 File name RUN784

Element	Found Value	True Value	Percent Deviation	Units
Allow	4848.4	5000.0	3.0%	ug/L
Ba	4864.7	5000.0	2.7%	ug/L
Be	5060.1	5000.0	1.2%	ug/L
Calow	4931.1	5000.0	1.4%	ug/L
Co	5040.1	5000.0	0.8%	ug/L
Cr	4979.2	5000.0	0.4%	ug/L
Cu	4936.0	5000.0	1.3%	ug/L
Mglow	5000.0	5000.0	0.0%	ug/L
Felow	4984.0	5000.0	0.3%	ug/L
Mn	5027.8	5000.0	0.6%	ug/L
Ni	5140.3	5000.0	2.8%	ug/L
V	4834.3	5000.0	3.3%	ug/L
Znlow	4971.6	5000.0	0.6%	ug/L

All elements within 5 % of the true value.

Q. Daly
5-17-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 1 Operator

Date analyzed 05/16/90 File name RUN784

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	99876.0	100000.0	0.1%	ug/L
Cahigh	102592.6	100000.0	2.6%	ug/L
Mghigh	97635.0	100000.0	2.4%	ug/L
Fehigh	99583.2	100000.0	0.4%	ug/L
K	97688.8	100000.0	2.3%	ug/L
Na	104334.7	100000.0	4.3%	ug/L
Znhigh	100685.9	100000.0	0.7%	ug/L

All elements within 10 % of true value.

R. Dilly
5-17-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 2 Operator

Date analyzed 05/16/90 File name RUN784

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	97624.8	100000.0	2.4%	ug/L
Cahigh	101811.9	100000.0	1.8%	ug/L
Mghigh	96567.1	100000.0	3.4%	ug/L
Fehigh	98634.2	100000.0	1.4%	ug/L
K	95820.2	100000.0	4.2%	ug/L
Na	101433.9	100000.0	1.4%	ug/L
Znhigh	99449.1	100000.0	0.6%	ug/L

All elements within 10 % of true value.

5-17-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG ACC 1 Operator

Date analyzed 05/16/90 File name RUN784

Element	Found Value	True Value	Percent Deviation	Units
Ag	51.6	50.0	3.2%	ug/L

Silver audit within 10 % limit.

Q. Dilly
5-17-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 2 Operator

Date analyzed 05/16/90 File name RUN764

Element	Found Value	True Value	Percent Deviation	Units
Ag	50.3	50.0	0.6%	ug/L

Silver audit within 10 % limit.

Q. Dilg
5-17-90

DUPLICATE

Sample SF7171 90FS15518 Operator

Date Analyzed 05/16/90 Correction 1.22000 File RUN784

Element	Units	Sample	Duplicate	Difference	Detect Limit	RPD
Ag	ug/L	0	0	0	6	0%
Alhigh	ug/L	-26	-35	-9	20000	0%
Allow	ug/L	-11	-19	-8	80	55%
Ba	ug/L	194	196	2	6	1%
Be	ug/L	0	0	0	1	0%
Cahigh	ug/L	42301	42416	115	20000	0%
Calow	ug/L	42946	43133	187	500	0%
Co	ug/L	2	1	-1	6	-54%
Cr	ug/L	6	8	2	8	25%
Cu	ug/L	2	1	-1	6	-107%
Mghigh	ug/L	20332	20376	43	20000	0%
Mglow	ug/L	20287	20330	43	100	0%
Felow	ug/L	681	687	6	80	1%
Fehigh	ug/L	801	806	5	20000	0%
K	ug/L	2995	2160	-835	5000	-28%
Mn	ug/L	8	7	0	5	-6%
Na	ug/L	42575	42945	370	1000	1%
Ni	ug/L	0	7	7	15	234%
V	ug/L	0	-1	0	5	0%
Znlow	ug/L	24	19	-5	40	-22%
Znhigh	ug/L	0	-66	-66	20000	0%

All duplicates values are within either 10% relative percent difference or the detection limit of each other.

Q. Dilly
5-17-90

SPIKE COMPARISON

Sample SF7174 90FS15S18 Analyzed by

Date Analyzed 05/16/90 Spike Correction 1.5200 File RUN784

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	ug/L	0	46	50	91%
Allow	ug/L	-11	720	800	91%
Ba	ug/L	194	384	200	95%
Be	ug/L	0	9	10	90%
Cahigh	ug/L	42301	92000	50000	99%
Co	ug/L	2	94	100	92%
Cr	ug/L	6	105	100	99%
Cu	ug/L	2	47	50	90%
Malow	ug/L	20287	44000	25000	95%
Felow	ug/L	681	1461	800	98%
K	ug/L	2995	26000	25000	92%
Mn	ug/L	8	103	100	95%
Na	ug/L	42575	92000	50000	99%
Ni	ug/L	0	156	150	104%
V	ug/L	0	45	50	91%
Znlow	ug/L	24	402	400	94%

All spike recoveries are within 15% of the expected value.

L. Dilly
5-17-90

SAMPLE REPORT

Sample INITIAL ICSA - VENTURES Operator

Date analyzed 05/16/90 Correction 1.00000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	483000.	micrograms/liter
Barium	13.9	micrograms/liter
Beryllium	1.0 U	micrograms/liter
Calcium	483000.	micrograms/liter
Cobalt	6.0 U	micrograms/liter
Chromium	81.9	micrograms/liter
Copper	8.4	micrograms/liter
Iron	186000.	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	56.3	micrograms/liter
Sodium	1000. U	micrograms/liter
Nickel	15.1	micrograms/liter
Vanadium	17.6	micrograms/liter
Zinc	46.1	micrograms/liter

CURRENTLY, LIMITS NOT ESTABLISHED

P. Dilg
5-17-90

SAMPLE REPORT

Sample FINAL ICSA - VENTURES Operator

Date analyzed 05/16/90 Correction 1.00000 File name RUN784

Element	Concentration	Units
Silver	6.0 U	micrograms/liter
Aluminum	491000.	micrograms/liter
Barium	13.9	micrograms/liter
Beryllium	1.0 U	micrograms/liter
Calcium	498000.	micrograms/liter
Cobalt	6.0 U	micrograms/liter
Chromium	82.6	micrograms/liter
Copper	8.3	micrograms/liter
Iron	191000.	micrograms/liter
Potassium	5000. U	micrograms/liter
Manganese	57.6	micrograms/liter
Sodium	1000. U	micrograms/liter
Nickel	15.0 U	micrograms/liter
Vanadium	16.1	micrograms/liter
Zinc	43.2	micrograms/liter

CURRENTLY, LIMITS NOT ESTABLISHED.

R. Dilly
5-17-90

DUPLICATE AND SPIKE IN LIMS FORMAT

Sample SF7171 90FS15S18 Analyzed by

Date Analyzed 05/16/90 Sample factor 1.22000 File RUN784

Duplicate factor 1.22000 Spike factor 1.5200

If the correction factor is zero and the values are unchanging, the audit is not to be used. Another sample was used for the audit.

Element	Duplicate			Spike	
Ag	0	/D0	/R-27	46	/S91
Alhigh	0	/D26	/R-200	1000	/S103
Allow	-19	/D-8	/R55	720	/S91
Ba	196	/D2	/R1	384	/S95
Be	0	/D0	/R-200	9	/S90
Cahigh	42400	/D95	/R0	92000	/S99
Calow	43100	/D154	/R0	92000	/S98
Co	1	/D-1	/R-65	94	/S92
Cr	8	/D2	/R25	105	/S99
Cu	1	/D-1	/R-88	47	/S90
Mghigh	20400	/D68	/R0	44000	/S95
Mglow	20300	/D13	/R0	44000	/S95
Felow	687	/D6	/R1	1461	/S98
Fehigh	800	/D-1	/R0	2000	/S67
K	2200	/D-795	/R-31	26000	/S92
Mn	8	/D0	/R-6	103	/S95
Na	42900	/D325	/R1	92000	/S99
Ni	7	/D7	/R213	156	/S104
V	-1	/D0	/R47	45	/S91
Znlow	19	/D-5	/R-23	402	/S94
Znhigh	-100	/D-100	/R200	0	/S0

Run 784
R. Dill
5-17-90

Method: SED5 Sample Name: INSTR BLANK 1 Operator:
Run Time: 05/16/90 12:18:44
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.4036	L-.02241	L2.0327	L31.225	L.84400	L.07877	L.24965

#1	L.16253	L-.01942	L-3.7380	L34.684	L.04108	L.18379	L.20178
#2	L1.4993	L-.01942	L2.3717	L28.887	L.61686	L.18379	L.34539
#3	L2.5490	L-.02838	L7.4644	L30.103	L1.8741	L-.13128	L.20178

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.00738	L-.00527	L-2.1547	L1.9125	L-1.7165	L-.29939	-.02624
#1	L-.00415	L-.00546	L-4.1164	L1.5306	L-2.6604	L-1.4736	-.02614
#2	L-.00831	L-.00489	L-1.1452	L1.6254	L-.60060	L.29160	-.02614
#3	L-.00969	L-.00546	L-1.2026	L2.5815	L-1.8885	L.28381	-.02642

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00650	L2.2661	L-.03847	L.82367	L2.6665	L-.47873	L4.8462
#1	.00659	L2.1582	L-.05386	L.49174	L.29629	L-.67023	L-.86133
#2	.00659	L1.8344	L-.00769	L.56550	L3.8516	L-.38512	L6.1331
#3	.00632	L2.8056	L-.05386	L1.4138	L3.8516	L-.38085	L9.2667

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.01808	L2.9592	L23.512	L-.00885	L.12452	L-.08733	L-.00844
#1	L-.01842	L5.9184	L-1.8833	L22.421	L.00000	L-.43667	L-.71315
#2	L-.02150	L-2.4370	L41.055	L-.00141	L.18678	L.08734	L.23086
#3	L-.01433	L5.3962	L31.363	L-22.446	L.18678	L.08734	L.45699

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.27329	L.50803	L-.03696
#1	L.15617	L.01495	L-.01990
#2	L.62467	L1.2520	L-.06255
#3	L.03904	L.25715	L-.02843

Method: SED5 Sample Name: AQC 1 Operator:
Run Time: 05/16/90 12:21:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-59.224	5.7809	Q4920.9	5057.0	4851.3	4953.1	5108.0
#1	Q-60.726	5.7764	Q4915.0	4979.6	4846.8	4960.5	5105.6
#2	Q-57.784	5.8032	Q4936.4	5075.1	4856.8	4955.8	5118.4
#3	Q-59.162	5.7629	Q4911.4	5116.2	4850.4	4943.0	5100.0

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	5.2545	5.0169	5057.3	5086.4	4994.7	5031.8	5.0474
#1	5.2393	5.0199	5043.7	5084.1	4982.7	5041.6	5.0436
#2	5.2739	5.0217	5064.8	5093.4	4997.4	5032.5	5.0577
#3	5.2504	5.0091	5063.4	5081.7	5003.8	5021.4	5.0410

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	5.0547	5040.0	6.7253	.34422	5123.5	5072.9	5042.6
#1	5.0509	5039.0	6.7330	-.45486	5144.9	5073.8	5048.9
#2	5.0649	5052.3	6.7253	.79908	5114.7	5083.0	5056.4
#3	5.0483	5028.6	6.7176	.68844	5111.1	5062.0	5022.4

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.00955	5177.6	4985.9	5153.0	5224.3	4923.0	4916.8
#1	-.00819	5178.9	4993.8	5136.0	5227.2	4925.7	4915.1
#2	-.01024	5170.6	4978.1	5199.2	5229.4	4927.0	4926.0
#3	-.01024	5183.1	4985.8	5123.7	5216.3	4916.3	4909.3

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	5231.8	5007.9	5.1918
#1	5232.2	5003.5	5.1406
#2	5237.8	5020.5	5.2942
#3	5225.5	4999.6	5.1406

Method: SED5 Sample Name: HIGH AQC 1 Operator:
Run Time: 05/16/90 12:23:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-.13463	99.876	Q96417.	Q-11.484	Q-7.9303	Q1.4440	Q-.37538
#1	Q.34216	99.726	Q96369.	Q-27.485	Q-5.2140	Q1.9166	Q-.00951
#2	Q1.4907	99.885	Q96369.	Q18.814	Q-10.543	Q1.6016	Q-.41347
#3	Q-2.2368	100.02	Q96514.	Q-25.781	Q-8.0342	Q.81391	Q-.70315

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	102.59	Q112.75	Q1.3707	Q1.3940	Q10.323	Q1.4674	97.635
#1	102.51	Q112.64	Q2.8165	Q.37349	Q12.386	Q1.8878	97.647
#2	102.74	Q110.65	Q1.7089	Q2.8602	Q7.4910	Q3.0217	97.695
#3	102.54	Q114.95	Q-.41327	Q.94822	Q11.091	Q-.50730	97.563

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	98.237	Q94209.	99.583	97.689	Q15.703	Q14.423	Q10.216
#1	98.249	Q94231.	99.760	97.808	Q18.073	Q14.551	Q8.2847
#2	98.298	Q94221.	99.537	98.103	Q14.518	Q14.282	Q14.039
#3	98.163	Q94174.	99.452	97.156	Q14.518	Q14.435	Q8.3249

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	104.33	Q-1.3926	Q-28.781	Q-20.266	Q4.1091	Q5.3710	Q1.2583
#1	104.18	Q-9.7479	Q-28.808	[illegible]	[illegible]	[illegible]	[illegible]

#2	104.36	Q3.8295	Q-12.348	Q-18.238	Q4.1091	Q5.3274	Q2.2182
#3	104.46	Q1.7407	Q-45.186	Q-7.3853	Q3.9223	Q5.0654	Q1.4091

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	Q1.6788	Q93476.	100.69
#1	Q2.1473	Q93456.	100.57
#2	Q1.6788	Q93559.	100.80
#3	Q1.2103	Q93414.	100.68

Method: SED5 Sample Name: AG AQC 1 Operator:
Run Time: 05/16/90 12:26:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	51.626	.30918	Q306.13	Q56.139	Q7.7539	Q.60387	Q.45458
#1	50.480	.32113	Q309.02	Q68.413	Q9.1737	Q.65638	Q.50490
#2	54.590	.31217	Q311.56	Q71.539	Q7.3319	Q.81391	Q.50123
#3	49.809	.29425	Q297.80	Q28.465	Q6.7561	Q.34132	Q.35762

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	.00185	Q.00393	Q-2.5928	Q.38213	Q1.2859	Q.19202	-.01317
#1	.00831	Q.00778	Q-4.5099	Q-1.3396	Q1.4577	Q.58385	-.00946
#2	.00554	Q.00313	Q-.80398	Q-.19178	Q4.0310	Q1.4645	-.01335
#3	-.00831	Q.00088	Q-2.4646	Q2.6778	Q-1.6309	Q-1.4723	-.01669

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01950	Q16.834	-.01924	-.16801	Q2.0740	Q-.04645	Q4.3251
#1	.02319	Q20.934	-.01154	.39339	Q3.8516	Q.04930	Q1.1400
#2	.01932	Q16.402	.00000	-.11064	Q2.0740	Q.04823	Q2.7103
#3	.01600	Q13.165	-.04617	-.78679	Q.29629	Q-.23687	Q9.1249

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	.00921	Q1.3926	Q7.1484	Q-31.056	Q.43581	Q.21834	Q.78175
#1	.01638	Q-3.4814	Q35.842	Q-15.646	Q.56033	Q.61134	Q.58826
#2	.00409	Q.69628	Q8.4251	Q-41.475	Q.37355	Q.34934	Q1.6488
#3	.00717	Q6.9628	Q-22.822	Q-36.048	Q.37355	Q-.30566	Q.10816

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	Q.27329	Q12.983	.01706
#1	Q.50755	Q17.405	.15922
#2	Q.50755	Q13.016	-.06255
#3	Q-.19521	Q8.5289	-.04549

Method: SED5 Sample Name: ICSA - VENTURES Operator:
Run Time: 05/16/90 12:28:48
Comment: INITIAL
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.5533	H483.01	H348350.	L-38.484	L-13.748	13.942	L-2.4557
#1	L1.6950	H483.14	H348040.	L-40.094	L-14.243	13.731	L-2.8077
#2	L1.2983	H483.37	H348980.	L-40.306	L-13.787	14.047	L-1.8916
#3	L1.6665	H482.54	H348020.	L-35.050	L-13.214	14.047	L-2.6677

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	H482.84	?.00000	L-.66068	L-1.8475	81.918	8.4017	?.00000
#1	H480.93	?.00000	L.31415	L-1.6561	66.120	7.5274	?.00000
#2	H482.63	?.00000	L-1.3224	L-3.8555	98.558	8.8009	?.00000
#3	H484.96	?.00000	L-.97377	L-.03099	81.075	8.8768	?.00000

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	?.00000	H173480.	185.85	L-.25817	34.665	56.314	L4.5623
#1	?.00000	H173160.	185.30	L-.87284	35.850	56.413	L-4.9083
#2	?.00000	H173310.	185.90	L-.34422	34.072	56.357	L2.8557
#3	?.00000	H173990.	186.35	L.44257	34.072	56.171	15.740

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.12420	15.144	L-76.524	L-16.467	11.269	L19.606	17.642
#1	L.12079	L12.707	L-111.56	L-18.871	11.207	L19.475	16.774
#2	L.13307	L11.141	L-42.063	L-20.089	11.207	L19.606	17.160
#3	L.11874	21.585	L-75.950	L-10.442	11.393	L19.737	18.991

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L1.6007	46.128	L.19334
#1	L1.2103	46.214	L.09099
#2	L1.6788	46.369	L.29570
#3	L1.9131	45.800	L.19334

Method: SED5 Sample Name: 90FS15S16 Operator:
Run Time: 05/16/90 12:35:41
Comment: SF7171
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.57402	L-.02733	L-.14712	L.95233	13.001	83.570	L-.15005
#1	L-1.7414	L-.03462	L4.8149	L-20.509	11.959	83.826	L-.16994
#2	L-.47922	L-.03462	L-9.6281	L-2.1308	[illegible]	[illegible]	[illegible]

#3	L.49852	L-.01276	L4.3718	L25.497	17.234	83.442	L-.14608

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	77.529	H75.888	L-2.9333	L-.86750	L6.4995	L.42980	10.307
#1	77.515	H75.906	L-2.3678	L-1.2954	10.059	L1.3933	10.324
#2	77.281	H75.881	L-3.3721	L.10545	L-.93109	L-.76976	10.283
#3	77.793	H75.878	L-3.0601	L-1.4125	10.371	L.66592	10.314

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	10.297	14238.	L14.554	L1.5348	L9.7594	931.00	L.39561
#1	10.315	14246.	L14.617	L2.3547	11.205	933.73	L-1.4834
#2	10.274	14221.	L14.504	L1.2298	L6.8678	928.71	L-2.8000
#3	10.304	14248.	L14.542	L1.0199	11.205	930.56	L5.4703

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	3.5913	L-7.2204	L-7.4263	L-8.3331	131.18	L7.6714	6.7121
#1	3.5646	L-2.9731	L12.311	L-37.068	131.48	L7.7779	7.8679
#2	3.6122	L-20.812	L-39.947	L9.3476	131.02	L7.1386	6.1127
#3	3.5972	L2.1237	L5.3571	L2.7214	131.02	L8.0976	6.1556

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.47631	L17.790	L-.20813
#1	L.47631	L18.896	L-.20119
#2	L.33342	L18.007	L-.28444
#3	L.61921	L16.467	L-.13875

Method: SED5 Sample Name: 90FS15S17 Operator:
Run Time: 05/16/90 12:38:23
Comment: SF7171
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.27331	L-.02551	L-6.5949	L-12.175	175.35	91.321	L.05157
#1	L-1.2355	L-.02369	L-11.067	L1.6175	176.10	91.129	L-.00734
#2	L1.3474	L-.03462	L-2.8881	L-26.557	176.08	91.129	L-.01628
#3	L.70800	L-.01822	L-5.8293	L-11.587	173.85	91.706	L.17831

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	44.255	H45.138	L-1.0047	L3.6459	L7.2420	8.1069	11.314
#1	44.064	H45.000	L-.83980	L1.6244	8.0786	9.0569	11.283
#2	44.222	H45.119	L-.45510	L2.7905	L1.1735	7.6323	11.306
#3	44.480	H45.296	L-1.7192	6.5229	12.474	7.6315	11.354

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L

Avge	11.301	694.05	L.74946	L1.3698	L8.6751	2532.7	L1.5259
#1	11.270	694.58	L.73224	L1.8748	10.121	2526.8	L1.6402
#2	11.292	694.58	L.76041	L.41995	L6.8678	2531.0	L-1.3155
#3	11.340	693.00	L.75571	L1.8148	L9.0365	2540.3	L4.2530

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	24.469	L5.5215	L-22.350	L-8.1099	151.61	L5.8601	L-.07255
#1	24.360	17.414	L-11.165	L-54.558	151.08	L5.5404	L.78397
#2	24.504	L4.6721	L-35.122	L-8.9363	151.76	L5.8601	L-1.8028
#3	24.543	L-5.5215	L-20.764	L39.164	151.99	L6.1797	L.80119

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.23816	L5.8592	L-.03469
#1	L.04763	L6.2647	L-.07631
#2	L.61921	L6.5727	L.00694
#3	L.04763	L4.7402	L-.03469

Method: SED5 Sample Name: 90FS15D17 Operator:
Run Time: 05/16/90 12:41:30
Comment: SF7171
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.15585	L-.03098	L-7.7827	L-14.478	156.27	90.937	L.00956
#1	L-2.2177	L-.02369	L-15.328	L-24.704	162.73	90.553	L.01056
#2	L.69678	L-.02369	L-14.670	L-18.590	153.78	90.553	L.01056
#3	L1.9884	L-.04556	L6.6502	L-.13845	152.29	91.706	L.00758

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	44.341	H45.304	L-1.9681	7.3795	8.0770	6.7848	11.286
#1	44.204	H45.209	L.56566	7.2243	15.925	6.9034	11.267
#2	44.260	H45.263	L-2.2445	8.1570	L2.4266	7.2607	11.266
#3	44.559	H45.439	L-4.2255	6.7572	L5.8799	6.1903	11.326

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	11.273	664.04	L.67905	L2.2897	10.121	2554.0	L1.6348
#1	11.254	662.98	L.67592	L1.6198	11.205	2549.5	L.24225
#2	11.252	662.98	L.67592	L2.6397	10.121	2548.7	L1.6345
#3	11.312	666.14	L.68531	L2.6097	L9.0365	2563.8	L3.0277

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	24.286	L13.591	L-22.213	L11.225	151.00	L5.4339	L1.9202
#1	24.222	L-.42473	L-6.2840	L17.582	150.62	L5.2208	L.52415
#2	24.219	L5.9462	L-58.775	L-14.763	150.85	L5.5404	L3.0390
#3	24.417	35.253	L-1.5903	L30.854	151.53	L5.5404	L3.1875

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.04763	L16.264	L-.07631
#1	L-.09526	L17.741	L-.01387
#2	L.04763	L16.517	L-.03469
#3	L.19053	L14.535	L-.18038

5-16-90

Method: SED5 Sample Name: 90FS1518 Operator:
Run Time: 05/16/90 12:44:28
Comment: SF7171
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.39166	L-.02551	L-10.957	L-4.9795	294.82	194.40	L.03516
#1	L.40067	L-.03462	L-14.703	L22.339	298.28	194.33	L-.03716
#2	L.70890	L-.01822	L-10.905	L-36.999	293.08	194.53	L.16489
#3	L.06541	L-.02369	L-7.2624	L-.27847	293.10	194.33	L-.02225

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	42.301	H42.946	L-.80793	L2.1679	L6.4065	L1.8027	20.332
#1	42.273	H42.953	L-.93543	L2.3234	L3.6867	L.49667	20.320
#2	42.382	H42.987	L-.37592	L2.7902	8.0806	L1.9213	20.362
#3	42.248	H42.898	L-1.1124	L1.3901	L7.4522	L2.9901	20.315

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	20.287	680.75	L.80109	L2.9946	15.904	7.9575	L7.7382
#1	20.274	681.15	L.82612	L2.5497	15.543	7.9258	L7.6538
#2	20.316	677.59	L.79796	L2.8047	14.458	7.9284	L2.9521
#3	20.269	683.52	L.77918	L3.6296	17.712	8.0184	L12.609

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	42.575	L-.21237	L13.272	L11.807	312.56	L6.1265	L-.30991
#1	42.563	L-8.0699	L.46133	L24.254	312.64	L6.1797	L.91602
#2	42.643	L4.0350	L22.042	L15.124	312.64	L6.0199	L-2.0605
#3	42.520	L3.3979	L17.311	L-3.9559	312.41	L6.1797	L.21478

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.04763	L24.061	L.00000
#1	L.33342	L23.860	L-.05550
#2	L-.23816	L24.621	L.00694
#3	L.04763	L23.702	L.04856

Method: SED5 Sample Name: 90FS02R55 Operator:

Run Time: 05/16/90 12:51:38
Comment: SF7171
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-1.4779	L-.04556	L2.3098	65.641	L9.6449	L.35234	L.00062
#1	L.52631	L-.03462	L-.79386	76.232	L8.6152	L.41641	L-.04648
#2	L-1.6015	L-.03462	L14.112	56.510	L9.0666	L.41641	L-.01367
#3	L-3.3585	L-.06742	L-6.3883	64.181	11.253	L.22422	L.06201

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.04871	L.06380	L-2.7406	L.73069	L3.9731	L1.8884	-.02149
#1	L.05405	L.06397	L-1.7056	L.80837	L4.9162	L1.0625	-.02138
#2	L.04054	L.06380	L-.98417	L-.00845	L1.4602	L3.1891	-.02138
#3	L.05152	L.06363	L-5.5321	L1.3921	L5.5429	L1.4135	-.02172

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01839	L8.5572	L-.10326	L-.09499	L.72293	L-.40233	L.56968
#1	.01850	L9.7420	L-.05633	L-.38995	L2.5302	L-.46551	L-1.9200
#2	.01850	L6.9774	L-.15959	L.22497	L-.72291	L-.27944	L6.9452
#3	.01817	L8.9521	L-.09388	L-.11999	L.36147	L-.46203	L-3.3161

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.01998	L1.2742	L9.7069	L-35.686	L.15191	L5.1675	L-1.4159
#1	L.02248	L-2.9731	L19.159	L-30.699	L.22787	L5.2208	L-.69764
#2	L.01499	L3.3979	L28.954	L-29.065	L.00000	L5.3806	L-2.7100
#3	L.02248	L3.3979	L-18.992	L-47.294	L.22787	L4.9012	L-.83999

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L-.14289	L5.9137	L-.13181
#1	L-.23816	L5.5032	L-.13875
#2	L.04763	L6.7308	L-.15956
#3	L-.23816	L5.5071	L-.09713

Method: SED5 Sample Name: 90FS15S18 DUP Operator:
Run Time: 05/16/90 12:54:45
Comment: SF7171
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.33803	L-.03462	L-19.169	56.524	287.61	196.06	L-.03070
#1	L-.26513	L-.03462	L-24.548	82.092	284.91	196.06	L-.01777
#2	L1.0418	L-.02369	L-14.658	L18.994	288.60	196.45	L-.03418
#3	L.23744	L-.04556	L-18.299	68.486	289.33	195.68	L-.04014

Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	42.416	H43.133	L-1.5762	L1.0797	8.1854	L.73146	20.376
#1	42.425	H43.170	L1.1490	L2.3244	L-1.3376	L-.22829	20.390
#2	42.343	H43.190	L-1.4865	L.22411	17.498	L.49508	20.373
#3	42.479	H43.039	L-4.3911	L.69072	8.3956	L1.9276	20.364

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	20.330	686.94	L.80578	L2.1597	15.543	7.4864	L4.1421
#1	20.344	687.47	L.76510	L2.0248	15.543	7.7549	L4.2540
#2	20.327	689.05	L.81673	L2.3397	15.543	7.3088	L7.2177
#3	20.318	684.31	L.83551	L2.1147	15.543	7.3954	L.95448

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	42.945	L6.7957	L25.165	L31.436	314.61	L5.7535	L-.54058
#1	42.970	L7.2204	L-23.268	L39.167	315.14	L5.5404	L-1.2419
#2	42.990	L3.3979	L55.383	L-2.2881	314.91	L5.8601	L-.03163
#3	42.874	L9.7688	L43.381	57.430	313.77	L5.8601	L-.34820

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.14289	L19.126	L-.06591
#1	L.47631	L19.442	L.01734
#2	L.04763	L18.208	L-.13875
#3	L-.09526	L19.727	L-.07631

Method: SED5 Sample Name: 90FS15S18 SPIKE Operator:
Run Time: 05/16/90 12:59:24
Comment: SF7171
Mode: CONC Corr. Factor: 1.52

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	46.310	L.77871	720.48	L-8.0224	1049.0	383.67	9.4938
#1	47.114	L.78779	718.84	L-17.055	1062.0	386.15	9.3322
#2	45.504	L.78779	709.22	L-14.123	1050.9	381.48	9.5746
#3	46.312	L.76055	733.38	L7.1111	1034.1	383.40	9.5746

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	92.340	H92.062	19.570	94.163	104.61	46.753	44.042
#1	92.603	H92.181	18.131	94.308	101.22	46.160	44.111
#2	92.087	H91.944	23.060	92.129	110.99	43.488	43.928
#3	92.331	H92.062	17.519	96.052	101.61	50.611	44.088

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	43.949	1460.6	L1.7973	25.924	68.002	103.49	128.07
#1	44.018	1463.2	L1.8012	26.235	68.002	103.49	135.37
Units	ug/L	ug/L	Mg/L				

#2	43.835	1452.9	L1.7954	24.161	68.002	103.05	122.90
#3	43.994	1465.7	L1.7954	27.375	68.002	103.93	125.94

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	92.089	155.58	770.74	517.41	1302.4	102.95	45.374
#1	92.414	161.40	785.61	532.56	1306.5	103.28	44.830
#2	91.865	145.52	743.98	520.16	1298.8	102.28	45.220
#3	91.988	159.81	782.63	499.50	1302.0	103.28	46.073

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	49.790	401.57	L.35006
#1	49.196	403.60	L.24202
#2	49.552	400.76	L.34574
#3	50.620	400.35	L.46243

Method: SED5 Sample Name: DIGESTION BLANK Operator:
Run Time: 05/16/90 13:04:03
Comment:
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-2.5489	L-.04556	L4.1786	59.207	L5.0338	L.16016	L-.13408
#1	L-3.5185	L-.05649	L9.1500	L42.023	L3.8058	L.22422	L-.12812
#2	L-2.0692	L-.04556	L-.79712	L39.610	L5.2823	L.03203	L-.13408
#3	L-2.0589	L-.03462	L4.1830	95.990	L6.0134	L.22422	L-.14005

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.05574	L.06446	L-1.6553	L.61445	L1.5670	L.46220	-.01900
#1	L.05574	L.06569	L-1.1046	L.69272	8.0539	L.33992	-.01866
#2	L.04899	L.06415	L-2.5834	L.69272	L-3.2462	L-.37158	-.01900
#3	L.0625	L.06354	L-1.2781	L.45791	L-.10658	L1.4183	-.01934

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.02087	L10.795	L-.08449	L-.22997	L1.8073	L-.52174	L-2.3289
#1	.02120	L10.532	L-.10326	L-.98988	L2.5302	L-.46116	L-5.7535
#2	.02087	L10.532	L-.08449	L.62992	L2.5302	L-.81594	L-.00853
#3	.02053	L11.322	L-.06571	L-.32996	L.36147	L-.28812	L-1.2249

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.02747	L8.7070	L9.6527	L4.1272	L.07596	L4.9012	L-.80631
#1	L.01748	L10.406	L19.218	L-12.464	L.00000	L4.5815	L.45028
#2	L.02747	16.140	L2.4875	L9.1033	L.00000	L4.5815	L-2.4377
#3	L.03746	L-.42473	L7.2529	L15.742	L.22787	L5.5404	L-.43147

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L

Avge	L-.04763	L2.0983	L-.10059
#1	L-.23816	L2.3054	L-.08672
#2	L-.23816	L1.5421	L-.20119
#3	L.33342	L2.4475	L-.01387

Method: SED5 Sample Name: ICSA - VENTURES Operator:
Run Time: 05/16/90 13:06:34
Comment: FINAL
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.85775	H491.31	H374500.	L-9.3621	L-16.384	13.863	L-2.8067
#1	L.42525	H489.28	H363230.	L-18.864	L-15.693	13.810	L-3.0051
#2	L2.6037	H491.23	H370460.	L5.4980	L-16.524	13.889	L-2.6219
#3	L-.45570	H493.43	H389810.	L-14.720	L-16.935	13.889	L-2.7930

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	H498.29	?.00000	L-1.8349	L.09445	82.578	8.2560	?.00000
#1	H496.72	?.00000	L-1.5677	L1.4012	87.885	7.2169	?.00000
#2	H498.89	?.00000	L-3.7263	L.15737	79.145	9.0230	?.00000
#3	H499.26	?.00000	L-.21072	L-1.2752	80.705	8.5280	?.00000

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	?.00000	H177300.	190.77	L-.32373	35.850	57.595	L2.7294
#1	?.00000	H176780.	190.40	L-1.1187	35.850	57.243	L2.7394
#2	?.00000	H177160.	190.69	L.78679	35.850	57.795	L.91409
#3	?.00000	H177950.	191.23	L-.63927	35.850	57.746	L4.5347

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.14399	L8.5295	L-79.778	L-43.339	11.487	L21.047	16.142
#1	L.14740	L2.7851	L-78.222	L-73.518	11.393	L21.047	16.684
#2	L.14536	L9.5739	L-45.848	L-5.5152	11.580	L21.571	15.735
#3	L.13921	L13.229	L-115.27	L-50.984	11.487	L20.523	16.006

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L1.8740	43.224	L.39806
#1	L2.1473	42.449	L.50042
#2	L2.1473	42.899	L.36394
#3	L1.3274	44.323	L.32982

Method: SED5 Sample Name: INSTR BLANK 2 Operator:
Run Time: 05/16/90 13:11:53
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.69901	L-.00747	L9.0008	63.658	L.83422	L-.02626	L.19281
#1	L1.2368	L.00747	L10.023	90.048	L4.2769	L.18379	L.18466
#2	L-.22371	L-.01046	L12.058	50.817	L-.60512	L-.13128	L.18711
#3	L1.0839	L-.01942	L4.9221	50.110	L-1.1692	L-.13128	L.20667

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.00323	L.00356	L-.80841	L1.2739	L-.51536	L-.68775	-.01743
#1	L.00831	L.00567	L-.37632	L.76398	L-.08577	L-.87869	-.01544
#2	L.00415	L.00384	L.38974	L2.9632	L1.4578	L-.87999	-.01711
#3	L-.00277	L.00116	L-2.4386	L.09466	L-2.9181	L-.30458	-.01975

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01526	L4.9638	L-.02565	L.61878	L3.5554	L-.28700	L2.6364
#1	.01724	L7.9852	L.00000	L.36881	L5.6293	L-.09646	L2.3537
#2	.01558	L5.3954	L-.00769	L.57780	L2.9628	L-.38512	L3.3515
#3	.01295	L1.5107	L-.06925	L.90972	L2.0740	L-.37943	L2.2041

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00955	L6.0925	L-23.432	L1.1269	L.18678	L.61134	L-.58703
#1	L-.01433	L8.0072	L-23.463	L-12.916	L.18678	L.61134	L.34990
#2	L-.01433	L3.8295	L-23.479	L8.8357	L.18678	L.61134	L-.57887
#3	L.00000	L6.4406	L-23.353	L7.4613	L.18678	L.61134	L-1.5321

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	L.19521	L-1.6626	L.07393
#1	L.27329	L-1.7490	L.10805
#2	L.27329	L-.74605	L.05687
#3	L.03904	L-2.4927	L.05687

Method: SED5 Sample Name: AQC 2 Operator:
Run Time: 05/16/90 13:14:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-58.968	5.6525	Q4848.4	4933.5	4818.0	4864.7	5060.1
#1	Q-57.831	5.6197	Q4843.1	4945.3	4824.1	4855.9	5050.0
#2	Q-58.574	5.6868	Q4865.6	4902.2	4801.6	4876.9	5072.8
#3	Q-60.499	5.6510	Q4836.5	4952.9	4828.1	4861.3	5057.5

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	5.2308	4.9311	5049.0	5040.1	4979.2	4936.0	4.9925

#1	5.2088	4.9266	5032.2	5035.2	4946.7	4927.4	4.9848
#2	5.2531	4.9415	5055.1	5047.5	5008.0	4944.4	4.9996
#3	5.2303	4.9252	5059.9	5037.4	4983.0	4936.2	4.9929

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	5.0000	4984.0	6.7048	.36471	5027.3	5027.8	5010.4
#1	4.9924	4983.0	6.7407	1.2908	5024.0	5028.0	5009.7
#2	5.0071	4980.7	6.6868	.29505	5040.0	5034.5	5023.6
#3	5.0005	4988.2	6.6868	-.49174	5017.8	5021.0	4997.7

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.00273	5140.3	4997.9	Q5295.1	5136.7	4849.6	4834.3
#1	-.00205	5120.5	4992.5	Q5316.8	5127.8	4844.5	4828.7
#2	-.00819	5176.9	4969.4	5229.8	5148.4	4855.7	4849.1
#3	.00205	5123.6	5031.9	Q5338.6	5134.0	4848.5	4825.1

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	5153.7	4971.6	5.2373
#1	5143.1	4967.6	5.2601
#2	5165.9	4978.6	5.1748
#3	5152.3	4968.7	5.2771

Method: SED5 Sample Name: HIGH AQC 2 Operator:
Run Time: 05/16/90 13:17:28
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q.58792	97.625	Q94331.	Q26.442	Q-10.261	Q1.7591	Q-.23216
#1	Q-.76027	97.767	Q94322.	Q42.846	Q-13.137	Q1.7591	Q-.85471
#2	Q.13385	97.441	Q94220.	Q25.458	Q-8.2878	Q1.7591	Q.33335
#3	Q2.3902	97.666	Q94452.	Q11.021	Q-9.3596	Q1.7591	Q-.17512

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	101.81	Q92.545	Q-.69798	Q1.3924	Q8.5792	Q1.1121	96.567
#1	101.93	Q92.681	Q-1.8840	Q-.39248	Q12.104	Q.57669	96.560
#2	101.56	Q92.633	Q-.26049	Q3.6243	Q5.9071	Q.45015	96.304
#3	101.95	Q92.319	Q.05058	Q.94534	Q7.7261	Q2.3094	96.837

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	97.141	Q93035.	98.634	95.820	Q16.295	Q13.884	Q10.786
#1	97.134	Q93006.	98.933	95.669	Q18.073	Q13.615	Q16.190
#2	96.871	Q92886.	98.183	95.410	Q14.518	Q13.974	Q9.1954
#3	97.417	Q93214.	98.787	96.382	Q16.295	Q14.062	Q6.9739

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	101.43	Q6.6147	Q-16.553	Q-42.876	Q4.2336	Q6.3754	Q2.0527
#1	101.50	Q9.0517	Q-1.3155	Q-55.043	Q4.2959	Q6.3754	Q1.6159
#2	101.38	Q2.7851	Q-17.843	Q-17.150	Q4.2959	Q5.8514	Q1.1995
#3	101.42	Q8.0072	Q-30.500	Q-56.436	Q4.1091	Q6.8994	Q3.3426

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	Q1.7569	Q92477.	99.449
#1	Q1.6788	Q92455.	99.438
#2	Q1.6788	Q92219.	99.242
#3	Q1.9131	Q92759.	99.668

Method: SED5 Sample Name: AG AQC 2 Operator:
Run Time: 05/16/90 13:19:54
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	50.307	.04332	Q56.378	Q46.676	Q6.5936	Q.13128	Q.49064
#1	49.423	.03435	Q55.866	Q50.575	Q5.1641	Q.02626	Q.33073
#2	51.815	.06124	Q64.022	Q51.203	Q7.8959	Q.34132	Q.63996
#3	49.683	.03435	Q49.247	Q38.250	Q6.7209	Q.02626	Q.50123

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	.01338	Q.00684	Q-1.4350	Q.50872	Q3.9463	Q-.97070	-.00965
#1	.00969	Q.00975	Q-1.9676	Q-.76590	Q3.2603	Q-1.1651	-.00585
#2	.01800	Q.00792	Q1.9934	Q.95439	Q9.1789	Q-.86831	-.00890
#3	.01246	Q.00285	Q-4.3307	Q1.3377	Q-.60037	Q-.87869	-.01419

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.02300	Q15.323	.03334	-.16391	Q3.2591	Q.04515	Q.28866
#1	.02678	Q17.697	.03847	-1.1679	Q2.0740	Q.04467	Q2.0723
#2	.02374	Q15.755	.06156	.44257	Q2.0740	Q.18722	Q-.63571
#3	.01849	Q12.517	.00000	.23358	Q5.6293	Q-.09646	Q-.57060

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	.00955	Q-.52221	Q7.1698	Q-46.446	Q.62259	Q.78600	Q-1.8127
#1	.00819	Q-7.6591	Q15.615	Q-52.336	Q.56033	Q.61134	Q-2.6709
#2	.01842	Q-.87035	Q7.7928	Q-52.331	Q.74711	Q1.1353	Q-1.2474
#3	.00205	Q6.9628	Q-1.8982	Q-34.670	Q.56033	Q.61134	Q-1.5197

Elem	Y	Znlow	Znhigh
Units	ug/L	ug/L	Mg/L
Avge	Q.23425	Q14.651	.13363
#1	Q.27329	Q19.533	.17629

#2	0.27329	015.648	.11658
#3	0.15617	09.7715	.10805

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUN 19 1990

SUBJECT: Review of Region 5 data for Steyn Rubber & Tool

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory
Chi Yang for

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90 ES15 S16-18, D17, R5J
Parameter(s): 6/19/90 ~~Ag CRL-ESAT~~ CN, Hg
Laboratory: CRL/ESAT

Results Status:

(X) DATA ACCEPTABLE FOR USE*.
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

Ag

RECEIVED BY/DATE: .....
Comments:

ATA SET	SITE	DU/ACT.
SF7171	Stern Rubber & TMT	TFA

AMPLES	PARAMETER(S)
90FS15 S16-18 R55	CN, Hg

AMPLED	RECEIVED	DUE	LAB
5/10/90	5/11/90	6/1/90	CRL-ESAT

HIPPED	DATA RECEIVED	CONTRACT
—	N/A	—

Comments By Reviewer:

BP 6/15/90

(X) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE

Chi Tang 6/19/90

( ) REVIEWED (X) UNREVIEWED SECTION CHIEF/DATE

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR
6-19-90	6-19-90	Griffin

ESAT CONTRACT **TID NO:** 05-06
TASK NO: 2864

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on 5/15, 1990 for:

DATASET NO: 7171 **SITE NAME:** Stern Rubber + Tool

PARAMETER : CN/Hg

MATRIX : water **SF DU/ACT NO: TFA** 302 **Y** ___ **/C** ___

SAMPLE NUMBERS: 90FS15S16-18, 90FS15D17, 90FS02R55

NUMBER OF SAMPLES: 5

ESAT APPROVALS:

M. Fletcher / D K Kruse 5/15/90
(ANALYST DATE)

D K Kruse 5/18/90
(TEAM LEADER DATE)

C Simon Benedin 5/22/90
(QC COORDINATOR DATE)

[signature] 5/24/90
(ESAT TEAM MANAGER DATE)

COMMENTS: FOR CN: Sample 90FS15S16 was analyzed by Manual distillation method 335.2; The rest of the CN samples were analyzed by Auto UV method 335.3.

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

[signature] 5-25-90
(DELIVERED BY DATE)

H. Phan 5/25/90
(RECEIVED BY DATE)

EPA APPROVALS:

[signature] 6/15/90
(EPA TASK MONITOR DATE)

[✓] Reviewed
[ ] Unreviewed
[✓] Accepted
[ ] Rejected
[ ] Returned/_____ (Date)

COMMENTS: _____

[signature] 6/19/90
(SECTION CHIEF DATE)

[ ] Reviewed [✓] Unreviewed

Jay Thakker 6.19.90
(ESAT DPO DATE)

_____/_____/_____
(DATA COORD'R REC'D TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

OK-PP
6/15/90

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS · NUTRIENTS

TFA302

/ISION/BRANCH FIT SUPERFUND SAMPLE DATE 5.10.90 LAB ARRIVAL DATE 5.11.90 DUE DATE ~~5.31.90~~ 6-1-90 5/11/90

NUMBER TFA DATA SET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

RL LOG NUMBER	SAMPLE DESCRIPTION	WATER PHENOLICS UG PHENOL/L MIN 74818	WATER CYANIDE UG CN/L MIN 74919	WATER GROSS ALPHA P CI/L MIN 75020	WATER CR^{+6} UG CR^{+6}/L MIN 74616	WATER MERCURY UG HG/L MIN 74717
0FS15S16	RW1 5-188108		X 8u +	+ Sample analyzed by Manual distillation Method 335.2		
17	RW2 5-188127		X 5u x			
18	RW3 5-188145		X 5u x	x Sample analyzed by Auto UV Method 335.3		
~~19~~	~~RW4~~		X			
D17	DUP 5-188136		X 5u x			
0FS02R55	BLANK 5-188065		X 5u x			
			M. Fletcher 5/17/90			
			Shipment is Complete			
0FS15S16	RW1 5-188109			all Hg results by		X 0.1 u
FS15S17	RW2 5-188128			automated cold vapor		X 0.1 u
FS15D17	DUPLICATE 5-188137			method 245.2 DNS		X 0.1 u
FS15S18	RW3 5-188146					X 0.1 u
FS02R55	BLANK 5-188066					X 0.1 u
						5/16/90

RMS 5.3.90

DKruse

M. Fletcher 5/17/90
M. Fletcher 5/17/90

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: M. FLETCHER
PARAMETER NAME ----: CN 15
DATE OF ANALYSIS --: 05-~~27~~-1990
MFS/17/90

DATA SET NUMBER ---: ~~7170~~ 717/MFS/17/90
DU NUMBER ----------: TFA302

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = -7.54772E-01
+6.66481E-01 * SIGNAL

COEFFICIENT OF DETERMINATION : .9996805

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.500	+0.000	-0.422
2	+9.500	+5.000	+5.576
3	+16.000	+10.000	+9.908
4	+38.600	+25.000	+24.971
5	+76.100	+50.000	+49.964

T-A-B-L-E O-F S-A-M-P-L-E-S

	SAMPLE I.D.	SIGNAL	CONCENTRATION		LIMITS
	BLK	+1.000	-0.089		0 ± 5ug/l
	BLK	+1.000	-0.089		0 ± 5ug/l
	BLK	+1.100	-0.022		0 ± 5ug/l
	LOW AQC 5	+14.000	+8.575		pos result req
	HIGH AQC 20	+33.900	+21.838	rec=22;	20 ± 5ug/l
SF 7170	90FS15S13	+1.500	+0.244	5u	
	90FS15S14	+1.300	+0.111	5u	
	90FS15S15	+1.100	-0.022	5u	
	90FS15D13	+1.100	-0.022	5u	
	90FS02R54	+1.100	-0.022	5u	
SF 7171	90FS15S17	+1.100	-0.022	5u	
	90FS15S18	+1.500	+0.244	5u	
	90FS15D17	+1.400	+0.178	5u	
	90FS02R55	+1.300	+0.111	5u	
SMP	90FS15S13 LAB Duplicate	+1.000	-0.089	5u	
	90FS15S14 LAB Spike	+33.000	+21.239	rec=21	20 ± 5ug/l
	BLK	+1.500	+0.244		0 ± 5ug/l
	BLK	+1.400	+0.178		0 ± 5ug/l
	LOW AQC 5	+14.400	+8.842		positive result req.
	HIGH AQC 20	+33.500	+21.572		20 ± 5ug/l
	BLK	+2.000	+0.578		0 ± 5ug/l

M. Fletcher 5/15/90

COMPUTATION SHEET

OFFICE				FILE NO.
SUBJECT CN - Auto UV method 335.3				SF 7171
COMPUTATION				
COMPUTED BY M. Fletcher	CHECKED BY	DATE 5/15/90		PAGE 1 OF 1 PAGES

(1)	(2)	(3)	(4)	(5) Reading	(6) Conc ug/l CN	(7)	(8) Limits	(9) Cl2 screen	(10) S2 screen
All pH's >11 ✓									
standards	0 ug/l CN			.50	-.42				
	5			9.5	5.58				
	10			16.0	9.91				
	25			38.6	24.97				
	50			76.1	49.96				
BLK				1.00	-.09		0±5 ug/l		
BLK				1.10	-.09		0±5 ug/l		
LOW AQC 5				14.00	8.58		pos result req		
HIGH AQC 20				33.90	21.84	rec=22;	20±5 ug/l		
90FS15S13	SF7170			1.50	.24			neg.	neg.
90FS15S14				1.30	.11				
S15				1.10	-.02				
D13				1.10	-.02				
90FS02R54				1.10	-.02				
90FS15S17	SF7171			1.10	-.02				
S18				1.50	.24				
D17 ~~S19~~ MFS11540				1.40	.18				
90FS02R55				1.30	.11				
90FS15S13	lab dup			1.00	-.09				
90FS15S14	lab spike			33.00	21.24	rec=21;	20±5 ug/l		
BLK				1.50	.24		0±5 ug/l		
BLK				1.40	.18		0±5 ug/l		
LOW AQC 5				14.40	8.84		pos result req.		
HIGH AQC 20				33.50	21.57		20±5 ug/l		
BLK				2.00	.58		0±5 ug/l		

M. Fletcher
5/15/90

CYANIDE AUTO UV METHOD

Element: cyanide

Analyst M. Fletcher

Date 5/15/90

Data Set 7171

Pos	ID	Spike	DF	Comment
1	Prim			
2	Prim			
3	Blank			
4	Blank			
5	Standard 0 ug/l			undistilled
6	Standard 5 ug/l			undistilled
7	Standard 10 ug/l			undistilled
8	Standard 25 ug/l			undistilled
9	Standard 50 ug/l			undistilled
10	Blank			
11	Blank			
12	(low) CS 5 ug/l			undistilled
13	(high) CS 20 ug/l			undistilled
14	SF7170 90FS15513			
15	S14			
16	S15			
17	D13			
18	90FS02R54			
19	90FS15517 (SF7171)			
20	S18			
21	D17			
22	90FS02R55			
23	90FS15513			lab duplicate
24	90FS15514			lab spike
25	BLK			
26	BLK			
27	(LOW) CS 5ug/l			

cnl

M. Fletcher
5/15/90

CYANIDE AUTO UV METHOD

Element: cyanide

Analyst M. Fletcher

Dat 5/15/90

Data Set 7171

Pos	ID	Spike	DF	Comment
28	(HIGH AGG) CS 20 ug/l			
29	B/K			
30				
31				
32				
33				
34	Blank			
35	CS 5 ug/l			
36	CS 20 ug/l			
37				
38				
39				
40				
	Start Wheel 2			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

cn2

Myra Fletcher 5/17/90
Myra Fletcher 5/17/90

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: M. FLETCHER
PARAMETER NAME ----: CN
DATE OF ANALYSIS --: 05-17-1990

DATA SET NUMBER ---: 7171
DU NUMBER ---------: TFA302

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = +1.60730E+00
+2.35535E+00 * SIGNAL

COEFFICIENT OF DETERMINATION : .9984325

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.000	+0.000	+1.607
2	+8.900	+25.000	+22.569
3	+19.600	+50.000	+47.772
4	+43.800	+100.000	+104.771
5	+83.500	+200.000	+198.278

T-A-B-L-E O-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION		LIMITS
BLK UND	+0.000	+1.607		0 ± 8 ug/l
BLK DIS	+0.000	+1.607		0 ± 8 ug/l
AQC UND (100) TV=100 ug/l	+43.500	+104.065	rec=104	85-115 ug/l
AQC DIS (100) TV=100 ug/l	+46.400	+110.895	rec=111	85-115 ug/l
90FS15S20 SP7171	+0.200	+2.078	8u	
90FS15S21	+0.300	+2.313	8u	
90FS15S22	+0.000	+1.607	8u	
90FS15S23	+0.000	+1.607	8u	
90FS15S24	+0.200	+2.078	8u	
90FS15S25	+0.000	+1.607	8u	
90FS15S26	+0.000	+1.607	8u	
90FS15S26 LAB Spike	+45.200	+108.069	rec=108	85-115 ug/l
90FS15S27	+0.400	+2.549	8u	
90FS15S27 LAB Dup	+0.500	+2.784	8u Dup difference = -.24 ug/l;	Duplicate difference <15 ug/l
~~90FS15S27 LAB D~~	~~+0.500~~	~~+2.784~~	~~mf5/17/90 operator error~~	
~~BLK UND~~	~~+0.300~~	~~+2.313~~	~~mf5/17/90 operator error~~	
BLK UND	+0.000	+1.607		0 ± 8 ug/l
90FS15S16 SP7171	+0.100	+1.842	8u	mf5/17/90 difference
~~90FS16S16 LAB D~~	~~+0.100~~	~~+1.842~~	~~5/17/90 operator error~~	
90FS15S16 LAB Dup	+0.100	+1.842	8u dup difference=0	Duplicate difference <15 ug/l
90FS15S16 LAB Spike	+47.400	+113.250	rec=113	85-115 ug/l
BLK UND	+0.300	+2.313		0 ± 8 ug/l
BLK DIS	+0.100	+1.842		0 ± 8 ug/l
AQC UND (100) TV=100 ug/l	+43.700	+104.536	rec=104	85-115
AQC DIS (100) TV=100 ug/l	+46.400	+110.895	rec=111	85-115
BLK UND	+0.200	+2.078		0 ± 8 ug/l

COMPUTATION SHEET

M. Fletcher 5/17/90

OFFICE

FILE NO.

SUBJECT CN Manual distillation method 335.2

COMPUTATION SF7171

COMPUTED BY M. Fletcher | CHECKED BY | DATE 5/17/90 | PAGE 1 OF 1 PAGES

(1)	(2)	(3)	(4)	(5) Reading	(6) Conc. ug/l CN	(7)	(8) LIMITS	(9) Screen Cl2	(10) Screen Sulfide
primer									
primer									
BCK									
BCK									
standard	0 ug/l CN			0.0	1.61				
	25			8.4	22.57				
	50			19.6	47.77				
	100			43.8	104.77				
	200			83.5	198.28				
bck mid				0.00	1.61		0 ± 8 ug/l		
bck dup				0.00	1.61		0 ± 8 ug/l		
AQC (mid)	TV = 100 ug/l			43.5	104.07	rec = 104	85-115 ug/l		
AQC (dup)	TV = 100 ug/l			46.4	110.90	rec = 111	85-115 ug/l		
90FS155	20 SF7171			0.20	2.08			neg	neg
S21				0.30	2.31				
S22				0.00	1.61				
S23				0.00	1.61				
S24				0.20	2.08				
S25				0.00	1.61				
S26				0.00	1.61				
S26	lab spike			45.20	108.07	rec = 108	85-115 ug/l		
S27				0.40	2.55			neg.	neg.
S27	lab duplicate			0.50	2.78	dup diff -0.23	dup diff < 15 ug/l		
Blk (mid)				0.00	1.61		0 ± 8 ug/l		
90FS15	S16	SF7171		0.10	1.84			neg	neg
	S16 lab duplicate			0.10	1.84	dup diff 0.0	dup diff < 15 ug/l		
	S16 lab spike			47.40	113.25	rec = 113	85-115 ug/l		
blk mid				0.30	2.31				
blk dup				0.10	1.84				
AQC (mid)	TV = 100 ug/l			43.70	104.54	rec = 104	85-115 ug/l		
AQC (dup)	TV = 100 ug/l			46.40	110.90	rec = 111	85-115 ug/l		
blk mid				0.20	2.08		0 ± 8 ug/l		

M. Fletcher
5/17/90

CYANIDE MANUAL DISTILLATION

Element: cyanide

Analyst M. Fletcher

Date 5/17/90

Data Set 7171

Pos	ID	Spike	DF	Comment
1	Prim			
2	Prim			
3	Blank			
4	Blank			
5	Standard 0 ug/l			undistilled
6	Standard 25 ug/l			undistilled
7	Standard 50 ug/l			undistilled
8	Standard 100 ug/l			undistilled
9	Standard 200 ug/l			undistilled
10	Blank			undistilled
11	Blank			undistilled
12	Blank			distilled
13	(AQC) CS 100 ug/l (TV 100)			undistilled
14	(WQC) CS 100 ug/l (TV 100)			distilled
15	90F515 ~~Blank~~ S20			SF7171 ~~undistilled~~
16	S21			
17	S22			
18	S23			
19	S24			
20	S25			
21	S26			
22	S26			lab spike
23	S27			
24	S27			lab duplicate
25	BLANK			und
26	90F515 S16			
27	S16			lab duplicate

cn3

M. Hetkey
9/17/90

5/15 SF 7171 Soil Weights

Sample	Wet Weight	Dry Weight 5/16	Tare 5/16
90FS15520	12.733	63.993	51.803
521	9.798	60.574	50.987
522	10.016	61.575	51.789
523	54.752	105.679	66.114
524	78.269	132.703	73.784
525	76.883	138.766	79.437
526	18.921	69.040	51.956
527	14.912	62.421	51.093

5/16 Sample 90FS15520 Wet Weight = 13.960 g
Dry 13.404 g

M. Fletcher
5/18/90

* SOLIDS * CSC VERSION 1.00 *

M. Fletcher 5/18/90

NAME OF ANALYST ---: M. Fletcher
DATE OF ANALYSIS ---: 05-18-1990

SAMPLE I.D.	DISH WT(GM)	DISH+WET WT	WET WT(GM)	DISH+DRY WT	DRY WT(GM)	% SOLID
90FS15S20	51.8030	64.5360	12.7330	63.9930	12.1900	95.74 %
90FS15S21	50.9870	60.7850	9.7980	60.5740	9.5870	97.85 %
90FS15S22	51.7890	61.8050	10.0160	61.5750	9.7860	97.70 %
90FS15S23	66.1140	120.8660	54.7520	105.6790	39.5650	72.26 %
90FS15S24	73.7840	152.0530	78.2690	132.7030	58.9190	75.28 %
90FS15S25	79.4370	156.3200	76.8830	138.7660	59.3290	77.17 %
90FS15S26	51.9560	70.8770	18.9210	69.0400	17.0840	90.29 %
90FS15S27	51.0930	66.0050	14.9120	62.4210	11.3280	75.97 %

M. Fletcher 5/18/90

M. Fletcher 5/18/9

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* SEDCAL * CSC VERSION 1.00 *

NAME OF ANALYST ----: M. FLETCHER
DATE OF ANALYSIS ---: 05-18-1990

SEDIMENT CALCULATION FOR CYANIDE

SAMPLE NO.	% SOLID	WET WT(GMS)	DRY WT(GM/L)	SED CONC(UG/L)	SED CONC(MG/KG)

D Kruse
5/16/90

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: D KRUSE DATA SET NUMBER ---: 7171
PARAMETER NAME ----: HG DU NUMBER --------: TFA302
DATE OF ANALYSIS --: ~~05-16-1990~~
5/15/90 DK

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = +9.10807E-03
+3.47926E-02 * SIGNAL

COEFFICIENT OF DETERMINATION : .9971534

T-A-B-L-E D-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.000	+0.000	+0.009
2	+15.200	+0.500	+0.537
3	+26.400	+1.000	+0.927
4	+43.100	+1.500	+1.508
5	+57.700	+2.000	+2.016

D Kruse 5/16/90

T-A-B-L-E D-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION		
BLK	+1.000	+0.043	Limit = <.1 µg/l	
CS1	+45.700	+1.599	Limit = 1.5 ± .2 µg/l	
CS2	+45.250	+1.583	Limit = 1.5 ± .2 µg/l	
90FT02R42	+0.500	+0.026	.1u	SF7118
90FT13S90	+1.300	+0.054	.1u	
90FT13S90 SPK	+33.900	+1.188	Recovery = 1.134 Limit = 1.0 ± .15 µg/l	
90FT13S89	+3.200	+0.120	.1	
90FT13S88	+0.800	+0.036	.1u	
90FT13D88	+0.000	+0.009	.1u	
90FT13S89 SPK	+31.800	+1.115	Recovery = 0.995 Limit = 1.0 ± .15 µg/l	
90FD13S91	+3.400	+0.127	.1	SF7122
90FD13S92	+0.500	+0.026	.1u	
90FD13D92	+0.000	+0.009	.1u	
90FT13S90 DUP	+0.000	+0.009	Dup difference = .045 Limit = 0.15 µg/l	
90FD13S93	+0.500	+0.026	.1u	SF7122
90FD13S94	+0.000	+0.009	.1u	
90FD02R43	+0.000	+0.009	.1u	
90FD13S91 DUP	+2.400	+0.092	.1u Dup difference = .035 Limit = .15 µg/l	
90FS15S13	+0.000	+0.009	.1u	SF7170
90FS15D13	+0.000	+0.009	.1u	
90FS15S14	+3.200	+0.120	.1	
90FS15S15	+1.000	+0.043	.1u	
90FS02R54	+0.000	+0.009	.1u	
CS1	+39.000	+1.366	Limit = 1.5 ± .2 µg/l	
CS2	+40.800	+1.428	Limit = 1.5 ± .2 µg/l	
BLK	+0.000	+0.009	Limit < .1 µg/l	
90FS15S16	+0.000	+0.009	.1u	SF7171
90FS15S17	+0.500	+0.026	.1u	
90FS15D17	+1.500	+0.061	.1u	
90FS15S18	+0.500	+0.026	.1u	

90FS15S15	+1.000	+0.043	.1u
90FS02R54	+0.000	+0.009	.1u
CS1	+39.000	+1.366	Limit = 1.5 ± .2 µg/l
CS2	+40.800	+1.428	Limit = 1.5 ± .2 µg/l
BLK	+0.000	+0.009	Limit < .1 µg/l
90FS15S16	+0.000	+0.009	.1u
90FS15S17	+0.500	+0.026	.1u
90FS15D17	+1.500	+0.061	.1u
90FS15S18	+0.500	+0.026	.1u
90FS02R55	+0.000	+0.009	.1u
90FS15S16 DUP	+0.000	+0.009	.1u Dup. Difference = 0 Limit = .15 µg/l
90FS15S16 SPK	+28.400	+0.997	Recovery = .988 µg/l Limit = 1.0 ± .15 µg/l
CS1	+41.000	+1.435	Limit = 1.5 ± .2 µg/l
CS2	+43.000	+1.505	Limit = 1.5 ± .2 µg/l
BLK	+0.000	+0.009	Limit < .1 µg/l

SF 7171

D Kruse 5/16/90

D Kruse 5/16/90

D Kruse 5/16/90

COMPUTATION SHEET

D Kruse 5/16/90

OFFICE

FILE NO.

SUBJECT Hg on SF7118, 7122, 7170 + 7171

COMPUTATION

COMPUTED BY D Kruse | CHECKED BY | DATE 5/16/90 | PAGE 1 OF 2 PAGES

(1) Sample I.D.	(2)	(3) Peak height (average)	(4)	(5)	(6) Conc µg/l	(7)	(8) Limits	(9)	(10)
0 µg/l		0							
0.5		15.15							
1.0		26.35							
1.5		~~41.9~~ 43.1 OK 5/16							
2.0		57.7							
BLK		1			0.043		<.1 µg/l		
CS1		45.7			1.599		1.5 ± .2 µg/l		
CS2		45.25			1.583		1.5 ± .2 µg/l		
90FT02	R42	0.5			0.026				
90FT13	S90	1.3	OK		0.054				
S	90S	33.9	~~Not used~~		1.118		106.4% R		
S	89	3.15			.120				
S	88	.75			.036				
D	88	0			.009				
S	89 Spk	31.85			1.115		99.5% R		
90FD13	S91	3.35			.127				
	S92	.5			.026				
	D92	0			.009				
90FT13	S90 Dup	0			.009		Δ <.15 µg/l		
90FD13	S93	.5			.026				
90FD13	S94	0			.009				
90FD02	R43	0			.009				
90FD13	S91 Dup	2.4			.092		Δ < .15 µg/l		
90FS15	S13	0			.009				
	D13	0			.009				
	S14	3.15			.120				
	S15	1			.043				
90FS02	R54	0			.009				
CS1		39.05			1.366		1.5 ± .2 µg/l		
CS2		40.85			1.428		1.5 ± .2 µg/l		
DIK		0			.009		<.1 µg/l		
90FS15	S16	0			.009				
	S17	.5			.026				
	8 OK D17	1.5			.061				
	S18	.5			.026				
90FS02	R55	0			.009				
90FS15	S16 Dup	0			.009				
90FS15	S16 Spk	34.15	Not used		~~10~~ OK				

Continued on Page 2

COMPUTATION SHEET D Kruse 5/16/90

OFFICE

FILE NO.

SUBJECT Hg on SF 7118, 7122, 7170, 7171

COMPUTATION

COMPUTED BY D Kruse | CHECKED BY | DATE 5/16/90 | PAGE 2 OF 2 PAGES

(1) Sample ID	(2)	(3) Peak Height (average)	(4)	(5)	(6) Conc µg/l	(7)	(8) Limits	(9)	(10)
90FS165	16 Spk	28.35			0.997		98.8% R		
CS1		41.0			1.435		1.5 ± .2 µg/l		
CS2		43.0			1.505		1.5 ± .2 µg/l		
Blank		0			.009		< .1 µg/l		

D Kruse
5/16/90

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 0 1 1990

SUBJECT: Review of Region 5 data for Stern Rubber & Tool

FROM: Curtis Ross, Director for Reg Rice
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90 PS15520 - 527
Parameter(s): Hg
Laboratory: CRL-ESAT

Results Status:

(PP) ~~( )~~ DATA ACCEPTABLE FOR USE*
(X) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

pg

RECEIVED BY/DATE:

Comments:

DATA SET	SITE	DU/ACT.
SF 7171	Stern rubber & Tool	TFA

SAMPLES	PARAMETER(S)
90 FS15S20-S27	Hg

SAMPLED	RECEIVED	DUE	LAB
5/9/90	5/10/90	5/31/90	CRL-ESAT

SHIPPED	DATA RECEIVED	CONTRACT
—	N/A	—

Comments By Reviewer:

The Hg data has some bias in the system. What's causi it, is ~~[illegible]~~ currently unknown to us.

[signature]
7/30/90

PP 7/30/90

(X) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE

PP 7/30/90

(X) REVIEWED ( ) UNREVIEWED SECTION CHIEF/DATE

[signature] 7/30/90

(X) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR
8/1/90	8/1/90	Griffin

ESAT CONTRACT

TID NO: 05-9005-06
TASK NO: 2864

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on JULY 12, 1990 for:

DATASET NO: SF7171 SITE NAME: STERN RUBBER & TOOL

PARAMETER : Hg

MATRIX : SOIL SF DU/ACT NO: TFA302 Y____ /C_____

SAMPLE NUMBERS: 90SF15S20 — S27

NUMBER OF SAMPLES: 8

ESAT APPROVALS:

Francis A. Awanya 7/17/90
(ANALYST DATE)

[illegible] 7/19/90
(TEAM LEADER DATE)

C Sims Bender 7/18/90
(QC COORDINATOR DATE)

[illegible] 7-19-90
(ESAT TEAM MANAGER DATE)

COMMENTS:

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

J. Gam 7/19/90
(DELIVERED BY DATE)

Howard Pham 7/19/90
(RECEIVED BY DATE)

EPA APPROVALS:

[illegible] 7/30/90
(EPA TASK MONITOR DATE)

[✓] Reviewed
[ ] Unreviewed
[✓] Accepted
[ ] Rejected
[ ] Returned/_____ (Date)

COMMENTS:

(SECTION CHIEF DATE)

[ ] Reviewed [ ] Unreviewed

(ESAT DPO DATE)

Sylvia Griffin 8-1-90 / 8-1-90
(DATA COORD'R REC'D TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

ESAT's work

OK-PP 7/30/90

(9)

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH: FIT SUPERFUND SAMPLING DATE: 5.9.90 LAB ARRIVAL DATE: 5.10.90 DUE DATE: 5.31.90

EU NUMBER: TFA DATASET NUMBER: 7171 STUDY: Stern Rubber & Tool PRIORITY: N CONTRACTOR: N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS CHEMICAL OXYGEN DEMAND MG COD/KG (DRY) MIN43327	SEDIMENTS SOLIDS MERCURY MG HG/KG (DRY) MIN44728	SEDIMENTS SOLIDS PHENOLICS MG PHENOL/KG (DRY) MIN44829	SEDIMENTS SOLIDS CYANIDE MG CN/KG (DRY) MIN44930	
90FS15520	S1	~~0.03~~ 7/16/90	0.03		X	5188029
21	S2		0.06		X	5188033
22	S3		0.03u		X	5188037
23	S4		0.04u		X	5188041
24	S5		0.03u		X	5188045
25	S6		0.03u		X	5188049
26	S7		0.03u		X	5188053
27	S8		0.08		X	5188057

Shipment is NOT Complete

Analyzed using E.P.A method 245.2 × DNS Automated Cold Vapor

Francis A. Awanya
7/12/1990

Case Narrative

TID: 059005-06

TASK: 2864

DATA SET: SF7171

8 soil samples were assayed for Hg by method 245.2 * DNS. The following exceptions from the CRL QC criteria were found. The inorganic check sample(CS4) was out of control. This has been a continuing problem for this method and is being investigated. An ampule from the U.S. E.P.A was also out of control but it probably contains mostly inorganic Hg. The solid QB2 was also analyzed and found to be in control. The organic(CS3) was in control. It is our professional opinion that the data are acceptable because the organic check samples and QB2 are in control.

Francis A. Awanya
7/12/90

Francis A. Awanya
7/12/90

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: FAA/MF
PARAMETER NAME ----: Hg
DATE OF ANALYSIS --: ~~07-16-1990~~
07-12-1990

DATA SET NUMBER ---: SF7171
DU NUMBER ---------: TFA302

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = -5.34171E-03
+1.52038E-03 *

COEFFICIENT OF DETERMINATION : .9973682

T-A-B-L-E 0-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION ug Hg	CALCULATED
1	+2.000	+0.000	-0.003
2	+21.500	+0.025	+0.027
3	+37.000	+0.050	+0.050
4	+53.500	+0.075	+0.075
5	+68.000	+0.100	+0.098

T-A-B-L-E 0-F S-A-M-P-L-E-S

Francis A. Awanya
Data Set# SF7171
7-12-1990

SAMPLE I.D.	SIGNAL	CONCENTRATION ug Hg	
BLANK	+2.000	-0.003	Limit ± 0.005 ug Hg
BLANK	+2.000	-0.003	
CS3(ORG)	+40.000	+0.055	Limit 0.050 ug ± 0.005 ug Hg
CS4(INORG)	+42.500	+0.059	Limit 0.075 ug ± 0.0075 ug Hg
~~QP2 FAA~~ 7/12/90 QB2	+53.000	+0.075	0.497 mg/Kg Limit 0.25 mg/Kg – 0.57 mg/Kg Hg
CONC.1	+72.000	+0.104	Limit 0.0019 ug – 0.046 ug Hg
90SF15S20	+7.500	+0.006	0.031 mg/Kg
90SF15S21	+10.500	+0.010	0.055 mg/Kg
90SF15S22	+5.000	+0.002	0.030 mg/Kg (u)
90SF15S23	+2.000	-0.003	0.036 mg/Kg (u)
90SF15S22(DUP)	+3.500	-0.001	0.028 mg/Kg (u) Δ = 0.002 mg/Kg RPD = 6.9 %
90SF15S22(SPK)	+43.500	+0.060	0.331 mg/Kg % Recovery = 120.6 % Limit 100 ± 20 %
90SF15S24	+2.000	-0.003	0.033 mg/Kg (u)
90SF15S26	+4.500	+0.001	0.029 mg/Kg (u)
90SF15S25	+4.500	+0.001	0.033 mg/Kg (u)
90SF15S27	+12.000	+0.012	0.079 mg/Kg
CONC.1	+76.000	+0.110	Limit 0.0019 ug – 0.046 ug Hg
CS3(ORG)	+40.000	+0.055	Limit = 0.050 ug ± 0.005 ug Hg
CS4(INORG)	+41.500	+0.057	Limit 0.075 ug ± 0.0075 ug Hg
BLANK	+1.500	-0.004	Limit ±0.005 ug/Hg
BLANK	+2.000	-0.003	

OFFICE ESAT/EPA

FILE NO.

SUBJECT Hg Analysis D/S # SF7171

COMPUTATION For D/S# SF7171

COMPUTED BY Francis A Awuonga

CHECKED BY

DATE 7/12/90

PAGE | OF | PAGES

(1) SAMPLE ID	(2)	(3)	(4) SAMPLE WEIGHT (g)	(5) PEAK HEIGHT	(6) CONC. ug Hg	(7) CONC mg/Kg	(8) LIMITS	(9)	(10)
BLANK				2.0	-0.003				
0.025 ug/L				21.5	0.027				
0.050 ug/L				37.0	0.050				
0.075 ug/L				53.5	0.075				
0.100 ug/L				68.0	0.098				
BLANK				2	-0.003		±0.005 ug/Hg		
BLANK				2	-0.003		~~±0.000~~ ±0.005 ug Hg		
CS3 (ORGANIC)				40	0.055		~~0.05~~ 0.05 ± 0.005 ug Hg		
CS4 (INORGANIC)				42.5	0.059		0.075 ± 0.0075 ug Hg		
QB2			0.1508	53.0	0.075	0.497 mg/Kg	0.25 — 0.57 mg/Kg		
CONC. 1				72.0	0.104		0.0019 — 0.046		
90SF15	S20		0.2031	7.5	0.006	0.031			
90SF15	S21		0.1843	10.5	0.010	0.055		FAA 7/12/1990	
90SF15	S22		0.1830	5.0	0.002	0.030u	~~0.25 — 0.57 mg/Kg~~		
90SF15	S23		0.1901	2.0	-0.003	0.0364			
90SF15	S22 (DUPLICATE)		0.1851	3.5	-0.001	0.0284	Δ < 20% or 0.01 ug/Hg.		
90SF15	S22 (SPIKE)		0.1856	43.5	0.060	0.331	100 ± 20 %		
90SF15	S24		0.2000	2.0	-0.003	0.0334			
90SF15	S26		0.1970	4.5	0.001	0.0284			
90SF15	S25		0.1970	4.5	0.001	0.0334			
90SF15	S27		0.1981	12.0	0.012	0.079			
CONC. 1				76.0	0.110		0.0019 — ~~0.004~~ 0.046 ug/Hg		
CS3 (ORGANIC)				40.0	0.055		0.05 ± 0.005 ug Hg		
CS4 (INORGANIC)				41.5	0.057		0.075 ± 0.0075 ug Hg		
BLANK				1.5	-0.004		±0.005 ug/Hg		
BLANK				2.0	-0.003		±0.005 ug/Hg		

Spike added = 0.05 ug Hg

Analyzed using E.P.A method 245.2* DNS Automated Cold Vapour

Francis A Awuonga
7-12-199

GPO 802-789

* SOLIDS * CSC VERSION 1.00 *

M. Fletcher 5/18/90

NAME OF ANALYST ---: M. Fletcher
DATE OF ANALYSIS ---: 05-18-1990

SAMPLE I.D.	DISH WT (GM)	DISH+WET WT	WET WT (GM)	DISH+DRY WT	DRY WT (GM)	% SOLIDS
90FS15520	51.8030	64.5360	12.7330	63.9930	12.1900	95.74 %
90FS15521	50.9870	60.7851	9.7981	60.5740	9.5870	97.85 %
90FS15522	51.7890	61.8050	10.0160	61.5750	9.7860	97.70 %
90FS15523	66.1140	120.6661	54.7520	105.6790	39.5650	72.26 %
90FS15524	73.7840	152.0530	78.2690	132.7030	58.9190	75.28 %
90FS15525	79.4370	156.3200	76.8830	138.7660	59.3290	77.17 %
90FS15526	51.9560	70.8770	18.9210	69.0400	17.0840	90.29 %
90FS15527	51.0930	66.0050	14.9120	62.4210	11.3280	75.97 %

~~M. Fletcher~~ M. FLETCHER
Francis A. Awanya
7/12/1990
For Dataset # SF 7171 Hg
Calculations

5/15 SF 7171 Soil Weights

Sample	Wet Weight - dish	Dry Weight + dish 5/16	Tare 5/16
90FS15S20	12.733	63.993	51.803
S21	9.798	60.574	50.987
S22	10.016	61.575	51.789
S23	54.752	105.679	66.114
S24	78.269	132.703	73.784
S25	76.883	138.766	79.437
S26	18.921	69.040	51.956
S27	14.912	62.421	51.093

5/16 Sample 90FS15S20 Wet Weight = 13.960 g
Dry 13.404 g

51.803

M. FLETCHER 5/15/1990

Francis A. Awanya
7/12/1990
for Dataset # SF 7171 Hg
Calculations

RUN LOG 7/12/1990 SF7171

Hg Analysis
Francis A. Awonuga
7/12/1990

1 PRIMER
2 BLANK
3 0.000 ug/L
4 0.025
5 0.050
6 0.075
7 0.100
8 BLANK
9 BLANK
10 CS 3 (ORGANIC)
11 CS 4 (INORGANIC)
12 CS 4 (") NOT USED
13 QB 2
14 CONC. 1
15 90SF15S20
16 90SF15S21
17 90SF15S22
18 90SF15S23
19 90SF15S22 (Dup)
20 90SF15S22 (SPK)
21 90SF15S24
22 Unidentified sample run by mistake
23 90SF15S26
24 90SF15S25
25 90SF15S27
26 ~~90SF~~ CONC. 1
27 CS3 (ORGANIC)
28 CS4 (INORGANIC)
29 CONC. 1
30 BLANK
31 BLANK

Data Set # SF 7171 Hg Analysis
Francis A. Awanya
7/12/1990

INORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QB 2 FY 90

LABORATORY NAME: US EPA, Region 5 (IL) [J2] (REG5)
PERFORMANCE LEVEL: ACCEPTABLE
LABORATORY RANK: Above = 17 Same = 1 Below = 28

% Score: 90.8
REPORT DATE: 3/8/1990
MATRIX: SOIL 1

ELEMENT NAME	95 % CI LOWER	95 % CI UPPER	LAB RESULTS REPORTED VALUE	LAB RESULTS QUALIFIER CODE	PROGRAM DATA #LABS NOT-ID	#LABS MIS-QUANT	#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	7760	15800	11200		0	3	0	0	0	47
ANTIMONY	c	c	2.9		0	0	0	31	0	47
ARSENIC	28.8	46.9	31.3		0	3	1	2	2	47
BARIUM	89.2	117	99.1		0	3	0	0	0	47
BERYLLIUM	1.0	1.5	1		4	2	0	0	0	47
CADMIUM	1.7	3.7	2.8		0	7	0	2	0	47
CALCIUM	28800	34500	30900		0	6	0	0	0	47
CHROMIUM	20.7	30.6	25.2		0	9	0	1	1	47
COBALT	11.1	14.5	12.7		1	8	0	0	0	47
COPPER	182	217	198		0	7	0	2	0	47
IRON	12400	17900	14400		0	2	0	0	0	47
LEAD	112	165	131		0	3	0	2	2	47
MAGNESIUM	11900	14300	12500		0	5	0	0	0	47
MANGANESE	1720	2180	1870		0	3	0	1	0	47
MERCURY	0.23	[illegible]	0.73	[illegible]	2	7	0	4	7	47
NICKEL	21.2	29.1	25.4		0	6	0	0	0	47
POTASSIUM	1000.0	1870	970		1	3	0	0	0	47
SELENIUM	1.0	2.2	1.4		8	8	5	15	3	47
SILVER	c	c	0.91		0	0	0	7	0	47
SODIUM	d	d	214		0	0	0	0	0	47
THALLIUM	d	d	1.2		0		0	3	0	47
VANADIUM	25.5	44.4	32		0		0	1	0	47
ZINC	124	150	133		0		[illegible]	1	0	47

OF ELEMENTS NOT-IDENTIFIED: 0
OF ELEMENTS MIS-QUANTIFIED: 1
OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 0
SOIL :

OF DUPLICATES OUT: 0
SOIL :

CONC. 1

Hg Analysis
Dataset SF 7171
Francis A. Awanya
7/12/1995

U.S. Environmental Protection Agency
Environmental Monitoring and Support Laboratory - Cincinnati

WATER POLLUTION QUALITY CONTROL CHECK SAMPLES

Instructions for MERCURY Analyses

CAUTION: Read Instructions Carefully Before Opening Ampuls.

The requested set(s) of quality control concentrates are enclosed in this package. The quality control samples were prepared from the highest quality material available and were designed for and verified by the methodology stated in USEPA Manual 600/4-79-020, "Methods for Chemical Analyses of Water and Wastes", Methods 245.1 and 245.2. Any other methods of analyses may yield different results and would not be applicable or valid to the given statistics. These samples are to be used as a means to check the individual analyst's accuracy and precision related to the USEPA methods. Quality control samples are not to be used as standards.

SAMPLE PREPARATION

To begin the analyses, add approximately 900 mL of laboratory-pure or tap water to a 1000 mL volumetric flask. Then pipet 1.0 mL of reagent grade nitric acid into the flask. Open an ampul by snapping the top off at the break area of the neck and pipet 10.0 mL of the concentrate into the liter flask. Dilute to volume and mix well. Each ampul is to be diluted to volume and analyzed separately.

The laboratory-pure or tap water should be analyzed for background correction.

A sheet containing the statement of added levels is attached to these instructions for use as you desire. If there are any questions or problems, please contact:

Quality Assurance Branch
Environmental Monitoring and Support Laboratory - Cincinnati
U.S. Environmental Protection Agency
Cincinnati, OH 45268

RECEIVED
DEC 12 1986
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

WP
1183

Data set SF 7171
Francis A. Awanya
7/12/1990

U.S. Environmental Protection Agency
Environmental Monitoring and Support Laboratory - Cincinnati

WATER POLLUTION QUALITY CONTROL CHECK SAMPLES

True Values for MERCURY

When diluted to volume according to instructions, the samples contain the following compounds at concentrations expressed as ug/liter. The mean recovery ($\bar{X}$) and the standard deviation (S) are listed below along with the true value and the 95% confidence interval. The true value represents the actual weighing and subsequent dilutions. The 95% confidence interval represents the mean recovery plus or minus two standard deviations ($\bar{X} \pm 2S$) and was developed from regression equations from Performance Evaluation Studies.

Mercury

Concentration #1

True Value	Mean Recovery	Standard Deviation	95% Confidence Interval
1.3 ug/L	1.31	0.27	0.77 - 1.85

Concentration #2

True Value	Mean Recovery	Standard Deviation	95% Confidence Interval
4.7 ug/L	4.61	0.72	3.17 - 6.05

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

JUN 0 4 1990

DATE:

SUBJECT: **Review of Region 5 data for** Stern Rubber & Tool

FROM: **Curtis Ross, Director** Chi Yang for
Region 5 Central Regional Laboratory

To: **Data User:**

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15 S16-S18, D17, 90FS02 R55, 90FS15 S20-27
Parameter(s): As, Cd, Pb, Sb, Se, Tl
Laboratory: CRL

Results Status:

(X) **DATA ACCEPTABLE FOR USE***
( ) **DATA QUALIFIED AS TO USE**
( ) **DATA UNACCEPTABLE FOR USE**

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, **the Quality Control Coordinator, at** 3-3805

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

RECEIVED BY/DATE:
Comments:

DATA SET	SITE	DU/ACT.
SF 7171	Stern Rubber & Tool	TFA302

SAMPLES	PARAMETER(S)
90FS15516-518, 520-527, 017, 90FS02R55	As, Cd, Pb, Sb, Se, Tl

SAMPLED	RECEIVED	DUE	LAB
10 May 90	11 May 90	1 June 90	CRL

SHIPPED	DATA RECEIVED	CONTRACT
NA	29 May 90	ESAT

Comments By Reviewer: As, Se, & Tl were run using a microwave oven digestion. Cd, Pb, Sb used a hot plate digestion.

90FS15520 from the microwave digestion had a white precipitate which formed after filtration. It was filtered again. The As result was confirmed using a separate microwave digestion to which HCl had been added (assuming the white precipitate was $FeSiO_3$ from XRF qualitative analysis of ppt.) 1.1 vs. 1.4 mg/kg

(X) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE John V. Moore 31 May 90

( ) REVIEWED (X) UNREVIEWED SECTION CHIEF/DATE JVM for CMT 31 May 90

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED 6/4/90 TRANSMITTED 6/4/90 DATA MANAGEMENT COORDINATOR

CC: QUALITY CONTROL COORDINATOR

ESAT CONTRACT TID NO: 05-06
TASK NO: 2864

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on MAY 24, 1990 for:

DATASET NO: SF7171 SITE NAME: Stern Rubber

PARAMETER : GFAA Metals

MATRIX : Water/Soil SF DU/ACT NO: TFA302 Y____ /C_____

SAMPLE NUMBERS: Water : 90FS15S16-S18, 90FS15D17, 90FS02R55
Soil : 90FS15S20-S27 NUMBER OF SAMPLES: 5 Water 8 Soil

ESAT APPROVALS:

J Garry 5/25/90
(ANALYST DATE)

D Kruse 5/29/90
(TEAM LEADER DATE)

C Sims Blaider 5/29/90
(QC COORDINATOR DATE)

D Kruse 5/29/90
(ESAT TEAM MANAGER DATE)

COMMENTS: _____

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

J Garry 5/29/90
(DELIVERED BY DATE)

John V. Moore 29 May 90
(RECEIVED BY DATE)

EPA APPROVALS:

John V. Moore 31 May 90
(EPA TASK MONITOR DATE)

[X] Reviewed
[ ] Unreviewed
[X] Accepted
[ ] Rejected
[ ] Returned/_____ (Date)

COMMENTS: _____

JVM for CMT 31 May 90
(SECTION CHIEF DATE)

[ ] Reviewed [X] Unreviewed

Jay Thakker 6.4.90
(ESAT DPO DATE)

Sylvia Griffin 6/4/90 6/4/90
(DATA COORD'R REC'D TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

Jun for CMT
31 May 90

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

TFA302

DIVISION/BRANCH FIT SUPERFUND SAMPLE DATE 5-10-90 LAB ARRIVAL DATE 5-11-90 DUE DATE ~~5-31-90~~ 6-1-90 5/11/90 WA

DU NUMBER TFA ~~[illegible]~~ DATA SET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	TOTAL METALS WATER Cd UG/L	TOTAL METALS WATER TOTAL ICAP UG/L MET111	TOTAL METALS WATER AS UG/L MET101	TOTAL METALS WATER PB UG/L MET1101	TOTAL METALS WATER SB UG/L MET1201	TOTAL METALS WATER SE UG/L MET1211	TOTAL METALS WATER TL UG/L MET1721
90FS15S16	RW1 5-18-90 107	0.2u		2u	2u	2u	2u	2u
17	RW2 5-18-90 126	0.2u		2u	4	2u	2u	22u
18	RW3 5-18-90 144	0.2u		2u	2u	2u	2u	6
~~19~~	~~RWH~~							
✓ D17	DUP 5-18-90 135	0.2u		2u	4	2u	2u	2u
90FS02R55	BLANK 5-18-90 044	0.2u		2u	2u	2u	2u	2u
		g Gary		B Yuen	B Yuen	B Yuen	B. Yuen	B. Yuen
		5/21/90		5-16-90	5-16-90	5-18-90	5-23-90	5-18-90

Shipment is Complete

Rec'd 5-31-90

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM METALS

TFA302

Jun for cont 31 May 90

DIVISION/BRANCH FIT SUPERFUND SAMPLING DATE 5.9.90 LAB ARRIVAL DATE 5.10.90 DUE DATE 5.~~30~~ 31.90

SOW NUMBER TFA ~~[illegible]~~ DATASET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLID S AS MG/KG (DRY WT.) MET403	SEDIMENTS SOLID S BA MG/KG (DRY WT.) MET4203	SEDIMENTS SOLID S BE MG/KG (DRY WT.) MET4213	SEDIMENTS SOLID S TL MG/KG (DRY WT.) MET4223	
0FS15S20	S1	X	X 1.4	X 0.2u	X 0.4u	X 0.2u	5-188029
21	S2	X	X 1.5	X 0.6	X 0.2u	X 0.2u	5-188033
22	S3	X	X 1.2	X 0.2u	X 1.1u	X 0.2u	5-188037
23	S4	X	X 0.4u	X 0.2u	X 0.2u	X 0.2u	5-188041
24	S5	X	X 0.4	X 0.2u	X 0.2u	X 0.2u	5-188045
25	S6	X	X 1.0	X 0.2u	X 0.2u	X 0.2u	5-188049
26	S7	X	X 0.7	X 0.2u	X 1.1u	X 0.2u	5-188053
27	S8	X	X 2.3	X 0.2u	X 0.3	X 0.2u	5-188057
			J Barry 5/23/90	B. Yuen 5-23-90	B. Yuen 5-23-90	B. Yuen 5-23-90	

Shipment is not Complete

CRL V.2; 3/85

312 886 2591

JAN 25 '90 15:09

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

TFA302

JVM for CMT
31 May 90

DIVISION/BRANCH FIT SUPERFUND SAMPLING DATE 5.9.90 LAB ARRIVAL DATE 5.10.90 DUE DATE 5.~~30~~ 31.90

DU NUMBER TFA-[redacted] DATASET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S PB MG/KG (DRY WT.) MET4193	SEDIMENTS SOLID CD MG/KG (DRY WT.) MET	
90FS15S20	S1	*	0.14	5-188029
21	S2	*	1.4	5-188033
22	S3	4.1	0.12	5-188037
23	S4	7.8	0.05	5-188041
24	S5	5.0	0.06	5-188045
25	S6	3.8	0.07	5-188049
26	S7	2.3	0.03	5-188053
27	S8	13	0.43	5-188057
		J Garry 5/24/90	J Garry 5/22/90	
	Shipment is Not Complete			
		* Reported by ICP		

---

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-16-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

B L Green
5-16-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	.1834133	.9996967	.02399	2u Limit = ±2 µg/l
AQC 23.5 UG/L	24.16377	.9995097	2.283999E-02	102.8%R Limit=100±10%
90FS15S13	1.746414	.9997598	.0209	2u SF7170
90FS15D13	1.940224	.999936	.02041	2u
90FS15S14	-3.683747E-02	.9997609	.02172	2u
90FS15S15	-4.866477E-02	.9997456	.02055	2u
90FS02R54	-.3666834	.9996749	.02209	2u
AQC 23.5 UG/L	23.88122	.9993609	.02172	101.6%R Limit=100±10%
90FS15S16	1.804074	.9999319	.02062	2u SF7171
90FS15S17	1.466403	.9999501	.02039	2u
90FS15D17	1.408935	.999927	.02037	2u
90FS15S18	1.568725	.9994932	.01957	2u
90FS02R55	-9.638849E-02	.999667	.02075	2u
AQC 23.5 UG/L	23.04857	.9999968	.02142	98.1%R Limit=100±10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	8.999999E-03	4.400086E-03	-4.599914E-03	-104.5415 %
10	.234	.2443001	1.030007E-02	4.216155 %
20	.491	.4842001	-6.799966E-03	-1.404371 %
30	.723	.7241	1.100004E-03	.1519132 %

AQC 23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.551	.5519001	9.001493E-04	.1631 %
10	.788	.7803	-7.699967E-03	-.9867956 %
20	.996	1.0087	.0126999	1.259037 %
30	1.243	1.2371	-5.900145E-03	-.4769336 %

90FS15S13

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.037	3.650006E-02	-4.999414E-04	-1.3697 %
10	.249	.2455	-3.49997E-03	-1.425649 %
20	.446	.4545	8.50001E-03	1.870189 %
30	.668	.6635	-4.500032E-03	-.6782264 %

90FS15D13

SPIKE	MEASURED	CALC.	ERROR	PER CENT

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.037	3.959998E-02	2.599977E-03	6.565603 %
10	.248	.2437	-4.300028E-03	-1.764476 %
20	.447	.4478	7.999838E-04	.1786476 %
30	.651	.6519	8.999109E-04	.1380443 %

90FS15S14

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	-8.001099E-04	-5.80011E-03	724.9142 %
10	.209	.2163999	7.399902E-03	3.41955 %
20	.431	.4335999	2.599925E-03	.5996138 %
30	.655	.6508	-4.200042E-03	-.645366 %

B. Green
5-16-90

90FS15S15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-1.000061E-03	-1.000061E-03	100 %
10	.199	.2045	5.499974E-03	2.689474 %
20	.418	.41	-7.999986E-03	-1.951216 %
30	.612	.6155001	3.500044E-03	.5686506 %

90FS02R54

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.014	-8.100036E-03	5.899964E-03	-72.83873 %
10	.218	.2128	-5.200029E-03	-2.443623 %
20	.441	.4337	-7.300049E-03	-1.683203 %
30	.648	.6546	6.599963E-03	1.008244 %

AQC 23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.511	.5187002	7.700205E-03	1.484519 %
10	.742	.7359002	-6.09982E-03	-.8288924 %
20	.964	.9531002	-1.089978E-02	-1.143614 %
30	1.161	1.1703	9.300232E-03	.7946877 %

90FS15S16

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.036	3.720001E-02	1.200013E-03	3.22584 %
10	.247	.2434	-3.599987E-03	-1.479041 %
20	.446	.4496	3.600001E-03	.800712 %
30	.657	.6558001	-1.199961E-03	-.1829766 %

90FS15S17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.032	2.989996E-02	-2.100039E-03	-7.023552 %
10	.232	.2338	1.800001E-03	.7698891 %
20	.435	.4377001	2.700031E-03	.6168678 %
30	.644	.6416001	-2.399922E-03	-.3740526 %

90FS15D17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.026	2.870001E-02	2.700012E-03	9.407704 %
10	.237	.2324	-4.600004E-03	-1.979347 %
20	.435	.4361	1.100004E-03	.2522366 %
30	.639	.6398	7.99954E-04	.1250319 %

90FS15S18

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.03	3.069995E-02	6.999523E-04	2.279978 %
10	.233	.2264	-6.599993E-03	-2.915191 %
20	.411	.4221001	1.110002E-02	2.629714 %
30	.623	.6178001	-5.199909E-03	-.8416815 %

90FS02R55

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	-2.000061E-03	-5.000062E-03	249.9955 %
10	.202	.2054999	3.499925E-03	1.703127 %
20	.405	.4129999	7.999927E-03	1.937029 %
30	.627	.6204999	-6.500125E-03	-1.047563 %

AQC 23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.493	.4937002	7.002056E-04	.1418281 %
10	.709	.7079002	-1.099825E-03	-.1553644 %
20	.922	.9221002	1.001954E-04	.010866 %
30	1.136	1.1363	3.000498E-04	2.640586E-02 %

B. Yuen
5-16-90

Begin Element - AS
-0.000
0.000 AZ

0	0.009	Blank
10	0.234	
20	0.491	
30	0.723	
0	0.551	AQC
10	0.788	
20	0.996	
30	1.243	
0	0.037	90FS15S13
10	0.249	
20	0.446	
30	0.668	
0	0.037	90FS15D13
10	0.248	
20	0.447	
30	0.651	
0	0.005	90FS15S14
10	0.209	
20	0.431	
30	0.655	
0	0.000	90FS15S15
10	0.199	
20	0.418	
30	0.612	
0	-0.014	90FS02R54
10	0.218	
20	0.441	
30	0.648	
0	0.511	AQC
10	0.742	
20	0.964	
30	1.161	
	0.007	Blank cup
0	0.036	90FS15S16
10	0.247	
20	0.446	
30	0.657	
0	0.032	90FS15S17
10	0.232	
20	0.435	
30	0.644	
0	0.026	90FS15D17
10	0.237	
20	0.435	
30	0.639	
0	0.030	90FS15S18
10	0.233	
20	0.411	
30	0.623	
0	0.003	90FS02R55
10	0.202	
20	0.405	
30	0.627	
0	0.493	AQC
10	0.709	
20	0.922	
30	1.136	
	0.005	Blank cup

SF7170

SF7171

B. [illegible]
5-16-90

AAS RUN LOG

Element As

Analyst B. Yuen

Date 5-16-90

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV=23.5 µg/l
6		10	
7		20	
8		30	
9	90FS15S13	0	SF7170
10		10	
11		20	
12		30	
13	90FS15D13	0	
14		10	
15		20	
16		30	
17	90FS15S14	0	B. Yuen
18		10	5-16-90
19		20	
20		30	
21	90FS15S15	0	
22		10	
23		20	
24		30	
25	90FS02R54	0	
26		10	
27		20	

AAS RUN LOG

Element As

Analyst B. Green

Date 5-16-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV=23.5 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1	90FS15S16	0	SF7171
2		10	
3		20	
4		30	
5	90FS15S17	0	
6		10	
7		20	
8		30	B. Green
9	90FS15D17	0	
10		10	5-16-90
11		20	
12		30	
13	90FS15S18	0	
14		10	
15		20	
16		30	
17	90FS02R55	0	
18		10	
19		20	
20		30	

AAS RUN LOG

Element As

Analyst B. Yuen

Date 5-16-90

Data Set SF7171

	ID	spike	comment
21	AQC	0	TV=23.5 µg/l
22		10	
23		20	
24		30	
25	Blank Cup	0	
26		10	
27		20	
28		30	
29	B.Y. ~~AQC~~	0	
30		10	
31		20	
32		30	
33	B.Y. ~~Blank Cup~~	0	B. Yuen
	Start Wheel 3		
1		0	5-16-90
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst B. Yuen
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5-16-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8327
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 44
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
0.18	0.02399		
		24.16	
		23.88	
		23.05	
			B Yuen 5-16-90

Blank cup absorbance
0.007
0.005

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-21-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

J Ganz 5/21/90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-2.438727E-02	.9999785	.0205	Limit = ± 2 ug/L
AQC TV=23.5 UG/L				%R = 105.2 Limit = 100 ± 10%
	24.71606	.9997864	2.024999E-02	
90FS15S23 SPIKE 1/15				Adj. Conc. = 16.47 mg/Kg
	12.01854	.9996243	.01833	Spike = 18.27 mg/kg
90FS15S25 SPIKE 1/10				Adj. Conc = 18.43 mg/kg
	19.38697	.9998072	1.827001E-02	Spike = 19.01 mg/Kg
LCS 1/500	20.95309	.9999298	.02004	Adj. Conc = 957.3 mg/kg Limit = 635 ± 1139
90FS15S25	4.465829	.9233112	.01039	Rerun
90FS15S23	5.077054	.9978826	.01168 verify on west inst.	~~Adj. Conc~~ Not used ~~Per~~ reruns on west inst used
AQC TV=23.5 UG/L				
	24.2937	.9995869	.01791	%R = 103.4 Limit = 100 ± 10%

90FS15S23 spike %R = 90.1 90FS15S25 spike %R = 91.7 Limit = 100 ± 20%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-4.99939E-04	1.500061E-03	-300.0489 %
10	.207	.2045001	-2.499923E-03	-1.222456 %
20	.409	.4095001	5.00083E-04	.1221204 %
30	.614	.6145001	5.000234E-04	8.137076E-02 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.5030001	.5005001	-2.499998E-03	-.4995 %
10	.703	.703	-5.960465E-08	-8.478613E-06 %
20	.898	.9054999	7.499874E-03	.8282579 %
30	1.113	1.108	-5.000234E-03	-.4512847 %

90FS15S23 SPIKE 1/15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.215	.2202999	5.299926E-03	2.405778 %
10	.413	.4036	-9.40004E-03	-2.329049 %
20	.584	.5869	2.900005E-03	.4941224 %
30	.769	.7702	1.20002E-03	.1558063 %

90FS15S25 SPIKE 1/10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.352	.3542	2.199948E-03	.6211034 %
10	.537	.5369	-1.000166E-04	-1.862853E-02 %
20	.726	.7196	-6.399989E-03	-.8893814 %

30	.896	.9023001	4.300058E-03	.4765663 %

LCS 1/500

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.422	.4199001	-2.099961E-03	-.5001098 %
10	.619	.6203001	1.300037E-03	.2095819 %
20	.817	.8207001	3.700078E-03	.4508441 %
30	1.024	1.0211	-2.900005E-03	-.2840079 %

90FS15S25

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.083	4.639996E-02	-3.660004E-02	-78.87945 %
10	.13	.1503	2.029996E-02	13.5063 %
20	.185	.2542	6.919995E-02	27.22265 %
30	.411	.3580999	-5.290008E-02	-14.77243 %

90FS15S23

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.056	5.929999E-02	3.299985E-03	5.5649 %
10	.187	.1761	-1.090002E-02	-6.189677 %
20	.281	.2929	1.190001E-02	4.062823 %
30	.414	.4097	-4.300028E-03	-1.049555 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.441	.4351	-5.900026E-03	-1.356016 %
10	.608	.6142	6.199956E-03	1.009436 %
20	.788	.7933	5.299926E-03	.668086 %
30	.978	.9723998	-5.600155E-03	-.5759107 %

J Gary 5/21/90

J Gary 5/18/90

Begin Element - AS

0.000		
0.000	AZ	
-0.002	+0	Blank
0.207	+10	
0.409	+20	
0.614	+30	
0.503	+0	AQC TV = 23.5 mg/L
0.703	+10	
0.898	+20	
1.113	+30	
0.215	+0	90FS15S23 Spike 1/15
0.413	+10	
0.584	+20	
0.769	+30	
0.352	+0	90FS15S25 Spike 1/10
0.537	+10	
0.726	+20	
0.999	+30	
0.422	+0	LCS 1/500
0.619	+10	
0.817	+20	
1.024	+30	
0.083	+0	90FS15S25
0.130	+10	
0.185	+20	
0.411	+30	
0.056	+0	90FS15S23
0.187	+10	
0.281	+20	
0.414	+30	
0.441	+0	AQC TV=23.5 mg/L
0.608	+10	
0.788	+20	
0.978	+30	
0.001		Blank
0.123		
0.205		
0.277		
0.344		
0.010		
0.169	qwk 5/18	
0.289	not used	
0.404		
0.073		
0.521		
0.107		
0.210		
0.251		
0.611		
0.587		
0.096		
-0.486		

AAS RUN LOG

Element AS

Date 5/18/90

J Kamy 5/18/90

Analyst JWG

Data Set SF7171

	ID	spike	comment.
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=23.5 ug/L	0	
6		10	
7		20	
8		30	
9	90FS15523 Spike 1/15	0	
10		10	
11		20	
12		30	
13	90FS15525 Spike 1/10	0	
14		10	
15		20	
16		30	
17	LCS 1/500	0	
18		10	
19		20	
20	~~90FS15525~~ qmb spike	30	
21	90FS15525	0	
22		10	
23		20	
24		30	
25	90FS15523	0	
26		10	
27		20	

AAS RUN LOG

Element As

Date 5/18/90

J Barry 5/18/90

Analyst JWG

Data Set SF7171

	ID	spike	comment
28	90FS15523	30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

J Harry 5/18/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/18/90
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8327
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 56
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.024	.0205	24.72	90FS15523 spike %R = 90.1
		24.29	90FS15525 spike %R = 91.7
			LCS = 957.3 mg/kg

Blank cup absorbance
.001

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-21-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

J Ganz 5/21/90

SAMPLE NO.	CONC.	R VALUE	SLOPE
BLANK	-.4191995	.9999847	.01646
AQC TV=23.5 UG/L	23.49785	.999901	.01641
DIGESTION BLANK B	-.3448301	.9999968	.01479
90FS15S23 SPIKE 1/15	10.57143	.9999806	.0175
90FS15S25 SPIKE 1/10	21.38158	.9996967	.0152
LCS 1/500	22.39824	.9998104	.01597
90FS15S25	6.040038	.9804928	.01149
AQC TV=23.5 UG/L	26.74928	.9994497	.01412

Limit = ± 2 ug/L
%R = 100.0
Adj. Conc = 0.24 mg/Kg

Rerun - AQC out

%R = 113.8 - Restandardize
Digestion Blank B result < IDL
∴ acceptable

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-6.900025E-03	-9.000245E-04	13.04379 %
10	.157	.1577	6.999821E-04	.4438695 %
20	.321	.3223	1.300007E-03	.4033531 %
30	.488	.4869001	-1.099974E-03	-.2259137 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.383	.3855999	2.599865E-03	.6742392 %
10	.554	.5496999	-4.300118E-03	-.7822664 %
20	.713	.7138	7.99954E-04	.1120698 %
30	.877	.8779	9.000301E-04	.1025208 %

DIGESTION BLANK B

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-5.100037E-03	-1.000366E-04	1.961488 %
10	.143	.1428	-2.000481E-04	-.1400897 %
20	.29	.2907	6.999672E-04	.2407868 %
30	.439	.4386	-4.000664E-04	-9.121442E-02 %

90FS15S23 SPIKE 1/15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.185	.185	0	0 %
10	.359	.36	9.999573E-04	.277766 %

20	.537	.535	-2.000034E-03	-.3738381 %
30	.709	.7099999	9.998679E-04	.1408265 %

90FS15S25 SPIKE 1/10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.321	.325	3.999978E-03	1.230763 %
10	.484	.477	-7.000059E-03	-1.467518 %
20	.627	.629	1.999974E-03	.317961 %
30	.78	.7809999	9.999275E-04	.1280317 %

LCS 1/500

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.359	.3577	-1.300037E-03	-.3634434 %
10	.513	.5174	4.399956E-03	.8503973 %
20	.682	.6771	-4.900038E-03	-.7236802 %
30	.835	.8368	1.800001E-03	.2151053 %

90FS15S25

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.081	6.940003E-02	-1.159997E-02	-16.71465 %
10	.188	.1843	-3.699973E-03	-2.007582 %
20	.257	.2992	.0422	14.10428 %
30	.441	.4141	-2.690002E-02	-6.496022 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.372	.3777	5.699933E-03	1.509117 %
10	.526	.5189	-7.100046E-03	-1.368288 %
20	.663	.6601	-2.900005E-03	-.4393281 %
30	.797	.8013001	4.300058E-03	.5366352 %

J Garry 5/21/90

J Harry 5/18/90

Begin Element - AS

0.000	AZ	
-0.006	+0	Blank
0.157	+10	
0.321	+20	
0.488	+30	
0.383	+0	AQC TV= 23.5 µg/L
0.554	+10	
0.713	+20	
0.877	+30	
-0.005	+0	Digestion Blank B
0.143	+10	
0.290	+20	
0.439	+30	
0.185	+0	90FS15523 Spike 1/15
0.359	+10	
0.537	+20	
0.709	+30	
0.321	+0	90FS15525 Spike 1/10
0.484	+10	
0.627	+20	
0.780	+30	
0.359	+0	LCS 1/500
0.513	+10	
0.682	+20	
0.835	+30	
0.081	+0	90FS15525
0.188	+10	
0.257	+20	
0.441	+30	
0.372	+0	AQC TV= 23.5 µg/L
0.526	+10	
0.663	+20	
0.797	+30	
-0.005		Blank

AAS RUN LOG

Element As

Date 5/18/90

J Barry 5/18/90

Analyst JWG

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=23.5 ug/L	0	
6		10	
7		20	
8		30	
9	Digestion Blank B	0	
10		10	
11		20	
12		30	
13	90FS15S23 Spike 1/15	0	
14		10	
15		20	
16		30	
17	90FS15S25 Spike 1/10	0	
18		10	
19		20	
20		30	
21	LCS 1/500	0	
22		10	
23		20	
24		30	
25	90FS15S25	0	
26		10	
27		20	

AAS RUN LOG

Element As

Date 5/18/90

J Harry 5/18/90

Analyst JWG

Data Set SF7171

	ID	spike	comment
28	90FS15525	30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

J Barry 5/18/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/18/90
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8327
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 56
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.419	.01646	23.50 26.75	Blank B < 0.2 mg/Kg

Blank cup absorbance
-.005

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-21-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

J Ganz 5/21/90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-4.902094E-02	.9998453	.01836	Limit = ± 2 ug/L
AQC TV=23.5 UG/L				
	23.70748	.9997612	1.853001E-02	%R = 100.9 Limit=100±10
DIGESTION BLANK A				Adj. Conc = 0.2 u mg/kg
	.1376147	.9998232	.0109	
DIGESTION BLANK B				Rerun
	-.2078729	.9722211	.01347	
90FS13S23 SPIKE 1/10				
	40.55234	.9640715	8.690002E-03	Rerun
90FS15S25 SPIKE 1/10				Rerun- AQC out
	20.74014	.9977914	.01243	
LCS 1/500	21.01838	.9986832	1.796999E-02	Rerun- AQC out
AQC TV=23.5 UG/L				
	26.11388	.9999306	.01598	%R = 111.1 - Restandardize

Digestion Blank A result <IDL ∴ acceptable

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-9.000244E-04	2.099976E-03	-233.3243 %
10	.188	.1827	-5.300015E-03	-2.900939 %
20	.362	.3663	4.299999E-03	1.173901 %
30	.551	.5499	-1.100004E-03	-.2000371 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.44	.4392998	-7.002056E-04	-.1593913 %
10	.62	.6245998	4.59981E-03	.7364411 %
20	.817	.8099	-7.100046E-03	-.8766572 %
30	.992	.9951999	3.199935E-03	.3215369 %

DIGESTION BLANK A

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	.0015	-.0015	-100 %
10	.107	.1105	3.499992E-03	3.167414 %
20	.222	.2195	-2.500028E-03	-1.138965 %
30	.328	.3285	4.999638E-04	.152196 %

DIGESTION BLANK B

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	-2.800049E-03	-6.800049E-03	242.8547 %

10	.152	.1319	-2.010003E-02	-15.23884 %
20	.206	.2666	6.059999E-02	22.73068 %
30	.435	.4013	-3.369999E-02	-8.397704 %

90FS13S23 SPIKE 1/10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.381	.3523999	-.0286001	-8.115807 %
10	.406	.4393	3.329995E-02	7.580231 %
20	.5070001	.5262	1.919991E-02	3.648786 %
30	.637	.6131	-2.390003E-02	-3.898228 %

90FS15S25 SPIKE 1/10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.259	.2577999	-1.20008E-03	-.4655083 %
10	.388	.3820999	-5.900085E-03	-1.544121 %
20	.491	.5064	1.539993E-02	3.041062 %
30	.639	.6307	-8.300066E-03	-1.316009 %

LCS 1/500

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.373	.3777002	4.700214E-03	1.24443 %
10	.556	.5574002	1.400173E-03	.2511971 %
20	.754	.7371001	-1.689988E-02	-2.292753 %
30	.906	.9168	.0108	1.178011 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.419	.4172999	-1.700074E-03	-.4073985 %
10	.576	.5771	1.100004E-03	.1906089 %
20	.734	.7369	2.899945E-03	.393533 %
30	.899	.8967	-2.299965E-03	-.2564921 %

J Harry 5/21/90

BEGIN DATA FILE: AS518.DF

J Garry 5/18/90

Begin Element - AS

0.001	
0.000 AZ	
-0.001	
0.254	
0.500	
0.760	
0.608	
0.841	
1.080	
1.311	

Begin Element - AS

-0.002		
0.000 AZ		
-0.003	+0	Blank
0.188	+10	
0.362	+20	
0.551	+30	
0.440	+0	AQC TV=23.5 µg/L
0.620	+10	
0.817	+20	
0.992	+30	
0.003	+0	Digestion Blank A
0.107	+10	
0.222	+20	
0.328	+30	
0.004	+0	Digestion Blank B
0.152	+10	
0.206	+20	
0.435	+30	
0.381	+0	90FS15S23 Spike 1/10
0.406	+10	
0.507	+20	
0.637	+30	
0.259	+0	90FS15S25 Spike 1/10
0.388	+10	
0.491	+20	
0.639	+30	
0.373	+0	LCS 1/500
0.556	+10	
0.754	+20	
0.906	+30	
0.419	+0	AQC TV= 23.5 µg/L
0.576	+10	
0.734	+20	
0.899	+30	
0.002		Blank

AAS RUN LOG

Element As J Garry 5/18/90 Analyst JWG

Date 5/18/90 Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=23.5ug/L	0	
6		10	
7		20	
8		30	
9	Digestion Blank A	0	
10		10	
11		20	
12		30	
13	Digestion Blank B	0	~~Rerun~~ [illegible]
14		10	
15		20	
16		30	
17	90FS15S23 Spike 1/10	0	~~Rerun~~ [illegible]
18		10	
19		20	
20		30	
21	90FS15S25 Spike 1/10	0	
22		10	
23		20	
24		30	
25	LCS 1/500	0	
26		10	
27		20	

AAS RUN LOG

Element As

Date 5/18/90

J Harry 5/18/90

Analyst JWG

Data Set SF7171

	ID	spike	comment
28	LCS 1/500	30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

J Gary 5/18/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/18/90
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8327
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 56
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.049	.01836	23.71 26.11	Dig. Blank A < 0.2 mg/Kg

Blank cup absorbance
.002

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-23-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

J Ganz 5/23/90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	.1911704	.9991181	.02197	Limit = ±2 ug/L
AQC TV=23.5 UG/L				%R = 108.9 Limit = 100±10%
	25.58824	.9997684	.0204	
90FS15S23 1/2	1.36442	.9998599	.01158	Adj. Conc. = ~~0.24~~ 0.44 mg/kg
90FS15S21 1/2	9.186611	.9999316	.01045	Rerun straight
90FS15S22	12.07613	.9975309	8.670001E-03	Adj. Conc. = 1.15 mg/kg
90FS15S26	8.194011	.9992266	9.690001E-03	Adj. Conc. = 0.73 mg/kg
90FS15S23	4.498385	.9937154	.01236	CORR<0.995 - use diluted sample result
AQC TV=23.5 UG/L				%R = 103.9 Limit = 100± 10%
	24.42306	.9997612	1.924001E-02	
90FS15S23 DUPLICATE 1/2				Adj Conc. = ~~0.24~~ 0.44 mg/kg
	.8155984	.9997939	.0141	Difference < 0.08 mg/kg
90FS15S24	4.766349	.9989012	.0107	Adj. Conc. = 0.43 mg/kg
90FS15S27 1/2	10.8366	.9991463	.01016	Rerun straight
90FS15S21	15.73219	.9995756	.01038	Adj. Conc. = 1.47 mg/kg
90FS15S27	23.15502	.9999017	.00916	Adj. Conc. = 2.26 mg/kg
AQC TV=23.5 UG/L				
	25.33371	.9994698	.01813	%R = 107.8 Limit = 100±10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	4.200013E-03	7.200013E-03	171.4284 %
10	.227	.2239	-3.100008E-03	-1.38455 %
20	.459	.4436	-1.540002E-02	-3.471601 %
30	.652	.6633	1.129997E-02	1.703598 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.526	.522	-4.000008E-03	-.7662851 %
10	.718	.726	8.000016E-03	1.101931 %
20	.934	.9300001	-3.999949E-03	-.430102 %
30	1.134	1.134	1.192093E-07	1.051228E-05 %

90FS15S23 1/2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.018	1.579999E-02	-2.200011E-03	-13.92413 %
10	.128	.1316	3.599972E-03	2.735541 %
20	.248	.2474	-6.000251E-04	-.2425324 %
30	.364	.3632	-8.000136E-04	-.2202681 %

J Barry 5/23/90

90FS15S21 1/2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.097	9.600006E-02	-9.999424E-04	-1.041606 %
10	.2	.2005	5.000383E-04	.2493956 %
20	.303	.305	2.000004E-03	.655739 %
30	.411	.4095	-1.500011E-03	-.3663029 %

90FS15S22

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.111	.1047	-6.299988E-03	-6.017179 %
10	.18	.1914	1.140001E-02	5.95612 %
20	.282	.2781	-3.899992E-03	-1.40237 %
30	.366	.3648	-1.199961E-03	-.3289366 %

90FS15S26

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.075	7.939997E-02	4.399963E-03	5.541518 %
10	.181	.1763	-4.70002E-03	-2.665922 %
20	.277	.2732	-3.800035E-03	-1.390935 %
30	.366	.3701	4.099995E-03	1.107807 %

90FS15S23

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.042	5.560004E-02	1.360004E-02	24.46048 %
10	.205	.1792	-2.579998E-02	-14.39731 %
20	.292	.3028	1.080003E-02	3.566722 %
30	.425	.4264	1.399994E-03	.3283288 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.467	.4698998	2.899766E-03	.6171031 %
10	.663	.6622998	-7.001758E-04	-.1057189 %
20	.862	.8546999	-7.300139E-03	-.8541172 %
30	1.042	1.0471	5.099893E-03	.4870493 %

90FS15S23 DUPLICATE 1/2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.014	1.149994E-02	-2.500062E-03	-21.73979 %
10	.151	.1525	1.499966E-03	.9835844 %
20	.289	.2935	4.499972E-03	1.53321 %
30	.438	.4345	-3.499985E-03	-.8055201 %

J Gary 5/23/90

90FS15S24

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.048	5.099994E-02	2.999939E-03	5.882241 %
10	.166	.158	-8.000031E-03	-5.063312 %
20	.258	.265	.007	2.641509 %
30	.374	.372	-2.000004E-03	-.5376355 %

90FS15S27 1/2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.114	.1100999	-3.900088E-03	-3.542318 %
10	.209	.2116999	2.699927E-03	1.275355 %
20	.307	.3133	6.299943E-03	2.010834 %
30	.42	.4149	-5.100012E-03	-1.229215 %

90FS15S21

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.161	.1633001	2.300054E-03	1.408483 %
10	.268	.2671	-8.999705E-04	-.3369414 %
20	.376	.3709	-5.100012E-03	-1.375037 %
30	.471	.4747	3.699988E-03	.7794372 %

90FS15S27

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.212	.2121	9.997189E-05	4.713433E-02 %
10	.305	.3037	-1.300037E-03	-.4280662 %
20	.393	.3953	2.299965E-03	.5818276 %
30	.488	.4869	-1.100034E-03	-.225926 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.455	.4593001	4.300028E-03	.9362133 %
10	.642	.6406	-1.399994E-03	-.2185442 %
20	.832	.8219	-1.010001E-02	-1.228861 %
30	.996	1.0032	7.199943E-03	.7176978 %

BEGIN DATA FILE: AS522.DF

J Gary 5/22/90

Begin Element - AS

-0.015		
0.000	AZ	
-0.008	+0	
0.227	+10	Blank
0.459	+20	
0.652	+30	
0.526	+0	
0.718	+10	AQC TV= 23.5 µg/L
0.934	+20	
1.134	+30	
0.018	+0	
0.138	+10	90FS15523 1/2
0.248	+20	
0.364	+30	
0.097	+0	
0.200	+10	90FS15521 1/2
0.303	+20	
0.411	+30	
0.111	+0	
0.180	+10	90FS15522
0.282	+20	
0.386	+30	
0.075	+0	
0.181	+10	90FS15526
0.277	+20	
0.383	+30	
0.042	+0	
0.205	+10	90FS15523
0.292	+20	
0.425	+30	
0.457	+0	
0.653	+10	AQC TV= 23.5 µg/L
0.852	+20	
1.042	+30	
-0.010		Blank
0.014	+0	
0.151	+10	90FS15523 duplicate 1/2
0.289	+20	
0.438	+30	
0.048	+0	
0.165	+10	90FS15524
0.258	+20	
0.374	+30	
0.114	+0	
0.209	+10	90FS15527 1/2
0.307	+20	
0.420	+30	
0.161	+0	
0.268	+10	90FS15521
0.376	+20	
0.471	+30	
0.212	+0	
0.305	+10	90FS15527
0.393	+20	
0.488	+30	
0.455	+0	
0.642	+10	AQC TV = 23.5 µg/L
0.832	+20	
0.996	+30	

-0.01E Blank

J Gary 5/22/90

AAS RUN LOG

Element As

Date 5/22/90

J Harry 5/22/90

Analyst JWG

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=23.5 ug/L	0	
6		10	
7		20	
8		30	
9	90FS15523 1/2	0	
10		10	
11		20	
12		30	
13	90FS15521 1/2	0	
14		10	
15		20	
16		30	
17	90FS15522	0	
18		10	
19		20	
20		30	
21	90FS15526	0	
22		10	
23		20	
24		30	
25	90FS15523	0	
26		10	
27		20	

AAS RUN LOG

Element As J Gary 5/22/90 Analyst JWG

Date 5/22/90 Data Set SF7171

	ID	spike	comment :
28	90FS15523	30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1	90FS15523 Duplicate 1/2	0	
2		10	
3		20	
4		30	
5	90FS15524	0	
6		10	
7		20	
8		30	
9	90FS15527 1/2	0	
10		10	
11		20	
12		30	
13	90FS15521	0	
14		10	
15		20	
16		30	
17	90FS15527	0	
18		10	
19		20	
20		30	

AAS RUN LOG

Element AS

Date 5/22/90

J Garz 5/22/90

Analyst JWG

Data Set 5F7171

	ID	spike	comment
21		0	
22		10	
23		20	
24		30	
25		0	
26		10	
27		20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 3		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	

[illegible] 5/22/90

J Garry 5/22/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JW6
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/22/90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # ~~83~~ 8316
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 43
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
.191	.02197	25.59	90FS15523 duplicate difference < 0.4 mg/kg
		24.42	IDL = ~~0.2~~ 0.4 due to dilution
		25.33	

Blank cup absorbance
-.010
-.012

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-23-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

J Ganz 5/23/90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	1.636261E-02	.9996231	2.444001E-02	Limit = ± 2 ug/L
AQC TV=23.5 UG/L				%R = 103.4 Limit = 100±10
	24.29497	.9999286	.02312	
90FS15S27	18.05216	.9974268	6.519937E-03	Verify on west instrument Rerun was used
90FS15S23 DUPLICATE				
	2.725174	.9946666	.00866	Rerun
90FS15S25 DUPLICATE				Adj. Conc. = 0.97 mg/Kg
	10.3996	.9996535	.01001	
90FS15S20	14.40273	.9996854	.01465	Adj. Conc. = 1.41 mg/Kg
90FS15S25	11.10905	.9986631	.01082	Adj. Conc. = 1.03 mg/Kg
AQC TV=23.5 UG/L				%RPD = 6.0 Limit = 20%
	21.88074	.9992768	.0218	%R = 93.1 Limit = 100±10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	3.999024E-04	7.399903E-03	1850.427 %
10	.252	.2448	-7.200048E-03	-2.941197 %
20	.497	.4892	-7.800013E-03	-1.594443 %
30	.726	.7336001	7.600069E-03	1.035996 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.56	.5616998	1.699805E-03	.3026181 %
10	.793	.7928999	-1.001358E-04	-1.262906E-02 %
20	1.029	1.0241	-4.900217E-03	-.4784902 %
30	1.252	1.2553	3.299832E-03	.2628721 %

90FS15S27

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.121	.1177	-3.299989E-03	-2.803729 %
10	.182	.1829	8.999854E-04	.4920643 %
20	.24	.2481	8.099943E-03	3.264791 %
30	.319	.3132999	-5.700112E-03	-1.819379 %

90FS15S23 DUPLICATE

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	.026	2.360001E-02	-2.399994E-03	-10.16946 %
10	.099	.1102	.0112	10.16334 %
20	.212	.1968	-1.519999E-02	-7.723572 %
30	.277	.2834	6.399989E-03	2.258289 %

90FS15S25 DUPLICATE

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.101	.1041	3.099971E-03	2.977878 %
10	.209	.2042	-4.800007E-03	-2.35064 %
20	.304	.3043	3.0002E-04	9.859348E-02 %
30	.403	.4044001	1.400054E-03	.3462051 %

90FS15S20

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.214	.211	-3.000006E-03	-1.421804 %
10	.356	.3575	1.499951E-03	.4195667 %
20	.498	.504	5.999953E-03	1.190467 %
30	.655	.6505	-4.500032E-03	-.6917805 %

90FS15S25

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.127	.1202	-6.800056E-03	-5.657287 %
10	.22	.2284	8.399949E-03	3.677737 %
20	.333	.3366	3.599942E-03	1.069502 %
30	.45	.4448	-5.200058E-03	-1.169078 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.469	.477	7.999986E-03	1.677146 %
10	.701	.695	-6.000042E-03	-.8633154 %
20	.925	.9129999	-1.200014E-02	-1.314364 %
30	1.121	1.131	9.999752E-03	.8841515 %

J Harry
5/23/90

¿¿¿BEGIN DATA FILE: AS522.DF

Begin Element - AS

J Gary 5/22/90

Begin Element - AS

0.003		
0.000	AZ	
-0.007	+0	
0.252	+10	Blank
0.497	+20	
0.726	+30	
0.560	+0	
0.793	+10	AQC TV= 23.5 µg/L
1.029	+20	
1.252	+30	
0.121	+0	
0.182	+10	90FS15S27
0.240	+20	
0.319	+30	
0.026	+0	
0.099	+10	90FS15S23 duplicate
0.212	+20	
0.277	+30	
0.101	+0	
0.209	+10	90FS15S25 duplicate
0.304	+20	
0.403	+30	
0.214	+0	
0.356	+10	90FS15S20
0.498	+20	
0.655	+30	
0.219		
0.374	gmb 5/22	
0.378	problems with autosampler	
0.221	– not used	
0.226		
0.325		
0.127	+0	
0.220	+10	90FS15S25
0.333	+20	
0.450	+30	
0.469	+0	
0.701	+10	AQC TV= 23.5 µg/L
0.925	+20	
1.121	+30	
-0.002		Blank
0.039		
0.141		
0.273		
0.517		
0.057	not used	AQC out of control
0.208		
0.251	gmb 5/22	
0.563		
0.289		
0.416		
0.502		
0.681		
0.159		
0.240		
0.343		

AAS RUN LOG

Element AS

Date 5/22/90

J Gary 5/22/90

Analyst JWG

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=23.5 ug/L	0	
6		10	
7		20	
8		30	
9	90FS15527	0	
10		10	
11		20	
12		30	
13	90FS15523 Duplicate	0	
14		10	
15		20	
16		30	
17	90FS15525 Duplicate	0	
18		10	
19		20	
20		30	
21	90FS15520	0	
22		10	
23		20	
24		30	
25	90FS15525	0	
26		10	
27		20	

AAS RUN LOG

Element As

Date 5/22/90

J Gary 5/22/90

Analyst JWG

Data Set SF7171

	ID	spike	comment
28	90FS15525	30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

J Garry 5/22/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/22/90
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8327
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 55
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
.016	.0244	24.29 21.88	90FS15525 duplicate RPD = 6 %

Blank cup absorbance

-.002

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-24-1990
PARAMETER NAME ----: AS
DATA SET # --------: SF7171

J Ganz 5/31/90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	2.531955E-02	.9998886	.01975	Limit = ±2 ug/L
AQC TV=23.5 UG/L				%R = 106.7 Limit = 100 ± 10%
	25.0844	.9999798	.01896	
90FS15S20	11.61905	.9970242	.01575	Adj. Conc. = 1.1 mg/Kg
AQC TV=23.5 UG/L				
	24.88125	.9988613	.01979	%R = 105.9 Limit = 100 ± 10%
~~N~~	~~1~~	~~1.701412E+38~~	~~1.701412E+38~~	

qwb 5/24

for verification of result of sample (run 786)
the sample in this run is from run 789

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	5.000611E-04	3.500061E-03	699.9268 %
10	.202	.198	-3.999978E-03	-2.020191 %
20	.398	.3955	-2.500028E-03	-.6321183 %
30	.59	.593	2.999962E-03	.5058957 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.475	.4756001	6.000996E-04	.1261773 %
10	.667	.6652001	-1.799882E-03	-.2705774 %
20	.853	.8548001	1.80012E-03	.2105896 %
30	1.045	1.0444	-5.998612E-04	-5.743595E-02 %

90FS15S20

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.197	.1830001	-1.399994E-02	-7.650238 %
10	.318	.3405	2.250004E-02	6.60794 %
20	.501	.498	-2.999991E-03	-.6024079 %
30	.661	.6555	-5.500078E-03	-.8390661 %

AQC TV=23.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.481	.4923999	.0113999	2.31517 %
10	.707	.6903	-1.670009E-02	-2.419251 %
20	.889	.8881999	-8.000732E-04	-9.007805E-02 %
30	1.08	1.0861	6.09994E-03	.561637 %

BEGIN DATA FILE: A9524.DF

J Garry 5/31/90

Begin Element - AS

-0.007	
0.000 AZ	
0.005	
0.284	
0.459	
0.648	
0.507	
0.699	
0.903	
1.082	
0.180	
0.358	
0.401	
0.527	

JWG 5/24
not used

Begin Element - AS

0.001		
0.000 AZ		
-0.009	+0	Blank
0.202	+10	
0.398	+20	
0.590	+30	
0.475	+0	AQC TV=23.5 ug/L
0.657	+10	
0.859	+20	
1.045	+30	
0.187	+0	90FS15520
0.318	+10	
0.501	+20	
0.661	+30	
0.481	+0	AQC TV=23.5 ug/L
0.707	+10	
0.889	+20	
1.080	+30	
-0.000		Blank

AAS RUN LOG

Element As

Date 5/24/90

J Gary 5/31/90

Analyst JWG

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2	"	10	
3		20	
4		30	
5	AQC TV=23.5 ug/L	0	
6		10	
7		20	
8		30	
9	90FS15520	0	
10		10	
11		20	
12		30	
13	AQC	0	
14		10	
15		20	
16		30	
17	Blank Cup	0	
18		10	
19		20	
20		30	
21		0	
22		10	
23		20	
24		30	
25		0	
26		10	
27		20	

J Barry 5/31/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JW6
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/24/90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8316
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 44
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-42-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
.025	.01975	25.08 24.88	

Blank cup absorbance
.000

J Gary 5/31/90

DIGESTION RECORD

Prepared by R. DILG Date 5-22-90 Run Number 789

	Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
36.6628	40	SF 7171	90R5520	0.5359g.				
36.0863	41		S20	0.5465g.		DUP		
35.9152	42		S20	0.5485g.		SPIKE	5ml SED SPIKE +1ml 5ppm Ag	
35.7728	43		S20	0.5410g.		SPIKE	5ml SED SPIKE +1ml 5ppm Ag	
36.6565	45		LCS 0287	0.5331g.				
	46		DIGEST BLK					

COMMENTS: % SOLIDS: OVERNITE @ 105°C (N/18 HRS)
DISH 73.7088g WET SAMPLE 14.1471g
DISH + DRY SAMPLE 87.3321g DRY SAMPLE 13.6233g ⇒ 96.3% SOLIDS

— DRIED SAMPLE HAD RANDOM SIZED DARK ROCKS; NOTICEABLE ORGANIC ODOR

— SAMPLE TRIPLE BALL MIXED/GROUND; PASSED THROUGH PLASTIC SIEVE; FINALLY PASSED THROUGH 50 MESH SIEVE; SAMPLE HAD TENDENCY TO CLUMP AS IF A WAXY SUBSTANCE WERE PRESENT

— 2.5ml CONC. HCl ADDED PRIOR TO BRINGING TO 50ml FINAL VOLUME.

Perkin-Elmer Model 5100 PC
Report Of Analytical Results
May 18, 1990

Data File: CD051890.DAT
Data Collected: 05/18/90 At: 10:42:40 By: JWG

	Cd ug/L		
Blank	0.000		
Standard 1	2.000		
Standard 2	1.500		
Standard 3	1.000		
Standard 4	0.500		
AQC 0.975 UG/L	0.915	%R = 93.8 Limit = 100±10%	
CCB1	-0.013	Limit = ± 0.2 ug/L	
90FS15S13	0.038	> %R = 100.0	
90FS15S13 +1	1.038		
90FS15D13	0.111	> %R = 95.5	
90FS15D13 +1	1.066		
90FS15S14	-0.049	> %R = 105.1	
90FS15S14 +1	1.002		
90FS15S15	0.025	> %R = 95.7	
90FS15S15 +1	0.982		
90FS02R54	0.015	> %R = 98.6	
90FS02R54 +1	1.001		
AQC 0.975 UG/L	0.971	%R = 99.6 Limit = 100±10%	
CCB2	-0.017	Limit = ± 0.2 ug/L	SF7170
90FS15S16	0.025	> %R = 106.5	SF7171
90FS15S16 +1	1.090		
90FS15S17	-0.002	> %R = 107.5	
90FS15S17 +1	1.073		
90FS15D17	0.039	> %R = 102.8	
90FS15D17 +1	1.067		
90FS15S18	-0.002	> %R = 103.5	
90FS15S18 +1	1.033		
90FS02R55	-0.036	> %R = 100.4	
90FS02R55 +1	0.968		
AQC 0.975 UG/L	0.994	%R = 101.9 Limit = 100± 10%	
CCB3	0.008	Limit = ± 0.2 ug/L	

Analyst: J Gary 5/18/90 Supervisor: _____

J Gary 5/18/90

[illegible] Element: [illegible]
[illegible] Time: 10:34
Data Storage File: [illegible].DAT [illegible]
Technique: [illegible] Calibration Type: Linear

ID: Blank   Seq. No.: 00002   A/S Pos.: 1   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 1
Replicate 1   Time: 10:42
Peak Area (A-s): 0.005   Peak Height (A): 0.011
Background Pk Area (A-s): 0.179   Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.005

Auto-zero performed.

ID: Standard 1   Seq. No.: 00003   A/S Pos.: 2   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 2
Replicate 1   Time: 10:45
Peak Area (A-s): 0.135   Peak Height (A): 0.211
Background Pk Area (A-s): 0.204   Background Pk Height (A): 0.096
Blank Corrected Pk Area (A-s): 0.130

Standard number 1 applied. [2.000]
Correlation coefficient: 1.00000   Slope: 0.0648   Int: 0.000

ID: Standard 2   Seq. No.: 00004   A/S Pos.: 3   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 3
Replicate 1   Time: 10:48
Peak Area (A-s): 0.101   Peak Height (A): 0.166
Background Pk Area (A-s): 0.218   Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 1.476

Standard number 2 applied. [1.500]
Correlation coefficient: 0.99992   Slope: 0.0645   Int: -0.000

ID: Standard 3   Seq. No.: 00005   A/S Pos.: 4   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 4
Replicate 1   Time: 10:52
Peak Area (A-s): 0.071   Peak Height (A): 0.114
Background Pk Area (A-s): 0.191   Background Pk Height (A): 0.068
Blank Corrected Pk Area (A-s): 0.066
Concentration (ug/L): 1.023

Standard number 3 applied. [1.000]
Correlation coefficient: 0.99983   Slope: 0.0645   Int: 0.000

J Garry 5/18/90

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ID: Standard 4   Seq. No.: 00006   A/S Pos.: 5   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 5
Replicate 1   Time: 10:55
Peak Area (A-s): 0.042   Peak Height (A): 0.063
Background Pk Area (A-s): 0.181   Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.037
Concentration (ug/L): 0.569

Standard number 4 applied. [0.500]
Correlation coefficient: 0.99917   Slope: 0.0636   Int: 0.002

~~~~~~

ID: AQC 0.975 UG/L   Seq. No.: 00007   A/S Pos.: 37   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1   Time: 10:58
Peak Area (A-s): 0.066   Peak Height (A): 0.109
Background Pk Area (A-s): 0.187   Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.060
Concentration (ug/L): 0.915

Check sample is within range .8775 - 1.0725

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ID: CCB1   Seq. No.: 00008   A/S Pos.: 6   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1   Time: 11:01
Peak Area (A-s): 0.007   Peak Height (A): 0.013
Background Pk Area (A-s): 0.158   Background Pk Height (A): 0.044
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.013

~~~~~~

ID: 90FS15S13   Seq. No.: 00009   A/S Pos.: 7   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 7
Replicate 1   Time: 11:04
Peak Area (A-s): 0.010   Peak Height (A): 0.017
Background Pk Area (A-s): 0.448   Background Pk Height (A): 0.145
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.038

~~~~~~

ID: 90FS15S13 +1   Seq. No.: 00010   A/S Pos.: 8   Date: 05/18/90

uL dispensed: 5 from 36, 15 from 8
Replicate 1   Time: 11:08
Peak Area (A-s): 0.073   Peak Height (A): 0.117
Background Pk Area (A-s): 0.467   Background Pk Height (A): 0.145
Blank Corrected Pk Area (A-s): 0.068
Concentration (ug/L): 1.038

~~~~~~

ID: 90FS15D13   Seq. No.: 00011   A/S Pos.: 9   Date: 05/18/90

J Gary 5/18/90

uL dispensed: 5 from 36, 15 from 9
Replicate 1 — Time: 11:11
Peak Area (A-s): 0.015 — Peak Height (A): 0.016
Background Pk Area (A-s): 0.444 — Background Pk Height (A): 0.141
Blank Corrected Pk Area (A-s): 0.009
Concentration (ug/L): 0.111

~~~~~~

ID: 90FS15D13 +1 Seq. No.: 00012 A/S Pos.: 10 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 10
Replicate 1 — Time: 11:14
Peak Area (A-s): 0.075 — Peak Height (A): 0.116
Background Pk Area (A-s): 0.454 — Background Pk Height (A): 0.139
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 1.066

~~~~~~

ID: 90FS15S14 Seq. No.: 00013 A/S Pos.: 11 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 11
Replicate 1 — Time: 11:18
Peak Area (A-s): 0.004 — Peak Height (A): 0.012
Background Pk Area (A-s): 0.788 — Background Pk Height (A): 0.485
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.049

~~~~~~

ID: 90FS15S14 +1 Seq. No.: 00014 A/S Pos.: 12 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 12
Replicate 1 — Time: 11:21
Peak Area (A-s): 0.071 — Peak Height (A): 0.114
Background Pk Area (A-s): 0.806 — Background Pk Height (A): 0.495
Blank Corrected Pk Area (A-s): 0.066
Concentration (ug/L): 1.002

~~~~~~

ID: 90FS15S15 Seq. No.: 00015 A/S Pos.: 13 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 13
Replicate 1 — Time: 11:24
Peak Area (A-s): 0.009 — Peak Height (A): 0.012
Background Pk Area (A-s): 0.344 — Background Pk Height (A): 0.106
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.025

~~~~~~

ID: 90FS15S15 +1 Seq. No.: 00016 A/S Pos.: 14 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 14
Replicate 1 — Time: 11:27
Peak Area (A-s): 0.070 — Peak Height (A): 0.114
Background Pk Area (A-s): 0.361 — Background Pk Height (A): 0.109
Blank Corrected Pk Area (A-s): 0.064
Concentration (ug/L): 0.982

~~~~~~

ID: 90FS02R54 Seq. No.: 00017 A/S Pos.: 15 Date: 05/18/90

J Gary 5/18/90

uL dispensed: 5 from 36, 15 from 15
Replicate 1 Time: 11:31
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.163 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.015

~~~~~~

ID: 90FS02R54 +1 Seq. No.: 00018 A/S Pos.: 16 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 16
Replicate 1 Time: 11:34
Peak Area (A-s): 0.071 Peak Height (A): 0.116
Background Pk Area (A-s): 0.180 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.066
Concentration (ug/L): 1.001

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00019 A/S Pos.: 37 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 11:37
Peak Area (A-s): 0.069 Peak Height (A): 0.116
Background Pk Area (A-s): 0.175 Background Pk Height (A): 0.068
Blank Corrected Pk Area (A-s): 0.064
Concentration (ug/L): 0.971

Check sample is within range .8775 - 1.0725

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ID: CCB2 Seq. No.: 00020 A/S Pos.: 17 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 17
Replicate 1 Time: 11:40
Peak Area (A-s): 0.006 Peak Height (A): 0.010
Background Pk Area (A-s): 0.162 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.017

~~~~~~

ID: 90FS15S16 Seq. No.: 00021 A/S Pos.: 18 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 18
Replicate 1 Time: 11:44
Peak Area (A-s): 0.009 Peak Height (A): 0.015
Background Pk Area (A-s): 0.374 Background Pk Height (A): 0.118
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.025

~~~~~~

ID: 90FS15S16 +1 Seq. No.: 00022 A/S Pos.: 19 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 19
Replicate 1 Time: 11:47
Peak Area (A-s): 0.077 Peak Height (A): 0.120
Background Pk Area (A-s): 0.391 Background Pk Height (A): 0.118
Blank Corrected Pk Area (A-s): 0.071
Concentration (ug/L): 1.090
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J Gary 5/18/90

~~~~~~

ID: 90FS15S17 Seq. No.: 00023 A/S Pos.: 20 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 20
Replicate 1 Time: 11:50
Peak Area (A-s): 0.007 Peak Height (A): 0.014
Background Pk Area (A-s): 0.340 Background Pk Height (A): 0.105
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): -0.002

~~~~~~

ID: 90FS15S17 +1 Seq. No.: 00024 A/S Pos.: 21 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 21
Replicate 1 Time: 11:53
Peak Area (A-s): 0.076 Peak Height (A): 0.120
Background Pk Area (A-s): 0.361 Background Pk Height (A): 0.106
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 1.073

~~~~~~

ID: 90FS15D17 Seq. No.: 00025 A/S Pos.: 22 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 22
Replicate 1 Time: 11:56
Peak Area (A-s): 0.010 Peak Height (A): 0.017
Background Pk Area (A-s): 0.342 Background Pk Height (A): 0.106
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.039

~~~~~~

ID: 90FS15D17 +1 Seq. No.: 00026 A/S Pos.: 23 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 23
Replicate 1 Time: 11:59
Peak Area (A-s): 0.075 Peak Height (A): 0.121
Background Pk Area (A-s): 0.358 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 1.067

~~~~~~

ID: 90FS15S18 Seq. No.: 00027 A/S Pos.: 24 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 24
Replicate 1 Time: 12:03
Peak Area (A-s): 0.007 Peak Height (A): 0.014
Background Pk Area (A-s): 0.364 Background Pk Height (A): 0.111
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): -0.002

~~~~~~

ID: 90FS15S18 +1 Seq. No.: 00028 A/S Pos.: 25 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 25
Replicate 1 Time: 12:06
Peak Area (A-s): 0.073 Peak Height (A): 0.120
Background Pk Area (A-s): 0.380 Background Pk Height (A): 0.123
Blank Corrected Pk Area (A-s): 0.068

J Garz 5/18/90

Concentration (ug/L): 1.033

~~~~~~

ID: 90FS02R55 Seq. No.: 00029 A/S Pos.: 26 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 26
Replicate 1 Time: 12:09
Peak Area (A-s): 0.005 Peak Height (A): 0.011
Background Pk Area (A-s): 0.155 Background Pk Height (A): 0.044
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.036

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ID: 90FS02R55 +1 Seq. No.: 00030 A/S Pos.: 27 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 27
Replicate 1 Time: 12:12
Peak Area (A-s): 0.069 Peak Height (A): 0.120
Background Pk Area (A-s): 0.171 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.064
Concentration (ug/L): 0.968

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00031 A/S Pos.: 37 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 12:16
Peak Area (A-s): 0.071 Peak Height (A): 0.121
Background Pk Area (A-s): 0.176 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.065
Concentration (ug/L): 0.994

Check sample is within range .8775 - 1.0725

~~~~~~

ID: CCB3 Seq. No.: 00032 A/S Pos.: 28 Date: 05/18/90

uL dispensed: 5 from 36, 15 from 28
Replicate 1 Time: 12:19
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.151 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.008

J Gary 5/18/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/18/90
☒ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # WL36016
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 49
☐ Pb	☒ 5100	☐ SPEX II	Expansion 1
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-126-MS
☐ Se		☐	☒ platform ☒ MSC
☐ Tl		☐	☐ wall ☐ MSA

Blank	Slope	AQC	Digestion QC
-.013	.0636	.915	
-.017		.971	
.008		.994	

Blank cup absorbance

Report generator would not produce a report due to replicate ID's,

J Barry 5/22/90

Element File: CDMSC.GEL
Element: Cd
Date: 05/22/90
Time: 12:50
Data Storage File: CD052290.DAT
ID/Weight File: CDGENER.A60
Technique: HGA
Calibration Type: Linear

~~~~~~

ID: Blank Seq. No.: 00044 A/S Pos.: 1 Date: 05/22/90

Replicate 1
Time: 12:50
Peak Area (A-s): 0.004
Peak Height (A): 0.010
Background Pk Area (A-s): 0.271
Background Pk Height (A): 0.082
Blank Corrected Pk Area (A-s): 0.004

Auto-zero performed.

~~~~~~

ID: Standard 1 Seq. No.: 00045 A/S Pos.: 2 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 2
Replicate 1
Time: 12:53
Peak Area (A-s): 0.140
Peak Height (A): 0.222
Background Pk Area (A-s): 0.238
Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.136

Standard number 1 applied. [2.000]
Correlation coefficient: 1.00000
Slope: 0.0679
Int: 0.000

~~~~~~

ID: Standard 2 Seq. No.: 00046 A/S Pos.: 3 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 3
Replicate 1
Time: 12:56
Peak Area (A-s): 0.107
Peak Height (A): 0.168
Background Pk Area (A-s): 0.215
Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.103
Concentration (ug/L): 1.517

Standard number 2 applied. [1.500]
Correlation coefficient: 0.99996
Slope: 0.0681
Int: 0.000

~~~~~~

ID: Standard 3 Seq. No.: 00047 A/S Pos.: 4 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 4
Replicate 1
Time: 12:59
Peak Area (A-s): 0.074
Peak Height (A): 0.114
Background Pk Area (A-s): 0.207
Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 1.024

Standard number 3 applied. [1.000]
Correlation coefficient: 0.99986
Slope: 0.0680
Int: 0.001

~~~~~~

ID: Standard 4 Seq. No.: 00048 A/S Pos.: 5 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 5
~~~~~~

J Garry
5/22/90

Replicate 1 Time: 13:03
Peak Area (A-s): 0.037 Peak Height (A): 0.061
Background Pk Area (A-s): 0.200 Background Pk Height (A): 0.064
Blank Corrected Pk Area (A-s): 0.033
Concentration (ug/L): 0.472

Standard number 4 applied. [0.500]
Correlation coefficient: 0.99977 Slope: 0.0683 Int: -0.000

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00049 A/S Pos.: 37 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 13:06
Peak Area (A-s): 0.074 Peak Height (A): 0.115
Background Pk Area (A-s): 0.219 Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 1.020

Check sample is within range .8775 - 1.0725 %R=104.6 Limit=100±10%

~~~~~~

ID: 90FS15S25 Seq. No.: 00050 A/S Pos.: 29 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 29
Replicate 1 Time: 13:09
Peak Area (A-s): 0.060 Peak Height (A): 0.100
Background Pk Area (A-s): 0.567 Background Pk Height (A): 0.183
Blank Corrected Pk Area (A-s): 0.056
Concentration (ug/L): 0.816 gwa 5/22 not used

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00052 A/S Pos.: 37 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 13:13
Peak Area (A-s): 0.077 Peak Height (A): 0.117
Background Pk Area (A-s): 0.227 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.072
Concentration (ug/L): 1.061 %R=108.8 Limit=100±10%

Check sample is within range .8775 - 1.0725

~~~~~~

ID: CCB3 Seq. No.: 00053 A/S Pos.: 28 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 28
Replicate 1 Time: 13:16
Peak Area (A-s): 0.007 Peak Height (A): 0.011
Background Pk Area (A-s): 0.188 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.031 Limit= ±0.2 ug/L

~~~~~~

ID: 90FS15S25 Seq. No.: 00054 A/S Pos.: 29 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 29 gwb 5/22 not used
Replicate 1 Time: 13:20
Peak Area (A-s): 0.064 Peak Height (A): 0.100
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ID: 90FS15S21 1/14 Seq. No.: 00083 A/S Pos.: 24 Date: 05/22/90

J Garry 5/22/90

uL dispensed: 5 from 36, 15 from 24
Replicate 1 Time: 14:57
Peak Area (A-s): 0.087 Peak Height (A): 0.135
Background Pk Area (A-s): 0.295 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.083
Concentration (ug/L): 1.212

~~~~~~

ID: S21 1/14 +1 Seq. No.: 00084 A/S Pos.: 25 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 25
Replicate 1 Time: 15:00
Peak Area (A-s): 0.148 Peak Height (A): 0.224
Background Pk Area (A-s): 0.321 Background Pk Height (A): 0.117
Blank Corrected Pk Area (A-s): 0.143
Concentration (ug/L): 2.096

qwk stzz not used

~~~~~~

ID: 90FS15S22 2/3 Seq. No.: 00085 A/S Pos.: 26 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 26
Replicate 1 Time: 15:03
Peak Area (A-s): 0.080 Peak Height (A): 0.123
Background Pk Area (A-s): 0.435 Background Pk Height (A): 0.137
Blank Corrected Pk Area (A-s): 0.076
Concentration (ug/L): 1.111

~~~~~~

ID: S22 2/3 +1 Seq. No.: 00086 A/S Pos.: 27 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 27
Replicate 1 Time: 15:07
Peak Area (A-s): 0.136 Peak Height (A): 0.216
Background Pk Area (A-s): 0.457 Background Pk Height (A): 0.142
Blank Corrected Pk Area (A-s): 0.132
Concentration (ug/L): 1.928

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00087 A/S Pos.: 37 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 15:10
Peak Area (A-s): 0.074 Peak Height (A): 0.117
Background Pk Area (A-s): 0.242 Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.069
Concentration (ug/L): 1.011

%R = 103.7 Limit = 100 ± 10%

Check sample is within range .8775 - 1.0725

~~~~~~

ID: CCB6 Seq. No.: 00088 A/S Pos.: 28 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 28
Replicate 1 Time: 15:13
Peak Area (A-s): 0.005 Peak Height (A): 0.008

Background Pk Area (A-s): 0.213 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): 0.006

Limit = ± 0.2 ug/L J Garz 5/22/90

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00089 A/S Pos.: 37 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 15:17
Peak Area (A-s): 0.069 Peak Height (A): 0.116
Background Pk Area (A-s): 0.241 Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.065
Concentration (ug/L): 0.951

%R = 97.5 Limit = 100 ± 10%

Check sample is within range .8775 - 1.0725

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ID: DIGEST BLANK 1 Seq. No.: 00090 A/S Pos.: 29 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 29
Replicate 1 Time: 15:20
Peak Area (A-s): 0.006 Peak Height (A): 0.016
Background Pk Area (A-s): 0.193 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.030

Adj. Conc. = 0.024 mg/kg

~~~~~~

ID: DG BLANK 1 +1 Seq. No.: 00091 A/S Pos.: 30 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 30
Replicate 1 Time: 15:23
Peak Area (A-s): 0.080 Peak Height (A): 0.122
Background Pk Area (A-s): 0.207 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.076
Concentration (ug/L): 1.109

%R = 107.9

~~~~~~

ID: DIGEST BLANK 2 Seq. No.: 00092 A/S Pos.: 31 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 31
Replicate 1 Time: 15:26
Peak Area (A-s): 0.015 Peak Height (A): 0.013
Background Pk Area (A-s): 0.189 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.011
Concentration (ug/L): 0.156

Rerun

~~~~~~

ID: DG BLANK 2 +1 Seq. No.: 00093 A/S Pos.: 32 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 32
Replicate 1 Time: 15:30
Peak Area (A-s): 0.073 Peak Height (A): 0.110
Background Pk Area (A-s): 0.216 Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.069
Concentration (ug/L): 1.010

%R = 85.4

~~~~~~

ID: S22 SPIKE 1/50 Seq. No.: 00094 A/S Pos.: 33 Date: 05/22/90

J Gary
5/22/90

uL dispensed: 5 from 36, 15 from 33
Replicate 1 | Time: 15:33
Peak Area (A-s): 0.071 | Peak Height (A): 0.110
Background Pk Area (A-s): 0.242 | Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.067
Concentration (ug/L): 0.974

Adj. Conc. = 4.480 mg/kg Spike %R = 94.7
Spike Amt = 4.600 mg/kg Limit = 100±20%

ID: S22 SP 1/50 +1 Seq. No.: 00095 A/S Pos.: 34 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 34
Replicate 1 | Time: 15:36
Peak Area (A-s): 0.136 | Peak Height (A): 0.208
Background Pk Area (A-s): 0.246 | Background Pk Height (A): 0.100
Blank Corrected Pk Area (A-s): 0.132
Concentration (ug/L): 1.930

%R = 95.6

ID: S25 SPIKE 1/50 Seq. No.: 00096 A/S Pos.: 35 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 35
Replicate 1 | Time: 15:39
Peak Area (A-s): 0.069 | Peak Height (A): 0.109
Background Pk Area (A-s): 0.233 | Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.065
Concentration (ug/L): 0.951

Adj. Conc = 4.769 mg/kg Spike %R = 93.7
Spike Amt = 5.015 mg/kg Limit = 100±20%

ID: S25 SPK 1/50 +1 Seq. No.: 00097 A/S Pos.: 38 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 38
Replicate 1 | Time: 15:42
Peak Area (A-s): 0.134 | Peak Height (A): 0.209
Background Pk Area (A-s): 0.252 | Background Pk Height (A): 0.100
Blank Corrected Pk Area (A-s): 0.129
Concentration (ug/L): 1.893

%R = 94.2

ID: LCS 1/500 Seq. No.: 00098 A/S Pos.: 39 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 39
Replicate 1 | Time: 15:46
Peak Area (A-s): 0.073 | Peak Height (A): 0.107
Background Pk Area (A-s): 0.233 | Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.068
Concentration (ug/L): 0.999

Adj. Conc. = 50.15 mg/kg
Limit = 35.7 LL 55.1 mg/kg

ID: LCS 1/500 +1 Seq. No.: 00099 A/S Pos.: 40 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 40
Replicate 1 | Time: 15:49
Peak Area (A-s): 0.137 | Peak Height (A): 0.206
Background Pk Area (A-s): 0.262 | Background Pk Height (A): 0.102
Blank Corrected Pk Area (A-s): 0.133
Concentration (ug/L): 1.946

%R = 94.7

ID: AQC 0.975 UG/L Seq. No.: 00100 A/S Pos.: 37 Date: 05/22/90

J Garcy 5/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 — Time: 15:55
Peak Area (A-s): 0.069 — Peak Height (A): 0.115
Background Pk Area (A-s): 0.239 — Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.065
Concentration (ug/L): 0.950 — %R = 97.4 Limit = 100±10%

Check sample is within range .8775 - 1.0725

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ID: CCB7 Seq. No.: 00101 A/S Pos.: 6 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1 — Time: 15:59
Peak Area (A-s): 0.003 — Peak Height (A): 0.008
Background Pk Area (A-s): 0.207 — Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.023 — Limit = ±0.2 ug/L

~~~~~~

ID: DIGEST BLANK 2 Seq. No.: 00102 A/S Pos.: 7 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 7
Replicate 1 — Time: 16:02
Peak Area (A-s): 0.006 — Peak Height (A): 0.012
Background Pk Area (A-s): 0.198 — Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): 0.001 — Adj. Conc. = 0.024 mg/kg
Concentration (ug/L): 0.018

~~~~~~

ID: DG BLANK 2 +1 Seq. No.: 00103 A/S Pos.: 8 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 8
Replicate 1 — Time: 16:05
Peak Area (A-s): 0.077 — Peak Height (A): 0.118
Background Pk Area (A-s): 0.214 — Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.072
Concentration (ug/L): 1.059 — %R = 104.1

~~~~~~

ID: 90FS15S22 Seq. No.: 00104 A/S Pos.: 9 Date: 05/22/90

gmk 5/22/90 wrong sample prepped

uL dispensed: 5 from 36, 15 from 9
Sample abs. is greater than that of the largest standard.
Replicate 1 — Time: 16:08
Peak Area (A-s): 0.210 — Peak Height (A): 0.312
Background Pk Area (A-s): 0.497 — Background Pk Height (A): 0.169
Blank Corrected Pk Area (A-s): 0.206
Concentration (ug/L): 3.009

~~~~~~

ID: 90FS15S22 +1 Seq. No.: 00105 A/S Pos.: 10 Date: 05/22/90

gmk 5/22/90

uL dispensed: 5 from 36, 15 from 10
Sample abs. is greater than that of the largest standard.
Replicate 1 — Time: 16:12
Peak Area (A-s): 0.275 — Peak Height (A): 0.395
Background Pk Area (A-s): 0.513 — Background Pk Height (A): 0.191
~~~~~~

Blank Corrected Pk Area (A-s): 0.270
Concentration (ug/L): 3.957

J Gang 5/22/90

~~~~~~

ID: 90FS15S25 Seq. No.: 00106 A/S Pos.: 11 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 11
Replicate 1 Time: 16:15
Peak Area (A-s): 0.053 Peak Height (A): 0.066
Background Pk Area (A-s): 0.541 Background Pk Height (A): 0.175
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 0.707

Adj. Conc = 0.071 mg/kg

~~~~~~

ID: 90FS15S25 +1 Seq. No.: 00107 A/S Pos.: 12 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 12
Replicate 1 Time: 16:18
Peak Area (A-s): 0.118 Peak Height (A): 0.157
Background Pk Area (A-s): 0.556 Background Pk Height (A): 0.178
Blank Corrected Pk Area (A-s): 0.114
Concentration (ug/L): 1.662

%R=95.5

~~~~~~

ID: S22 DUPL ~~173~~ Seq. No.: 00108 A/S Pos.: 13 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 13
Replicate 1 Time: 16:22
Peak Area (A-s): 0.092 Peak Height (A): 0.120
Background Pk Area (A-s): 0.504 Background Pk Height (A): 0.159
Blank Corrected Pk Area (A-s): 0.088
Concentration (ug/L): 1.285

Adj. Conc = 0.118 mg/kg RPD = 4.1%
Limit = 20%

~~~~~~

ID: S22 DUPL ~~173~~ +1 Seq. No.: 00109 A/S Pos.: 14 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 14
Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 16:25
Peak Area (A-s): 0.159 Peak Height (A): 0.207
Background Pk Area (A-s): 0.516 Background Pk Height (A): 0.158
Blank Corrected Pk Area (A-s): 0.155
Concentration (ug/L): 2.265

%R= 98.0

~~~~~~

ID: 90FS15S25 DUPL Seq. No.: 00110 A/S Pos.: 15 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 15
Replicate 1 Time: 16:28
Peak Area (A-s): 0.041 Peak Height (A): 0.068
Background Pk Area (A-s): 0.491 Background Pk Height (A): 0.156
Blank Corrected Pk Area (A-s): 0.036
Concentration (ug/L): 0.531

Adj. Conc. = 0.054 mg/kg
Dupl diff < 0.02 mg/kg

~~~~~~

ID: S25 DUPL +1 Seq. No.: 00111 A/S Pos.: 16 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 16
Replicate 1 Time: 16:31

Peak Area (A-s): 0.112 Peak Height (A): 0.165
Background Pk Area (A-s): 0.500 Background Pk Height (A): 0.153
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 1.574

J Garry 5/22/90

%R = 104.3

~~~~~~

ID: AQC 0.975 UG/L Seq. No.: 00112 A/S Pos.: 37 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 Time: 16:35
Peak Area (A-s): 0.074 Peak Height (A): 0.114
Background Pk Area (A-s): 0.237 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.069
Concentration (ug/L): 1.017

%R = 104.3 Limit = 100±10%

Check sample is within range .8775 - 1.0725

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ID: CCB8 Seq. No.: 00113 A/S Pos.: 17 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 17
Replicate 1 Time: 16:38
Peak Area (A-s): 0.001 Peak Height (A): 0.007
Background Pk Area (A-s): 0.205 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.047

Limit = ±0.2 ug/L

~~~~~~

ID: 90FS15S22 Seq. No.: 00114 A/S Pos.: 18 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 18
Replicate 1 Time: 16:41
Peak Area (A-s): 0.096 Peak Height (A): 0.132
Background Pk Area (A-s): 0.504 Background Pk Height (A): 0.157
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 1.343

Adj Conc. = 0.123 mg/kg

~~~~~~

ID: 90FS15S22 +1 Seq. No.: 00115 A/S Pos.: 19 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 19
Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 16:44
Peak Area (A-s): 0.161 Peak Height (A): 0.217
Background Pk Area (A-s): 0.515 Background Pk Height (A): 0.157
Blank Corrected Pk Area (A-s): 0.157
Concentration (ug/L): 2.295

%R = 95.2

~~~~~~

ID: 90FS15S21 1/14 Seq. No.: 00116 A/S Pos.: 20 Date: 05/22/90

gh 5/22 wrong sample pipetted

uL dispensed: 5 from 36, 15 from 20
Replicate 1 Time: 16:47
Peak Area (A-s): 0.020 Peak Height (A): 0.033
Background Pk Area (A-s): 0.301 Background Pk Height (A): 0.094
Blank Corrected Pk Area (A-s): 0.016
Concentration (ug/L): 0.228

~~~~~~

ID: S21 1/14 +1 Seq. No.: 00117 A/S Pos.: 21 Date: 05/22/90

gurb 5/22 wrong sample pipped

J Gary 5/22/90

uL dispensed: 5 from 36, 15 from 21
Replicate 1 Time: 16:50
Peak Area (A-s): 0.090 Peak Height (A): 0.127
Background Pk Area (A-s): 0.314 Background Pk Height (A): 0.093
Blank Corrected Pk Area (A-s): 0.086
Concentration (ug/L): 1.252

~~~~~~

ID: 90FS15S23 Seq. No.: 00118 A/S Pos.: 22 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 22
Replicate 1 Time: 16:54
Peak Area (A-s): 0.037 Peak Height (A): 0.052
Background Pk Area (A-s): 0.422 Background Pk Height (A): 0.132
Blank Corrected Pk Area (A-s): 0.032
Concentration (ug/L): 0.474

Adj. Conc = 0.047 mg/Kg

~~~~~~

ID: 90FS15S23 +1 Seq. No.: 00119 A/S Pos.: 23 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 23
Replicate 1 Time: 16:57
Peak Area (A-s): 0.109 Peak Height (A): 0.145
Background Pk Area (A-s): 0.432 Background Pk Height (A): 0.132
Blank Corrected Pk Area (A-s): 0.105
Concentration (ug/L): 1.535

%R = 106.1

~~~~~~

ID: 90FS15S24 Seq. No.: 00120 A/S Pos.: 24 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 24
Replicate 1 Time: 17:00
Peak Area (A-s): 0.047 Peak Height (A): 0.074
Background Pk Area (A-s): 0.479 Background Pk Height (A): 0.154
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 0.622

Adj. Conc = 0.063 mg/Kg

~~~~~~

ID: 90FS15S24 +1 Seq. No.: 00121 A/S Pos.: 25 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 25
Replicate 1 Time: 17:03
Peak Area (A-s): 0.114 Peak Height (A): 0.167
Background Pk Area (A-s): 0.496 Background Pk Height (A): 0.153
Blank Corrected Pk Area (A-s): 0.110
Concentration (ug/L): 1.608

%R = 98.6

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ID: 90FS15S26 Seq. No.: 00122 A/S Pos.: 26 Date: 05/22/90

uL dispensed: 5 from 36, 15 from 26
Replicate 1 Time: 17:06
Peak Area (A-s): 0.023 Peak Height (A): 0.031
Background Pk Area (A-s): 0.429 Background Pk Height (A): 0.135
Blank Corrected Pk Area (A-s): 0.019
Concentration (ug/L): 0.273

Adj. Conc. = 0.028 mg/Kg
~~~~~~

J Garry
5/22/90

Background Pk Area (A-s): 0.268   Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.064
Concentration (ug/L): 0.939   Adj. Conc. = 1.365 mg/Kg

~~~~~~

ID: S21 1/14 +1   Seq. No.: 00129   A/S Pos.: 32   Date: 05/22/90

uL dispensed: 5 from 36, 15 from 32
Replicate 1   Time: 17:29
Peak Area (A-s): 0.139   Peak Height (A): 0.196
Background Pk Area (A-s): 0.284   Background Pk Height (A): 0.099
Blank Corrected Pk Area (A-s): 0.134
Concentration (ug/L): 1.966   %R = 102.7

~~~~~~

ID: 90FS15S20   Seq. No.: 00130   A/S Pos.: 33   Date: 05/22/90

uL dispensed: 5 from 36, 15 from 33
Replicate 1   Time: 17:33
Peak Area (A-s): 0.100   Peak Height (A): 0.147
Background Pk Area (A-s): 0.588   Background Pk Height (A): 0.188
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 1.403   Adj. Conc. = 0.140 mg/Kg

~~~~~~

ID: 90FS15S20 +1   Seq. No.: 00131   A/S Pos.: 34   Date: 05/22/90

uL dispensed: 5 from 36, 15 from 34
Sample abs. is greater than that of the largest standard.
Replicate 1   Time: 17:36
Peak Area (A-s): 0.166   Peak Height (A): 0.247
Background Pk Area (A-s): 0.610   Background Pk Height (A): 0.194
Blank Corrected Pk Area (A-s): 0.162
Concentration (ug/L): 2.366   %R = 96.3

~~~~~~

ID: AQC 0.975 UG/L   Seq. No.: 00132   A/S Pos.: 37   Date: 05/22/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1   Time: 17:39
Peak Area (A-s): 0.074   Peak Height (A): 0.115
Background Pk Area (A-s): 0.239   Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.069
Concentration (ug/L): 1.015   %R = 104.1 Limit = 100 ± 10%

~~~~~~

ID: CCB10   Seq. No.: 00133   A/S Pos.: 6   Date: 05/22/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1   Time: 17:43
Peak Area (A-s): 0.006   Peak Height (A): 0.011
Background Pk Area (A-s): 0.203   Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.027

Limit = ± 0.2 mg/L
~~~~~~

J Gamy 5/22/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/22/90
☒ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # WL36016
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 49
☐ Pb	☒ 5100	☐ SPEX II	Expansion 1
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-126-MD
☐ Se		☐	☒ platform ☒ MSC
☐ Tl		☐	☐ wall ☐ MSA

Blank	Slope	AQC	Digestion QC
.031	.0683	1.020	Blanks < 0.02 mg/kg
.006		1.061	S22 spike %R = 94.7
-.023		1.011	S25 spike %R = 93.7
-.047		0.951	LCS = 50.15 mg/kg
.036		0.950	S22 duplicate RPD = 4.1 %
.027		1.017	S25 duplicate difference < 0.02 mg/kg
		1.012	
		1.015	

Blank cup absorbance

Perkin-Elmer Model 5100 PC
Report Of Analytical Results
May 16, 1990

Data File: PB51690.DAT
Data Collected: 05/16/90 At: 10:54:34 By: BAI

	Pb ug/L	Pb ug/L
Blank	0.00	0.00
Standard 1	40.00	40.00
Standard 2	30.00	30.00
Standard 3	20.00	20.00
Standard 4	10.00	10.00
AQC 22.4 UG/L	22.46	22.79
CCB1	-2.07	-0.49
90FS15S13	0.44	1.52
90FS15S13 + 20	20.09	21.77
90FS15D13	----	-0.16
90FS15D13 + 20	----	21.56
90FS15S14	----	-0.71
90FS15S14 + 20	----	19.58
90FS15S15	----	-1.24
90FS15S15 + 20	----	19.00
90FS02R54	----	-0.07
90FS02R54 + 20	----	20.21
AQC 22.4 UG/L	----	22.74
CCB2	----	-0.40
90FS15S16 + 20	----	22.23
90FS15S16 ~~+ 20~~	----	0.89
90FS15S17	----	3.95
90FS15S17 + 20	----	25.03
90FS15D17	----	3.78
90FS15D17 + 20	----	24.55
90FS15S18	----	-0.87
90FS15S18 + 20	----	19.55
90FS02R55	----	1.00
90FS02R55 + 20	----	21.13
AQC 22.4 UG/L	----	22.19
CCB3	----	-0.88

NOT USED B.Y. 5-16-90

B.Y. 5-16-90

SF7171

Analyst: B. Yuen 5-16-90 Supervisor: _____

ID: Blank Seq. No.: 00012 A/S Pos.: 1 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 1
Replicate 1 (Peak Stored) Time: 11:26
Peak Area (A-s): 0.008 Peak Height (A): 0.016
Background Pk Area (A-s): 0.024 Background Pk Height (A): 0.010
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.41

Auto-zero performed.

B. Yuen
5-16-90

~~~~~~

ID: Standard 1 Seq. No.: 00013 A/S Pos.: 2 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 2
Replicate 1 (Peak Stored) Time: 11:29
Peak Area (A-s): 0.104 Peak Height (A): 0.223
Background Pk Area (A-s): 0.060 Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 41.69

Standard number 1 applied. [40.00]
Correlation coefficient: 1.00000 Slope: 0.0024 Int: 0.000

~~~~~~

ID: Standard 2 Seq. No.: 00014 A/S Pos.: 3 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 3
Replicate 1 (Peak Stored) Time: 11:33
Peak Area (A-s): 0.081 Peak Height (A): 0.172
Background Pk Area (A-s): 0.052 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.073
Concentration (ug/L): 30.18

Standard number 2 applied. [30.00]
Correlation coefficient: 0.99999 Slope: 0.0024 Int: 0.000

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ID: Standard 3 Seq. No.: 00015 A/S Pos.: 4 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 4
Replicate 1 (Peak Stored) Time: 11:36
Peak Area (A-s): 0.055 Peak Height (A): 0.122
Background Pk Area (A-s): 0.042 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 19.54

Standard number 3 applied. [20.00]
Correlation coefficient: 0.99990 Slope: 0.0024 Int: -0.000

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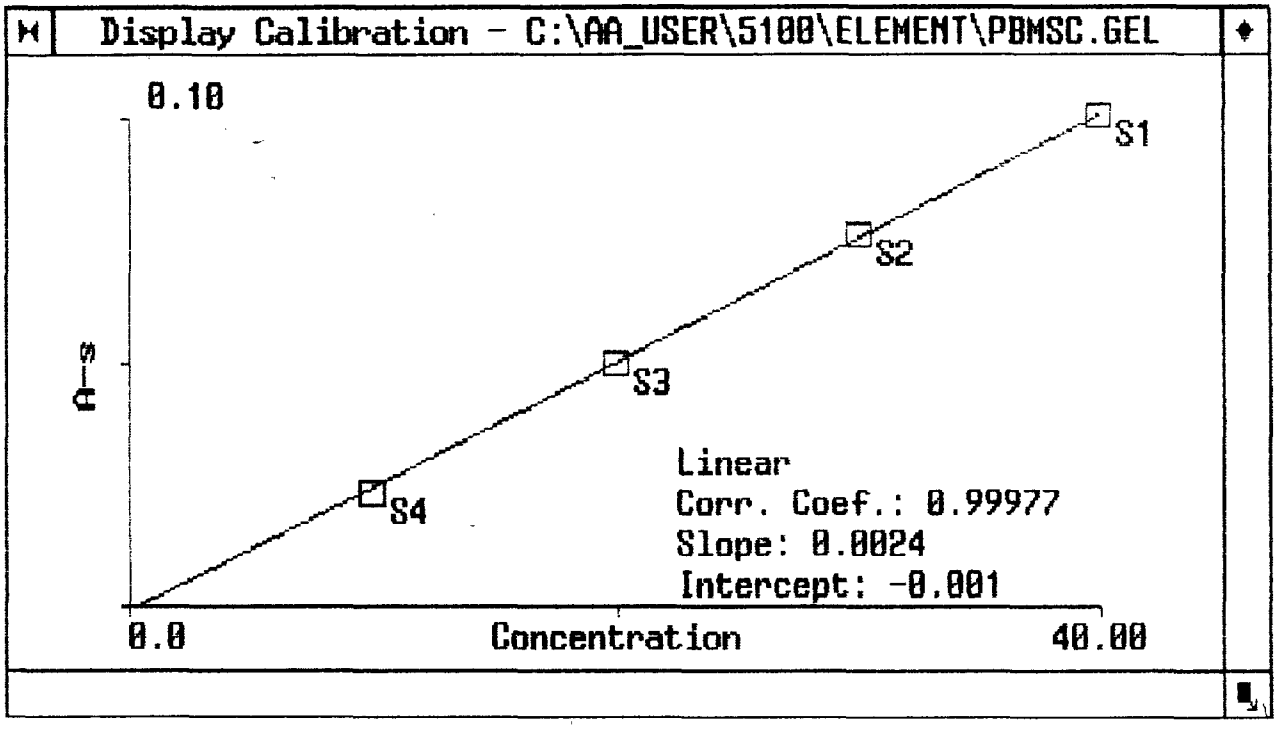
ID: Standard 4 Seq. No.: 00016 A/S Pos.: 5 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 5
Replicate 1 (Peak Stored) Time: 11:39
Peak Area (A-s): 0.030 Peak Height (A): 0.070
Background Pk Area (A-s): 0.037 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.022
Concentration (ug/L): 9.36

Standard number 4 applied. [10.00]
Correlation coefficient: 0.99977 Slope: 0.0024 Int: -0.001

B. Yuen
5-16-90



B. Green
5-16-90

ID: AQC 22.4 UG/L Seq. No.: 00017 A/S Pos.: 37 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 11:43
Peak Area (A-s): 0.062 Peak Height (A): 0.131
Background Pk Area (A-s): 0.046 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.055
Concentration (ug/L): 22.79

101.7 % R Limit = 100 ± 10%

Check sample is within range 20.16 - 24.64

ID: CCB1 Seq. No.: 00018 A/S Pos.: 6 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1 (Peak Stored) Time: 11:46
Peak Area (A-s): 0.006 Peak Height (A): 0.014
Background Pk Area (A-s): 0.027 Background Pk Height (A): 0.010
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.49

2u Limit = ± 2 ug/l

ID: 90FS15S13 Seq. No.: 00019 A/S Pos.: 7 Date: 05/16/90

SF7170

uL dispensed: 5 from 36, 15 from 7
Replicate 1 (Peak Stored) Time: 11:49
Peak Area (A-s): 0.011 Peak Height (A): 0.021
Background Pk Area (A-s): 0.129 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 1.52

ID: 90FS15S13 + 20 Seq. No.: 00020 A/S Pos.: 8 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 8
Replicate 1 (Peak Stored) Time: 11:53
Peak Area (A-s): 0.060 Peak Height (A): 0.127
Background Pk Area (A-s): 0.152 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 21.77

101.2 % R

ID: 90FS15D13 Seq. No.: 00021 A/S Pos.: 9 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 9
Replicate 1 (Peak Stored) Time: 11:56
Peak Area (A-s): 0.007 Peak Height (A): 0.020
Background Pk Area (A-s): 0.149 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.16

ID: 90FS15D13 + 20 Seq. No.: 00022 A/S Pos.: 10 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 10
Replicate 1 (Peak Stored) Time: 11:59
Peak Area (A-s): 0.060 Peak Height (A): 0.1[illegible]0

B. Yuen
5-16-90

Background Pk Area (A-s): 0.158 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 21.58

108.7 % R

~~~~~~

ID: 90FS15S14 Seq. No.: 00023 A/S Pos.: 11 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 11
Replicate 1 (Peak Stored) Time: 12:03
Peak Area (A-s): 0.005 Peak Height (A): 0.013
Background Pk Area (A-s): 0.266 Background Pk Height (A): 0.096
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.71

~~~~~~

ID: 90FS15S14 + 20 Seq. No.: 00024 A/S Pos.: 12 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 12
Replicate 1 (Peak Stored) Time: 12:06
Peak Area (A-s): 0.055 Peak Height (A): 0.119
Background Pk Area (A-s): 0.279 Background Pk Height (A): 0.120
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 19.58

101.4 % R

~~~~~~

ID: 90FS15S15 Seq. No.: 00025 A/S Pos.: 13 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 13
Replicate 1 (Peak Stored) Time: 12:09
Peak Area (A-s): 0.004 Peak Height (A): 0.018
Background Pk Area (A-s): 0.070 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -1.24

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ID: 90FS15S15 + 20 Seq. No.: 00026 A/S Pos.: 14 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 14
Replicate 1 (Peak Stored) Time: 12:12
Peak Area (A-s): 0.053 Peak Height (A): 0.125
Background Pk Area (A-s): 0.089 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 19.00

101.2 % R

~~~~~~

ID: 90FS02R54 Seq. No.: 00027 A/S Pos.: 15 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 15
Replicate 1 (Peak Stored) Time: 12:16
Peak Area (A-s): 0.007 Peak Height (A): 0.016
Background Pk Area (A-s): 0.032 Background Pk Height (A): 0.010
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.07

~~~~~~

ID: 90FS02R54 + 20 Seq. No.: 00028 A/S Pos.: 16 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 16
Replicate 1 (Peak Stored) Time: 12:19

B. Yuen
5-16-90

Peak Area (A-s): 0.056 Peak Height (A): 0.127
Background Pk Area (A-s): 0.051 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 20.21

101.4 % R

~~~~~~

ID: AQC 22.4 UG/L Seq. No.: 00029 A/S Pos.: 37 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 12:22
Peak Area (A-s): 0.062 Peak Height (A): 0.133
Background Pk Area (A-s): 0.049 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.054
Concentration (ug/L): 22.74

Check sample is within range 20.16 - 24.64 101.5 % R Limit ±10%

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ID: CCB2 Seq. No.: 00030 A/S Pos.: 17 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 17
Replicate 1 (Peak Stored) Time: 12:25
Peak Area (A-s): 0.006 Peak Height (A): 0.017
Background Pk Area (A-s): 0.033 Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.40

2u Limit = ± 2 ug/l

~~~~~~

ID: 90FS15S16 + 20 Seq. No.: 00031 A/S Pos.: 18 Date: 05/16/90
B.Y 5-16-90

SF7171

uL dispensed: 5 from 36, 15 from 18
Replicate 1 (Peak Stored) Time: 12:28
Peak Area (A-s): 0.061 Peak Height (A): 0.121
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.053
Concentration (ug/L): 22.23

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ID: 90FS15S16 ~~+ 20~~ Seq. No.: 00032 A/S Pos.: 19 Date: 05/16/90
B.Y. 5-16-90

uL dispensed: 5 from 36, 15 from 19
Replicate 1 (Peak Stored) Time: 12:32
Peak Area (A-s): 0.009 Peak Height (A): 0.016
Background Pk Area (A-s): 0.105 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.89

106.7 % R

~~~~~~

ID: 90FS15S17 Seq. No.: 00033 A/S Pos.: 20 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 20
Replicate 1 (Peak Stored) Time: 12:35
Peak Area (A-s): 0.017 Peak Height (A): 0.033
Background Pk Area (A-s): 0.092 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): 0.009
Concentration (ug/L): 3.95

B. Yuen
5-16-90

~~~~~~

ID: 90FS15S17 + 20 Seq. No.: 00034 A/S Pos.: 21 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 21
Replicate 1 (Peak Stored) Time: 12:38
Peak Area (A-s): 0.068 Peak Height (A): 0.143
Background Pk Area (A-s): 0.103 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.060
Concentration (ug/L): 25.03 105.4 % R

~~~~~~

ID: 90FS15D17 Seq. No.: 00035 A/S Pos.: 22 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 22
Replicate 1 (Peak Stored) Time: 12:41
Peak Area (A-s): 0.016 Peak Height (A): 0.035
Background Pk Area (A-s): 0.091 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): 0.008
Concentration (ug/L): 3.78

~~~~~~

ID: 90FS15D17 + 20 Seq. No.: 00036 A/S Pos.: 23 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 23
Replicate 1 (Peak Stored) Time: 12:44
Peak Area (A-s): 0.067 Peak Height (A): 0.143
Background Pk Area (A-s): 0.111 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.059
Concentration (ug/L): 24.55 103.8 % R

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ID: 90FS15S18 Seq. No.: 00037 A/S Pos.: 24 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 24
Replicate 1 (Peak Stored) Time: 12:47
Peak Area (A-s): 0.005 Peak Height (A): 0.017
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.87

~~~~~~

ID: 90FS15S18 + 20 Seq. No.: 00038 A/S Pos.: 25 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 25
Replicate 1 (Peak Stored) Time: 12:51
Peak Area (A-s): 0.055 Peak Height (A): 0.119
Background Pk Area (A-s): 0.130 Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 19.55 102.1 % R

~~~~~~

ID: 90FS02R55 Seq. No.: 00039 A/S Pos.: 26 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 26
Replicate 1 (Peak Stored) Time: 12:54
Peak Area (A-s): 0.009 Peak Height (A): 0.012
Background Pk Area (A-s): 0.029 Background Pk Height (A): 0.012
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 1.00

~~~~~~

B. Yuen
5-16-90

ID: 90FS02RS5 + 20 Seq. No.: 00040 A/S Pos.: 27 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 27
Replicate 1 (Peak Stored) Time: 12:57
Peak Area (A-s): 0.058 Peak Height (A): 0.125
Background Pk Area (A-s): 0.051 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.051
Concentration (ug/L): 21.13

100.6 % R

~~~~~~

ID: AQC 22.4 UG/L Seq. No.: 00041 A/S Pos.: 37 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 13:00
Peak Area (A-s): 0.061 Peak Height (A): 0.132
Background Pk Area (A-s): 0.051 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.053
Concentration (ug/L): 22.19

Check sample is within range 20.16 - 24.64

99.1 % R Limit = 100 ± 10 %

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ID: CCB3 Seq. No.: 00042 A/S Pos.: 28 Date: 05/16/90

uL dispensed: 5 from 36, 15 from 28
Replicate 1 (Peak Stored) Time: 13:04
Peak Area (A-s): 0.005 Peak Height (A): 0.015
Background Pk Area (A-s): 0.035 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.88

Zu Limit = ± 2 ug/l

B. Yuen
5-16-90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 5-16-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 382152
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 47
☒ Pb	☒ 5100	☐ SPEX II	Expansion 1
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-53-MD
☐ Se		☐	☒ platform ☒ MSC
☐ Tl		☐	☐ wall ☐ MSA

Blank	Slope	AQC	Digestion QC
-0.49	0.0024	22.79	
-0.40		22.74	
-0.88		22.19	
			B. Yuen 5-16-90

Blank cup absorbance

Perkin-Elmer Model 5100 PC
Report Of Analytical Results
May 24, 1990

Data File: PB052490.DAT
Data Collected: 05/24/90 At: 16:59:40 By: JWG

J Gary 5/24/90

	Pb ug/L	
Blank	0.00	
Standard 1	40.00	
Standard 2	30.00	
Standard 3	20.00	
Standard 4	10.00	
AQC 22.4 UG/L	23.54	%R = 105.1 Limit = 100±10%
CCB1	-1.53	Limit = ±2 ug/L
DIGEST BLANK 1	-1.29	Adj. Conc. = 0.2u mg/Kg
DG BLANK 1 +20	21.06	%R = 111.8 Result < 10L % acceptable
DIGEST BLANK 2	0.41	
DG BLANK 2 +20	19.71	%R = 96.5 Adj. Conc. = 0.2u mg/Kg
S22 SPIKE 1/10	23.41	%R = 101.2 Adj. Conc. = 21.52 mg/Kg Spike = 18.40 mg/Kg
S22 SP 1/10 +20	43.65	
S25 SPIKE 1/10	24.04	%R = 95.6 Adj. Conc. = 24.11 mg/Kg; Spike = 20.06 mg/Kg
S25 SP 1/10 +20	43.15	
LCS 1/100	24.34	%R = 109.1 Adj. Conc. = 244.4 mg/Kg Limit = 188 << 285 mg/Kg
LCS 1/100 +20	46.16	
AQC 22.4 UG/L	22.97	%R = 102.5 Limit = 100±10%
CCB2	-1.46	Limit = ±2 ug/L
90FS15S22 1/2	22.28	%R = 90.9 Adj Conc. = ~~10.92 mg/Kg~~ gwk 5/24 4.08 mg/Kg Spike %R = 94.8 Limit = 100±20%
S22 1/2 +20	40.46	
90FS15S25 1/2	18.82	%R = 95.6 Adj. Conc. = 3.76 mg/Kg Spike %R = 101.4 Limit = 100±20%
S25 1/2 +20	37.93	
S22 DUPL 1/2	20.87	%R = 98.2 Adj. Conc. = 3.84 mg/Kg RPD = 6.1% Limit = 20%
S22 DPL 1/2 +20	40.51	
S25 DUPL 1/2	14.57	%R = 114.4 - Rerun
S25 DPL 1/2 +20	37.45	
90FS15S20 1/10	6.61	Rerun at a lower dilution
S20 1/10 +20	26.12	
AQC 22.4 UG/L	22.25	%R = 99.3 Limit = 100±10%
CCB3	-1.79	Limit = ±2 ug/L
S25 DUPL 1/2	15.48	%R = 113.4 - MSA required
S25 DPL 1/2 +20	38.15	
90FS15S24 1/3	16.47	%R = 102.0 Adj. Conc = 5.00 mg/Kg
S24 1/3 +20	36.87	
90FS15S26	22.66	%R = 106.7 Adj. Conc = 2.31 mg/Kg
90FS15S26 +20	44.00	
90FS15S27 1/8	15.96	%R = 97.9 Adj. Conc. = 12.9 mg/Kg
S27 1/8 +20	35.54	
90FS15S23 1/5	15.72	%R = 100.2 Adj Conc. = ~~1.51~~ 7.83 mg/Kg gwk 5/24
S23 1/5 +20	35.77	
90FS15S20 1/3	21.50	%R = 111.9 - Rerun
S20 1/3 +20	43.88	
90FS15S20 1/3	21.02	%R = 106.0 Adj. Conc. = 6.30 mg/Kg / ICP result reported
S20 1/3 +20	42.21	
CCB4	-1.67	Limit = ±2 ug/L
AQC 22.4 UG/L	21.87	%R = 97.6 Limit = 100±10%

Analyst: _____ Supervisor: _____

Element File: PBMSC.GEL
Date: 05/24/90
Data Storage File: PB052490.DAT
Technique: HGA

Element: Pb
Time: 16:56
ID/Weight File: PBGENER.A60
Calibration Type: Linear

J Barry 5/24/90

ID: Blank Seq. No.: 00001 A/S Pos.: 1 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 1
Replicate 1 (Peak Stored) Time: 16:59
Peak Area (A-s): 0.010 Peak Height (A): 0.015
Background Pk Area (A-s): 0.078 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.010

Auto-zero performed.

ID: Standard 1 Seq. No.: 00002 A/S Pos.: 2 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 2
Replicate 1 (Peak Stored) Time: 17:02
Peak Area (A-s): 0.102 Peak Height (A): 0.204
Background Pk Area (A-s): 0.095 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.092

Standard number 1 applied. [40.00]
Correlation coefficient: 1.00000 Slope: 0.0023 Int: 0.000

ID: Standard 2 Seq. No.: 00003 A/S Pos.: 3 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 3
Replicate 1 (Peak Stored) Time: 17:05
Peak Area (A-s): 0.076 Peak Height (A): 0.160
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.066
Concentration (ug/L): 28.79

Standard number 2 applied. [30.00]
Correlation coefficient: 0.99947 Slope: 0.0023 Int: -0.000

ID: Standard 3 Seq. No.: 00004 A/S Pos.: 4 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 4
Replicate 1 (Peak Stored) Time: 17:09
Peak Area (A-s): 0.058 Peak Height (A): 0.112
Background Pk Area (A-s): 0.072 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 21.04

Standard number 3 applied. [20.00]
Correlation coefficient: 0.99901 Slope: 0.0023 Int: 0.000

ID: Standard 4 Seq. No.: 00005 A/S Pos.: 5 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 5
Replicate 1 (Peak Stored) Time: 17:12
Peak Area (A-s): 0.035 Peak Height (A): 0.064
Background Pk Area (A-s): 0.062 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): 0.025
Concentration (ug/L): 10.75

J Garz 5/24/90

Standard number 4 applied. [10.00]
Correlation coefficient: 0.99892 Slope: 0.0023 Int: 0.001

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ID: AQC 22.4 UG/L Seq. No.: 00006 A/S Pos.: 37 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 17:15
Peak Area (A-s): 0.064 Peak Height (A): 0.124
Background Pk Area (A-s): 0.073 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.054
Concentration (ug/L): 23.54

Check sample is within range 20.16 - 24.64

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ID: CCB1 Seq. No.: 00007 A/S Pos.: 6 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1 (Peak Stored) Time: 17:18
Peak Area (A-s): 0.008 Peak Height (A): 0.011
Background Pk Area (A-s): 0.052 Background Pk Height (A): 0.015
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -1.53

~~~~~~

ID: DIGEST BLANK 1 Seq. No.: 00008 A/S Pos.: 7 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 7
Replicate 1 (Peak Stored) Time: 17:21
Peak Area (A-s): 0.008 Peak Height (A): 0.015
Background Pk Area (A-s): 0.055 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -1.29

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ID: DG BLANK 1 +20 Seq. No.: 00009 A/S Pos.: 8 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 8
Replicate 1 (Peak Stored) Time: 17:25
Peak Area (A-s): 0.058 Peak Height (A): 0.105
Background Pk Area (A-s): 0.069 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 21.06

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ID: DIGEST BLANK 2 Seq. No.: 00010 A/S Pos.: 9 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 9
Replicate 1 (Peak Stored) Time: 17:28
Peak Area (A-s): 0.012 Peak Height (A): 0.015
Background Pk Area (A-s): 0.052 Background Pk Height (A): 0.016
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Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.41

J Garry 5/24/90

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ID: DG BLANK 2 +20 Seq. No.: 00011 A/S Pos.: 10 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 10
Replicate 1 (Peak Stored) Time: 17:31
Peak Area (A-s): 0.055 Peak Height (A): 0.106
Background Pk Area (A-s): 0.068 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 19.71

~~~~~~

ID: S22 SPIKE 1/10 Seq. No.: 00012 A/S Pos.: 11 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 11
Replicate 1 (Peak Stored) Time: 17:35
Peak Area (A-s): 0.064 Peak Height (A): 0.124
Background Pk Area (A-s): 0.077 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.054
Concentration (ug/L): 23.41

~~~~~~

ID: S22 SP 1/10 +20 Seq. No.: 00013 A/S Pos.: 12 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 12
Replicate 1 (Peak Stored) Time: 17:38
Peak Area (A-s): 0.109 Peak Height (A): 0.211
Background Pk Area (A-s): 0.093 Background Pk Height (A): 0.076
Blank Corrected Pk Area (A-s): 0.099
Concentration (ug/L): 43.65

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ID: S25 SPIKE 1/10 Seq. No.: 00014 A/S Pos.: 13 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 13
Replicate 1 (Peak Stored) Time: 17:41
Peak Area (A-s): 0.065 Peak Height (A): 0.122
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.044
Blank Corrected Pk Area (A-s): 0.055
Concentration (ug/L): 24.04

~~~~~~

ID: S25 SP 1/10 +20 Seq. No.: 00015 A/S Pos.: 14 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 14
Replicate 1 (Peak Stored) Time: 17:45
Peak Area (A-s): 0.108 Peak Height (A): 0.209
Background Pk Area (A-s): 0.100 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.098
Concentration (ug/L): 43.15

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ID: LCS 1/100 Seq. No.: 00016 A/S Pos.: 15 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 15
Replicate 1 (Peak Stored) Time: 17:48
Peak Area (A-s): 0.066 Peak Height (A): 0.133

Background Pk Area (A-s): 0.098 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.056
Concentration (ug/L): 24.34

J Gary 5/24/90

ID: LCS 1/100 +20 Seq. No.: 00017 A/S Pos.: 16 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 16
Sample abs. is greater than that of the largest standard.
Replicate 1 (Peak Stored) Time: 17:51
Peak Area (A-s): 0.115 Peak Height (A): 0.229
Background Pk Area (A-s): 0.110 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.105
Concentration (ug/L): 46.16

ID: AQC 22.4 UG/L Seq. No.: 00018 A/S Pos.: 37 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 17:54
Peak Area (A-s): 0.063 Peak Height (A): 0.127
Background Pk Area (A-s): 0.069 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.053
Concentration (ug/L): 22.97

Check sample is within range 20.16 - 24.64

ID: CCB2 Seq. No.: 00019 A/S Pos.: 17 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 17
Replicate 1 (Peak Stored) Time: 17:57
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.048 Background Pk Height (A): 0.015
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -1.46

ID: 90FS15S22 1/2 Seq. No.: 00020 A/S Pos.: 18 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 18
Replicate 1 (Peak Stored) Time: 18:01
Peak Area (A-s): 0.061 Peak Height (A): 0.107
Background Pk Area (A-s): 0.104 Background Pk Height (A): 0.040
Blank Corrected Pk Area (A-s): 0.051
Concentration (ug/L): 22.28

ID: S22 1/2 +20 Seq. No.: 00021 A/S Pos.: 19 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 19
Replicate 1 (Peak Stored) Time: 18:04
Peak Area (A-s): 0.102 Peak Height (A): 0.195
Background Pk Area (A-s): 0.125 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 40.46

ID: 90FS15S25 1/2 Seq. No.: 00022 A/S Pos.: 20 Date: 05/24/90

J Gany 5/24/90

uL dispensed: 5 from 36, 15 from 20
Replicate 1 (Peak Stored) Time: 18:07
Peak Area (A-s): 0.053 Peak Height (A): 0.091
Background Pk Area (A-s): 0.138 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.043
Concentration (ug/L): 18.82

~~~~~~

ID: S25 1/2 +20 Seq. No.: 00023 A/S Pos.: 21 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 21
Replicate_ 1 (Peak Stored) Time: 18:10
Peak Area (A-s): 0.096 Peak Height (A): 0.183
Background Pk Area (A-s): 0.154 Background Pk Height (A): 0.068
Blank Corrected Pk Area (A-s): 0.086
Concentration (ug/L): 37.93

~~~~~~

ID: S22 DUPL 1/2 Seq. No.: 00024 A/S Pos.: 22 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 22
Replicate 1 (Peak Stored) Time: 18:13
Peak Area (A-s): 0.058 Peak Height (A): 0.103
Background Pk Area (A-s): 0.123 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 20.87

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ID: S22 DPL 1/2 +20 Seq. No.: 00025 A/S Pos.: 23 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 23
Replicate 1 (Peak Stored) Time: 18:16
Peak Area (A-s): 0.102 Peak Height (A): 0.194
Background Pk Area (A-s): 0.134 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 40.51

~~~~~~

ID: S25 DUPL 1/2 Seq. No.: 00026 A/S Pos.: 24 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 24
Replicate 1 (Peak Stored) Time: 18:20
Peak Area (A-s): 0.044 Peak Height (A): 0.086
Background Pk Area (A-s): 0.111 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.034
Concentration (ug/L): 14.57

~~~~~~

ID: S25 DPL 1/2 +20 Seq. No.: 00027 A/S Pos.: 25 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 25
Replicate 1 (Peak Stored) Time: 18:23
Peak Area (A-s): 0.095 Peak Height (A): 0.178
Background Pk Area (A-s): 0.129 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.085
Concentration (ug/L): 37.45

~~~~~~

ID: 90FS15S20 1/10   Seq. No.: 00028   A/S Pos.: 26   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 26   J Garry 5/24/90
Replicate 1 (Peak Stored)   Time: 18:26
Peak Area (A-s): 0.026   Peak Height (A): 0.041
Background Pk Area (A-s): 0.069   Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.016
Concentration (ug/L): 6.61

~~~~~~

ID: S20 1/10 +20   Seq. No.: 00029   A/S Pos.: 27   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 27
Replicate 1 (Peak Stored)   Time: 18:29
Peak Area (A-s): 0.070   Peak Height (A): 0.128
Background Pk Area (A-s): 0.088   Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.060
Concentration (ug/L): 26.12

~~~~~~

ID: AQC 22.4 UG/L   Seq. No.: 00030   A/S Pos.: 37   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored)   Time: 18:33
Peak Area (A-s): 0.061   Peak Height (A): 0.127
Background Pk Area (A-s): 0.073   Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.051
Concentration (ug/L): 22.25

Check sample is within range 20.16 - 24.64

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ID: CCB3   Seq. No.: 00031   A/S Pos.: 28   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 28
Replicate 1 (Peak Stored)   Time: 18:36
Peak Area (A-s): 0.007   Peak Height (A): 0.011
Background Pk Area (A-s): 0.051   Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -1.79

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ID: S25 DUPL 1/2   Seq. No.: 00032   A/S Pos.: 29   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 29
Replicate 1 (Peak Stored)   Time: 18:39
Peak Area (A-s): 0.046   Peak Height (A): 0.087
Background Pk Area (A-s): 0.109   Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.036
Concentration (ug/L): 15.48

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ID: S25 DPL 1/2 +20   Seq. No.: 00033   A/S Pos.: 30   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 30
Replicate 1 (Peak Stored)   Time: 18:43
Peak Area (A-s): 0.097   Peak Height (A): 0.178
Background Pk Area (A-s): 0.131   Background Pk Height (A): 0.064
Blank Corrected Pk Area (A-s): 0.087
~~~~~~

Concentration (ug/L): 38.15

J Gary 5/24/90

~~~~~~

ID: 90FS15S24 1/3 Seq. No.: 00034 A/S Pos.: 31 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 31
Replicate 1 (Peak Stored) Time: 18:46
Peak Area (A-s): 0.048 Peak Height (A): 0.085
Background Pk Area (A-s): 0.090 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.038
Concentration (ug/L): 16.47

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ID: S24 1/3 +20 Seq. No.: 00035 A/S Pos.: 32 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 32
Replicate 1 (Peak Stored) Time: 18:49
Peak Area (A-s): 0.094 Peak Height (A): 0.179
Background Pk Area (A-s): 0.106 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.084
Concentration (ug/L): 36.87

~~~~~~

ID: 90FS15S26 Seq. No.: 00036 A/S Pos.: 33 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 33
Replicate 1 (Peak Stored) Time: 18:52
Peak Area (A-s): 0.062 Peak Height (A): 0.120
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 22.66

~~~~~~

ID: 90FS15S26 +20 Seq. No.: 00037 A/S Pos.: 34 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 34
Replicate 1 (Peak Stored) Time: 18:55
Peak Area (A-s): 0.110 Peak Height (A): 0.209
Background Pk Area (A-s): 0.160 Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.100
Concentration (ug/L): 44.00

~~~~~~

ID: 90FS15S27 1/8 Seq. No.: 00038 A/S Pos.: 35 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 35
Replicate 1 (Peak Stored) Time: 18:59
Peak Area (A-s): 0.047 Peak Height (A): 0.090
Background Pk Area (A-s): 0.082 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.037
Concentration (ug/L): 15.96

~~~~~~

ID: S27 1/8 +20 Seq. No.: 00039 A/S Pos.: 38 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 38
Replicate 1 (Peak Stored) Time: 19:02
Peak Area (A-s): 0.091 Peak Height (A): 0.178
Background Pk Area (A-s): 0.095 Background Pk Height (A): 0.061

J Barry 5/24/90

Blank Corrected Pk Area (A-s): 0.081
Concentration (ug/L): 35.54

~~~~~~

ID: 90FS15S23 1/5 Seq. No.: 00040 A/S Pos.: 39 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 39
Replicate 1 (Peak Stored) Time: 19:05
Peak Area (A-s): 0.046 Peak Height (A): 0.084
Background Pk Area (A-s): 0.073 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.036
Concentration (ug/L): 15.72

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ID: S23 1/5 +20 Seq. No.: 00041 A/S Pos.: 40 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 40
Replicate 1 (Peak Stored) Time: 19:08
Peak Area (A-s): 0.092 Peak Height (A): 0.176
Background Pk Area (A-s): 0.089 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.082
Concentration (ug/L): 35.77

~~~~~~

ID: 90FS15S20 1/3 Seq. No.: 00042 A/S Pos.: 6 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1 (Peak Stored) Time: 19:12
Peak Area (A-s): 0.059 Peak Height (A): 0.109
Background Pk Area (A-s): 0.125 Background Pk Height (A): 0.044
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 21.50

~~~~~~

ID: S20 1/3 +20 Seq. No.: 00043 A/S Pos.: 7 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 7
Replicate 1 (Peak Stored) Time: 19:15
Peak Area (A-s): 0.110 Peak Height (A): 0.200
Background Pk Area (A-s): 0.141 Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.100
Concentration (ug/L): 43.88

~~~~~~

ID: 90FS15S20 1/3 Seq. No.: 00044 A/S Pos.: 6 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 6
Replicate 1 (Peak Stored) Time: 19:18
Peak Area (A-s): 0.058 Peak Height (A): 0.110
Background Pk Area (A-s): 0.127 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 21.02

~~~~~~

ID: S20 1/3 +20 Seq. No.: 00045 A/S Pos.: 7 Date: 05/24/90

uL dispensed: 5 from 36, 15 from 7
Replicate 1 (Peak Stored) Time: 19:22
Peak Area (A-s): 0.106 Peak Height (A): 0.202

Background Pk Area (A-s): 0.142   Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 42.21

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ID: CCB4   Seq. No.: 00046   A/S Pos.: 8   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 8
Replicate 1 (Peak Stored)   Time: 19:25
Peak Area (A-s): 0.007   Peak Height (A): 0.011
Background Pk Area (A-s): 0.051   Background Pk Height (A): 0.018
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -1.67

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ID: AQC 22.4 UG/L   Seq. No.: 00047   A/S Pos.: 37   Date: 05/24/90

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored)   Time: 19:28
Peak Area (A-s): 0.060   Peak Height (A): 0.127
Background Pk Area (A-s): 0.069   Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.050
Concentration (ug/L): 21.87

J Garry 5/24/90

J Gary 5/24/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/24/90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 382152
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 51
☒ Pb	☒ 5100	☐ SPEX II	Expansion 1
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-53-MD
☐ Se		☐	☒ platform ☒ MSC
☐ Tl		☐	☐ wall ☐ MSA

Blank	Slope	AQC	Digestion QC
-1.53	.0023	23.54	Blanks < 0.2 mg/kg
-1.46		22.97	90FS15522 spike %R = 94.8
-1.79		22.25	S25 spike %R = 101.4
-1.67		21.87	90FS15522 Duplicate RPD = 6.1%
			LCS = 244.4 mg/kg

Blank cup absorbance

J Ganz
5/24/90

---

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 05-24-1990
PARAMETER NAME ----: PB
DATA SET # --------: SF7171

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	9.900898E-02	.9994768	.01313	Limit = ± 2 ug/L
AQC TV=22.4 UG/L	24.5202	.9973061	.01188	%R = 109.5 Limit = 100 ± 10%
90FS15S25 DUPLICATE 1/2	17.47316	.9998992	.01211	Adj. Conc = 3.52 mg/kg RPD = 6.3% Limit = 20%
AQC TV=22.4 UG/L	24.07407	.9982604	.01215	%R = 107.5 Limit = 100 ± 10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	1.299988E-03	3.299988E-03	253.8476 %
10	.134	.1326	-1.400024E-03	-1.055825 %
20	.271	.2639	-7.100046E-03	-2.690431 %
30	.39	.3952	5.199969E-03	1.315782 %

AQC TV=22.4 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.281	.2913	1.029995E-02	3.535858 %
10	.426	.4101	-1.590005E-02	-3.877115 %
20	.528	.5289	8.999705E-04	.1701589 %
30	.643	.6477	4.699946E-03	.7256363 %

90FS15S25 DUPLICATE 1/2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.211	.2116	5.999804E-04	.2835446 %
10	.332	.3327	6.99997E-04	.2103989 %
20	.457	.4538	-3.199995E-03	-.7051553 %
30	.573	.5749	1.900017E-03	.3304953 %

AQC TV=22.4 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.284	.2925	8.49998E-03	2.905976 %
10	.427	.414	-1.299998E-02	-3.140092 %
20	.535	.5355001	5.000234E-04	9.337504E-02 %
30	.653	.6570001	4.000068E-03	.6088383 %

BEGIN DATA FILE: PB524.DF

J Gary
5/24/90

Begin Element - PB

-0.581	
0.000 AZ	
-0.002 +0	
0.134 +10	Blank
0.271 +20	
0.390 +30	
0.281 +0	
0.426 +10	
0.528 +20	AQC TV = 22.4 ug/L
0.643 +30	
0.211 +0	
0.332 +10	
0.457 +20	90F515S25 Duplicate 1/2
0.573 +30	
0.284 +0	
0.427 +10	
0.535 +20	AQC TV= 22.4 ug/L
0.653 +30	
0.001	Blank

AAS RUN LOG

Element Pb

Date 5/24/90

J Kamy 5/24/90

Analyst JWG

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV= 22.4 µg/L	0	
6		10	
7		20	
8		30	
9	90FS15525 Duplicate 1/2	0	
10		10	
11		20	
12		30	
13	AQC	0	
14		10	
15		20	
16		30	
17	Blank Cup	0	
18		10	
19		20	
20		30	
21		0	
22		10	
23		20	
24		30	
25		0	
26		10	
27		20	

J Garry 5/24/90

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 5/24/90
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 420252
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 49
☒ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-53-MD
☐ Se		☐	☒ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

[illegible] 5/24

Blank	Slope	AQC	Digestion QC
.099	.01313	24.52 24.07	Duplicate RPD = 6.3%

Blank cup absorbance
.001

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-17-1990
PARAMETER NAME ----: SB
DATA SET # --------: SF7171

B. Yuen
5-18-90

SAMPLE NO.	CONC.	R VALUE	SLOPE		
BLANK	.1196311	.9997952	.02257	2u	Limit = ± 2 ug/l
AQC 16.92 UG/L	16.71614	.9995867	.02628	%R = 98.8	Limit = 100 ± 10 %
90FS15S13	-.9825398	.9998711	.02463	2u	SF7170
90FS15D13	-.7623323	.9988916	.02453	2u	
90FS15S14	-.1927221	.9983288	.02335	2u	
90FS15S15	-.6569697	.9996577	.01994	2u	
90FS02R54	-8.946564E-02	.9984209	.02012	2u	
AQC 16.92 UG/L	17.6592	.9969563	.02324	%R = 104.4	Limit = 100 ± 10 %
90FS15S16	-.5577	.9995909	.02851	2u	SF7171
90FS15S17	-.8414258	.9976311	.02472	2u	
90FS15D17	-.6276125	.9991189	.0239	2u	
90FS15S18	-5.188384E-02	.9995549	.02313	2u	
90FS02R55	-.9618115	.9992391	.02121	2u	
AQC 16.92 UG/L	16.7046	.9999397	2.460999E-02	%R = 98.7	Limit = 100 ± 10 %

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	2.700073E-03	-4.299927E-03	-159.2522 %
10	.22	.2284	8.400038E-03	3.677775 %
20	.458	.4541	-3.900021E-03	-.8588464 %
30	.68	.6798	-2.000332E-04	-.0294253 %

AQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.447	.4393001	-7.699937E-03	-1.752774 %
10	.688	.7021001	1.410002E-02	2.008263 %
20	.97	.9649	-5.100012E-03	-.5285534 %
30	1.229	1.2277	-1.299977E-03	-.1058872 %

90FS15S13

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.029	-2.419995E-02	4.800048E-03	-19.83495 %
10	.229	.2221	-6.899983E-03	-3.106701 %
20	.469	.4684	-6.0004E-04	-.1281042 %
30	.712	.7147	2.699912E-03	.3777686 %

90FS15D13

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	-.006	-1.870001E-02	-1.270001E-02	67.91445 %
10	.205	.2266	2.159999E-02	9.532213 %
20	.477	.4719	-5.100012E-03	-1.08074 %
30	.721	.7172	-3.800035E-03	-.5298431 %

90FS15S14

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	-4.500061E-03	-1.650006E-02	366.6631 %
10	.206	.2289999	2.299993E-02	10.04364 %
20	.459	.4624999	3.499925E-03	.7567407 %
30	.706	.6959999	-1.000011E-02	-1.436798 %

90FS15S15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.01	-1.309998E-02	-3.099976E-03	23.66399 %
10	.178	.1863	8.300036E-03	4.455199 %
20	.393	.3857001	-7.29993E-03	-1.892644 %
30	.583	.5851001	2.10011E-03	.3589318 %

B. Yuen
5-18-90

90FS02R54

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	-1.800049E-03	-1.380005E-02	766.6486 %
10	.182	.1994	1.739998E-02	8.726169 %
20	.394	.4006	6.599993E-03	1.647527 %
30	.612	.6018	-1.019996E-02	-1.694909 %

AQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.392	.4103998	1.839981E-02	4.483386 %
10	.658	.6427998	-.0152002	-2.364686 %
20	.9	.8751998	-2.480018E-02	-2.83366 %
30	1.086	1.1076	2.159977E-02	1.950142 %

90FS15S16

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-1.590002E-02	-9.900023E-03	62.26421 %
10	.255	.2692	1.419997E-02	5.274879 %
20	.553	.5543	1.299977E-03	.234526 %
30	.845	.8393999	-5.600095E-03	-.6671546 %

90FS15S17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-2.080005E-02	-2.080005E-02	100 %
10	.2	.2264	2.639996E-02	11.66076 %
20	.464	.4736	9.599984E-03	2.027024 %
30	.736	.7208	-1.520002E-02	-2.108771 %

90FS15D17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-1.499994E-02	-9.999939E-03	66.66654 %
10	.216	.2240001	8.000046E-03	3.571448 %
20	.449	.4630001	1.400006E-02	3.02377 %
30	.714	.702	-1.199997E-02	-1.709397 %

90FS15S18

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-1.200073E-03	-3.200073E-03	266.6565 %
10	.22	.2300999	1.009993E-02	4.389368 %
20	.472	.4614	-1.060006E-02	-2.297369 %
30	.689	.6927	3.699958E-03	.5341358 %

90FS02R55

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.011	-2.040003E-02	-9.400025E-03	46.0785 %
10	.182	.1917	9.700015E-03	5.059997 %
20	.395	.4038001	8.80003E-03	2.179304 %
30	.625	.6159001	-9.099961E-03	-1.477506 %

AQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.41	.4111	1.099974E-03	.2675685 %
10	.661	.6571999	-3.800154E-03	-.5782341 %
20	.899	.9032998	4.29982E-03	.4760125 %
30	1.151	1.1494	-1.600266E-03	-.1392262 %

B. Yuen
5-18-90

BEGIN [illegible]

Begin Element - SB

	0.010	
	0.005 AZ	
0	0.007	Blank
10	0.220	
20	0.455	
30	0.680	
0	0.447	AQC
10	0.688	
20	0.970	
30	1.229	
0	-0.029	90FS15S13
10	0.229	
20	0.489	
30	0.712	
0	-0.005	90FS15D13
10	0.205	
20	0.477	
30	0.721	
0	0.012	90FS15S14
10	0.208	
20	0.459	
30	0.705	
0	-0.010	90FS15S15
10	0.178	
20	0.399	
30	0.583	
0	0.012	90FS02R54
10	0.183	
20	0.394	
30	0.612	
0	0.392	AQC
10	0.658	
20	0.900	
30	1.095	
	-0.015	Blank cup
0	-0.006	90FS15S16
10	0.255	
20	0.553	
30	0.845	
0	-0.000	90FS15S17
10	0.200	
20	0.454	
30	0.735	
0	-0.005	90FS15D17
10	0.216	
20	0.449	
30	0.714	
0	0.002	90FS15S18
10	0.220	
20	0.472	
30	0.689	
0	-0.011	90FS02R55
10	0.182	
20	0.395	
30	0.625	
0	0.410	AQC
10	0.661	
20	0.899	
30	1.151	
	-0.016	Blank cup

SF7170

SF7171

B. Yuen
5-18-90

AAS RUN LOG

Element Sb

Analyst B. Yuen

Date # 5-17-90

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV = 16.92 µg/l
6		10	
7		20	
8		30	
9	90FS15S13	0	SF7170
10		10	
11		20	
12		30	
13	90FS15D13	0	
14		10	
15		20	
16		30	
17	90FS15S14	0	B. Yuen
18		10	
19		20	5-18-90
20		30	
21	90FS15S15	0	
22		10	
23		20	
24		30	
25	90FS02R54	0	
26		10	
27		20	

AAS RUN LOG

Element Sb

Analyst B. Yuen

Date 5-17-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 16.92 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1	90FS15S16	0	SF7171
2		10	
3		20	
4		30	
5	90FS15S17	0	
6		10	
7		20	
8		30	
9	90FS15D17	0	B. Yuen
10		10	
11		20	5-18-90
12		30	
13	90FS15S18	0	
14		10	
15		20	
16		30	
17	90FS02R55	0	
18		10	
19		20	
20		30	

AAS RUN LOG

Element Sb

Analyst B. Yuen

Date 5-17-90

Data Set SF7171

	ID	spike	comment
21	AQC	0	TV = 16.92 µg/l
22		10	
23		20	
24		30	
25	Blank Cup	0	
26		10	
27		20	
28		30	
29	B.Y. ~~AQC~~	0	
30		10	B. Yuen
31		20	
32		30	5-18-90
33	B.Y. ~~Blank Cup~~	0	
	Start Wheel 3		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-17-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2237
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 44
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☒ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 1-110-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
0.12	0.02257		
		16.72	
		17.66	
		16.70	
			B. Yuen 5-18-90

Blank cup absorbance
-0.016
-0.016

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-21-1990
PARAMETER NAME ----: SB
DATA SET # --------: SF7171

B. Yuen
5-23-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BALNK	-1.041661	.9992103	.0216	2u Limit = ±2 ug/l
AQC 16.92 UG/L	16.63159	.9997498	2.374999E-02	%R = 98.3 Limit = 100±10%
DIGEST BLANK 1	-.5301205	.9996482	.02075	0.2u mg/kg SF7171
DIGEST BLANK 2	-.5685448	.9987984	.02181	0.2u mg/kg
90FS15S22	-.5860105	.9989424	.03174	0.18u ~~0.09~~ mg/kg B.Y. diff. < 0.2 mg/kg ~~RPD% = 0~~ B.Y.
90FS15S22 DUP	-.7142858	.999099	.0308	~~0.09~~ B.Y. 0.18u mg/kg
90FS15S22 SPK 1:9	5.488367	.9995372	.0215	Rerun. See less dilution bel
AQC 16.92 UG/L	16.43153	.9994758	.02169	%R = 97.1 Limit = 100±10%
90FS15S22 SPK 1:4	12.30803	.9999968	.02318	5.66 mg/kg SPIKE CONC. = ~~200ppb~~ 18.4 %R = 30.77
90FS15S25	-.596676	.99868	.03067	0.20u mg/kg ~~RPD = 0.0%~~ B.Y.
90FS15S25 DUP	-.6352672	.999944	.03164	0.20u mg/kg diff. < 0.2 mg/kg
90FS15S25 SPK 1:4	11.53813	.9995661	2.438001E-02	5.79 mg/kg SPIKE CONC. = 2u mg/l %R = 28.84
LCS 1:9	4018.302	.1335339	1.26001E-03	Rerun, dilution error
90FS15S20	-.2295458	.9999865	3.006001E-02	B.Y. ~~0.30~~ 0.20u mg/kg
90FS15S21	5.679007	.9995636	2.916001E-02	0.59 mg/kg
AQC 16.92 UG/L	17.28222	.9984722	.02204	%R = 102.1 Limit = 100±10%
LCS 1:99	21.57684	.9983286	.02505	216.63 mg/kg (Limit = 127~294 mg/kg
90FS15S23	-.1557347	.9976351	.03018	0.20u mg/kg
90FS15S24	-8.669474E-02	.9986434	.02999	0.20u mg/kg
90FS15S26	.1740902	.9990215	.02987	0.20u mg/kg
90FS15S27	.2052897	.9979239	.02874	0.20u mg/kg
AQC 16.92 UG/L	17.13327	.9985868	.02236	%R = 101.3 Limit = 100±10%

spike % Recoveries 30.77 and 28.84 are characteristically low

BALNK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.012	-2.249988E-02	-1.049988E-02	46.66638 %
10	.18	.1935001	1.350007E-02	6.976775 %
20	.405	.4095	4.500002E-03	1.098902 %
30	.633	.6255	-7.500053E-03	-1.199049 %

AQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.399	.3950001	-3.999859E-03	-1.012622 %
10	.631	.6325001	1.50007E-03	.2371652 %
20	.861	.87	9.000003E-03	1.034483 %
30	1.114	1.1075	-6.500125E-03	-.5869188 %

DIGEST BLANK 1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-8.000001E-03	-.011	-.003	27.27272 %
10	.197	.1965	-4.999936E-04	-.2544496 %
20	.394	.404	9.999991E-03	2.475245 %
30	.618	.6115	-6.500006E-03	-1.062961 %

DIGEST BLANK 2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-1.239996E-02	-1.239996E-02	100 %
10	.186	.2057	1.970004E-02	9.577069 %
20	.426	.4238001	-2.199948E-03	-.5191005 %
30	.647	.6419001	-5.099952E-03	-.7945088 %

90FS15S22

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.013	-1.859998E-02	-5.599976E-03	30.10744 %
10	.304	.2988001	-5.199939E-03	-1.740274 %
20	.589	.6162001	.0272001	4.414168 %
30	.95	.9336001	-1.639992E-02	-1.756632 %

B. Green
5-23-90

90FS15S22 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.012	-.022	-.01	45.45455 %
10	.282	.286	4.000008E-03	1.398604 %
20	.572	.594	2.199996E-02	3.703696 %
30	.918	.902	-1.599997E-02	-1.773833 %

90FS15S22 SPK 1 : 9

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.11	.1179999	7.999882E-03	6.779568 %
10	.344	.3329999	-1.100013E-02	-3.303342 %
20	.55	.5479999	-2.000153E-03	-.3649915 %
30	.758	.7629999	4.999876E-03	.6552919 %

AQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.365	.3564	-8.599997E-03	-2.413018 %
10	.562	.5733	1.130003E-02	1.97105 %
20	.787	.7902001	3.200054E-03	.4049676 %
30	1.013	1.0071	-5.899906E-03	-.5858312 %

90FS15S22 SPK 1 : 4

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.285	.2853001	3.000498E-04	.1051699 %
10	.518	.5171001	-8.999705E-04	-.1740419 %
20	.748	.7489001	9.000301E-04	.1201803 %
30	.981	.9807	-2.999902E-04	-3.058979E-02 %

90FS15S25

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-1.830005E-02	-1.930005E-02	105.4645 %
10	.262	.2883999	2.639988E-02	9.153916 %
20	.59	.5950998	5.099833E-03	.856971 %
30	.914	.9017998	-1.220018E-02	-1.35287 %

90FS15S25 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.016	-2.009985E-02	-4.099853E-03	20.39743 %
10	.291	.2963002	5.300135E-03	1.788772 %
20	.611	.6127001	1.700103E-03	.2774772 %
30	.932	.9291001	-2.899826E-03	-.3121112 %

90FS15S25 SPK 1 : 4

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.273	.2812998	8.299798E-03	2.950517 %
10	.534	.5251	-8.900046E-03	-1.694924 %
20	.776	.7689001	-7.099986E-03	-.9233952 %
30	1.005	1.0127	7.700205E-03	.7603637 %

B. Yuen
5-23-90

LCS 1:9

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	4.955	5.0631	.1080995	2.135045 %
10	5.248	5.0757	-.1723008	-3.394622 %
20	5.068	5.0883	2.029991E-02	.3989528 %
30	5.057	5.1009	4.389954E-02	.8606234 %

90FS15S20

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-8.000001E-03	-6.900147E-03	1.099854E-03	-15.93957 %
10	.294	.2936999	-3.000796E-04	-.1021722 %
20	.597	.5943	-2.700031E-03	-.4543212 %
30	.893	.8949	1.900017E-03	.2123162 %

90FS15S21

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.16	.1655999	5.599857E-03	3.381559 %
10	.458	.4571999	-8.00103E-04	.1750007 %
20	.764	.7488	-1.520008E-02	-2.029925 %
30	1.03	1.0404	1.040006E-02	.999621 %

PQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	.366	.3809	1.490003E-02	3.911795 %
10	.622	.6013	-2.069998E-02	-3.442538 %
20	.825	.8217001	-3.299952E-03	-.4016005 %
30	1.033	1.0421	9.099961E-03	.8732329 %

LCS 1:99

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.548	.5405	-7.499993E-03	-1.387603 %
10	.769	.791	2.200002E-02	2.781291 %
20	1.063	1.0415	-2.149987E-02	-2.064318 %
30	1.285	1.292	7.000089E-03	.5418025 %

90FS15S23

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-4.700073E-03	-5.700073E-03	121.2763 %
10	.271	.2971	2.609995E-02	8.784906 %
20	.634	.5989	-3.510004E-02	-5.860752 %
30	.886	.9006999	1.469994E-02	1.632057 %

90FS15S24

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.01	-2.599976E-03	7.400024E-03	-284.619 %
10	.294	.2973001	3.300041E-03	1.110004 %
20	.626	.5972001	-2.879995E-02	-4.822497 %
30	.879	.8971001	1.810008E-02	2.017621 %

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90FS15S26

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	5.200073E-03	3.200073E-03	61.539 %
10	.32	.3039001	-1.609993E-02	-5.297771 %
20	.58	.6026001	2.260006E-02	3.750424 %
30	.911	.9012999	-9.70006E-03	-1.07623 %

90FS15S27

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.016	5.900025E-03	-1.009998E-02	-171.1853 %
10	.295	.2933	-1.700014E-03	-.5796161 %
20	.547	.5807	3.369993E-02	5.80333 %
30	.89	.8680999	-2.190012E-02	-2.522765 %

AQC 16.92 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.373	.3831	1.009998E-02	2.636382 %
10	.628	.6067	-2.130008E-02	-3.510809 %
20	.818	.8303	1.229996E-02	1.481387 %
30	1.055	1.0539	-1.099944E-03	-.1043689 %

BEGIN DATA FILE: SB531.DF

Begin Element - SE

	0.005	
	0.000 AZ	
0	-0.012	Blank
10	0.180	
20	0.405	
30	0.633	
0	0.399	AQC
10	0.631	
20	0.851	
30	1.112	
0	-0.005	Digest Blank 1 (SF7171)
10	0.197	
20	0.394	
30	0.615	
0	0.000	Digest Blank 2
10	0.188	
20	0.425	
30	0.647	
0	-0.013	90FS15522
10	0.304	
20	0.588	
30	0.850	
0	-0.012	90FS15522 Dup
10	0.282	
20	0.572	
30	0.915	
	1.250	NOT USED, DILUTION ERROR
0	0.110	90FS15522 SpK 1:9
10	0.344	
20	0.550	
30	0.758	
0	0.355	AQC
10	0.562	
20	0.787	
30	1.019	
	-0.014	Blank Dup
0	0.285	90FS15522 SpK 1:4
10	0.519	
20	0.749	
30	0.981	
0	0.001	90FS15525
10	0.263	
20	0.590	
30	0.914	
0	-0.015	90FS15525 Dup
10	0.291	
20	0.611	
30	0.932	
0	0.273	90FS15525 SpK 1:4
10	0.534	
20	0.776	
30	1.005	
0	4.955	LCS 1:9
10	5.248	
20	5.068	
30	5.057	
0	-0.008	90FS15520
10	0.294	
20	0.597	

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30	0.893	
0	0.160	
10	0.458	90FS15521
20	0.764	
30	1.030	
24. 0	0.366	
10 ~~20~~	0.622	AQC
20	0.825	
30	1.033	
	-0.005	Blank Cup
0	0.548	
10	0.759	LCS 1:99
20	1.063	
30	1.285	
0	0.001	
10	0.271	90FS15523
20	0.634	
30	0.886	
0	-0.010	
10	0.294	90FS15524
20	0.626	
30	0.879	
0	0.002	
10	0.320	90FS15526
20	0.580	
30	0.811	
0	0.015	
10	0.295	90FS15527
20	0.547	
30	0.850	
0	0.373	
10	0.628	AQC
20	0.818	
30	1.055	
	-0.006	Blank Cup

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AAS RUN LOG

Element Sb

Analyst B. Yuen

Date 5-21-90

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV=16.92 µg/l
6		10	
7		20	
8		30	
9	Digest Blank 1	0	SF7171
10		10	
11		20	
12		30	
13	Digest Blank 2	0	
14		10	
15		20	
16		30	B. Yuen
17	90FS15522	0	5-23-90
18		10	
19		20	
20		30	
21	90FS15522 Dup	0	
22		10	
23		20	
24		30	
25	90FS15522 SpK 1:9	0	Rerun
26		10	
27		20	

AAS RUN LOG

Element Sb

Analyst B. Yuen

Date 5-21-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV=16.92 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1	90FS15522 SpK 1:4	0	SF7171
2		10	
3		20	
4		30	
5	90FS15525	0	
6		10	
7		20	
8		30	B. Yuen
9	90FS15525 Dup	0	
10		10	5-23-90
11		20	
12		30	
13	90FS15525 SpK 1:4	0	
14		10	
15		20	
16		30	
17	LCS 1:9	0	Rerun
18		10	
19		20	
20		30	

AAS RUN LOG

Element Sb

Analyst B. Yuen

Date 5-21-90

Data Set SF7171

	ID	spike	comment
21	90FS15520	0	SF7171
22	"	10	
23		20	
24		30	
25	90FS15[illegible]21	0	
26		10	
27		20	
28		30	
29	AQC	0	TV=16.92 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	B. Yuen
	Start Wheel 3		5-23-90
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	

AAS RUN LOG

Element Sb

Analyst B. Yuen

Date 5-21-90

Wheel 3

Data Set SF7171

	ID	spike	comment .
1	B.Y. ~~Blank~~ LCS 1:99	0	SF7171
2		10	
3		20	
4		30	
5	B.Y. ~~AQC~~ 90FS15523	0	
6		10	
7		20	
8		30	
9	90FS15524	0	
10		10	
11		20	
12		30	
13	90FS15526	0	
14		10	B. Yuen
15		20	
16		30	5-23-90
17	90FS15527	0	
18		10	
19		20	
20		30	
21	AQC	0	TV = 16.92 µg/l
22		10	
23		20	
24		30	
25	Blank cup	0	
26		10	
27		20	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-21-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2237
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 43
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☒ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 1-110-MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-1.04	0.0216		Digest Blank 1 < 0.2 mg/kg
		16.63	Digest Blank 2 < 0.2 mg/kg
		16.43	
		17.28	90FS15522: ~~RPD% = 0~~ B.Y. Dup diff < 0.2 mg/l
		17.13	Spike %R = 30.77
			90FS15525: ~~RPD% = 0~~ B.Y. Dup diff < 0.2 mg/l
			Spike %R = 28.84
			LCS = 216.63 mg/kg
			Limit for LCS = 127 ~ 294 mg/kg

Blank cup absorbance
-0.014
-0.006
-0.006

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FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-21-1990
PARAMETER NAME ----: SE
DATA SET # --------: SF7171

B. Yuen
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SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	.0604997	.9997438	.01157	2u Limit = ± 2 Mg/l
AQC 25 UG/L	23.61683	.9988192	.01164	%R = 94.5 Limit = 100±10%
90FS15S13	.6672701	.9994256	.01109	2u SF7170
90FS15D13	-1.329431	.9953061	.01196	2u
90FS15S14	.1343363	.9980831	.01191	2u
90FS15S15	-.1063806	.9999606	.01034	2u
90FS02R54	.4958671	.9998759	.01089	2u
AQC 25 UG/L	24.13636	.9996606	.011	%R = 96.5 Limit = 100±10%
90FS15S16	.4616741	.9969651	.01148	2u SF7171
90FS15S17	.2323564	.9991877	.01162	2u
90FS15D17	-6.739578E-02	.9996575	.01187	2u
90FS15S18	.2030457	.9983808	.00985	2u
90FS02R55	-.276337	.9989665	.01158	2u
DIGEST BLANK A	2.904045E-02	.999941	.01033	0.2u Mg/kg
DEGIST BLANK B	.3193625	.9995738	.01002	0.2u Mg/kg
AQC 25 UG/L	22.94228	.9992442	.01074	%R = 91.8 Limit = 100±10%
90FS15S23	.3211424	.9995491	.01121	0.19u Mg/kg SF7171
90FS15S23 DUP	.2394141	.9979612	.01086	0.19u Mg/kg ~~RPD % = 0~~ diff. < 0.2 Mg/kg
90FS15S23 SPK 1:9				18.92 Mg/kg Spike Conc. = 18.27 Mg/kg %R = 103.60
	20.71428	.999753	9.380001E-03	
90FS15S25	1.084341	.9990724	8.299999E-03	0.18u Mg/kg
90FS15S25 DUP	1.079811	.9925247	6.390001E-03	0.19u Mg/kg ~~RPD % = 5.40~~ B.Y. Rerun r<0.992
90FS15S25 SPK 1:9				
	20.70602	.9997831	8.639999E-03	19.68 Mg/kg Spike Conc. = 19.01 Mg/kg %R = 103.53
LCS 1:19	22.97936	.9987234	.01017	41.99 Mg/kg Limit = 19! ~ 59.4 Mg/kg
AQC 25 UG/L	27.90394	.9308251	.00916	Rerun r<0.995
AQC 25 UG/L	24.79822	.9965646	8.919998E-03	%R = 99.2 Limit = 100±10%
90FS15S25 DUP	-.5468751	.9776978	.0064	Rerun r<0.995 ~~0.19 Mg/kg~~ ~~RPD % = 5.40~~ BY
90FS15S20	.8548712	.9948117	5.030001E-03	Rerun r<0.995
90FS15S21	.3571384	.9961651	7.000001E-03	0.19u Mg/kg
90FS15S22	1.011234	.9947776	6.230002E-03	Rerun r<0.995
90FS15S24	.3149558	.9987252	6.350001E-03	0.18u Mg/kg
90FS15S26	-.3379686	.9922534	.00503	Rerun r<0.995
90FS15S27	3.283585	.9956204	.00603	0.32 Mg/kg
AQC 25 UG/L	23.26033	.9992777	8.220001E-03	%R = 93.0 Limit = 100±10%
90FS15S25 DUP 1:1				
	.8064516	.9280439	.0062	Rerun r<0.995
90FS15S20 1:1	2.869616E-02	.9969204	.00697	0.39u Mg/kg
90FS15S22 1:1	1.514596	.9690694	5.480001E-03	Rerun r<0.995
90FS15S26 1:1	2.5612	.9778904	5.310002E-03	Rerun r<0.995
90FS15S25 DUP 1:5				
	5.102093E-02	.9976426	.00588	1.12u ~~1.52~~ B.Y. Mg/kg diff. < 0.2 Mg/kg ~~RPD % = 0~~ B.Y.
90FS15S22 1:5	-.3356907	.9973821	.00566	1.14u Mg/kg
90FS15S26 1:5	.8914772	.9990549	5.159999E-03	1.07u Mg/kg
AQC 25 UG/L	30.60812	.9329609	5.919998E-03	Rerun r<0.995
AQC 25 UG/L	24.86487	.9960121	7.029999E-03	%R = 99.4 Limit = 100±10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	6.999817E-04	-2.300019E-03	-328.5827 %
10	.115	.1164	1.400016E-03	1.202763 %
20	.228	.2321001	4.100055E-03	1.766503 %
30	.351	.3478001	-3.199935E-03	-.9200501 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.268	.2749	6.899953E-03	2.509987 %
10	.401	.3913	-.0097	-2.478917 %
20	.509	.5077001	-1.299977E-03	-.2560523 %
30	.62	.6241001	4.100084E-03	.6569595 %

90FS15S13

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	7.400024E-03	-4.599976E-03	-62.16164 %
10	.112	.1183	6.300003E-03	5.325446 %
20	.228	.2292	1.199991E-03	.5235562 %
30	.343	.3401	-2.900005E-03	-.8526917 %

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90FS15D13

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-1.589999E-02	-1.189999E-02	74.84276 %
10	.082	.1037	2.170001E-02	20.92576 %
20	.231	.2233	-7.699996E-03	-3.448274 %
30	.345	.3429001	-2.099961E-03	-.6124121 %

90FS15S14

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.01	1.599945E-03	-8.400054E-03	-525.0215 %
10	.107	.1207	1.369996E-02	11.35043 %
20	.242	.2398	-2.200022E-03	-.9174406 %
30	.352	.3589	-3.100008E-03	-.8637526 %

90FS15S15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-1.099976E-03	-1.099976E-03	100 %
10	.101	.1023	1.300015E-03	1.270786 %
20	.205	.2057	7.000119E-04	.3403072 %
30	.31	.3091	-9.000003E-04	-.291168 %

90FS02R54

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	5.399994E-03	1.399993E-03	25.92584 %
10	.115	.1143	-6.99997E-04	-.6124208 %
20	.226	.2232	-2.799988E-03	-1.254475 %
30	.33	.3321	2.100021E-03	.6323458 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.269	.2655	-3.500044E-03	-1.318284 %
10	.371	.3755	4.499972E-03	1.198395 %
20	.484	.4855	1.499951E-03	.3089498 %
30	.598	.5955	-2.500057E-03	-.419825 %

90FS15S16

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	5.300019E-03	5.300019E-03	99.99999 %
10	.12	.1201	1.000166E-04	8.327776E-02 %
20	.251	.2349	-1.609998E-02	-6.85397 %
30	.339	.3497	1.070002E-02	3.05977 %

90FS15S17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	2.699982E-03	-4.300019E-03	-159.261 %
10	.116	.1189	2.89999E-03	2.439016 %
20	.228	.2351	7.100001E-03	3.019992 %
30	.357	.3513	-5.699992E-03	-1.622543 %

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90FS15D17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-7.999878E-04	-1.799988E-03	225.0019 %
10	.113	.1179	4.899994E-03	4.156059 %
20	.241	.2366	-4.400015E-03	-1.859685 %
30	.354	.3553	1.299977E-03	.3658816 %

90FS15S18

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	8.000001E-03	.002	-6.000001E-03	-300 %
10	.095	.1005	5.499996E-03	5.472633 %
20	.192	.199	.007	3.517588 %
30	.304	.2975	-6.499976E-03	-2.184866 %

90FS02R55

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	-3.199982E-03	-6.199982E-03	193.7506 %
10	.103	.1126	9.600014E-03	8.525766 %
20	.229	.2284	-5.999953E-04	-.2626949 %
30	.347	.3442	-2.800018E-03	-.8134857 %

DIGEST BLANK A

SPIKE	MEASURED	CALC.	ERROR	PER CENT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

0	0	2.999878E-04	2.999878E-04	100 %
10	.105	.1036	-1.400009E-03	-1.35136 %
20	.205	.2069	1.899988E-03	.918312 %
30	.311	.3102	-8.000136E-04	-.2579025 %

DEGIST BLANK B

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.006	3.200012E-03	-2.799988E-03	-87.49928 %
10	.098	.1034	5.400025E-03	5.22246 %
20	.206	.2036	-2.399966E-03	-1.178765 %
30	.304	.3038001	-1.999438E-04	-6.581427E-02 %

AGC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.245	.2464	1.400024E-03	.5681914 %
10	.352	.3538	1.800001E-03	.5087622 %
20	.469	.4612	-7.800013E-03	-1.691243 %
30	.564	.5686	4.599929E-03	.8089921 %

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90FS15S23

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.006	3.600006E-03	-2.399994E-03	-66.66639 %
10	.11	.1157	5.700022E-03	4.926553 %
20	.232	.2278	-4.199967E-03	-1.843708 %
30	.339	.3399	9.000301E-04	.2647926 %

90FS15S23 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	2.600037E-03	4.600037E-03	176.922 %
10	.112	.1112	-7.999987E-04	-.7194232 %
20	.232	.2198	-1.220003E-02	-5.550514 %
30	.32	.3284	8.399963E-03	2.557845 %

90FS15S23 SPK 1 : 9

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.192	.1943	2.299979E-03	1.183726 %
10	.292	.2881	-3.899992E-03	-1.353694 %
20	.381	.3819	9.000003E-04	.2356639 %
30	.475	.4757	7.000268E-04	.1471572 %

90FS15S25

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	9.000031E-03	4.000031E-03	44.44464 %
10	.096	9.200002E-02	-3.999978E-03	-4.347801 %
20	.179	.175	-3.999993E-03	-2.28571 %
30	.254	.258	3.999978E-03	1.550379 %

90FS15S25 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	6.899994E-03	5.899994E-03	85.50723 %
10	.073	7.080001E-02	-2.199993E-03	-3.107334 %
20	.148	.1347	-1.329999E-02	-9.873783 %
30	.189	.1986	9.600043E-03	4.833858 %

90FS15S25 SPK 1 : 9

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.177	.1789	1.899958E-03	1.062023 %
10	.267	.2653	-1.700044E-03	-.6408006 %
20	.354	.3517	-2.300054E-03	-.6539819 %
30	.436	.4380999	2.099931E-03	.479327 %

LCS 1:19

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.228	.2337001	5.700067E-03	2.439052 %
10	.341	.3354001	-5.599946E-03	-1.669632 %
20	.443	.4371	-5.899966E-03	-1.349798 %
30	.533	.5388	5.800009E-03	1.076468 %

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AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.22	.2556	3.560004E-02	13.92803 %
10	.414	.3472	-6.679997E-02	-19.23962 %
20	.412	.4388001	2.680004E-02	6.107574 %
30	.526	.5304001	4.400015E-03	.8295654 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.218	.2212001	3.200084E-03	1.446692 %
10	.321	.3104001	-1.059994E-02	-3.414929 %
20	.388	.3996	1.160002E-02	2.902907 %
30	.493	.4888	-4.199982E-03	-.8592433 %

90FS15S25 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.01	-.0035	-.0135	385.7142 %
10	.05	.0605	.0105	17.35536 %
20	.105	.1245	.0195	15.66265 %
30	.205	.1885	-1.650001E-02	-8.753322 %

90FS15S20

SPIKE	MEASURED	CALC.	ERROR	PER CENT

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.01	4.300003E-03	-5.699997E-03	-132.558 %
10	.045	5.460001E-02	9.600006E-03	17.58243 %
20	.107	.1049	-2.099984E-03	-2.00189 %
30	.157	.1552	-1.799986E-03	-1.159785 %

90FS15S21

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	2.49997E-03	-1.500031E-03	-60.00197 %
10	.065	7.249998E-02	7.499978E-03	10.3448 %
20	.153	.1425	-1.050001E-02	-7.368432 %
30	.208	.2125	4.500002E-03	2.117648 %

90FS15S22

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	6.299988E-03	-5.700012E-03	-90.47656 %
10	.065	.0686	3.600001E-03	5.247816 %
20	.121	.1309	9.900011E-03	7.563033 %
30	.201	.1932	-7.799983E-03	-4.037258 %

B. Yuen
5-23-90

90FS15S24

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	1.99997E-03	9.999696E-04	49.99924 %
10	.064	6.549997E-02	1.499966E-03	2.290025 %
20	.135	.129	-6.000027E-03	-4.651185 %
30	.189	.1925	3.499985E-03	1.818174 %

90FS15S26

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.006	-1.699982E-03	-7.699982E-03	452.945 %
10	.038	4.860002E-02	1.060002E-02	21.81073 %
20	.097	9.890001E-02	1.900002E-03	1.921135 %
30	.154	.1492	-4.799992E-03	-3.217153 %

90FS15S27

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.014	1.980002E-02	5.800018E-03	29.29299 %
10	.085	8.010001E-02	-4.899986E-03	-6.117335 %
20	.148	.1404	-7.59998E-03	-5.41309 %
30	.194	.2007	6.700009E-03	3.33832 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.195	.1912	-3.800035E-03	-1.987466 %
10	.268	.2734	5.399972E-03	1.975118 %
20	.355	.2556	[illegible]	[illegible]

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.195	.1912	-3.800035E-03	-1.987466 %
10	.268	.2734	5.399972E-03	1.975118 %
20	.355	.3556	6.000102E-04	.1687318 %
30	.44	.4378	-2.200008E-03	-.5025143 %

90FS15S25 DUP 1 : 1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	.005	.002	40 %
10	.047	.067	.02	29.85075 %
20	.175	.129	-4.600001E-02	-35.65892 %
30	.167	.191	2.399999E-02	12.56544 %

90FS15S20 1:1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	2.000122E-04	-4.799988E-03	-2399.848 %
10	.06	6.990001E-02	9.900008E-03	14.1631 %
20	.145	.1396	-5.399987E-03	-3.868185 %
30	.209	.2093	2.999902E-04	.1433302 %

B. Green
5-23-90

90FS15S22 1:1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	8.299988E-03	3.299988E-03	39.75895 %
10	.055	.0631	8.099996E-03	12.83676 %
20	.144	.1179	-.0261	-22.1374 %
30	.158	.1727	.0147	8.511868 %

90FS15S26 1:1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	1.359998E-02	9.599974E-03	70.58818 %
10	.072	6.669999E-02	-5.300008E-03	-7.94604 %
20	.138	.1198	-.0182	-15.19198 %
30	.159	.1729	1.390003E-02	8.039344 %

90FS15S25 DUP 1 : 5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	3.000031E-04	-4.699997E-03	-1566.65 %
10	.054	.0591	5.100001E-03	8.629442 %
20	.114	.1179	3.900007E-03	3.307893 %
30	.181	.1767	-4.299984E-03	-2.433494 %

90FS15S22 1:5

SPIKE	MEASURED	CALC.	ERROR	PER CENT

			ERROR	PER CENT
		1.359998E-02	9.599974E-03	70.58818 %
		6.669999E-02	-5.300008E-03	-7.94604 %
		.1198	-.0182	-15.19198 %
		.1729	1.390003E-02	8.039344 %

90FS15S25 DUP 1 : 5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	3.000031E-04	-4.699997E-03	-1566.65 %
10	.054	.0591	5.100001E-03	8.629442 %
20	.114	.1179	3.900007E-03	3.307893 %
30	.181	.1767	-4.299984E-03	-2.433494 %

90FS15S22 1:5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	-1.900009E-03	-4.90001E-03	257.894 %
10	.049	5.469999E-02	5.699989E-03	10.42046 %
20	.108	.1113	3.299981E-03	2.964943 %
30	.172	.1679	-4.10001E-03	-2.441936 %

90FS15S26 1:5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	4.600022E-03	1.600022E-03	34.78291 %
10	.06	5.620001E-02	-3.79999E-03	-6.761547 %
20	.105	.1078	2.799995E-03	2.597398 %
30	.16	.1594	-6.000102E-04	-.3764179 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.165	.1812	1.620001E-02	8.9404 %
10	.245	.2404	-4.600019E-03	-1.913485 %
20	.339	.2996	-3.940001E-02	-13.15087 %
30	.331	.3587999	2.779994E-02	7.748033 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.17	.1748	4.799977E-03	2.745983 %
10	.247	.2451	-1.900032E-03	-.7752071 %
20	.326	.3154	-1.060006E-02	-3.360831 %
30	.378	.3856999	7.699937E-03	1.996354 %

B Green
3/90

Begin Element - SE
-0.002
0.000 AZ

0	0.005	Blank
10	0.115	
20	0.228	
30	0.351	
0	0.268	AQC
10	0.401	
20	0.509	
30	0.520	
0	0.012	90FS15S13
10	0.112	
20	0.228	
30	0.349	
0	-0.004	90FS15D13
10	0.082	
20	0.231	
30	0.345	
0	0.010	90FS15S14
10	0.107	
20	0.242	
30	0.352	
0	-0.000	90FS15S15
10	0.101	
20	0.205	
30	0.310	
0	0.004	90FS02R54
10	0.115	
20	0.225	
30	0.330	
0	0.359	AQC
10	0.471	
20	0.484	
30	0.598	
	0.005	Blank cup
0	0.000	90FS15S16
10	0.120	
20	0.251	
30	0.339	
0	0.007	90FS15S17
10	0.115	
20	0.228	
30	0.357	
0	0.001	90FS15D17
10	0.113	
20	0.241	
30	0.334	
0	0.003	90FS15S18
10	0.055	
20	0.132	
30	0.304	
0	0.003	90FS02R55
10	0.109	
20	0.229	
30	0.347	
0	-0.000	Digest Blank A
10	0.105	
20	0.205	
30	0.311	
0	0.005	

SF7170
SF7171

B. Green
5-23-90

Digest Blank B

10	0.098	
20	0.206	
30	0.304	
0	0.245	AQC
10	0.352	
20	0.469	
30	0.564	
	-0.003	Blank cup
0	0.006	90FS15523
10	0.110	
20	0.232	
30	0.339	
0	-0.002	90FS15523 Dup
10	0.112	
20	0.232	
30	0.320	
0	0.192	90FS15523 Spk 1:9
10	0.292	
20	0.381	
30	0.475	
0	0.005	90FS15525
10	0.096	
20	0.179	
30	0.254	
0	0.001	90FS15525 Dup
10	0.073	
20	0.148	
36	0.189	
0	0.177	90FS15525 Spk 1:9
16	0.267	
20	0.354	
36	0.436	
0	0.233	LCS 1:19
10	0.341	
20	0.449	
30	0.533	
0	0.220	AQC
10	0.414	
20	0.412	
30	0.525	
0	0.218	AQC
10	0.321	
20	0.388	
30	0.493	
	0.003	Blank Cup
0	0.012	90FS15525 Dup
10	0.050	
20	0.105	
30	0.205	
0	0.010	90FS15520
10	0.045	
20	0.107	
30	0.157	
0	0.004	90FS15521
10	0.065	
20	0.153	
30	0.208	
0	0.012	90FS15522
10	0.065	
20	0.121	
30	0.201	
0	0.001	90FS15524
10	0.054	

B. Green
5-23-90

20	0.135		
30	0.189		
0	0.006	90FS15S26	
10	0.038		
20	0.097		
30	0.154		
0	0.014	90FS15S27	
10	0.085		
20	0.148		
30	0.194		
0	0.195	AQC	
10	0.268		
20	0.355		
30	0.440		
	-0.000	Blank Cup	
0	0.003	90FS15S25	Dup 1:1
10	0.047		
20	0.175		
30	0.157		
0	0.005	90FS15S20	1:1
10	0.060		
20	0.145		
30	0.209		
0	0.005	90FS15S22	1:1
10	0.055		
20	0.144		
30	0.158		
0	0.004	90FS15S26	1:1
10	0.072		
20	0.138		
30	0.159		
0	0.005	90FS15S25	Dup 1:5
10	0.054		
20	0.114		
30	0.181		
0	0.003	90FS15S22	1:5
10	0.049		
20	0.108		
30	0.172		
0	0.003	90FS15S26	1:5
10	0.060		
20	0.105		
30	0.150		
0	0.155	AQC	
10	0.245		
20	0.339		
30	0.381		
0	0.170	AQC	
10	0.247		
20	0.326		
30	0.378		
	0.004	Blank Cup	

B. Yuen
5-23-90

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV=25 µg/l
6		10	
7		20	
8		30	
9	90FS15S13	0	SF7170
10		10	
11		20	
12		30	
13	90FS15D13	0	
14		10	
15		20	
16		30	B. Yuen
17	90FS15S14	0	
18		10	5-23-90
19		20	
20		30	
21	90FS15S15	0	
22		10	
23		20	
24		30	
25	90FS02R54	0	
26		10	
27		20	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1	90FS15S16	0	SF7171
2		10	
3		20	
4		30	
5	90FS15S17	0	
6		10	
7		20	
8		30	
9	90FS15D17	0	
10		10	B. Yuen
11		20	5-23-90
12		30	
13	90FS15S18	0	
14		10	
15		20	
16		30	
17	90FS02R55	0	
18		10	
19		20	
20		30	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Data Set SF7171

	ID	spike	comment
21	Digest Blank A	0	
22		10	
23		20	
24		30	
25	Digest Blank B	0	
26		10	
27		20	
28		30	
29	AQC	0	TV= 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 3		
1		0	B. Yuen
2		10	
3		20	5-23-90
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Wheel 3

Data Set SF7171

	ID	spike	comment .
1	B.Y. ~~Blank~~ 90FS15S23	0	SF7171
2	"	10	
3		20	
4		30	
5	B.Y. ~~AQC~~ 90FS15S23 Dup	0	
6		10	
7		20	
8		30	
9	90FS15S23 Spk 1:9	0	
10		10	
11		20	
12		30	
13	90FS15S25	0	B. Yuen
14		10	5-23-90
15		20	
16		30	
17	90FS15S25 Dup	0	Rerun
18		10	
19		20	
20		30	
21	90FS15S25 Spk 1:9	0	
22		10	
23		20	
24		30	
25	LCS 1:19	0	
26		10	
27		20	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel ~~3~~ 4		
1	90FS15S25 Dup	0	SF7171 Rerun
2		10	
3		20	
4		30	
5	90FS15S20	0	Rerun
6		10	
7		20	
8		30	
9	90FS15S21	0	B. Yuen
10		10	
11		20	5-23-90
12		30	
13	90FS15S22	0	Rerun
14		10	
15		20	
16		30	
17	90FS15S24	0	
18		10	
19		20	
20		30	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Data Set SF7171

	ID	spike	comment
21	90FS15526	0	SF7171 Rerun
22		10	
23		20	
24		30	
25	90FS[illegible]527	0	
26		10	
27		20	
28		30	
29	AQC	0	TV= 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	B. Yuen
	Start Wheel 3		
1		0	5-23-90
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

wheel 5

Data Set SF7171

	ID	spike	comment .
1	90FS15525 ~~Blank~~ 34 Dup 1:1	0	SF7171 Rerun
2		10	
3		20	
4		30	
5	B.Y. ~~AQC~~ 90FS15520 1:1	0	
6		10	
7		20	
8		30	
9	90FS15522 1:1	0	Rerun
10		10	
11		20	
12		30	
13	90FS15526 1:1	0	Rerun
14		10	
15		20	
16		30	
17	90FS15525 Dup 1:5	0	B. Yuen
18		10	
19		20	5-23-90
20		30	
21	90FS15522 1:5	0	
22		10	
23		20	
24		30	
25	90FS15526 1:5	0	
26		10	
27		20	

AAS RUN LOG

Element Se

Analyst B. Yuen

Date 5-18-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	B. Yuen
6		10	
7		20	5-23-90
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

Element	Instrument	QC Source		
☐ Ag	☐ 5000	☐ WP 284 TM I #2		Analyst B. Yuen
☐ As	☐ 4000	☐ WP 1183 TM II #1		Date 5-18-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2		Lamp # 4453
☐ Cr	☒ 5000 ZW	☐ ICV 2		Energy 42
☐ Pb	☐ 5100	☐ SPEX II		Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b		Stock 2-44-MD
☒ Se		☒ 2172 WP 2871	☐ platform	☐ MSC
☐ Tl		☐	☒ wall	☒ MSA

Blank	Slope	AQC	Digestion QC
0.06	0.01157		Digest Blank A < 0.2 mg/kg
		23.62	Digest Blank B < 0.2 mg/kg
		24.14	
		22.94	90FS15523: ~~RPD % = 0~~ B.Y Dup. diff. < 0.2 mg/kg
		24.80	Spike % R = 103.60
		23.26	
		24.86	90FS15525: ~~RPD % = 0~~ B.Y. Dup diff < 0.2 mg/kg
			Spike % R = 103.53
			LCS = 41.99 mg/kg
			Limit for LCS = 19.1 ~ 59.4 mg/kg

Blank cup absorbance
0.005
-0.003
0.003
0.000
0.004

B. Yuen
5-23-90

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-18-1990
PARAMETER NAME ----: TL
DATA SET # --------: SF7171

B. Green 5-18-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BALNK	-.5490823	.9993293	.02659	2u Limit = ±2 µg/l
AQC 25 UG/L	27.47016	.9992363	.02261	%R=109.9 Limit=100±10%
90FS15S16	-.8273424	.9992296	.0139	2u SF7171
90FS15S17	-2.21683	.9981775	6.180001E-03	Rerun
90FS15D17	-.2564147	.9994236	5.460001E-03	2u
90FS15S18	6.441946	.9993972	.00267	6
90FS02R55	-.2700456	.9961531	.02444	2u
AQC 25 UG/L	25.55914	.9997452	2.468001E-02	%R=102.2 Limit=100±10%
90FS15S13 1:10	.1607717	.9982613	.01555	22u SF7170
90FS15D13 1:10	.3786453	.999343	.01611	22u
90FS15S14 1:10	-2.793729	.9924312	3.829999E-03	Rerun r<0.995
90FS15S17 1:10	-4.112238E-02	.9965479	.01459	22u SF7171
90FS15S14 1:20	-3.188976	.9747626	.00508	Rerun r<0.995 SF717
90FS15S14 1:30	.1353959	.9920045	.00517	Rerun r<0.995
AQC 25 UG/L	26.60734	.9988401	2.529001E-02	%R=106.4 Limit=100±10
90FS15S14 1:40	-2.252255	.9976222	5.550002E-03	Rerun SF717
90FS15S14 1:50	.1369821	.993018	7.300001E-03	Rerun r<0.995
90FS15S14 1:50	-7.575756E-02	.9995181	6.600001E-03	102u
AQC 25 UG/L	27.72816	.9985079	.02575	%R=110.9 Limit=100±10%

90FS15S14 (1:50) is less than IDL and is acceptable.

BALNK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-.0146001	-8.600097E-03	58.90439 %
10	.246	.2512999	5.299911E-03	2.108998 %
20	.502	.5172	1.519996E-02	2.938894 %
30	.795	.7831	-1.190007E-02	-1.51961 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.615	.6211001	6.100059E-03	.9821378 %
10	.862	.8472001	-1.479995E-02	-1.746925 %
20	1.062	1.0733	1.129985E-02	1.052814 %
30	1.302	1.2994	-2.600193E-03	-.2001072 %

90FS15S16

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-1.150006E-02	-6.500061E-03	56.52197 %
10	.12	.1275	7.499956E-03	5.882321 %
20	.262	.2665	4.499972E-03	1.688545 %
30	.411	.4055	-5.500019E-03	-1.356355 %

90FS15S17

0	-.012	-1.370001E-02	-1.700012E-03	12.40884 %
10	.049	4.809999E-02	-9.000078E-04	-1.871118 %
20	.103	.1099	6.899998E-03	6.278433 %
30	.176	.1717	-4.299999E-03	-2.504367 %

90FS15D17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-1.400024E-03	-1.400024E-03	100 %
10	.05	5.319999E-02	3.199987E-03	6.015015 %
20	.11	.1078	-.0022	-2.040816 %
30	.162	.1624	4.000068E-04	.2463096 %

90FS15S18

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.017	.0172	1.999959E-04	1.162767 %
10	.045	.0439	-1.100004E-03	-2.505704 %
20	.069	.0706	1.600005E-03	2.266296 %
30	.098	9.729999E-02	-7.000044E-04	-.719429 %

B. Green
5-18-90

90FS02R55

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.018	-6.599915E-03	-2.459991E-02	372.7308 %
10	.212	.2378001	2.580007E-02	10.84948 %
20	.46	.4822001	2.220005E-02	4.603908 %
30	.75	.7266001	-2.339995E-02	-3.220472 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.635	.6307998	-4.20022E-03	-.6658563 %
10	.876	.8775998	1.599848E-03	.1822982 %
20	1.115	1.1244	9.399891E-03	.8359918 %
30	1.378	1.3712	-6.800056E-03	-.4959201 %

90FS15S13 1:10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.013	.0025	-.0105	-420.0001 %
10	.147	.158	1.100001E-02	6.96203 %
20	.304	.3135	9.500027E-03	3.030311 %
30	.479	.469	-9.999991E-03	-2.132194 %

90FS15D13 1:10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.001	6.099976E-03	7.099976E-03	116.3935 %
10	.176	.1672	-8.80003E-03	-5.263177 %
20	.332	.3283	-3.700018E-03	-1.127024 %
30	.484	.4894	5.399943E-03	1.10338 %

90FS15S14 1:10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	-1.069998E-02	-3.699982E-03	34.57933 %
10	.026	2.760001E-02	1.60001E-03	5.797137 %
20	.058	6.590001E-02	7.900007E-03	11.98787 %
30	.11	.1042	-5.800002E-03	-5.566221 %

90FS15S17 1:10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.014	-5.999756E-04	-1.459998E-02	2433.429 %
10	.128	.1453	1.730003E-02	11.90641 %
20	.282	.2912001	9.200036E-03	3.159353 %
30	.449	.4371001	-1.189995E-02	-2.722477 %

90FS15S14 1:20

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-.0162	-.0132	81.48147 %
10	.013	.0346	.0216	62.42774 %
20	.089	8.539999E-02	-3.600009E-03	-4.215468 %
30	.141	.1362	-4.800007E-03	-3.524234 %

B. Jones
5-18-90

90FS15S14 1:30

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	6.99997E-04	-3.000031E-04	-42.85778 %
10	.046	.0524	6.399993E-03	12.21373 %
20	.116	.1041	-1.190001E-02	-11.43133 %
30	.15	.1558	5.799979E-03	3.722708 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.686	.6728999	-1.310009E-02	-1.946811 %
10	.903	.9257999	2.279997E-02	2.462732 %
20	1.185	1.1787	-6.299854E-03	-.5344747 %
30	1.435	1.4316	-3.399849E-03	-.237486 %

90FS15S14 1:40

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-8.000001E-03	-1.250002E-02	-4.500015E-03	36.00008 %
10	.038	.043	4.999999E-03	11.62791 %
20	.095	9.850001E-02	3.500007E-03	3.553307 %
30	.158	.154	-3.999993E-03	-2.597398 %

90FS15S14 1:50

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	.011	9.999694E-04	-1.000003E-02	-1000.034 %
10	.058	7.399999E-02	1.599999E-02	21.62161 %
20	.149	.147	-2.000004E-03	-1.360547 %
30	.224	.22	-4.000008E-03	-1.818186 %

90FS15S14 1:50

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-.0005	.0015	-300 %
10	.066	6.550001E-02	-4.999936E-04	-.7633489 %
20	.135	.1315	-.0035	-2.661597 %
30	.195	.1975	2.500028E-03	1.265837 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.697	.714	1.699996E-02	2.380947 %
10	.992	.9715	-.0205	-2.110139 %
20	1.239	1.229	-9.999991E-03	-.813669 %
30	1.473	1.4865	1.349998E-02	.9081719 %

B. Green
5-18-90

Begin Element - TL

-0.015	
0.000 AZ	
-0.008	
0.234	
0.521	NOT USED
0.741	
0.839	B.Y.
0.853	
1.070	5-17-90
1.305	
0.008	
0.141	

Begin Element - TL

	0.004	
	0.000 AZ	
0	-0.006	
10	0.246	Blank
20	0.502	
30	0.795	
0	0.515	
10	0.862	AQC
20	1.062	
30	1.302	
0	-0.005	
10	0.120	90FS15S~~16~~ B.Y
20	0.262	16
30	0.411	
0	-0.012	
10	0.049	90FS15~~D13~~ B.Y
20	0.103	S17
30	0.176	
0	0.000	
10	0.050	90FS15~~S14~~ B.Y.
20	0.110	D17
30	0.162	
0	0.017	
10	0.045	90FS15S~~18~~
20	0.059	18 B.Y
30	0.098	
0	0.018	
10	0.312	90FS02R5~~4~~5
20	0.480	
30	0.730	B.Y.
0	0.835	
10	0.876	AQC
20	1.115	
30	1.378	
	0.015	Blank Cup
0	0.013	
10	0.147	90FS15S1~~6~~3 B.Y
20	0.304	
30	0.479	1:10
0	-0.001	
10	0.175	90FS15~~S17~~
20	0.332	D13 1:10
30	0.484	B.Y.
0	-0.007	
10	0.025	90FS15~~D17~~ 1:10
		S14

B. Green
5-18-90

SF7171
SF7170

B.Y.

20	0.058			
30	0.110			
0	0.014			
10	0.128	90FS15~~518~~ 517 B.Y.	1:10	SF7171
20	0.282			
30	0.449			
0	-0.003			
10	0.013	90FS15514	1:20	SF7170
20	0.089			
30	0.141			
0	-0.008	NOT USED, WRONG CUP 90FS15514		
10	-0.004			
20	0.107			
0	0.001			
10	0.046	90FS155~~15~~ 14 B.Y.	1:30	
20	0.116			
30	0.150			
0	0.585	AQC		
10	0.903			
20	1.185			
30	1.435			
	0.008	Blank Cup		
0	-0.008			
10	0.038	90FS15514	1:40	
20	0.095			
30	0.158			
	0.718	NOT USED, WRONG CUP		
0	0.011	90FS15514	1:50	
10	0.058			
20	0.149			
30	0.224			
0	-0.002			
10	0.066	90FS155~~15~~ 14 B.Y.	1:50	
20	0.135			
30	0.195			
0	0.597	AQC		
10	0.992			
20	1.239			
30	1.473			
	0.005	Blank Cup		

B. Yuen
5-18-90

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-17-90

Data Set SF7171

	ID	spike	comment.
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV=25 µg/l
6		10	
7		20	
8		30	
9	90FS15S16	0	SF7171
10		10	
11		20	
12		30	
13	90FS15S17	0	Rerun
14		10	
15		20	
16		30	
17	90FS15D17	0	B. Yuen
18		10	
19		20	5-18-90
20		30	
21	90FS15S18	0	
22		10	
23		20	
24		30	
25	90FS02R55	0	
26		10	
27		20	

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-17-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1	90FS15S13 1:10	0	SF7170
2		10	
3		20	
4		30	
5	90FS15D13 1:10	0	B. Yuen
6		10	
7		20	5-18-90
8		30	
9	90FS15S14 1:10	0	Rerun
10		10	
11		20	
12		30	
13	90FS15S17 1:10	0	SF7171
14		10	
15		20	
16		30	
17	90FS15S14 1:20	0	SF7170 Rerun
18		10	
19		20	
20		30	

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-17-90

Data Set SF7171

	ID	spike	comment
21	90FS15S14	0	NOT USED, WRONG Cup
22		10	
23		20	
24		30	
25	90F[illegible]5 S14 1:30	0	Rerun
26		10	
27		20	
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	B. Yuen
	Start Wheel 3		
1	90FS15S14 1:40	0	Rerun 5-18-90
2		10	
3		20	
4		30	
5	90FS15S14 1:50	0	Rerun
6		10	
7		20	
8		30	
9	90FS15S14 1:50	0	
10		10	
11		20	
12		30	
13	AQC	0	TV = 25 µg/l

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Green
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-17-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2556
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 48
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-51-MD
☐ Se		☐	☐ platform ☐ MSC
☒ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-0.55	0.02659		
		27.47	
		25.56	
		26.61	
		27.73	
			B. Green 5-18-90

Blank cup absorbance
0.015
0.008
0.005

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-21-1990
PARAMETER NAME ----: TL
DATA SET # --------: SF7171

B. Green
5-23-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BALNK	-1.214601	.9997325	.05261	2u Limit = ±2 µg/l
AQC 25 UG/L	25.71198	.9992707	4.922998E-02	%R=102.8 Limit=100±10
DIGEST BLANK A	-.7734305	.9997407	.05495	0.2u ~~0.2%~~ µg/kg SF7171
DIGEST BLANK B	-1.137442	.9971498	.05697	0.2u ~~0.2%~~ µg/kg
90FS15S23	-.2507981	.9996827	5.024001E-02	0.194u µg/kg diff. < 0.2 µg/l B.U.
90FS15S23 DUP	-.7105921	.9990871	4.827002E-02	0.195u µg/kg ~~RPD=0.0%~~
90FS15S23 SPK 1:11	15.4581	.9971716	.05872	16.943 µg/kg spike conc. %R=92.7
AQC 25 UG/L	24.05238	.9979518	5.725003E-02	%R=96.2 Limit=100±10%

BALNK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.049	-6.390015E-02	-1.490014E-02	23.31786 %
10	.442	.4621999	.0201999	4.370381 %
20	.984	.9882999	4.299939E-03	.4350844 %
30	1.524	1.5144	-9.600043E-03	-.6339173 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	1.243	1.2658	2.280021E-02	1.801248 %
10	1.791	1.7581	-3.289998E-02	-1.871337 %
20	2.253	2.2504	-2.600193E-03	-.1155436 %
30	2.73	2.7427	.0126996	.463033 %

DIGEST BLANK A

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.048	-.0425	.0055	-12.94118 %
10	.525	.5069999	-1.800007E-02	-3.55031 %
20	1.037	1.0565	.0194999	1.845708 %
30	1.613	1.606	-7.000208E-03	-.4358785 %

DIGEST BLANK B

SPIKE	MEASURED	CALC.	ERROR	PER CENT

90FS15S23

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.028	-.0126001	.0153999	-122.2205 %
10	.509	.4898	-1.920006E-02	-3.919979 %
20	1	.9921999	-7.800043E-03	-.7861361 %
30	1.483	1.4946	1.160002E-02	.7761285 %

90FS15S23 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.019	-.0343003	-.0153003	44.60689 %
10	.413	.4483999	3.539986E-02	7.894707 %
20	.956	.9311	-2.489996E-02	-2.674252 %
30	1.409	1.4138	4.799962E-03	.3395079 %

90FS15S23 SPK 1:11

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.949	.9076997	-.0413003	-4.549996 %
10	1.466	1.4949	2.889979E-02	1.933226 %
20	2.016	2.0821	6.609965E-02	3.174663 %
30	2.723	2.6693	-5.370045E-02	-2.011781 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	1.377	1.377	-4.768372E-07	-3.462871E-05 %
10	1.916	1.9495	3.349984E-02	1.718381 %
20	2.589	2.522	-6.699991E-02	-2.656618 %
30	3.061	3.094501	3.350043E-02	1.08258 %

B. Yuen
5-23-90

BEGIN DATA FILE: TL521.DF

Begin Element - TL
-0.015
0.000 AZ
0.004
0.749
1.559
2.295
1.934
2.822
3.919
5.009

Begin Element - TL
-0.039
0.000 AZ
0.035
0.642
1.353
1.897
1.491
2.159
2.753
3.548
0.047

NOT USED

B.Y.
5-21-90

Begin Element - TL
0.078
0.000 AZ

0	-0.049	Blank
10	0.442	
20	0.984	
30	1.524	
0	1.243	AQC
10	1.791	
20	2.253	
30	2.730	
0	-0.048	Digest Blank A (SF 7171)
10	0.525	
20	1.037	
30	1.613	
0	-0.044	Digest Blank B
10	0.441	
20	1.140	
30	1.622	
0	-0.028	90FS15523
10	0.509	
20	1.000	
30	1.483	
0	-0.019	90FS15523 Dup
10	0.413	
20	0.956	
30	1.409	
0	0.949	90FS15523 SpK 1:11
10	1.466	
20	2.016	
30	2.723	
0	1.377	AQC
10	1.916	

B. Yuen
5-23-90

20	2.589	
30	3.061	
	-0.070	Blank Cup
	-0.022	
	0.460	
	0.921	
	1.324	
	-0.074	
	0.352	
	0.851	
	1.381	
	0.930	
	1.329	
	1.939	
	2.434	
	0.009	
	0.372	
	0.851	
	1.331	
	0.971	
	1.300	
	1.687	
	2.377	
	0.011	
	0.246	
	0.630	
	0.889	
	-0.054	
	0.312	
	0.813	
	1.272	
	1.391	
	2.019	
	2.505	
	3.281	
	-0.063	

NOT USED
AQC OUT

B. Green
5-23-90

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-21-90

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV = 25 µg/l
6		10	
7		20	
8		30	
9	Digest Blank A	0	SF7171
10		10	
11		20	
12		30	
13	Digest Blank B	0	
14		10	
15		20	
16		30	
17	90FS15523	0	B. Yuen
18		10	5-23-90
19		20	
20		30	
21	90FS15523 Dup	0	
22		10	
23		20	
24		30	
25	90FS15523 SpK 1:11	0	
26		10	
27		20	

AAS RUN LOG

Element TL

Analyst B. Green

Date 5-21-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV=25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	
8		30	B. Green
9		0	5-23-90
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-21-90
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2556
☐ Cr	☐ 5000 ZW	☐ ICV 2	Energy 50
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-51-MD
☐ Se		☐	☐ platform ☐ MSC
☒ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-1.21	0.05261	25.71 24.05	Digest Blank A < 0.2 mg/kg Digest Blank B < 0.2 mg/kg Dup diff. < 0.2 mg/kg (for 90FS15523) ~~RPD % = 0~~ n.y. Spike %R = 92.7 B. Yuen 5-23-90

Blank cup absorbance

-0.070

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-22-1990
PARAMETER NAME ----: TL
DATA SET # --------: SF7171

B. Yuen 5-23-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	.6610669	.9998474	.02859	2u Limit = ±2 ug/l
AQC 25 UG/L	29.11582	.9926909	2.443001E-02	Rerun r<0.995
AQC 25 UG/L	26.75717	.9989817	.02578	%R = 107.0 Limit = 100 ± 10%
90FS15S25	.9633738	.997671	.02512	0.2 u ug/kg SF7171
90FS15S25 DUP	.2530606	.9992368	.02529	0.2 u ug/kg ~~RPD% = 0.8~~ diff <0.2 ug/kg
90FS15S25 SPK 1:9	22.81155	.9978802	.02287	Rerun
LCS 1:19	25.74023	.9969897	.01817	Rerun
90FS15S20	1.578693	.9966365	.02084	0.2 u ug/kg
AQC 25 UG/L	28.92225	.9990086	.02431	%R = 115.7 Limit = 100 ± 10%

3 samples are less than IDL and are acceptable.

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.017	.0188999	1.899902E-03	10.05244 %
10	.303	.3047999	1.799911E-03	.5905223 %
20	.6	.5907	-9.300112E-03	-1.574423 %
30	.871	.8765999	5.599916E-03	.6388223 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.681	.7112998	3.029978E-02	4.259777 %
10	.981	.9555999	-2.540016E-02	-2.658033 %
20	1.24	1.1999	-.0401001	-3.341954 %
30	1.409	1.4442	.0352	2.437336 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.677	.6897998	.0127998	1.855582 %
10	.96	.9475998	-1.240021E-02	-1.308592 %
20	1.219	1.2054	-1.360023E-02	-1.128276 %
30	1.45	1.4632	1.319969E-02	.9021111 %

90FS15S25

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	8.000001E-03	2.419995E-02	1.619995E-02	66.94208 %
10	.287	.2754	-1.160002E-02	-4.212062 %
20	.552	.5266	-2.539998E-02	-4.823392 %
30	.757	.7778001	2.080005E-02	2.674216 %

90FS15S25 DUP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.016	6.399903E-03	-9.600098E-03	-150.0038 %
10	.241	.2592999	1.829991E-02	7.05743 %
20	.52	.5122	-7.800043E-03	-1.522851 %
30	.766	.7651	-9.000301E-04	-.1176356 %

90FS15S25 SPK 1:9

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.518	.5217001	3.700078E-03	.7092346 %
10	.742	.7504001	8.400082E-03	1.119414 %
20	1.007	.9791	-2.789998E-02	-2.849554 %
30	1.192	1.2078	1.579988E-02	1.308154 %

LCS 1:19

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.485	.4677	-1.730007E-02	-3.698968 %
10	.626	.6494	2.339995E-02	3.603319 %
20	.826	.8310999	5.099893E-03	.6136318 %
30	1.024	1.0128	-1.120019E-02	-1.105864 %

90FS15S20

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.024	3.289997E-02	8.899964E-03	27.05159 %
10	.239	.2413	2.299979E-03	.9531618 %
20	.481	.4497	-3.130001E-02	-6.960198 %
30	.638	.6581	.0201	3.054247 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.712	.7030999	-8.900166E-03	-1.265847 %
10	.927	.9461998	1.919979E-02	2.029147 %
20	1.201	1.1893	-1.170015E-02	-.9837851 %
30	1.431	1.4324	1.399756E-03	9.772101E-02 %

B. Yuen
5-23-90

BEGIN DATA FILE: TL522.DF

Begin Element - TL
0.008
0.000 AZ
-0.011
0.261
0.487
0.710
0.593
0.830
1.025
1.208

Begin Element - TL
-0.002
0.000 AZ
-0.008
0.281
0.640
0.888

Begin Element - TL
-0.005
0.000 AZ
0.007
0.281
0.576
0.794
0.649

NOT USED
B.Y.
5-22-90

Begin Element - TL
-0.005
0.000 AZ

0	0.017	Blank
10	0.308	
20	0.600	
30	0.871	
0	0.681	AQC
10	0.981	
20	1.240	
30	1.409	
0	0.034	90FS15S25 (NOT USED)
10	0.274	
20	0.578	
~~0 30~~	~~0.677~~	B.Y.
10	0.960	~~90FS15S25 Dup~~ AQC
20	1.219	
30	1.450	
~~0 30~~	~~0.008~~	B.Y
10	0.287	90FS15S25 ~~SK 1:9~~ B.Y
20	0.552	
30	0.757	
~~0 30~~	~~0.016~~	B.Y
10	0.241	~~90FS15S25~~
20	0.520	
30	0.766	B.Y. B.Y ~~LCS 1:9~~
~~0 30~~	~~0.518~~	B.Y.
10	0.742	

AQC

90FS15S25 Dup

B. Yuen
5-23-90

(SF7171)

90FS15525 SpK 1:9

20	1.007	
30	1.192	
0	0.485	
10	0.626	LCS 1:19
20	0.826	
30	1.024	
0	0.024	
10	0.239	90FS15520
20	0.481	
30	0.638	
0	0.712	
10	0.927	AQC
20	1.301	
30	1.431	
	0.013	blank cup

B. Green
5-23-90

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-22-90

Data Set SF7171

	ID	spike	comment.
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV = 25 µg/l
6		10	
7		20	
8		30	
9	90FS15525	0	SF7171
10		10	
11		20	
12		30	
13	90FS15525 Dup	0	
14		10	B. Yuen
15		20	5-23-90
16		30	
17	90FS15525 SpK 1:9	0	Rerun
18		10	
19		20	
20		30	
21	LCS 1:19	0	Rerun
22		10	
23		20	
24		30	
25	90FS15520	0	
26		10	
27		20	

AAS RUN LOG

Element TL

Analyst B. Green

Date 5-22-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	
7		20	B. Green
8		30	5-23-90
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-22-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2556
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 50
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-51-MD
☐ Se		☐	☐ platform ☐ MSC
☒ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
0.66	0.02859	26.76 28.92	~~% RPD = 0~~ B.Y. Dup difference < 0.2 mg/kg B. Yuen 5-23-90

Blank cup absorbance
0.013

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-22-1990
PARAMETER NAME ----: TL
DATA SET # --------: SF7171

B. Yuen
5-23-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-.2577078	.9997174	.01979	2u Limit = ±2 µg/l
AQC 25 UG/L	24.5868	.9995626	.01803	%R=98.3 Limit=100±10%
90FS15S25 SPK 1:9				
	21.66332	.9979994	1.509001E-02	20.29 µg/kg SF7171 ~~SPIKE CONC.~~ %R= 108.3
LCS 1:19	26.5763	.9939905	.01291	Rerun r<0.995 SPIKE CONC. = 19.01 µg/kg
LCS 1:19	23.2301	.9941638	1.421001E-02	Rerun r<0.995
LCS 1:19	22.39523	.9933861	1.432001E-02	Rerun r<0.995
LCS 1:19	20.18285	.9997616	.01586	36.88 µg/kg Limit=24.6~53.5 µg/kg
AQC 25 UG/L	26.5305	.9957429	.01836	%R=106.1 Limit=100±10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-5.100037E-03	-5.100037E-03	99.99999 %
10	.188	.1928	4.799977E-03	2.489615 %
20	.385	.3907	5.699992E-03	1.458918 %
30	.594	.5886001	-5.399943E-03	-.9174213 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.439	.4433001	4.300028E-03	.9700039 %
10	.633	.6236	-9.40001E-03	-1.507378 %
20	.798	.8039	5.900026E-03	.7339253 %
30	.985	.9842	-8.000136E-04	-8.128567E-02 %

90FS15S25 SPK 1:9

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.318	.3268998	8.899778E-03	2.722479 %
10	.484	.4777999	-6.200105E-03	-1.297636 %
20	.643	.6287	-1.429999E-02	-2.274533 %
30	.768	.7796001	1.160008E-02	1.487952 %

LCS 1:19

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.332	.3431	1.109999E-02	3.235207 %
10	.497	.4722	-2.480006E-02	-5.252026 %
20	.585	.6012999	.0162999	2.710778 %
30	.733	.7303999	-2.600134E-03	-.3559877 %

LCS 1:19

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.321	.3300999	9.099841E-03	2.756693 %
10	.472	.4721999	1.99914E-04	4.233673E-02 %
20	.642	.6143	-2.770001E-02	-4.509199 %
30	.738	.7564001	1.840007E-02	2.432585 %

LCS 1:19

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.302	.3206998	1.869983E-02	5.830944 %
10	.483	.4638999	-1.910013E-02	-4.117296 %
20	.625	.6071	-1.790005E-02	-2.948452 %
30	.732	.7503001	1.830006E-02	2.439032 %

LCS 1:19

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.317	.3201	3.099978E-03	.9684406 %
10	.485	.4787	-6.300032E-03	-1.316071 %
20	.634	.6373	3.300011E-03	.5178113 %
30	.796	.7959	-1.000166E-04	-1.256648E-02 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.481	.4871	6.099969E-03	1.252303 %
10	.664	.6707	6.69998E-03	.9989533 %
20	.886	.8543	-3.169996E-02	-3.710635 %
30	1.019	1.0379	1.889992E-02	1.820977 %

B. Yuen
5-23-90

Begin Element - Tl

	0.000	
	0.000 AZ	
0	0.000	Blank
10	0.188	
20	0.385	
30	0.594	
0	0.439	AQC
10	0.633	
20	0.798	
30	0.985	
0	0.318	90FS15S25 SpK 1:9 (SF7171)
10	0.484	
20	0.643	
30	0.768	
0	0.392	LCS 1:19
10	0.497	
20	0.585	
30	0.782	
0	0.321	LCS 1:19
10	0.472	
20	0.642	
30	0.738	
0	0.302	LCS 1:19
10	0.459	
20	0.625	
30	0.782	
0	0.317	LCS 1:19
10	0.485	
20	0.634	
30	0.786	
0	0.451	AQC
10	0.664	
20	0.888	
30	1.013	
	-0.001	Blank cup

B. Yuen
5-23-90

AAS RUN LOG

Element TL

Analyst B. Green

Date 5-22-90

Data Set SF7171

	ID	spike	comment .
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV = 25 µg/l
6		10	
7		20	
8		30	
9	90FS15525 Spk 1:9	0	SF7171
10		10	
11		20	
12		30	
13	LCS 1:19	0	Rerun
14		10	
15		20	
16		30	
17	LCS 1:19	0	Rerun
18		10	
19		20	
20		30	
21	LCS 1:19	0	Rerun
22		10	
23		20	
24		30	B. Green
25	LCS 1:19	0	5-23-90
26		10	
27		20	

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-22-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV=25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	B. Yuen
5		0	
6		10	5-23-90
7		20	
8		30	
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-22-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2556
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 47
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-51-MD
☐ Se		☐	☐ platform ☐ MSC
☒ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-0.26	0.01979	24.59 26.53	Spike % R = 108.3 LCS = 36.88 mg/kg Limit for LCS = 24.6 ~ 53.5 mg/kg B. Yuen 5-23-90

Blank cup absorbance

-0.001

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: BAI
DATE OF ANALYSIS --: 05-22-1990
PARAMETER NAME ----: TL
DATA SET # --------: SF7171

B. Green
5-23-90

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	.0832823	.9991155	1.921001E-02	2u Limit = ±2 µg/l
AQC 25 UG/L	27.27767	.9992071	1.663999E-02	%R = 109.1 Limit = 100±10
90FS15S21	.5325499	.9974886	.01352	0.2u mg/kg SF7171
90FS15S22	1.331639E-02	.9990049	.01502	0.2u mg/kg
90FS15S24	-2.701043E-02	.9998237	.01481	0.2u mg/kg
90FS15S26	2.418158E-02	.9999883	.01654	0.2u mg/kg
90FS15S27	-.5751385	.9987391	.01617	0.2u mg/kg
AQC 25 UG/L	27.82066	.9995796	.01762	%R = 111.3 Limit = 100±10%

All data are less than IDL and are acceptable.

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	1.599854E-03	6.599854E-03	412.5286 %
10	.197	.1936999	-3.300071E-03	-1.703703 %
20	.399	.3858	-1.319999E-02	-3.421458 %
30	.568	.5779001	9.900034E-03	1.713105 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.462	.4539002	-8.099854E-03	-1.784501 %
10	.61	.6203001	1.030004E-02	1.660493 %
20	.783	.7867	3.700018E-03	.4703214 %
30	.959	.9530999	-5.900026E-03	-.6190353 %

90FS15S21

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	7.200074E-03	-4.799927E-03	-66.66496 %
10	.144	.1424001	-1.599923E-03	-1.123541 %
20	.26	.2776001	1.760006E-02	6.340078 %
30	.424	.4128	-1.119998E-02	-2.713174 %

90FS15S22

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.006	2.000122E-04	-5.799988E-03	-2899.817 %
10	.147	.1504	3.400028E-03	2.260656 %
20	.29	.3006	1.060003E-02	3.526291 %
30	.459	.4508001	-8.19996E-03	-1.81898 %

90FS15S24

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.001	-4.000244E-04	5.999757E-04	-149.9848 %
10	.151	.1477	-3.300026E-03	-2.234277 %
20	.291	.2958	4.799932E-03	1.622696 %
30	.446	.4439	-2.100051E-03	-.4730909 %

90FS15S26

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	3.999634E-04	3.999634E-04	100 %
10	.167	.1658	-1.200035E-03	-.723785 %
20	.33	.3312	1.199961E-03	.362307 %
30	.497	.4966	-4.000366E-04	-.0805551 %

90FS15S27

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-9.299988E-03	-3.299988E-03	35.48379 %
10	.141	.1524	1.139997E-02	7.480297 %
20	.327	.3141	-1.290006E-02	-4.10699 %
30	.471	.4757999	4.799932E-03	1.008813 %

AQC 25 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.495	.4902001	-4.799932E-03	-.9791782 %
10	.657	.6664001	9.40007E-03	1.410575 %
20	.847	.8426001	-4.399896E-03	-.5221808 %
30	1.019	1.0188	-1.99914E-04	-1.962249E-02 %

B. Green
5-23-90

Begin Element - TL

	0.007	
	0.000 AZ	
0	-0.005	Blank
10	0.197	
20	0.399	
30	0.568	
0	0.462	AQC
10	0.610	
20	0.783	
30	0.959	
0	0.012	90FS15S21 (SF7171)
10	0.144	
20	0.250	
30	0.424	
0	0.006	90FS15S22
10	0.147	
20	0.290	
30	0.459	
0	-0.001	90FS15S24
10	0.151	
20	0.291	
30	0.446	
0	0.001	90FS15S26
10	0.157	
20	0.330	
30	0.497	
0	-0.006	90FS15S27
10	0.141	
20	0.337	
30	0.471	
0	0.455	AQC
10	0.657	
20	0.847	
30	1.019	
	0.015	Blank cup

B. Yuen
5-23-90

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-22-90

Data Set SF 7171

	ID	spike	comment.
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC	0	TV = 25 µg/l
6		10	
7		20	
8		30	
9	90FS15521	0	SF 7171
10		10	
11		20	
12		30	
13	90FS15522	0	
14		10	
15		20	
16		30	
17	90FS15524	0	B. Yuen
18		10	
19		20	5-23-90
20		30	
21	90FS15526	0	
22		10	
23		20	
24		30	
25	90FS15527	0	
26		10	
27		20	

AAS RUN LOG

Element TL

Analyst B. Yuen

Date 5-22-90

Data Set SF7171

	ID	spike	comment
28		30	
29	AQC	0	TV = 25 µg/l
30		10	
31		20	
32		30	
33	Blank Cup	0	
	Start Wheel 2		
1		0	
2		10	
3		20	
4		30	
5		0	
6		10	B. Yuen
7		20	
8		30	5-23-90
9		0	
10		10	
11		20	
12		30	
13		0	
14		10	
15		20	
16		30	
17		0	
18		10	
19		20	
20		30	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst B. Yuen
☐ As	☐ 4000	☒ WP 1183 TM II #1	Date 5-22-90
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2556
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 47
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-51-MD
☐ Se		☐	☐ platform ☐ MSC
☒ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
0.08	0.01921		
		27.28	
		27.82	
			B. Yuen 5-23-90

Blank cup absorbance
0.015

J Gary 5/24/90

DIGESTION RECORD

Prepared by R. DILG Date 5-17-90 Run Number 786

	Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
137.0960	11	SF7171	90FS15S20	0.5110 g.		(WHITE ppt	FORMED)	
137.158	7		S21	0.5354 g				
137.033	16		S22	0.5239 g				
135.048	5		S23	0.5162 g				
137.109	14		S24	0.5494 g				
137.704	3		S25	0.5382 g				
135.209	1		S26	0.5582 g				
137.199	2		S27	0.5114 g				
136.394	4		S23	DUP 0.5136 g				
136.005	10		S23	SPK 0.5302 g		5 ml SED SPIKE + 1 ml 5 ppm Ag		
	27		DIGEST BLK					
136.293	8		S25	DUP 0.5339 g				
137.108	15		S25	SPK 0.5319 g		5 ml SED SPIKE + 1 ml 5 ppm Ag		
	19		DIGEST BLK					
137.406	21		LCS 0287	0.5472 g				
136.556	23		S23	0.5474 g AA SPK		0.5 ml	GFAA SPIKE	200 ppb As, Se, Tl, Pb, Sb
137.223	24		S25	0.5260 g AA SPK		0.5 ml	GFAA SPIKE	50 ppb Cd

COMMENTS: FINAL VOLUME = 50 ml

0.5 ml of 1000 µg/ml Y added prior to bringing to final volume

Used for As, Se, Tl

J. Ganz 5/24/90

DIGESTION RECORD

Prepared by J. GANZ Date 5/17/90 Run Number 785

Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
1	SF7171	90FS15520	1.001g				
2		90FS15521	0.963g				
3		90FS15522	1.092g				
4		90FS15523	1.003g				
5		90FS15524	0.988g				
6		90FS15525	1.000g				
7		90FS15526	0.981g				
8		90FS15527	0.988g				
9		90FS15522	1.087g		Spike	200ppb As, Se, Tl, Sb, Pb 50ppb Cd	
10		90FS15525	0.997g		Spike		
11		90FS15522	1.088g		Duplicate		
12		90FS15525	0.991g		Duplicate		
13		LCS	0.996g				
14		LCS	0.995g				
15		Blank					
16		Blank					

COMMENTS:

Final volume = 100ml

Used for Cd and Sb and Pb

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUN 0 4 1990

SUBJECT: **Review of Region 5 data for** Stern Rubber & Tool

FROM: **Curtis Ross, Director** Eli Jang for
Region 5 Central Regional Laboratory

To: **Data User:**

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15520-527
Parameter(s): ICP
Laboratory: CRL

Results Status:

(x) **DATA ACCEPTABLE FOR USE***
( ) **DATA QUALIFIED AS TO USE**
( ) **DATA UNACCEPTABLE FOR USE**

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 3-3805

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

pg

RECEIVED BY/DATE:
Comments:

DATA SET	SITE	DU/ACT.
SF 7171	Stern Rubber & Tool	TFA302

SAMPLES	PARAMETER(S)
90FS15520-527	ICP

SAMPLED	RECEIVED	DUE	LAB
10 May 90	11 May 90	1 June 90	CRL

SHIPPED	DATA RECEIVED	CONTRACT
NA	29 May 90	ESAT

Comments By Reviewer:

90FS15520 had white precipitate in first digestion which fell out after filtration. XRF qualitative analysis of the precipitate indicated Fe & Si, indicating possibly $FeSiO_3$. HCl was added to the subsequent digestion, to stabilize this compound if it indeed was present. Al, Fe in the blank for this second digestion are small compared to the sample, so can be ignored.

(✓) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE [signature] 31 May 90

( ) REVIEWED (✓) UNREVIEWED SECTION CHIEF/DATE [signature] for CMT 31 May 90

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED 6/4/90 TRANSMITTED 6/4/90 DATA MANAGEMENT COORDINATOR [signature]

CC: QUALITY CONTROL COORDINATOR

ESAT CONTRACT **TID NO:** 05-06
TASK NO: 2864

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on MAY 23, 1990 **for:**

DATASET NO: SF7171 **SITE NAME:** STERN RUBBER & TOOL

PARAMETER : ICAP

MATRIX : SOILS **SF DU/ACT NO: TFA** 302 **Y** ____ **/C** ____

SAMPLE NUMBERS: 90FS15S20 – S27

NUMBER OF SAMPLES: 8

ESAT APPROVALS:

R. Dilg 5-24-90
(ANALYST DATE)

D Kruse 5/29/90
(TEAM LEADER DATE)

[illegible] 5/29/90
(QC COORDINATOR DATE)

D Kruse 5/29/90
(ESAT TEAM MANAGER DATE)

COMMENTS: SEE ATTACHED SHEET OF COMMENTS

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

J. Garry 5/29/90
(DELIVERED BY DATE)

John V. Moore 29 May 90
(RECEIVED BY DATE)

EPA APPROVALS:

John V. Moore 31 May 90
(EPA TASK MONITOR DATE)

[x] Reviewed
[ ] Unreviewed
[x] Accepted
[ ] Rejected
[ ] Returned/_____
(Date)

COMMENTS: _____

10M for CMT 31 May 90
(SECTION CHIEF DATE)

[ ] Reviewed [x] Unreviewed

Jay Thakkar 6.4.90
(ESAT DPO DATE)

Sylvia Griffin 6/4/90, 6/4/90
(DATA COORD'R REC'D TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) **FILE LOCATION NUMBER:** 5.6.1

COMMENTS FOR SOIL SAMPLES FOR SF7171

General -

Sample results for S20 reported from RUN789.
Sample results for S21 - S27 reported from RUN786.
Pb results for samples S20 and S21 reported using ICAP data; remaining Pb results and all Cd results reported using GFAA data.

Specific -

RUN 786

-Microwave digestion procedure was used.
-ICAP run method "S5Y" was used.
-Mg recovery (83%R) was low for the LCS audit sample.
-A white precipitate (later examined by X-ray and found to contain Si and some Fe) formed after filtering and bringing to volume (50 ml) for sample S20.

RUN 789

-Per discussion with J. Morris, sample S20 was redigested with a modification to the microwave procedure. Essentially, the following step was added:
After microwaving and cooling, the digestion vessels were opened and 2.5 ml of concentrated HCl were added and the contents swirled to mix; the contents were then rinsed and filtered as usual into 50 ml volumetrics.
All steps prior and after were not changed.
-Unexpectedly, the digested blank gave a white precipitate.
-Sample S20 again formed a white precipitate but in much smaller amount than the previous digestion.
-The spiked samples formed a ring of "waxy" residue on the inner wall of the digestion vessels.
-Any precipitate in the volumetric flasks was allowed to settle overnight; supernatant was used for the ICAP analyses.
-ICAP run method "S5Y" was used.
-Pb recovery (121.4%R) for the LCS audit was high.
-Digestion blank values for Fe (93 ug/L) and Al (150 ug/L) exceeded the MDL values but Fe and Al values for S20 were >> 5X these blank values.

R. Dilg
5-24-90

Jun for cont
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S20 Operator

Date analyzed 05/23/90 File name RUN789

Element	Unit	Concentration
Silver	mg/kg	0.6 U
Aluminum	mg/kg	5100.
Barium	mg/kg	34.
Beryllium	mg/kg	0.1
Calcium	mg/kg	3100.
Cobalt	mg/kg	3.2
Chromium	mg/kg	15.
Copper	mg/kg	29.
Magnesium	mg/kg	2100.
Iron	mg/kg	7800.
Potassium	mg/kg	700.
Manganese	mg/kg	160.
Sodium	mg/kg	200.
Nickel	mg/kg	11.
Lead	mg/kg	11.
Vanadium	mg/kg	15.
Zinc	mg/kg	300.

R. Dilg
5-24-90

Jrn for corr
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S21 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.6 U
Aluminum	mg/kg	3800.
Barium	mg/kg	53.
Beryllium	mg/kg	0.3
Calcium	mg/kg	11000.
Cobalt	mg/kg	3.0
Chromium	mg/kg	13.
Copper	mg/kg	24.
Magnesium	mg/kg	6600.
Iron	mg/kg	9100.
Potassium	mg/kg	500. U
Manganese	mg/kg	180.
Sodium	mg/kg	100.
Nickel	mg/kg	9.0
Lead	mg/kg	51.
Vanadium	mg/kg	8.1
Zinc	mg/kg	2500.

R. Dilg
5-24-90
Jm for CMT
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S22 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.6 U
Aluminum	mg/kg	3400.
Barium	mg/kg	37.
Beryllium	mg/kg	0.2
Calcium	mg/kg	1000.
Cobalt	mg/kg	2.0
Chromium	mg/kg	4.1
Copper	mg/kg	2.7
Magnesium	mg/kg	800.
Iron	mg/kg	4200.
Potassium	mg/kg	500. U
Manganese	mg/kg	210.
Sodium	mg/kg	100. U
Nickel	mg/kg	4.2
Vanadium	mg/kg	7.1
Zinc	mg/kg	18.

L. Dilg
5-24-90

JVM for CMT
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S23 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.6 U
Aluminum	mg/kg	2300.
Barium	mg/kg	23.
Beryllium	mg/kg	0.1
Calcium	mg/kg	1000.
Cobalt	mg/kg	1.3
Chromium	mg/kg	4.3
Copper	mg/kg	3.0
Magnesium	mg/kg	700.
Iron	mg/kg	2800.
Potassium	mg/kg	500. U
Manganese	mg/kg	39.
Sodium	mg/kg	100. U
Nickel	mg/kg	3.5
Vanadium	mg/kg	5.7
Zinc	mg/kg	19.

P. Dilg
5-24-90

JVM for CMT
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S24 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.5 U
Aluminum	mg/kg	3600.
Barium	mg/kg	35.
Beryllium	mg/kg	0.2
Calcium	mg/kg	900.
Cobalt	mg/kg	1.6
Chromium	mg/kg	4.5
Copper	mg/kg	3.9
Magnesium	mg/kg	700.
Iron	mg/kg	3500.
Potassium	mg/kg	500. U
Manganese	mg/kg	77.
Sodium	mg/kg	100. U
Nickel	mg/kg	4.1
Vanadium	mg/kg	6.3
Zinc	mg/kg	29.

P. Dilg
5-24-90

JVM for CMT
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S25 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.6 U
Aluminum	mg/kg	4800.
Barium	mg/kg	35.
Beryllium	mg/kg	0.3
Calcium	mg/kg	1300.
Cobalt	mg/kg	2.6
Chromium	mg/kg	7.9
Copper	mg/kg	3.9
Magnesium	mg/kg	1100.
Iron	mg/kg	5400.
Potassium	mg/kg	500. U
Manganese	mg/kg	160.
Sodium	mg/kg	100. U
Nickel	mg/kg	5.5
Vanadium	mg/kg	9.9
Zinc	mg/kg	13.

R. Dilg
5-24-90
JVM Ar CMT
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S26 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.5 U
Aluminum	mg/kg	3100.
Barium	mg/kg	24.
Beryllium	mg/kg	0.2
Calcium	mg/kg	500.
Cobalt	mg/kg	2.0
Chromium	mg/kg	5.1
Copper	mg/kg	1.8
Magnesium	mg/kg	700.
Iron	mg/kg	3800.
Potassium	mg/kg	400. U
Manganese	mg/kg	120.
Sodium	mg/kg	100. U
Nickel	mg/kg	5.2
Vanadium	mg/kg	8.2
Zinc	mg/kg	7.5

L. Dilg
5-24-90
JVM for corr
31 May 90

SAMPLE REPORT

Sample SF7171 90FS15S27 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration
Silver	mg/kg	0.6 U
Aluminum	mg/kg	7600.
Barium	mg/kg	150.
Beryllium	mg/kg	0.6
Calcium	mg/kg	3200.
Cobalt	mg/kg	5.0
Chromium	mg/kg	11.
Copper	mg/kg	7.4
Magnesium	mg/kg	1500.
Iron	mg/kg	9500.
Potassium	mg/kg	1000.
Manganese	mg/kg	820.
Sodium	mg/kg	100. U
Nickel	mg/kg	9.2
Vanadium	mg/kg	16.
Zinc	mg/kg	43.

R. Dilg
5-24-90

Samples analyzed by SSY on 05/18/90 stored in file RUN76c .

Data set	Sample id	Correction Factor	Dig QC	Ins QC
	CU IEC	1.00000	IEC	S
	AL IEC	0.00500	IEC	S
	FE IEC	0.00250	IEC	S
	AS IEC	1.00000	IEC	S
	CR IEC	1.00000	IEC	S
	V IEC	1.00000	IEC	S
	TI IEC	0.02000	IEC	S
50 ppm	TI IEC	1.00000	IEC	S
	INSTR BLANK 1	1.00000		X
	AQC 1	1.00000		X
	HIGH AQC 1	1.00000		X
	AG AQC 1	1.00000		X
	INSTR BLANK 1	1.00000		B
	AQC 1	1.00000		Q
	HIGH AQC 1	1.00000		Q
	AG AQC 1	1.00000		Q
SF7171	90FS15S20	0.09784		X NOT USED
SF7171	90FS15S21	0.09338		S
SF7171	90FS15S22	0.09543		S
SF7171	90FS15S23	0.09686	SMP1	S
SF7171	90FS15S24	0.09100		S
SF7171	90FS15S25	0.09290	SMP2	S
SF7171	90FS15S26	0.08957		S
SF7171	90FS15S27	0.09777		S
SF7171	90FS15S23 DUP	0.09735	DUP1	S
SF7171	90FS15S23 SPIKE	0.09430	SPK1	S
	INSTR BLANK 2	1.00000		B
	AQC 2	1.00000		Q
	HIGH AQC 2	1.00000		Q
	AG AQC 2	1.00000		Q
	DIGEST BLANK "A"	1.00000		B
SF7171	90FS15S25 DUP	0.09365	DUP2	S
SF7171	90FS15S25 SPIKE	0.09312	SPK2	S
	DIGEST BLANK "B"	1.00000		B
SF7171	LCS EPA 0287	0.09137		S
1/10 Dilution	LCS EPA 0287	0.91374		S
	INSTR BLANK 3	1.00000		B
	AQC 3	1.00000		Q
	HIGH AQC 3	1.00000		Q
	AG AQC 3	1.00000		Q

R. Dilg
5-24-90

DIGESTION RECORD

Prepared by R. DILG Date 5-19-90 Run Number 786

	Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
137.0960	11	SF7171	90FS15S20	0.5110 g.		(WHITE ppt	FORMED)	
137.158	7		S21	0.5354 g				
137.033	16		S22	0.5239 g				
135.048	5		S23	0.5162 g				
137.109	14		S24	0.5494 g				
137.704	3		S25	0.5382 g				
135.209	1		S26	0.5582 g				
137.199	2		S27	0.5114 g				
136.394	4		S23	DUP 0.5136 g				
136.005	10		S23	SPK 0.5302 g		5 ml SED SPIKE + 1 ml 5 ppm Ag		
	27		DIGEST BLK					
136.293	8		S25	DUP 0.5339 g				
137.108	15		S25	SPK 0.5319 g		5 ml SED SPIKE + 1 ml 5 ppm Ag		
	19		DIGEST BLK					
137.406	21		LCS 0287	0.5472 g				
136.556	23		S23	0.5474 g AA SPK		0.5 ml	GFAA SPIKE	200 ppb As, Se, Tl, Pb, Sb
137.223	24		S25	0.5260 g AA SPK		0.5 ml	GFAA SPIKE	50 ppb Cd

COMMENTS: FINAL VOLUME = 50 ml

0.5 ml of 1000 µg/ml Y added prior to bringing to final volume

R. Dilg
5-24-98

BLANK REPORT

Blank name INSTR BLANK 1

Date analyzed 05/18/90 File name RUN786

Element	Blank Value	Detection limit	Units
Ag	-2.49	6.0	ug/L
Alhigh	-99.90	20000.0	ug/L
Allow	-4.50	80.0	ug/L
Ba	-0.32	6.0	ug/L
Be	0.21	3.0	ug/L
Cahigh	-80.70	20000.0	ug/L
Calow	-105.30	500.0	ug/L
Cd	-2.63	10.0	ug/L
Co	1.02	6.0	ug/L
Cr	-2.98	8.0	ug/L
Cu	-4.19	6.0	ug/L
Mghigh	-45.30	20000.0	ug/L
Mglow	-12.10	100.0	ug/L
Felow	-15.06	80.0	ug/L
Fehigh	65.60	20000.0	ug/L
K	186.60	5000.0	ug/L
Mn	0.16	5.0	ug/L
Na	-406.60	1000.0	ug/L
Ni	1.56	15.0	ug/L
Pb	-2.47	70.0	ug/L
V	0.88	5.0	ug/L
Znlow	-23.56	40.0	ug/L
Znhigh	224.60	20000.0	ug/L

All values for the blank are less than detection limit.

R. Dilg
5-24-90

BLANK REPORT

Blank name INSTR BLANK 2

Date analyzed 05/18/90 File name RUN786

Element	Blank Value	Detection limit	Units
Ag	-2.34	6.0	ug/L
Alhigh	-169.60	20000.0	ug/L
Allow	-4.54	80.0	ug/L
Ba	-0.63	6.0	ug/L
Be	-0.10	3.0	ug/L
Cahigh	-99.00	20000.0	ug/L
Calow	-104.60	500.0	ug/L
Cd	-1.90	10.0	ug/L
Co	1.68	6.0	ug/L
Cr	-2.41	8.0	ug/L
Cu	-4.30	6.0	ug/L
Mghigh	-47.90	20000.0	ug/L
Mglow	-14.70	100.0	ug/L
Felow	-15.18	80.0	ug/L
Fehigh	-6.70	20000.0	ug/L
K	137.50	5000.0	ug/L
Mn	-0.37	5.0	ug/L
Na	-400.10	1000.0	ug/L
Ni	7.44	15.0	ug/L
Pb	10.59	70.0	ug/L
V	-0.03	5.0	ug/L
Znlow	-25.60	40.0	ug/L
Znhigh	-12.00	20000.0	ug/L

All values for the blank are less than detection limit.

R. Dily
5-24-90

BLANK REPORT

Blank name INSTR BLANK 3

Date analyzed 05/18/90 File name RUN786

Element	Blank Value	Detection limit	Units
Ag	-2.03	6.0	ug/L
Alhigh	-112.80	20000.0	ug/L
Allow	-2.98	80.0	ug/L
Ba	-0.71	6.0	ug/L
Be	-0.03	3.0	ug/L
Cahigh	-74.50	20000.0	ug/L
Calow	-84.00	500.0	ug/L
Cd	-2.56	10.0	ug/L
Co	1.61	6.0	ug/L
Cr	-1.93	8.0	ug/L
Cu	-3.52	6.0	ug/L
Mghigh	-34.50	20000.0	ug/L
Molow	-1.60	100.0	ug/L
Felow	-13.58	80.0	ug/L
Fehigh	99.60	20000.0	ug/L
K	-47.00	5000.0	ug/L
Mn	-0.30	5.0	ug/L
Na	-411.60	1000.0	ug/L
Ni	0.44	15.0	ug/L
Pb	10.67	70.0	ug/L
V	-0.22	5.0	ug/L
Znlow	-25.19	40.0	ug/L
Znhigh	171.60	20000.0	ug/L

All values for the blank are less than detection limit.

R. Dilg
5-24-90

BLANK REPORT

Blank name DIGEST BLANK "A"

Date analyzed 05/18/90 File name RUN786

Element	Blank Value	Detection limit	Units
Ag	-3.11	6.0	ug/L
Alhigh	50.40	20000.0	ug/L
Allow	5.96	80.0	ug/L
Ba	-0.32	6.0	ug/L
Be	-0.01	3.0	ug/L
Cahigh	118.90	20000.0	ug/L
Calow	60.40	500.0	ug/L
Cd	-1.63	10.0	ug/L
Co	-0.41	6.0	ug/L
Cr	1.99	8.0	ug/L
Cu	-1.04	6.0	ug/L
Mghigh	-3.10	20000.0	ug/L
Mglow	29.00	100.0	ug/L
Felow	53.67	80.0	ug/L
Fehigh	339.30	20000.0	ug/L
K	422.60	5000.0	ug/L
Mn	2.12	5.0	ug/L
Na	-264.10	1000.0	ug/L
Ni	-0.98	15.0	ug/L
Pb	19.06	70.0	ug/L
V	0.12	5.0	ug/L
Znlow	-0.60	40.0	ug/L
Znhigh	787.20	20000.0	ug/L

All values for the blank are less than detection limit.

R. Dilg
5-24-90

BLANK REPORT

Blank name DIGEST BLANK "B"

Date analyzed 05/18/90 File name RUN786

Element	Blank Value	Detection limit	Units
Ag	-2.10	6.0	ug/L
Alhigh	13.50	20000.0	ug/L
Allow	5.22	80.0	ug/L
Ba	-0.26	6.0	ug/L
Be	-0.29	3.0	ug/L
Cahigh	71.30	20000.0	ug/L
Calow	23.40	500.0	ug/L
Cd	-3.21	10.0	ug/L
Co	-0.19	6.0	ug/L
Cr	0.70	8.0	ug/L
Cu	-3.58	6.0	ug/L
Mghigh	-20.50	20000.0	ug/L
Molow	12.10	100.0	ug/L
Felow	53.46	80.0	ug/L
Fehigh	312.80	20000.0	ug/L
K	916.30	5000.0	ug/L
Mn	2.19	5.0	ug/L
Na	-256.70	1000.0	ug/L
Ni	-6.00	15.0	ug/L
Pb	23.76	70.0	ug/L
V	0.03	5.0	ug/L
Znlow	-7.11	40.0	ug/L
Znhigh	586.20	20000.0	ug/L

All values for the blank are less than detection limit.

R. Dilg
5-24-98

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 1 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Allow	4836.0	5000.0	3.3%	ug/L
Ba	5072.6	5000.0	1.5%	ug/L
Be	4938.5	5000.0	1.2%	ug/L
Calow	4824.5	5000.0	3.5%	ug/L
Cd	4884.0	5000.0	2.3%	ug/L
Co	4850.1	5000.0	3.0%	ug/L
Cr	4775.9	5000.0	4.5%	ug/L
Cu	4969.6	5000.0	0.6%	ug/L
Molow	4926.1	5000.0	1.5%	ug/L
Felow	5140.0	5000.0	2.8%	ug/L
Mn	4979.6	5000.0	0.4%	ug/L
Ni	5008.1	5000.0	0.2%	ug/L
Pb	4797.1	5000.0	4.1%	ug/L
V	4847.6	5000.0	3.0%	ug/L
Znlow	4917.1	5000.0	1.7%	ug/L

All elements within 5 % of the true value.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 2 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Allow	4811.0	5000.0	3.8%	ug/L
Ba	5037.9	5000.0	0.8%	ug/L
Be	4961.8	5000.0	0.8%	ug/L
Calow	4807.1	5000.0	3.9%	ug/L
Cd	4940.9	5000.0	1.2%	ug/L
Co	4878.9	5000.0	2.4%	ug/L
Cr	4829.8	5000.0	3.4%	ug/L
Cu	4943.9	5000.0	1.1%	ug/L
Molow	4948.6	5000.0	1.0%	ug/L
Felow	5165.6	5000.0	3.3%	ug/L
Mn	5005.2	5000.0	0.1%	ug/L
Ni	5038.8	5000.0	0.8%	ug/L
Pb	4844.9	5000.0	3.1%	ug/L
V	4860.4	5000.0	2.8%	ug/L
Znlow	4932.5	5000.0	1.4%	ug/L

All elements within 5 % of the true value.

D. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 3 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Allow	4817.5	5000.0	3.7%	ug/L
Ba	5038.2	5000.0	0.8%	ug/L
Be	4960.0	5000.0	0.8%	ug/L
Calow	4802.0	5000.0	4.0%	ug/L
Cd	4928.4	5000.0	1.4%	ug/L
Co	4871.7	5000.0	2.6%	ug/L
Cr	4805.8	5000.0	3.9%	ug/L
Cu	4936.2	5000.0	1.3%	ug/L
Molow	4925.8	5000.0	1.5%	ug/L
Felow	5169.8	5000.0	3.4%	ug/L
Mn	5005.3	5000.0	0.1%	ug/L
Ni	5003.3	5000.0	0.1%	ug/L
Pb	4831.2	5000.0	3.4%	ug/L
V	4842.8	5000.0	3.1%	ug/L
Znlow	4919.6	5000.0	1.6%	ug/L

All elements within 5 % of the true value.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 1 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	99220.8	100000.0	0.8%	ug/L
Cahigh	100024.9	100000.0	0.0%	ug/L
Mghigh	99481.8	100000.0	0.5%	ug/L
Fehigh	100892.9	100000.0	0.9%	ug/L
K	102913.5	100000.0	2.9%	ug/L
Na	106112.9	100000.0	6.1%	ug/L
Znhigh	96989.5	100000.0	3.0%	ug/L

All elements within 10 % of true value.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 2 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	99029.1	100000.0	1.0%	ug/L
Cahigh	101042.3	100000.0	1.0%	ug/L
Mghigh	99124.5	100000.0	0.9%	ug/L
Fehigh	101481.8	100000.0	1.5%	ug/L
K	102939.5	100000.0	2.9%	ug/L
Na	105306.3	100000.0	5.3%	ug/L
Znhigh	97378.1	100000.0	2.6%	ug/L

All elements within 10 % of true value.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 3 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	98853.1	100000.0	1.1%	ug/L
Cahigh	99413.7	100000.0	0.6%	ug/L
Mghigh	98715.8	100000.0	1.3%	ug/L
Fehigh	101035.5	100000.0	1.0%	ug/L
K	101794.4	100000.0	1.8%	ug/L
Na	105646.9	100000.0	5.6%	ug/L
Znhigh	96874.2	100000.0	3.1%	ug/L

All elements within 10 % of true value.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 1 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Ag	49.1	50.0	1.8%	ug/L

Silver audit within 10 % limit.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 2 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Ag	49.6	50.0	0.8%	ug/L

Silver audit within 10 % limit.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 3 Operator

Date analyzed 05/18/90 File name RUN786

Element	Found Value	True Value	Percent Deviation	Units
Ag	49.8	50.0	0.4%	ug/L

Silver audit within 10 % limit.

L. Dilg
5-24-90

DUPLICATE

Sample SF7171 90FS15S23 Operator

Date Analyzed 05/18/90 File RUN786

Sample Correction 0.09686 Duplicate Correction 0.097

Element	Units	Sample	Duplicate	Difference	RPD
Ag	mg/kg	-0.3	-0.2	0.1	1 U
Alhigh	mg/kg	2300.0	2200.0	-100.0	2000 U
Allow	mg/kg	2046.2	1896.0	0.0	-8 %
Ba	mg/kg	22.5	20.6	-1.9	-9 %
Be	mg/kg	0.1	0.1	0.0	0 U
Cahigh	mg/kg	900.0	800.0	-100.0	2000 U
Calow	mg/kg	1000.0	900.0	-100.0	-13 %
Cd	mg/kg	-0.1	-0.2	-0.1	1 U
Co	mg/kg	1.3	1.3	0.0	1 U
Cr	mg/kg	4.3	3.9	-0.4	1 U
Cu	mg/kg	3.0	2.7	-0.3	1 U
Mghigh	mg/kg	700.0	700.0	0.0	2000 U
Mglow	mg/kg	700.0	600.0	-100.0	-10 %
Felow	mg/kg	2851.9	2688.1	0.0	-6 %
Fehigh	mg/kg	2800.0	2600.0	-200.0	2000 U
K	mg/kg	200.0	100.0	-100.0	0 U
Mn	mg/kg	39.3	36.7	-2.6	-7 %
Na	mg/kg	0.0	0.0	0.0	0 U
Ni	mg/kg	3.5	4.0	0.5	1 U
Pb	mg/kg	8.1	9.9	1.8	7 U
V	mg/kg	5.7	4.8	-0.9	-16 %
Znlow	mg/kg	19.0	17.5	-1.5	4 U
Znhigh	mg/kg	100.0	100.0	0.0	2000 U

ALL DUPLICATE VALUES ARE WITHIN EITHER 20% RELATIVE PERCENT DIFFERENCE OR THE DETECTION LIMIT OF EACH OTHER

L. Dilg
5-24-90

DUPLICATE

Sample SF7171 90FS15S25 Operator

Date Analyzed 05/18/90 File RUN786

Sample Correction 0.09290 Duplicate Correction 0.094

Element	Units	Sample	Duplicate	Difference	RPD
Ag	mg/kg	-0.3	-0.2	0.1	1 U
Alhigh	mg/kg	4800.0	5100.0	300.0	2000 U
Allow	mg/kg	4372.0	4649.4	277.4	6 %
Ba	mg/kg	34.5	34.8	0.3	1 U
Be	mg/kg	0.3	0.3	0.0	0 U
Cahigh	mg/kg	1100.0	1100.0	0.0	2000 U
Calow	mg/kg	1300.0	1300.0	0.0	0 U
Cd	mg/kg	-0.1	-0.1	0.0	1 U
Co	mg/kg	2.6	2.6	0.0	1 U
Cr	mg/kg	7.9	8.0	0.1	1 U
Cu	mg/kg	3.9	3.9	0.0	1 U
Mghigh	mg/kg	1100.0	1100.0	0.0	2000 U
Mglow	mg/kg	1100.0	1100.0	0.0	1 %
Felow	mg/kg	5578.9	5713.4	134.5	2 %
Fehigh	mg/kg	5400.0	5600.0	200.0	2000 U
K	mg/kg	400.0	500.0	100.0	0 U
Mn	mg/kg	161.3	163.4	2.1	1 %
Na	mg/kg	0.0	0.0	0.0	0 U
Ni	mg/kg	5.5	6.4	0.9	1 U
Pb	mg/kg	5.3	3.9	-1.4	7 U
V	mg/kg	9.9	10.3	0.4	0 U
Znlow	mg/kg	12.7	13.2	0.5	4 U
Znhigh	mg/kg	0.0	0.0	0.0	2000 U

ALL DUPLICATE VALUES ARE WITHIN EITHER 20% RELATIVE PERCENT DIFFERENCE OR THE DETECTION LIMIT OF EACH OTHER

L. Dilg
5-24-90

SPIKE COMPARISON

Sample SF7171 90FS15S23 Analyzed by

Date Analyzed 05/18/90 File RUN786 SMP1

Sample correction factor 0.09686 Spike correction factor 0.094

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	mg/kg	-0.3	8.1	9	93%
Ba	mg/kg	22.5	67.0	47	95%
Be	mg/kg	0.1	4.3	5	84%
Cd	mg/kg	-0.1	7.6	9	85%
Co	mg/kg	1.3	43.0	47	89%
Cr	mg/kg	4.3	46.3	47	89%
Cu	mg/kg	3.0	45.3	47	90%
Mn	mg/kg	39.3	208.3	188	90%
Ni	mg/kg	3.5	45.1	47	89%
Pb	mg/kg	8.1	84.9	94	82%
V	mg/kg	5.7	49.5	47	93%
Znlow	mg/kg	19.0	94.5	94	80%
~~Znhigh~~	~~mg/kg~~	~~60.4~~	~~100.0~~	~~0~~	~~0%*~~

ALL SPIKE RECOVERIES WITHIN ± 20 PERCENT

R. Dilg
5-24-90

SPIKE COMPARISON

Sample SF7171 90FS15S25 Analyzed by

Date Analyzed 05/18/90 File RUN786 SMP2

Sample correction factor 0.09290 Spike correction factor 0.093

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	mg/kg	-0.3	7.9	9	92%
Ba	mg/kg	34.5	77.8	47	92%
Be	mg/kg	0.3	4.3	5	81%
Cd	mg/kg	-0.1	7.7	9	87%
Co	mg/kg	2.6	43.6	47	87%
Cr	mg/kg	7.9	47.6	47	84%
Cu	mg/kg	3.9	45.3	47	88%
Mn	mg/kg	161.3	324.4	186	88%
Ni	mg/kg	5.5	46.6	47	88%
Pb	mg/kg	5.3	80.9	93	81%
V	mg/kg	9.9	52.1	47	90%
Znlow	mg/kg	12.7	90.7	93	84%
~~Znhigh~~	~~mg/kg~~	~~36.2~~	~~100.0~~	~~0~~	~~0%*~~

ALL SPIKE RECOVERIES WITHIN ± 20 PERCENT

R. Dilg
5-24-90

SAMPLE REPORT

Sample SF7171 LCS EPA 0287 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration	
Silver	mg/kg	27.	
Aluminum	mg/kg	230.	
Barium	mg/kg	5.5	
Beryllium	mg/kg	22.	
Calcium	mg/kg	58000.	
Cadmium	mg/kg	46.	
Cobalt	mg/kg	150.	
Chromium	mg/kg	100.	
Copper	mg/kg	7500.	
Iron	mg/kg	21000.	
Potassium	mg/kg	500.	U
Manganese	mg/kg	220.	
Sodium	mg/kg	100.	U
Nickel	mg/kg	60.	
Lead	mg/kg	230.	
Vanadium	mg/kg	68.	
Zinc	mg/kg	200.	

SEE 1/10 DILUTION FOR Ca, Cu, AND Mg VALUES.
ALL REMAINING VALUES WITHIN CONTROL LIMITS.

L. Dilg
5-24-90

SAMPLE REPORT

Sample 1/10 Dilution LCS EPA 0287 Operator

Date analyzed 05/18/90 File name RUN786

Element	Unit	Concentration	
Silver	mg/kg	26.	
Aluminum	mg/kg	99.	
Barium	mg/kg	5.5	U
Beryllium	mg/kg	22.	
Calcium	mg/kg	190000.	
Cadmium	mg/kg	44.	
Cobalt	mg/kg	160.	
Chromium	mg/kg	110.	
Copper	mg/kg	7200.	
Magnesium	mg/kg	98000.	
Iron	mg/kg	23000.	
Potassium	mg/kg	4600.	U
Manganese	mg/kg	230.	
Sodium	mg/kg	900.	U
Nickel	mg/kg	65.	
Lead	mg/kg	260.	
Vanadium	mg/kg	70.	
Zinc	mg/kg	190.	

Ca, Cu, AND Mg VALUES ONLY.

Ca AND Cu VALUES ARE WITHIN CONTROL LIMITS.

Mg VALUE IS NOT WITHIN CONTROL LIMITS; RECOVERY IS LOW (83%R).

R. Dilg
5-24-90

DIGESTION RECORD

Prepared by R. DILG Date 5-22-90 Run Number 789

	Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
136.6628	40	SF7171	90F15S20	0.5359g.				
136.0863	41		S20	0.5465g.		DUP		
135.9152	42		S20	0.5485g.		5ml SED SPIKE SPIKE +1ml 5ppm Ag		
135.7728	43		S20	0.5410g.		5ml SED SPIKE SPIKE +1ml 5ppm Ag		
136.6565	45		LCS 0287	0.5331g.				
	46		DIGEST BLK					

COMMENTS: % SOLIDS: OVERNITE @ 105°C (~18 HRS)
DISH 73.7083g DISH + DRY SAMPLE 87.3321g
WET SAMPLE 14.1471g DRY SAMPLE 13.6233g ⇒ 96.3% SOLIDS

— DRIED SAMPLE HAD RANDOM SIZED DARK ROCKS; NOTICEABLE ORGANIC ODOR

— SAMPLE TRIPLE BALL MIXED/GROUND; PASSED THROUGH PLASTIC SIEVE; FINALLY PASSED THROUGH 50 MESH SIEVE; SAMPLE HAD TENDENCY TO CLUMP AS IF A WAXY SUBSTANCE WERE PRESENT

— 2.5ml CONC. HCl ADDED PRIOR TO BRINGING TO 50ml FINAL VOLUME.

L. Dilg
5-24-90

BLANK REPORT

Blank name INSTR BLANK 1

Date analyzed 05/23/90 File name RUN789

Element	Blank Value	Detection limit	Units
Ag	-0.83	6.0	ug/L
Alhigh	-108.30	20000.0	ug/L
Allow	-5.90	80.0	ug/L
Ba	-0.01	6.0	ug/L
Be	0.04	1.0	ug/L
Cahigh	-25.80	20000.0	ug/L
Calow	-2.00	500.0	ug/L
Cd	-0.59	10.0	ug/L
Co	0.04	6.0	ug/L
Cr	-3.03	8.0	ug/L
Cu	-0.39	6.0	ug/L
Mghigh	-27.00	20000.0	ug/L
Mglow	5.70	100.0	ug/L
Felow	-4.75	80.0	ug/L
Fehigh	-122.00	20000.0	ug/L
K	193.90	5000.0	ug/L
Mn	-0.96	5.0	ug/L
Na	-30.80	1000.0	ug/L
Ni	14.43	15.0	ug/L
Pb	-10.76	70.0	ug/L
V	0.33	5.0	ug/L
Znlow	-2.41	40.0	ug/L
Znhigh	-325.20	20000.0	ug/L

All values for the blank are less than detection limit.

L. Dilg
5-24-90

BLANK REPORT

Blank name INSTR BLANK 2

Date analyzed 05/23/90 File name RUN789

Element	Blank Value	Detection limit	Units
Ag	0.47	6.0	ug/L
Alhigh	-146.40	20000.0	ug/L
Allow	-8.99	80.0	ug/L
Ba	0.07	6.0	ug/L
Be	0.14	1.0	ug/L
Cahigh	-43.20	20000.0	ug/L
Calow	-3.50	500.0	ug/L
Cd	-0.63	10.0	ug/L
Co	0.64	6.0	ug/L
Cr	-2.38	8.0	ug/L
Cu	-0.28	6.0	ug/L
Mghigh	-26.60	20000.0	ug/L
Mglow	6.20	100.0	ug/L
Felow	-8.26	80.0	ug/L
Fehigh	-173.10	20000.0	ug/L
K	891.30	5000.0	ug/L
Mn	-1.12	5.0	ug/L
Na	-27.50	1000.0	ug/L
Ni	6.85	15.0	ug/L
Pb	-16.25	70.0	ug/L
V	-0.19	5.0	ug/L
Znlow	-3.40	40.0	ug/L
Znhigh	-420.00	20000.0	ug/L

All values for the blank are less than detection limit.

L. Dila
5-24-98

BLANK REPORT

Blank name DIGESTION BLANK

Date analyzed 05/23/90 File name RUN789

Element	Blank Value	Detection limit	Units
Ag	-1.03	6.0	ug/L
Alhigh	223.10	20000.0	ug/L
Allow	149.78 *	80.0	ug/L
Ba	0.35	6.0	ug/L
Be	0.09	1.0	ug/L
Cahigh	137.90	20000.0	ug/L
Calow	144.80	500.0	ug/L
Cd	-0.07	10.0	ug/L
Co	-0.44	6.0	ug/L
Cr	-2.33	8.0	ug/L
Cu	1.85	6.0	ug/L
Mghigh	19.20	20000.0	ug/L
Mglow	51.00	100.0	ug/L
Felow	93.07 *	80.0	ug/L
Fehigh	192.80	20000.0	ug/L
K	-421.10	5000.0	ug/L
Mn	1.46	5.0	ug/L
Na	39.20	1000.0	ug/L
Ni	8.33	15.0	ug/L
Pb	11.54	70.0	ug/L
V	-0.89	5.0	ug/L
Znlow	21.61	40.0	ug/L
Znhigh	124.80	20000.0	ug/L

Some elements have blank values greater than detection limit.

These elements are Al, Fe.

L. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 1 Operator

Date analyzed 05/23/90 File name RUN789

Element	Found Value	True Value	Percent Deviation	Units
Allow	4802.7	5000.0	3.9%	ug/L
Ba	5077.8	5000.0	1.6%	ug/L
Be	4958.5	5000.0	0.8%	ug/L
Calow	4865.1	5000.0	2.7%	ug/L
Cd	4931.2	5000.0	1.4%	ug/L
Co	4890.5	5000.0	2.2%	ug/L
Cr	4810.1	5000.0	3.8%	ug/L
Cu	4941.1	5000.0	1.2%	ug/L
Molow	4969.9	5000.0	0.6%	ug/L
Felow	5158.1	5000.0	3.2%	ug/L
Mn	5012.9	5000.0	0.3%	ug/L
Ni	5045.1	5000.0	0.9%	ug/L
Pb	4845.0	5000.0	3.1%	ug/L
V	4839.1	5000.0	3.2%	ug/L
Znlow	4922.2	5000.0	1.6%	ug/L

All elements within 5 % of the true value.

L. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 2 Operator

Date analyzed 05/23/90 File name RUN789

Element	Found Value	True Value	Percent Deviation	Units
Allow	4780.9	5000.0	4.4%	ug/L
Ba	5045.9	5000.0	0.9%	ug/L
Be	4978.7	5000.0	0.4%	ug/L
Calow	4838.2	5000.0	3.2%	ug/L
Cd	4982.3	5000.0	0.4%	ug/L
Co	4937.0	5000.0	1.3%	ug/L
Cr	4828.0	5000.0	3.4%	ug/L
Cu	4895.8	5000.0	2.1%	ug/L
Malow	4958.8	5000.0	0.8%	ug/L
Felow	5213.3	5000.0	4.3%	ug/L
Mn	5044.8	5000.0	0.9%	ug/L
Ni	5118.3	5000.0	2.4%	ug/L
Pb	4952.6	5000.0	0.9%	ug/L
V	4844.2	5000.0	3.1%	ug/L
Znlow	4959.9	5000.0	0.8%	ug/L

All elements within 5 % of the true value.

R. Dily
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 1 Operator

Date analyzed 05/23/90 File name RUN789

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	98616.5	100000.0	1.4%	ug/L
Cahigh	99994.7	100000.0	0.0%	ug/L
Mghigh	100034.5	100000.0	0.0%	ug/L
Fehigh	100516.2	100000.0	0.5%	ug/L
K	102812.1	100000.0	2.8%	ug/L
Na	105906.2	100000.0	5.9%	ug/L
Znhigh	97102.9	100000.0	2.9%	ug/L

All elements within 10 % of true value.

L. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 2 Operator

Date analyzed 05/23/90 File name RUN789

Element	Found Value	True Value	Percent Deviation	Units
Alhigh	97776.2	100000.0	2.2%	ug/L
Cahigh	100171.2	100000.0	0.2%	ug/L
Mghigh	100000.0	100000.0	0.0%	ug/L
Fehigh	100997.6	100000.0	1.0%	ug/L
K	103313.7	100000.0	3.3%	ug/L
Na	105046.1	100000.0	5.0%	ug/L
Znhigh	97444.8	100000.0	2.6%	ug/L

All elements within 10 % of true value.

R. Dila
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 1 Operator

Date analyzed 05/23/90 File name RUN789

Element	Found Value	True Value	Percent Deviation	Units
Ag	50.5	50.0	1.0%	ug/L

Silver audit within 10 % limit.

R. Dilg
5-24-90

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 2 Operator

Date analyzed 05/23/90 File name RUN789

Element	Found Value	True Value	Percent Deviation	Units
Ag	49.9	50.0	0.2%	ug/L

Silver audit within 10 % limit.

R. Dilg
5-24-90

DUPLICATE

Sample SF7171 90FS15S20 Operator

Date Analyzed 05/23/90 File RUN789

Sample Correction 0.09330 Duplicate Correction 0.091

Element	Units	Sample	Duplicate	Difference	RPD
Ag	mg/kg	0.0	0.1	0.1	1 U
Alhigh	mg/kg	5100.0	5200.0	100.0	2000 U
Allow	mg/kg	4734.1	4866.1	132.0	3 %
Ba	mg/kg	34.2	34.7	0.5	1 U
Be	mg/kg	0.1	0.1	0.0	0 U
Cahigh	mg/kg	3100.0	3100.0	0.0	2000 U
Calow	mg/kg	3600.0	3600.0	0.0	0 U
Cd	mg/kg	0.2	0.4	0.2	1 U
Co	mg/kg	3.2	3.5	0.3	1 U
Cr	mg/kg	15.0	15.1	0.1	1 U
Cu	mg/kg	28.8	29.5	0.7	2 %
Mghigh	mg/kg	2100.0	2100.0	0.0	2000 U
Mglow	mg/kg	2100.0	2100.0	0.0	2 %
Felow	mg/kg	8081.4	8204.2	122.8	2 %
Fehigh	mg/kg	7800.0	8000.0	200.0	2000 U
K	mg/kg	700.0	700.0	0.0	0 U
Mn	mg/kg	163.4	166.5	3.1	2 %
Na	mg/kg	200.0	200.0	0.0	0 U
Ni	mg/kg	10.8	11.9	1.1	1 U
Pb	mg/kg	10.5	9.8	-0.7	7 U
V	mg/kg	14.9	16.0	1.1	7 %
Znlow	mg/kg	299.4	299.4	0.0	4 U
Znhigh	mg/kg	300.0	300.0	0.0	2000 U

ALL DUPLICATE VALUES ARE WITHIN EITHER 20% RELATIVE PERCENT DIFFERENCE OR THE DETECTION LIMIT OF EACH OTHER.

L. Dila
5-24-90

SPIKE COMPARISON

Sample SF7171 90FS15S20 Analyzed by

Date Analyzed 05/23/90 File RUN789 SMP2

Sample correction factor 0.09330 Spike correction factor 0.092

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	mg/kg	0.0	8.0	9	89%
Ba	mg/kg	34.2	77.1	46	93%
Be	mg/kg	0.1	4.1	5	81%
Cd	mg/kg	0.2	7.7	9	84%
Co	mg/kg	3.2	43.8	46	88%
Cr	mg/kg	15.0	52.5	46	82%
Cu	mg/kg	28.8	68.5	46	86%
Mn	mg/kg	163.4	322.8	184	87%
Ni	mg/kg	10.8	49.7	46	85%
Pb	mg/kg	10.5	85.0	92	81%
V	mg/kg	14.9	55.7	46	89%
Znlow	mg/kg	299.4	362.5	92	69%*
~~Znhigh~~	~~mg/kg~~	~~294.6~~	~~300.0~~	~~0~~	~~0%*~~

* SAMPLE VALUE MORE THAN TWICE THE SPIKE ADDED; THE SPIKE AUDIT IS NOT A VALID AUDIT.

THE REMAINING SPIKE RECOVERIES ARE WITHIN ±20 PERCENT.

R. Dilg
5-24-90

SAMPLE REPORT

Sample SF7171 LCS EPA 0287 Operator

Date analyzed 05/23/90 File name RUN789

Element	Unit	Concentration	
Silver	mg/kg	23.	
Aluminum	mg/kg	250.	
Barium	mg/kg	5.8	
Beryllium	mg/kg	21.	
Calcium	mg/kg	59000.	
Cadmium	mg/kg	47.	
Cobalt	mg/kg	150.	
Chromium	mg/kg	100.	
Copper	mg/kg	7400.	
Iron	mg/kg	22000.	
Potassium	mg/kg	500.	U
Manganese	mg/kg	220.	
Sodium	mg/kg	100.	
Nickel	mg/kg	61.	
Lead	mg/kg	290.	
Vanadium	mg/kg	68.	
Zinc	mg/kg	190.	

SEE 1/10 DILUTION FOR Ca, Cu, AND Mg VALUES.

ALL REMAINING VALUES WITHIN CONTROL LIMITS EXCEPT FOR Pb; RECOVERY FOR Pb IS HIGH (121.4%).

L. Dilg
5-24-90

SAMPLE REPORT

Sample 1/10 Dilution LCS EPA 0287 Operator

Date analyzed 05/23/90 File name RUN789

Element	Unit	Concentration	
Silver	mg/kg	24.	
Aluminum	mg/kg	100.	
Barium	mg/kg	5.7	
Beryllium	mg/kg	22.	
Calcium	mg/kg	190000.	
Cadmium	mg/kg	50.	
Cobalt	mg/kg	160.	
Chromium	mg/kg	110.	
Copper	mg/kg	7100.	
Magnesium	mg/kg	100000.	
Iron	mg/kg	25000.	
Potassium	mg/kg	4700.	U
Manganese	mg/kg	240.	
Sodium	mg/kg	900.	U
Nickel	mg/kg	74.	
Lead	mg/kg	270.	
Vanadium	mg/kg	70.	
Zinc	mg/kg	200.	

Ca, Cu, AND Mg VALUES ONLY.
ALL THREE VALUES ARE WITHIN CONTROL LIMITS.

R. Dilg
5-24-90

SAMPLE REPORT

Sample Undigested SED SPIKE + Ag Operator

Date analyzed 05/23/90 File name RUN789

Element	Unit	Concentration	
Silver	mg/kg	90.	
Aluminum	mg/kg	80.	U
Barium	mg/kg	500.	
Beryllium	mg/kg	44.	
Calcium	mg/kg	500.	U
Cadmium	mg/kg	83.	
Cobalt	mg/kg	460.	
Chromium	mg/kg	460.	
Copper	mg/kg	450.	
Magnesium	mg/kg	100.	U
Iron	mg/kg	80.	U
Potassium	mg/kg	5000.	U
Manganese	mg/kg	1900.	
Sodium	mg/kg	1000.	U
Nickel	mg/kg	460.	
Lead	mg/kg	860.	
Vanadium	mg/kg	470.	
Zinc	mg/kg	860.	

FOR ADDITIONAL INFORMATION

Run 786
5-24-90
Q.Dilg

Method: S5Y Standard: blnk

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00066	.00893	.00076	-.00105	.02037	.00009	-.00007
#1	-.00069	.00897	.00080	-.00138	.02032	.00007	-.00007
#2	-.00062	.00893	.00075	-.00138	.02052	.00011	-.00007
#3	-.00067	.00889	.00071	-.00037	.02028	.00009	-.00007

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02403	.02030	.00026	-.00028	.00006	.00020	.00225
#1	.02408	.02019	.00002	-.00024	-.00004	.00019	.00216
#2	.02412	.02019	.00039	-.00031	.00039	.00021	.00233
#3	.02388	.02053	.00037	-.00030	-.00016	.00021	.00225

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00225	.00987	.01912	-.00092	.00200	.00602	.00014
#1	.00216	.00986	.01916	-.00051	.00201	.00606	.00019
#2	.00233	.00992	.01911	-.00094	.00200	.00603	.00050
#3	.00225	.00983	.01908	-.00131	.00199	.00597	-.00026

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02138	.00007	.00005	.00013	.00243	.00888	.00009
#1	.02138	.00002	.00000	-.00009	.00244	.00893	.00024
#2	.02159	.00009	.00019	.00040	.00243	.00889	-.00005
#3	.02117	.00008	-.00005	.00007	.00241	.00884	.00007

Elem	Znlow	Znhigh
Avge	.00983	.02000
#1	.00982	.02004
#2	.00988	.02011
#3	.00981	.01985

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84939	--	--	--	--	--	--
#1	84550	--	--	--	--	--	--
#2	84843	--	--	--	--	--	--
#3	85424	--	--	--	--	--	--

Method: S5Y Standard: ten1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	.04270	.00946	.00366	.31115	.00806	.00005	-.00009
#1	.04271	.00947	.00367	.30925	.00797	.00005	-.00007
#2	.04266	.00947	.00379	.31188	.00812	.00005	-.00010
#3	.04274	.00945	.00350	.31232	.00810	.00005	-.00010

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02473	.00375	.00623	1.2379	.45509	-.00017	.82144
#1	.02472	.00374	.00627	1.2372	.45378	-.00017	.82153
#2	.02474	.00375	.00610	1.2384	.45606	-.00012	.82115
#3	.02474	.00375	.00631	1.2380	.45542	-.00022	.82165

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.82144	.01031	.02382	-.00068	.13594	.00644	1.6699
#1	.82153	.01034	.02384	-.00085	.13590	.00645	1.6692
#2	.82115	.01025	.02383	-.00022	.13568	.00640	1.6684
#3	.82165	.01035	.02379	-.00099	.13623	.00648	1.6721

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	1.1024	-.00006	.03002	.25296	1.2191	.00945	-.02497
#1	1.1009	.00004	.02996	.25307	1.2184	.00944	-.02455
#2	1.1028	-.00010	.03003	.25354	1.2188	.00945	-.02446
#3	1.1034	-.00013	.03006	.25227	1.2200	.00945	-.02591

Elem	Znlow	Znhigh
Avge	.00830	.02076
#1	.00828	.02079
#2	.00834	.02077
#3	.00828	.02072

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	82771	--	--	--	--	--	--
#1	82816	--	--	--	--	--	--
#2	82755	--	--	--	--	--	--
#3	82741	--	--	--	--	--	--

Method: S5Y Standard: ten2

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00757	.01028	.00032	-.00065	.38681	.00010	1.4527
#1	-.00754	.01027	.00034	-.00062	.38708	.00010	1.4525
#2	-.00758	.01029	.00029	-.00075	.38605	.00010	1.4521
#3	-.00759	.01028	.00032	-.00058	.38729	.00010	1.4536

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.19848	1.5422	1.2592	-.00188	-.00723	.38067	.00236
#1	.19878	1.5412	1.2606	-.00168	-.00712	.38056	.00238
#2	.19822	1.5427	1.2565	-.00224	-.00723	.38052	.00236
#3	.19842	1.5429	1.2605	-.00171	-.00734	.38093	.00236

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00236	.01456	.02525	.09180	.00210	1.5813	.00050
#1	.00238	.01454	.02525	.09165	.00209	1.5825	.00138

#2	.00236	.01459	.02527	.09170	.00212	1.5795	.00040
#3	.00236	.01456	.02523	.09204	.00209	1.5820	-.00028

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01889	.11098	-.00088	.00043	.00266	.00920	.98401
#1	.01893	.11138	-.00096	.00074	.00269	.00918	.98445
#2	.01889	.11071	-.00079	.00022	.00264	.00922	.98300
#3	.01886	.11086	-.00090	.00032	.00265	.00919	.98458

Elem	Znlow	Znhigh
Avge	.92401	.03422
#1	.92408	.03417
#2	.92424	.03416
#3	.92370	.03434

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	83157	--	--	--	--	--	--
#1	83237	--	--	--	--	--	--
#2	83074	--	--	--	--	--	--
#3	83160	--	--	--	--	--	--

Method: 55Y Standard: ten3

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00093	.03770	.22193	.00101	.05677	.66834	.00044
#1	-.00091	.03766	.22194	.00082	.05700	.66845	.00048
#2	-.00087	.03773	.22171	.00053	.05680	.66809	.00045
#3	-.00099	.03771	.22214	.00168	.05650	.66848	.00040

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02538	.01806	.00044	.00264	.00017	.00021	3.6406
#1	.02540	.01800	.00062	.00290	.00012	.00019	3.6468
#2	.02528	.01805	.00015	.00254	.00026	.00026	3.6355
#3	.02545	.01812	.00056	.00248	.00014	.00019	3.6395

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	3.6406	.34238	.05010	-.00152	.00208	.00692	-.00026
#1	3.6468	.34327	.05030	-.00123	.00207	.00694	-.00050
#2	3.6355	.34118	.05002	-.00172	.00209	.00692	.00016
#3	3.6395	.34270	.04997	-.00161	.00208	.00690	-.00044

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02864	-.00004	.00003	.00042	.00252	.83067	.00037
#1	.02865	-.00004	.00003	.00026	.00252	.83131	.00028
#2	.02853	-.00003	-.00002	.00067	.00251	.83005	.00045
#3	.02874	-.00006	.00008	.00032	.00253	.83064	.00037

Elem	Znlow	Znhigh

Avge	.00931	.01998
#1	.00934	.02001
#2	.00932	.01998
#3	.00928	.01993

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85752	--	--	--	--	--	--
#1	85644	--	--	--	--	--	--
#2	86084	--	--	--	--	--	--
#3	85529	--	--	--	--	--	--

Method: S5Y Standard: cazn

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00076	.00932	-.00753	-.00091	.00718	.00010	-.00002
#1	-.00079	.00930	-.00776	-.00062	.00722	.00011	-.00002
#2	-.00072	.00934	-.00753	-.00092	.00722	.00011	-.00002
#3	-.00077	.00931	-.00729	-.00119	.00709	.00007	-.00002

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	7.1508	12.909	.00057	-.00024	-.00016	.00016	.00149
#1	7.1376	12.910	.00038	-.00022	-.00002	.00012	.00156
#2	7.1620	12.915	.00078	-.00022	-.00047	.00017	.00147
#3	7.1528	12.901	.00056	-.00028	.00002	.00017	.00143

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00149	.01192	.02071	-.00115	.00247	.00655	.00424
#1	.00156	.01194	.02067	-.00091	.00247	.00656	.00399
#2	.00147	.01190	.02078	-.00115	.00247	.00655	.00608
#3	.00143	.01193	.02068	-.00138	.00247	.00655	.00264

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01805	.00000	.00009	.00021	.00391	.01079	.00027
#1	.01792	.00001	.00009	.00030	.00391	.01080	.00035
#2	.01818	-.00007	.00011	.00005	.00391	.01078	.00017
#3	.01803	.00005	.00007	.00027	.00393	.01079	.00030

Elem	Znlow	Znhigh
Avge	29.609	.58903
#1	29.613	.58813
#2	29.626	.58948
#3	29.588	.58949

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--

Avge	80908	--	--	--	--	--	--
#1	80896	--	--	--	--	--	--
#2	80863	--	--	--	--	--	--
#3	80966	--	--	--	--	--	--

Method: S5Y Standard: fehi

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00374	.00968	.00359	.00066	.05749	.00037	.01369
#1	-.00373	.00969	.00355	-.00109	.05751	.00036	.01359
#2	-.00379	.00969	.00381	.00099	.05719	.00037	.01379
#3	-.00370	.00966	.00341	.00209	.05776	.00038	.01370

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02334	.01151	-.00057	.00015	-.00053	-.00244	.00207
#1	.02330	.01174	-.00016	.00018	-.00062	-.00245	.00208
#2	.02341	.01152	-.00085	.00007	-.00038	-.00242	.00207
#3	.02331	.01126	-.00071	.00021	-.00059	-.00246	.00206

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00207	12.766	1.2232	-.00108	.00200	.01173	-.00573
#1	.00208	12.761	1.2216	-.00034	.00199	.01170	-.00570
#2	.00207	12.773	1.2241	-.00082	.00200	.01173	-.00604
#3	.00206	12.765	1.2238	-.00209	.00202	.01177	-.00545

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02970	-.00005	.00274	-.00228	.00247	.00892	-.00203
#1	.02966	-.00022	.00274	-.00319	.00245	.00890	-.00217
#2	.02957	.00001	.00270	-.00154	.00249	.00892	-.00200
#3	.02987	.00005	.00278	-.00211	.00248	.00895	-.00192

Elem	Znlow	Znhigh
Avge	.01465	.01979
#1	.01475	.01966
#2	.01477	.01993
#3	.01444	.01979

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86308	--	--	--	--	--	--
#1	86521	--	--	--	--	--	--
#2	86102	--	--	--	--	--	--
#3	86301	--	--	--	--	--	--

Method: S5Y Standard: alhi

Elem	Ag	Alhigh	Allow	As	B	Ba	Be

Avge	-.00063	.56339	4.5072	.03049	.00640	.00008	-.00004
#1	-.00061	.56282	4.5029	.02910	.00637	.00007	-.00005
#2	-.00070	.56274	4.5123	.03117	.00637	.00007	-.00002
#3	-.00058	.56461	4.5064	.03119	.00645	.00008	-.00005

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02302	.00606	.00022	-.00056	.00058	.00015	.00143
#1	.02299	.00606	.00037	-.00055	.00046	.00019	.00143
#2	.02304	.00605	.00008	-.00067	.00071	.00014	.00143
#3	.02302	.00607	.00022	-.00046	.00059	.00012	.00143

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00143	.01154	.01966	-.00108	.00231	.00855	.00025
#1	.00143	.01155	.01978	-.00103	.00228	.00863	-.00046
#2	.00143	.01152	.01969	-.00182	.00233	.00852	-.00031
#3	.00143	.01154	.01952	-.00038	.00233	.00850	.00151

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01924	-.00002	-.00116	-.00018	.00251	.00902	.00012
#1	.01905	.00004	-.00104	-.00052	.00252	.00903	.00024
#2	.01942	.00000	-.00130	-.00055	.00252	.00903	.00007
#3	.01926	-.00011	-.00115	.00054	.00249	.00899	.00004

Elem	Znlow	Znhigh
Avge	.00997	.02055
#1	.00994	.02051
#2	.01001	.02057
#3	.00995	.02058

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	83391	--	--	--	--	--	--
#1	83467	--	--	--	--	--	--
#2	83308	--	--	--	--	--	--
#3	83398	--	--	--	--	--	--

Standardization Report Fri 05-18-90 12:22:01 PM page 1

Method: S5Y

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag	328.000	ten1	blnk	23062.9	15.2056	05/18/90 11:45:02
Alhigh	308.200	alhi	blnk	.591943	.004835	05/18/90 12:16:19
Allow	396.100	ten3	blnk	45213.5	-34.2519	05/18/90 11:51:15
As	193.600	ten1	blnk	32030.8	33.4980	05/18/90 11:45:02
B	249.600	ten2	blnk	27290.0	-555.942	05/18/90 11:48:02
Ba	493.400	ten3	blnk	14964.5	-1.35026	05/18/90 11:51:15
Be	234.800	ten2	blnk	6883.20	.486231	05/18/90 11:48:02
Cahigh	315.800	cazn	blnk	56.1265	-1.34846	05/18/90 11:55:31
Calow	393.300	ten2	blnk	18.0425	-.302806	05/18/90 11:48:02
Cd	228.800	ten2	blnk	7943.11	-2.08430	05/18/90 11:48:02
Co	228.600	ten1	blnk	8076.42	2.28121	05/18/90 11:45:02
Cr	205.500	ten1	blnk	21977.0	-1.38882	05/18/90 11:45:02
Cu	324.700	ten2	blnk	26283.6	-5.36279	05/18/90 11:48:02
Mghigh	279.553	ten3	blnk	15.8090	-.031418	05/18/90 11:51:15
Mglow	279.553	ten1	blnk	15.7855	-.033895	05/18/90 11:45:02
Felow	259.900	ten3	blnk	30074.3	-296.949	05/18/90 11:51:15
Fehigh	271.400	fehi	blnk	332.209	-6.35045	05/18/90 12:00:45
K	766.400	ten2	blnk	1078.53	.993179	05/18/90 11:48:02
Li	670.700	ten1	blnk	74662.3	-149.435	05/18/90 11:45:02
Mn	257.600	ten2	blnk	6348.04	-38.2162	05/18/90 11:48:02
Mo	202.000	ten1	blnk	5988.88	-.851879	05/18/90 11:45:02
Na	589.000	ten1	blnk	92.5091	-1.97789	05/18/90 11:45:02
Ni	231.600	ten2	blnk	90158.3	-6.00727	05/18/90 11:48:02
Pb	220.300	ten1	blnk	333607.	-15.1130	05/18/90 11:45:02
Sn	189.900	ten1	blnk	39551.6	-4.96187	05/18/90 11:45:02
Sr	421.500	ten1	blnk	8219.18	-19.9341	05/18/90 11:45:02
Ti	334.900	ten3	blnk	12168.7	-108.118	05/18/90 11:51:15
V	292.400	ten2	blnk	10163.4	-.879599	05/18/90 11:48:02
Znlow	213.800	ten2	blnk	10938.9	-107.579	05/18/90 11:48:02
Znhigh	481.000	cazn	blnk	702.946	-14.0582	05/18/90 11:55:31

Method: S5Y Sample Name: CU IEC Operator:
Run Time: 05/18/90 12:26:47
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.68801	L.04826	243.04	L-13.311	1226.7	L2.1534	L.14272
#1	L.91647	L.03304	252.10	L-26.038	1223.5	L2.0837	L.17033
#2	L.29830	L.06205	237.12	L11.685	1230.7	L2.1043	L.08899
#3	L.84926	L.04969	239.90	L-25.580	1225.9	L2.2723	L.16885

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.10095	L-.07680	L.23362	L1.9367	L-.72146	10140.	-.03821
#1	L-.10754	L-.07931	L-.26159	L3.5785	L3.1499	10141.	-.03860
#2	L-.09361	L-.07653	L.57450	L-.23577	L-3.9255	10152.	-.03850
#3	L-.10170	L-.07456	L.38794	L2.4674	L-1.3888	10128.	-.03754

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.00524	L-2.7198	L-.11787	L-.06684	L-1.2826	L-.93777	L2.7360
#1	-.00562	L-2.2683	L-.15276	L.11459	L-.37896	L-1.2163	L2.0341
#2	-.00552	L-2.2353	L-.10022	L-.08987	L-2.0697	L-.70112	L4.9547
#3	-.00458	L-3.6558	L-.10063	L-.22523	L-1.3993	L-.89591	L1.2192

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.94063	L-18.812	L-235.98	L7.8171	L-.31191	L-1.0696	L.75767
#1	L.94018	L-17.386	L-239.03	L-7.6847	L-.50764	L-1.4502	L1.4526
#2	L.93527	L-16.934	L-221.12	L15.125	L-.20131	L-.80998	L.76274
#3	L.94644	L-22.116	L-247.78	L16.011	L-.22678	L-.94851	L.05767

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L12.541	L-.23884
#1	L12.281	L-.36339
#2	L13.127	L-.15138
#3	L12.214	L-.20174

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86848	--	--	--	--	--	--
#1	87157	--	--	--	--	--	--
#2	86637	--	--	--	--	--	--
#3	86749	--	--	--	--	--	--

Method: S5Y Sample Name: AL IEC Operator:
Run Time: 05/18/90 12:30:24
Comment:
Mode: CONC Corr. Factor: .005

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00122	L.49994	1020.8	L5.0801	L-1.9225	L-.00240	L.00022
#1	L.00094	L.50006	1020.6	L5.3177	L-1.9110	L-.00224	L-.00006
#2	L-.00419	L.49988	1019.5	L4.9524	L-1.9352	L-.00182	L.00078
#3	L-.00041	L.49988	1022.4	L4.9701	L-1.9212	L-.00314	L-.00006

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.00027	L-.00047	L.00040	L-.01095	L.06491	L-.00573	-.00019
#1	L-.00023	L-.00047	L-.00994	L-.01002	L.08183	L-.00463	-.00019
#2	L-.00030	L-.00047	L.00530	L-.00991	L.06291	L-.00475	-.00019
#3	L-.00028	L-.00047	L.00585	L-.01293	L.05001	L-.00781	-.00019

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.00002	L.23689	L.00095	L.00130	L.11844	L.08012	L.00438
#1	-.00002	L.24500	L.00121	L-.00167	L.12608	L.07912	L.02463
#2	-.00002	L.23224	L.00086	L.00652	L.10803	L.08378	L.01011
#3	-.00002	L.23342	L.00076	L-.00095	L.12122	L.07748	L-.02158

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00100	L-.00740	L-1.9122	L.04676	L.00386	L.00908	L-.00114
#1	L-.00095	L-.01645	L-1.6745	L.11349	L.00439	L.01110	L-.00562
#2	L-.00102	L-.02463	L-1.9962	L-.05327	L.00285	L.00527	L.00292
#3	L-.00103	L.01886	L-2.0659	L.08007	L.00435	L.01088	L-.00072

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L.00032	L.00204
#1	L-.00041	L.00235
#2	L.00397	L.00163
#3	L-.00261	L.00215

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	83092	--	--	--	--	--	--
#1	82934	--	--	--	--	--	--
#2	83375	--	--	--	--	--	--
#3	82968	--	--	--	--	--	--

Method: S5Y Sample Name: FE IEC Operator:
Run Time: 05/18/90 12:34:32

Comment:
Mode: CONC Corr. Factor: .0025

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.17498	L.00024	L.33584	L.15104	L2.5311	L.00904	L.24183
#1	L-.17780	L.00025	L.35959	L.19995	L2.5263	L.00955	L.24557
#2	L-.17760	L.00024	L.33057	L.13074	L2.5149	L.00760	L.24119
#3	L-.16954	L.00024	L.31737	L.12243	L2.5523	L.00996	L.23871

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.00017	L-.00020	L-.01355	L.00772	L-.02960	L-.17573	-.00008
#1	L-.00017	L-.00020	L-.01585	L.01779	L-.02119	L-.17384	-.00008
#2	L-.00017	L-.00020	L-.00864	L.00384	L-.02750	L-.17672	-.00008
#3	L-.00017	L-.00020	L-.01617	L.00152	L-.04012	L-.17664	-.00008

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00000	959.05	L.99904	L-.00042	L-.00126	L.09087	L-.10149
#1	.00000	957.65	L.99873	L.00009	L.00046	L.09125	L-.09593
#2	.00000	959.39	L.99879	L-.00102	L-.00418	L.09108	L-.09619
#3	.00000	960.13	L.99960	L-.00034	L-.00006	L.09027	L-.11233

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00190	L-.04398	L2.2577	L-.22861	L.00045	L-.00049	L-.04957
#1	L.00188	L-.02930	L2.2963	L-.24244	L.00033	L-.00192	L-.05136
#2	L.00195	L-.06429	L2.2222	L-.19444	L.00076	L-.00146	L-.05132
#3	L.00186	L-.03835	L2.2547	L-.24894	L.00027	L.00191	L-.04603

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L.08458	L-.00057
#1	L.08569	L-.00066
#2	L.08411	L-.00061
#3	L.08394	L-.00044

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86895	--	--	--	--	--	--
#1	86829	--	--	--	--	--	--
#2	86908	--	--	--	--	--	--
#3	86949	--	--	--	--	--	--

Method: S5Y Sample Name: AS IEC Operator:
Run Time: 05/18/90 12:40:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.14483	L.02129	162.94	9705.8	546.72	L.93701	L-.04650
#1	L1.2805	L.02484	153.69	9765.1	549.31	L.99546	L.16654
#2	L.19853	L.02134	169.59	9737.5	541.54	L.56245	L-.15361
#3	L-1.9135	L.01769	165.54	9614.8	549.32	L1.2531	L-.15243

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.05524	L-.03921	73.595	L1.3112	L-6.0671	L.13018	-.02762
#1	L-.05679	L-.03900	73.729	L.03054	L-10.320	L.13057	-.02748
#2	L-.05521	L-.03923	73.506	L.31046	L-4.4532	L.74534	-.02774
#3	L-.05370	L-.03940	73.550	L3.5926	L-3.4280	L-.48536	-.02765

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00512	L11.470	L-.08822	L-.07103	L-.63257	L-.70352	L6.0323
#1	.00526	L12.444	L-.08606	L-.10885	L-.32323	L-.62464	L6.3801
#2	.00500	L11.269	L-.08155	L.11593	L-.21582	L-.67132	L7.1508
#3	.00509	L10.697	L-.09703	L-.22018	L-1.3587	L-.81461	L4.5660

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.31763	L-11.939	L34.580	L-11.077	L-.08629	L-.93800	L.45780
#1	L.31867	L-12.288	L25.560	L3.3045	L-.08354	L-1.2999	L1.4806
#2	L.31387	L-12.293	L21.713	L-8.6385	L-.06924	L-.65734	L.06516
#3	L.32035	L-11.236	L56.467	L-27.898	L-.10610	L-.85676	L-.17235

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L9.7674	L-.02680
#1	L11.815	L.02957
#2	L10.376	L-.05830
#3	L7.1118	L-.05166

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86135	--	--	--	--	--	--
#1	86123	--	--	--	--	--	--
#2	86061	--	--	--	--	--	--
#3	86221	--	--	--	--	--	--

Method: S5Y Sample Name: CR IEC Operator:
Run Time: 05/18/90 12:44:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L

Avge	L.40693	L.03895	187.15	L.35030	973.72	L-.94398	L-.02074
#1	L-.06910	L.03607	189.55	L-12.652	966.42	L-1.0025	L-.15360
#2	L.16585	L.04044	181.62	L15.594	975.81	L-.65321	L.08546
#3	L1.1240	L.04033	190.28	L-1.8911	978.91	L-1.1762	L.00592

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.06978	L-.08158	L.10352	L3.1589	9902.7	L-2.2029	-.03842
#1	L-.07676	L-.08307	L-1.2537	L3.0320	9902.2	L-3.2250	-.03853
#2	L-.06351	L-.08157	L2.0781	L5.2908	9909.7	L-1.0778	-.03835
#3	L-.06908	L-.08009	L-.51388	L1.1541	9896.1	L-2.3060	-.03837

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.00544	L4.8185	L.11672	L.01469	L-1.2219	L-.51030	L1.7265
#1	-.00555	L3.5742	L.12675	L.32899	L-1.9543	L-.59843	L2.0708
#2	-.00537	L4.9360	L.14874	L.23961	L.10912	L-.66348	L4.2392
#3	-.00540	L5.9454	L.07467	L-.52455	L-1.8206	L-.26900	L-1.1305

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.69723	L-12.299	L-12.530	L-5.5811	L.26952	L2.8014	L-35.635
#1	L.67940	L-14.388	L-30.618	L-7.7193	L.31231	L2.4508	L-35.835
#2	L.71111	L-12.307	L-34.537	L-20.621	L.26116	L3.2610	L-35.675
#3	L.70118	L-10.201	L27.565	L11.597	L.23509	L2.6926	L-35.394

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-17.326	L-.07140
#1	L-18.352	L-.04229
#2	L-16.627	L-.09330
#3	L-16.999	L-.07862

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85974	--	--	--	--	--	--
#1	86063	--	--	--	--	--	--
#2	85874	--	--	--	--	--	--
#3	85985	--	--	--	--	--	--

Method: S5Y Sample Name: V IEC Operator:
Run Time: 05/18/90 12:46:46
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
					ug/L	ug/L	ug/L

Getting Next Action Analysis | Operation | Main Menu
S5Y CONC F:1 SN:V IEC 05/18/90 12:46:46

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	L-157.84	L.09093	L-18.060	81.735	L-257.94	L-.44757	L.11118
SDev	1.77	.01432	6.463	15.944	3.49	.30703	.09302
%RSD	-1.1231	15.748	-35.786	19.508	-1.3523	-68.600	83.663
#1	L-156.11	L.07774	L-23.707	89.151	L-253.95	L-.47776	L.16517
#2	L-157.77	L.08888	L-11.011	92.620	L-260.41	L-.73839	L.16459
#3	L-159.65	L.10616	L-19.463	63.433	L-259.46	L-.12656	L.00377

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	L-.01082	L-.02004	L1.3471	L-.98708	L-4.2985	L.16091	-.02747
SDev	.00336	.00027	.5658	2.20988	3.0951	1.1085	.00049
%RSD	-31.023	-1.3506	42.003	-223.88	-72.004	688.88	-1.7693
#1	L-.01463	L-.02022	L1.0649	L-1.8626	L-1.3888	L-.15248	-.02693
#2	L-.00956	L-.02017	L.97788	L-2.6250	L-7.5506	L1.3923	-.02759
#3	L-.00828	L-.01973	L1.9985	L1.5264	L-3.9562	L-.75713	-.02788

Command:

F1= Analyze F2= QC Stndrd
F3= Stndrdize F4= Blank
F5= Profile F6=
F7= F8= ALT Opts
F9= F10=HELP

Press a Function Key, or
Enter Command and press <Return>
<Page> keys active

Getting Next Action Analysis | Operation | Main Menu
S5Y CONC F:1 SN:V IEC 05/18/90 12:46:46

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00527	L10.397	L1.7092	L.40557	L.49507	L.10046	L.87386
SDev	.00048	1.014	.0050	.30271	1.7498	.22653	1.5727
%RSD	9.0211	9.7568	.29011	74.639	353.44	225.48	179.97
#1	.00579	L9.5562	L1.7149	L.38950	L.31315	L.05397	L-.85188
#2	.00515	L11.524	L1.7064	L.11121	L-1.1566	L.34663	L1.2470
#3	.00487	L10.111	L1.7062	L.71599	L2.3287	L-.09921	L2.2264

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	L-.29083	L-13.553	L29.025	L-.04214	L-.16652	L-.33476	9804.8
SDev	.01317	3.588	5.572	28.1206	.02077	.24226	13.8
%RSD	-4.5284	-26.475	19.197	-66732.	-12.476	-72.368	.14064
#1	L-.30583	L-10.738	L35.459	L9.7967	L-.19050	L-.56021	9792.1
#2	L-.28115	L-17.593	L25.808	L21.837	L-.15429	L-.07862	9802.7
#3	L-.28551	L-12.327	L25.807	L-31.760	L-.15475	L-.36545	9819.5

Command:

F1= Analyze F2= QC Stndrd
F3= Stndrdize F4= Blank
F5= Profile F6=
F7= F8= ALT Opts
F9= F10=HELP

Press a Function Key, or
Enter Command and press <Return>
<Page> keys active

Getting Next Action Analysis | Operation | Main Menu
S5Y CONC F:1 SN:V IEC 05/18/90 12:46:46

Elem	Znlow	Znhigh
Avge	L2.3389	L-.01347
SDev	1.3982	.05612
%RSD	59.777	-416.73

#1	L1.0994	L-.05785
#2	L3.8545	L-.03217
#3	L2.0629	L.04962

Command:

F1= Analyze F2= QC Stndrd
F3= Stndrdize F4= Blank
F5= Profile F6=
F7= F8= ALT Opts
F9= F10=HELP

Press a Function Key. or
Enter Command and press <Return>
<Page> keys active

Getting Next Action Analysis | Operation | Main Menu
S5Y CONC F:1 SN:V IEC 05/18/90 12:46:46

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85653	--	--	--	--	--	--
SDev	90.07220	--	--	--	--	--	--
%RSD	.1051594	--	--	--	--	--	--
#1	85757	--	--	--	--	--	--
#2	85600	--	--	--	--	--	--
#3	85602	--	--	--	--	--	--

Command:

F1= Analyze F2= QC Stndrd
F3= Stndrdize F4= Blank
F5= Profile F6=
F7= F8= ALT Opts
F9= F10=HELP

Press a Function Key. or
Enter Command and press <Return>
<Page> keys active

Method: S5Y Sample Name: TI IEC Operator:
Run Time: 05/18/90 12:52:51
Comment:
Mode: CONC Corr. Factor: .02

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.45583	L.05514	L39.497	L-.01326	132.20	L.32055	L.01615
#1	L-.44167	L.05531	L39.450	L.17638	132.33	L.31540	L.01615
#2	L-.47524	L.05495	L39.524	L.26686	132.37	L.32523	L.01614

#3	L-.45059	L.05517	L39.517	L-.48302	131.91	L.32103	L.01616

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.00760	L-.00073	L-.02192	L1.5733	L.29715	L.46125	-.00046
#1	L.00740	L-.00073	L-.01201	L1.5523	L.20826	L.43277	-.00046
#2	L.00767	L-.00073	L-.01392	L1.5890	L.30002	L.49304	-.00047
#3	L.00774	L-.00072	L-.03983	L1.5785	L.38318	L.45795	-.00046

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00019	L2.0873	L.00306	L.00351	L.06122	L.08622	L.00391
#1	.00019	L2.1360	L.00299	L.01332	L.04448	L.08938	L-.06318
#2	.00019	L2.0511	L.00260	L-.01306	L.03893	L.08486	L.05554
#3	.00019	L2.0747	L.00360	L.01028	L.10024	L.08441	L.01936

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.10007	L-.16215	L1.0343	L2.5842	L.03555	983.95	L.22598
#1	L.10003	L-.26750	L1.2555	L2.6526	L.03693	984.21	L.23394
#2	L.09991	L-.20419	L1.1749	L2.6476	L.03422	983.53	L.21453
#3	L.10028	L-.01478	L.67246	L2.4523	L.03550	984.12	L.22947

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-.10205	L.00062
#1	L-.08284	L.00145
#2	L-.12232	L-.00103
#3	L-.10098	L.00144

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85681	--	--	--	--	--	--
#1	85661	--	--	--	--	--	--
#2	85818	--	--	--	--	--	--
#3	85565	--	--	--	--	--	--

Method: S5Y Sample Name: TI IEC Operator:
Run Time: 05/18/90 12:55:06
Comment: 50 ppm
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-23.081	L2.7685	1981.0	L3.3529	6618.9	16.186	L.75296
#1	L-24.284	L2.7662	1987.5	L2.2640	6606.2	16.195	L.64604
#2	L-23.251	L2.7774	1980.8	L8.4736	6652.6	15.925	L.80728
#3	L-21.707	L2.7619	1974.6	L-.67890	6597.7	16.439	L.80555

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.36930	L-.03867	L-.26955	79.006	15.551	21.113	-.02253
#1	L.36576	L-.03858	L-1.5310	80.099	17.745	21.487	-.02252
#2	L.36820	L-.03862	L-.50974	81.200	13.475	21.608	-.02238
#3	L.37394	L-.03881	L1.2321	75.718	15.434	20.243	-.02269

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01010	106.99	L.16448	L.11654	L3.2901	L3.7885	L2.5828
#1	.01011	105.94	L.16701	L-.04600	L4.8425	L3.7882	L3.9452
#2	.01025	106.69	L.21169	L.59074	L3.7921	L3.8282	L2.8493
#3	.00994	108.35	L.11473	L-.19514	L1.2357	L3.7492	L.95403

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	4.9841	L-5.3086	L68.217	125.47	L1.7186	H49142.	11.051
#1	4.9798	L-7.0539	77.832	96.967	L1.7247	H49116.	11.155
#2	4.9851	L-4.9560	L49.073	148.15	L1.8217	H49199.	11.208
#3	4.9874	L-3.9160	77.746	131.28	L1.6093	H49110.	10.790

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-6.5491	L-.05776
#1	L-6.2448	L-.07978
#2	L-6.5563	L.00740
#3	L-6.8462	L-.10091

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86042	--	--	--	--	--	--
#1	86143	--	--	--	--	--	--
#2	85759	--	--	--	--	--	--
#3	86223	--	--	--	--	--	--

RUN 786
5-26-90
R. Dilg

Method: S5Y Standard: blnk

Elem	Ag	Alhigh	Allow	As	B	Ba	Be

Avge	-.00058	.00866	.00096	-.00195	.01985	.00007	-.00006
#1	-.00057	.00870	.00118	-.00155	.01978	.00009	-.00007
#2	-.00061	.00867	.00088	-.00216	.02006	.00007	-.00007
#3	-.00057	.00862	.00082	-.00213	.01972	.00006	-.00005
Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02333	.02021	.00054	-.00022	.00001	.00027	.00260
#1	.02341	.02027	.00059	-.00054	-.00005	.00027	.00262
#2	.02334	.02019	.00035	-.00026	-.00002	.00025	.00260
#3	.02324	.02016	.00069	.00015	.00009	.00030	.00259
Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00260	.00974	.01847	-.00118	.00195	.00586	.00000
#1	.00262	.00973	.01855	-.00119	.00195	.00585	.00041
#2	.00260	.00973	.01838	-.00113	.00195	.00586	-.00029
#3	.00259	.00974	.01848	-.00121	.00195	.00586	-.00011
Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02047	-.00008	.00002	-.00020	.00237	.00861	.00013
#1	.02046	-.00008	.00002	-.00034	.00238	.00864	.00014
#2	.02042	-.00008	.00000	.00046	.00235	.00856	.00005
#3	.02053	-.00009	.00003	-.00073	.00236	.00863	.00020
Elem	Znlow	Znhigh					
Avge	.00969	.01949					
#1	.00975	.01958					
#2	.00971	.01936					
#3	.00960	.01953					

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	88197	--	--	--	--	--	--
#1	88160	--	--	--	--	--	--
#2	88345	--	--	--	--	--	--
#3	88087	--	--	--	--	--	--

Method: S5Y Standard: ten1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	.04295	.00924	.00353	.31287	.00724	.00005	-.00010
#1	.04289	.00929	.00343	.31287	.00725	.00004	-.00012
#2	.04285	.00918	.00360	.31097	.00725	.00005	-.00009
#3	.04312	.00924	.00358	.31478	.00723	.00005	-.00010
Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02432	.00392	.00567	1.2381	.45355	-.00020	.81585
#1	.02428	.00389	.00540	1.2377	.45288	-.00024	.81581

#2	.02425	.00392	.00564	1.2379	.45235	-.00018	.81498
#3	.02444	.00396	.00598	1.2386	.45543	-.00019	.81677

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.81585	.01017	.02351	-.00114	.13632	.00633	1.6522
#1	.81581	.01014	.02344	-.00154	.13647	.00628	1.6486
#2	.81498	.01016	.02348	-.00047	.13612	.00635	1.6559
#3	.81677	.01021	.02362	-.00142	.13637	.00635	1.6521

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	1.0997	-.00002	.02992	.25623	1.2194	.00924	-.02644
#1	1.1008	-.00001	.02995	.25678	1.2186	.00922	-.02629
#2	1.0977	-.00011	.02997	.25506	1.2193	.00922	-.02642
#3	1.1005	.00007	.02982	.25686	1.2203	.00928	-.02661

Elem	Znlow	Znhigh
Avge	.00811	.02038
#1	.00820	.02034
#2	.00808	.02028
#3	.00804	.02052

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84209	--	--	--	--	--	--
#1	84378	--	--	--	--	--	--
#2	84408	--	--	--	--	--	--
#3	83840	--	--	--	--	--	--

Method: S5Y Standard: ten2

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00773	.01019	.00053	-.00117	.38749	.00009	1.4580
#1	-.00768	.01019	.00051	-.00143	.38716	.00008	1.4606
#2	-.00770	.01018	.00047	-.00064	.38674	.00008	1.4543
#3	-.00780	.01020	.00061	-.00144	.38858	.00009	1.4591

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.19911	1.5494	1.2583	-.00178	-.00723	.38116	.00249
#1	.19935	1.5491	1.2590	-.00201	-.00755	.38124	.00248
#2	.19853	1.5496	1.2573	-.00144	-.00707	.38084	.00245
#3	.19945	1.5496	1.2584	-.00190	-.00708	.38139	.00254

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00249	.01450	.02514	.09257	.00207	1.5823	.00071
#1	.00248	.01451	.02518	.09249	.00209	1.5845	.00002
#2	.00245	.01449	.02504	.09314	.00207	1.5780	.00073
#3	.00254	.01449	.02518	.09208	.00204	1.5842	.00137

Elem	Na	Ni	Pb	Sn	Sr	Ti	V

Avge	.01869	.11169	-.00090	.00071	.00262	.00903	.98814
#1	.01874	.11192	-.00102	.00092	.00265	.00903	.98765
#2	.01868	.11120	-.00095	.00049	.00261	.00903	.98741
#3	.01866	.11194	-.00075	.00071	.00260	.00904	.98936

Elem	Znlow	Znhigh
Avge	.91320	.03372
#1	.91444	.03378
#2	.91116	.03371
#3	.91400	.03368

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84755	--	--	--	--	--	--
#1	84629	--	--	--	--	--	--
#2	84895	--	--	--	--	--	--
#3	84742	--	--	--	--	--	--

Method: S5Y Standard: ten3

Elem	Ao	Alhigh	Allow	As	B	Ba	Be
Avge	-.00090	.03779	.22158	.00035	.05421	.66706	.00050
#1	-.00089	.03777	.22137	-.00044	.05433	.66769	.00050
#2	-.00083	.03784	.22205	.00055	.05392	.66667	.00047
#3	-.00097	.03777	.22131	.00095	.05439	.66682	.00052

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02475	.01640	.00043	.00251	.00007	.00026	3.5996
#1	.02468	.01640	.00040	.00220	-.00019	.00025	3.6000
#2	.02490	.01638	.00031	.00278	.00018	.00025	3.6052
#3	.02466	.01641	.00057	.00256	.00023	.00026	3.5936

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	3.5996	.34271	.04964	-.00132	.00205	.00681	.00077
#1	3.6000	.34308	.04955	-.00096	.00204	.00686	.00107
#2	3.6052	.34308	.04994	-.00146	.00207	.00680	.00178
#3	3.5936	.34197	.04943	-.00154	.00204	.00678	-.00052

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02778	.00002	.00008	.00012	.00247	.83196	.00050
#1	.02789	.00006	-.00009	-.00021	.00248	.83242	.00046
#2	.02784	-.00006	.00022	.00021	.00247	.83213	.00060
#3	.02762	.00006	.00012	.00037	.00246	.83132	.00043

Elem	Znlow	Znhigh
Avge	.00890	.01966
#1	.00892	.01968
#2	.00884	.01970

#3	.00892	.01960

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87292	--	--	--	--	--	--
#1	87186	--	--	--	--	--	--
#2	87056	--	--	--	--	--	--
#3	87633	--	--	--	--	--	--

Method: S5Y Standard: cazn

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00077	.00918	-.00842	-.00176	.00660	.00010	.00002
#1	-.00078	.00917	-.00835	-.00076	.00653	.00012	.00002
#2	-.00077	.00913	-.00835	-.00186	.00669	.00007	.00002
#3	-.00077	.00926	-.00856	-.00264	.00659	.00010	.00001

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	7.1934	12.811	.00067	-.00017	-.00018	.00014	.00143
#1	7.1844	12.817	.00053	.00001	-.00001	.00020	.00145
#2	7.1897	12.779	.00079	-.00019	-.00005	.00015	.00144
#3	7.2062	12.837	.00069	-.00032	-.00048	.00007	.00140

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00143	.01187	.02046	-.00127	.00244	.00651	.00555
#1	.00145	.01188	.02049	-.00046	.00242	.00653	.00727
#2	.00144	.01182	.02038	-.00150	.00244	.00648	.00461
#3	.00140	.01190	.02050	-.00186	.00245	.00651	.00478

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01765	-.00003	.00011	-.00013	.00389	.01063	.00030
#1	.01758	.00001	.00012	.00017	.00391	.01064	.00046
#2	.01757	-.00010	.00013	-.00018	.00388	.01060	.00024
#3	.01780	-.00001	.00010	-.00037	.00389	.01065	.00018

Elem	Znlow	Znhigh
Avge	29.268	.58760
#1	29.283	.58714
#2	29.190	.58729
#3	29.330	.58837

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81838	--	--	--	--	--	--
#1	81798	--	--	--	--	--	--
#2	82052	--	--	--	--	--	--

#3	81664	--	--	--	--	--	--

Method: S5Y Standard: fehi

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00406	.00895	-.00254	.00067	.01102	.00019	.01517
#1	-.00407	.00902	-.00259	.00029	.01098	.00019	.01510
#2	-.00402	.00894	-.00238	.00085	.01097	.00020	.01518
#3	-.00408	.00891	-.00267	.00087	.01112	.00017	.01522

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02320	.00907	-.00042	.00011	-.00065	-.00249	.00125
#1	.02340	.00966	-.00045	.00023	-.00040	-.00254	.00120
#2	.02318	.00933	-.00054	.00025	-.00047	-.00240	.00129
#3	.02302	.00821	-.00026	-.00016	-.00107	-.00253	.00125

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00125	12.910	1.2366	-.00118	.00199	.01173	-.00582
#1	.00120	12.911	1.2373	-.00105	.00198	.01175	-.00585
#2	.00129	12.886	1.2363	-.00118	.00201	.01173	-.00532
#3	.00125	12.933	1.2361	-.00132	.00199	.01171	-.00628

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01598	-.00007	.00278	-.00267	.00242	.00877	-.00198
#1	.01596	.00009	.00287	-.00277	.00242	.00881	-.00204
#2	.01589	-.00008	.00272	-.00282	.00241	.00875	-.00188
#3	.01609	-.00021	.00273	-.00241	.00241	.00875	-.00202

Elem	Znlow	Znhigh
Avge	.01532	.01987
#1	.01566	.01997
#2	.01540	.01976
#3	.01491	.01989

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86226	--	--	--	--	--	--
#1	85814	--	--	--	--	--	--
#2	86622	--	--	--	--	--	--
#3	86243	--	--	--	--	--	--

Method: S5Y Standard: alhi

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00061	.28082	2.2072	.01485	.00593	.00005	-.00005
#1	-.00057	.28064	2.2089	.01495	.00589	.00006	-.00002
#2	-.00064	.28046	2.2074	.01483	.00595	.00002	-.00005

#3	-.00063	.28137	2.2052	.01476	.00596	.00007	-.00007

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02233	.00858	.00037	-.00033	.00004	.00017	.00169
#1	.02251	.00876	.00050	-.00005	-.00002	.00016	.00170
#2	.02221	.00854	.00031	-.00049	.00008	.00019	.00169
#3	.02226	.00842	.00029	-.00046	.00007	.00016	.00169

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00169	.01108	.01888	-.00112	.00211	.00705	.00077
#1	.00170	.01127	.01903	-.00122	.00212	.00707	.00028
#2	.00169	.01102	.01888	-.00149	.00209	.00704	.00097
#3	.00169	.01095	.01874	-.00066	.00213	.00704	.00104

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01723	.00001	-.00049	.00000	.00239	.00871	.00003
#1	.01715	-.00010	-.00050	.00044	.00239	.00872	.00002
#2	.01708	.00017	-.00053	.00019	.00238	.00870	.00005
#3	.01745	-.00003	-.00044	-.00063	.00239	.00871	.00002

Elem	Znlow	Znhigh
Avge	.01052	.01982
#1	.01058	.01987
#2	.01065	.01974
#3	.01035	.01984

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86220	--	--	--	--	--	--
#1	86044	--	--	--	--	--	--
#2	86418	--	--	--	--	--	--
#3	86199	--	--	--	--	--	--

Standardization Report Fri 05-18-90 02:33:49 PM page 1

Method: S5Y

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag	328.000	ten1	blnk	22969.9	13.3686	05/18/90 02:14:41
Alhigh	308.200	alhi	blnk	1.20594	-.000326	05/18/90 02:32:05
Allow	396.100	ten3	blnk	45327.7	-43.5138	05/18/90 02:22:36
As	193.600	ten1	blnk	31764.2	61.9425	05/18/90 02:14:41
B	249.600	ten2	blnk	27200.6	-540.014	05/18/90 02:18:11
Ba	493.400	ten3	blnk	14992.7	-1.07658	05/18/90 02:22:36
Be	234.800	ten2	blnk	6858.54	.414675	05/18/90 02:18:11
Cahigh	315.800	cazn	blnk	55.7872	-1.30153	05/18/90 02:26:04
Calow	393.300	ten2	blnk	17.9563	-.299339	05/18/90 02:18:11
Cd	228.800	ten2	blnk	7950.95	-4.32858	05/18/90 02:18:11
Co	228.600	ten1	blnk	8075.69	1.76919	05/18/90 02:14:41
Cr	205.500	ten1	blnk	22048.6	-.167633	05/18/90 02:14:41
Cu	324.700	ten2	blnk	26254.7	-7.14495	05/18/90 02:18:11
Mghigh	279.553	ten3	blnk	15.9909	-.037510	05/18/90 02:22:36
Mglow	279.553	ten1	blnk	15.9009	-.039806	05/18/90 02:14:41
Felow	259.900	ten3	blnk	30032.3	-292.387	05/18/90 02:22:36
Fehigh	271.400	fehi	blnk	328.373	-6.06506	05/18/90 02:29:05
K	766.400	ten2	blnk	1066.70	1.25787	05/18/90 02:18:11
Li	670.700	ten1	blnk	74421.4	-145.135	05/18/90 02:14:41
Mn	257.600	ten2	blnk	6343.59	-37.1612	05/18/90 02:18:11
Mo	202.000	ten1	blnk	6052.55	-.001056	05/18/90 02:14:41
Na	589.000	ten1	blnk	92.6614	-1.89671	05/18/90 02:14:41
Ni	231.600	ten2	blnk	89469.7	7.43956	05/18/90 02:18:11
Pb	220.300	ten1	blnk	334486.	-6.32660	05/18/90 02:14:41
Sn	189.900	ten1	blnk	38996.2	7.83506	05/18/90 02:14:41
Sr	421.500	ten1	blnk	8216.61	-19.4398	05/18/90 02:14:41
Ti	334.900	ten3	blnk	12145.6	-104.568	05/18/90 02:22:36
V	292.400	ten2	blnk	10121.4	-1.30139	05/18/90 02:18:11
Znlow	213.800	ten2	blnk	11068.0	-107.252	05/18/90 02:18:11
Znhigh	481.000	cazn	blnk	704.084	-13.7203	05/18/90 02:26:04

Element:	Ag	Al	Al	As	B
Wavelength:	328.000	308.200	396.100	193.600	249.600
Use IECs:	YES	NO	YES	YES	YES
Number of IECs:	3	0	1	2	1
Affecting Element:	Fehigh	--n/a--	Cahigh	Alhigh	Fehigh
k1 factor:	-.17498	--n/a--	0	5.0801	2.5311
k2 factor:	0	--n/a--	0	0	0
use?:	YES	--n/a--	NO	YES	YES
Affecting Element:	V	--n/a--	--n/a--	Fehigh	--n/a--
k1 factor:	-.01578	--n/a--	--n/a--	.15104	--n/a--
k2 factor:	0	--n/a--	--n/a--	0	--n/a--
use?:	YES	--n/a--	--n/a--	YES	--n/a--
Affecting Element:	Ti	--n/a--	--n/a--	--n/a--	--n/a--
k1 factor:	-.00046	--n/a--	--n/a--	--n/a--	--n/a--
k2 factor:	0	--n/a--	--n/a--	--n/a--	--n/a--
use?:	YES	--n/a--	--n/a--	--n/a--	--n/a--

Element:	Ba	Be	Ca	Ca	Cd
Wavelength:	493.400	234.800	315.800	393.300	228.800
Use IECs:	NO	YES	YES	NO	YES
Number of IECs:	0	1	0	0	3
Affecting Element:	--n/a--	Fehigh	--n/a--	--n/a--	As
k1 factor:	--n/a--	.24183	--n/a--	--n/a--	.00736
k2 factor:	--n/a--	0	--n/a--	--n/a--	0
use?:	--n/a--	YES	--n/a--	--n/a--	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	-.01355
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Ni
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	NO

Element:	Co	Cr	Cu	Mg	2Mg
Wavelength:	228.600	205.500	324.700	279.553	279.553
Use IECs:	NO	YES	YES	YES	YES
Number of IECs:	2	1	1	0	0
Affecting Element:	Ni	Fehigh	Fehigh	--n/a--	--n/a--
k1 factor:	0	-.0296	-.17573	--n/a--	--n/a--
k2 factor:	0	0	0	--n/a--	--n/a--
use?:	NO	YES	YES	--n/a--	--n/a--
Affecting Element:	Ti	--n/a--	--n/a--	--n/a--	--n/a--
k1 factor:	.001573	--n/a--	--n/a--	--n/a--	--n/a--
k2 factor:	0	--n/a--	--n/a--	--n/a--	--n/a--
use?:	YES	--n/a--	--n/a--	--n/a--	--n/a--

Element:	Fe	Fe	K	Li	Mn
Wavelength:	259.900	271.400	766.400	670.700	257.600
Use IECs:	YES	NO	YES	YES	YES
Number of IECs:	0	0	0	0	1
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	.09087
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	YES

Element:	Mo	Na	Ni	Pb	Sn
Wavelength:	202.000	589.000	231.600	220.300	189.900
Use IECs:	YES	YES	YES	YES	YES
Number of IECs:	1	0	0	3	2
Affecting Element:	Fehigh	--n/a--	--n/a--	Alhigh	Alhigh
k1 factor:	-.10149	--n/a--	--n/a--	-1.9122	.04676
k2 factor:	0	--n/a--	--n/a--	0	0
use?:	YES	--n/a--	--n/a--	YES	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	Cu	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	-.0236	-.22861
k2 factor:	--n/a--	--n/a--	--n/a--	0	0
use?:	--n/a--	--n/a--	--n/a--	YES	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	Fehigh	--n/a--
k1 factor:	--n/a--	--n/a--	--n/a--	2.2577	--n/a--
k2 factor:	--n/a--	--n/a--	--n/a--	0	--n/a--
use?:	--n/a--	--n/a--	--n/a--	YES	--n/a--

Element:	Sr	Ti	V	Zn	Zn
Wavelength:	421.500	334.900	292.400	213.800	481.000
Use IECs:	YES	YES	YES	YES	YES
Number of IECs:	0	0	4	3	0
Affecting Element:	--n/a--	--n/a--	Cr	Cu	--n/a--
k1 factor:	--n/a--	--n/a--	-.00356	.001254	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	YES	YES	--n/a--
Affecting Element:	--n/a--	--n/a--	Fehigh	Fehigh	--n/a--
k1 factor:	--n/a--	--n/a--	-.04957	.08458	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	YES	YES	--n/a--
Affecting Element:	--n/a--	--n/a--	Mo	Ni	--n/a--
k1 factor:	--n/a--	--n/a--	0	0	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	NO	NO	--n/a--
Affecting Element:	--n/a--	--n/a--	Ti	--n/a--	--n/a--
k1 factor:	--n/a--	--n/a--	0	--n/a--	--n/a--
k2 factor:	--n/a--	--n/a--	0	--n/a--	--n/a--
use?:	--n/a--	--n/a--	NO	--n/a--	--n/a--

Method: S5Y Sample Name: INSTR BLANK 1 Operator:
Run Time: 05/18/90 14:48:52
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.99350	L-.09691	L-104.87	L25.081	L-382.30	L-.78671	L-.14085
#1	L-.45150	L-.10002	L-106.62	L47.326	L-379.35	L-.90265	L-.08848
#2	L-2.3558	L-.09560	L-110.90	L14.449	L-386.74	L-.72830	L-.24831
#3	L-.17317	L-.09511	L-97.078	L13.467	L-380.81	L-.72919	L-.08576

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.07795	L-.10436	L-2.2848	L-.16991	L-5.9618	L-2.6596	-.04833
#1	L-.07831	L-.10436	L-2.8306	L-.10634	L-11.164	L-2.5574	-.04823
#2	L-.07685	L-.10440	L-4.3873	L-2.1715	L-2.7255	L-2.5520	-.04850
#3	L-.07870	L-.10432	L.36359	L1.7681	L-3.9963	L-2.8694	-.04825

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.01505	L-13.788	L.10352	L.38771	L2.7840	L.01668	L2.7945
#1	-.01495	L-13.655	L.10644	L.61436	L3.3679	L.21492	L1.2034
#2	-.01522	L-12.973	L.10620	L.46491	L3.5455	L-.03506	L3.5248
#3	-.01497	L-14.735	L.09793	L.08385	L1.4387	L-.12982	L3.6552

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.39034	L7.0907	L-14.582	L7.7099	L-.18559	L.82270	L.59987
#1	L-.38308	L.17379	L-57.265	L17.817	L-.18442	L1.1110	L1.1300
#2	L-.40063	L7.4396	L-6.8094	L-.74223	L-.16138	L.67316	L-.13022
#3	L-.38731	L13.659	L20.329	L6.0548	L-.21096	L.68391	L.79989

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-24.101	L.19221
#1	L-23.796	L.24753
#2	L-24.596	L.14975
#3	L-23.910	L.17934

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86202	--	--	--	--	--	--
#1	86197	--	--	--	--	--	--
#2	86094	--	--	--	--	--	--
#3	86316	--	--	--	--	--	--

Method: S5Y Sample Name: AQC 1 Operator:
Run Time: 05/18/90 14:51:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-8.3251	6.1913	Q4773.9	4835.5	Q4448.1	5079.2	4939.7
#1	Q-9.4333	6.1841	Q4771.2	4789.9	Q4447.2	5084.1	4939.9
#2	Q-6.6191	6.1970	Q4767.7	4880.8	Q4447.3	5070.8	4933.6
#3	Q-8.9227	6.1928	Q4782.8	4835.8	Q4449.8	5082.6	4945.6

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	4.8079	4.8244	4879.9	4844.8	4784.7	4969.3	5.0212
#1	4.8009	4.8241	4892.6	4839.3	4781.0	4970.3	5.0172
#2	4.8063	4.8228	4869.7	4840.1	4770.9	4967.0	5.0215
#3	4.8164	4.8262	4877.3	4854.8	4802.2	4970.7	5.0250

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.9233	5144.9	6.7719	.21009	4874.6	4984.0	4820.8
#1	4.9194	5139.6	6.7629	-.17778	4878.5	4980.9	4799.9
#2	4.9236	5148.0	6.7645	.46593	4860.4	4978.2	4839.4
#3	4.9270	5147.0	6.7883	.34212	4884.9	4993.0	4823.1

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.42248	4997.6	4762.8	4822.0	5035.6	5047.7	4842.8
#1	-.43238	4986.0	Q4745.1	4816.4	5034.2	5048.2	4835.1
#2	-.43048	4962.3	4796.6	4788.9	5033.3	5045.8	4843.5
#3	-.40459	5044.6	Q4746.5	4860.7	5039.3	5049.1	4849.6

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	4911.3	4.9089
#1	4904.0	4.8562
#2	4915.1	5.0326
#3	4914.9	4.8379

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86197	--	--	--	--	--	--
#1	86189	--	--	--	--	--	--
#2	86204	--	--	--	--	--	--
#3	86198	--	--	--	--	--	--

Method: S5Y Sample Name: HIGH AQC 1 Operator:
Run Time: 05/18/90 14:54:44

Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-3.9295	98.953	Q98607.	Q18.982	Q-559.00	Q1.1131	Q2.2175
#1	Q-5.3153	98.911	Q98727.	Q8.2616	Q-561.89	Q1.2270	Q2.2890
#2	Q-4.0451	98.753	Q98610.	Q56.271	Q-557.90	Q1.1447	Q2.1492
#3	Q-2.4282	99.196	Q98483.	Q-7.5862	Q-557.23	Q.96745	Q2.2142

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	99.761	Q64.281	Q-1.3748	Q.41818	Q9.7016	Q-3.2989	99.635
#1	99.605	Q64.207	Q-1.1433	Q-2.0631	Q3.0783	Q-3.0752	99.392
#2	99.737	Q64.306	Q-1.5827	Q-.54290	Q14.323	Q-3.0765	99.705
#3	99.940	Q64.330	Q-1.3984	Q3.8605	Q11.704	Q-3.7450	99.808

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	97.343	Q100480.	100.92	102.72	Q19.672	Q15.670	Q9.9543
#1	97.104	Q100540.	100.86	102.21	Q20.230	Q15.454	Q9.8056
#2	97.412	Q100540.	101.07	102.96	Q16.287	Q15.910	Q10.687
#3	97.513	Q100340.	100.82	102.99	Q22.499	Q15.646	Q9.3705

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	106.49	Q12.209	Q3.8623	Q-10.657	Q4.4320	Q9.3473	Q2.3768
#1	106.77	Q11.141	Q-29.151	Q-18.902	Q4.4502	Q9.1249	Q2.7520
#2	106.39	Q12.212	Q21.652	Q-21.747	Q4.3228	Q9.4456	Q1.1204
#3	106.30	Q13.273	Q19.086	Q8.6781	Q4.5230	Q9.4713	Q3.2582

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q95467.	97.308
#1	Q95435.	97.167
#2	Q95474.	97.504
#3	Q95491.	97.254

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84443	--	--	--	--	--	--
#1	84608	--	--	--	--	--	--
#2	84370	--	--	--	--	--	--
#3	84351	--	--	--	--	--	--

Method: S5Y Sample Name: AG AQC 1 Operator:
Run Time: 05/18/90 14:57:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	48.170	.00628	Q-26.692	Q6.7337	Q-10.357	Q-.29464	Q.03026
#1	46.924	-.03353	Q-31.005	Q-1.4528	Q-11.066	Q-.38702	Q.07578
#2	49.097	.00329	Q-26.695	Q5.9147	Q-8.0443	Q-.29427	Q-.02454
#3	48.490	.04906	Q-22.376	Q15.739	Q-11.961	Q-.20263	Q.03953

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	-.06028	Q-.08787	Q-1.1345	Q-.35321	Q1.1408	Q-.82570	-.03685
#1	-.07506	Q-.08646	Q-1.7567	Q.00419	Q-2.7000	Q-1.0902	-.03526
#2	-.06081	Q-.08814	Q-.77415	Q-1.6047	Q-3.7419	Q-2.8526	-.03706
#3	-.04497	Q-.08902	Q-.87254	Q.54089	Q9.8641	Q1.4657	-.03823

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.00387	Q.76905	.16585	.32544	Q3.4317	Q.39958	Q3.2064
#1	-.00233	Q-.93517	.09697	-.09131	Q3.7611	Q.02980	Q-.47838
#2	-.00408	Q2.9215	.17190	-.01613	Q1.5679	Q.33745	Q5.8415
#3	-.00522	Q.32084	.22868	1.0838	Q4.9661	Q.83148	Q4.2559

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.19207	Q-.54694	Q39.211	Q20.180	Q.23157	Q1.6595	Q.04017
#1	-.22181	Q6.4108	Q29.902	Q23.104	Q.02257	Q.45225	Q-.25880
#2	-.18724	Q4.3272	Q24.253	Q35.005	Q.18708	Q1.7625	Q.45424
#3	-.16717	Q-12.379	Q63.478	Q2.4294	Q.48507	Q2.7637	Q-.07492

Elem	Zn low	Zn high
Units	ug/L	Mg/L
Avge	Q-9.7425	.27058
#1	Q-9.2665	.10735
#2	Q-10.496	.27323
#3	Q-9.4652	.43117

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86328	--	--	--	--	--	--
#1	86969	--	--	--	--	--	--
#2	86240	--	--	--	--	--	--
#3	85775	--	--	--	--	--	--

Method: S5Y Standard: blnk

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00061	.00860	-.00137	-.00149	.00592	.00003	-.00002
#1	-.00066	.00857	-.00139	-.00142	.00590	.00001	-.00002
#2	-.00066	.00864	-.00129	-.00146	.00599	.00005	-.00002

#3	-.00050	.00860	-.00142	-.00160	.00587	.00002	-.00002

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02210	.00398	.00040	-.00005	.00003	.00016	.00119
#1	.02208	.00406	.00037	-.00030	-.00007	.00012	.00120
#2	.02208	.00392	.00040	.00005	.00003	.00020	.00119
#3	.02213	.00395	.00045	.00012	.00012	.00016	.00119

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00119	.00940	.01888	-.00100	.00201	.00590	.00055
#1	.00120	.00943	.01883	-.00158	.00200	.00589	.00010
#2	.00119	.00936	.01898	-.00038	.00201	.00592	.00070
#3	.00119	.00941	.01883	-.00105	.00202	.00589	.00086

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01620	-.00005	.00008	-.00033	.00239	.00873	.00025
#1	.01611	-.00007	.00015	-.00039	.00239	.00868	.00027
#2	.01626	-.00007	.00006	-.00056	.00240	.00878	.00030
#3	.01622	-.00001	.00003	-.00002	.00237	.00874	.00019

Elem	Znlow	Znhigh
Avge	.00781	.01993
#1	.00785	.01987
#2	.00781	.02003
#3	.00776	.01989

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86022	--	--	--	--	--	--
#1	86149	--	--	--	--	--	--
#2	85862	--	--	--	--	--	--
#3	86055	--	--	--	--	--	--

Method: S5Y Standard: ten1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	.04282	.00939	.00369	.31249	.00747	.00006	-.00008
#1	.04278	.00936	.00382	.31184	.00743	.00004	-.00010
#2	.04273	.00933	.00359	.31350	.00742	.00008	-.00007
#3	.04295	.00947	.00366	.31213	.00757	.00005	-.00007

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02454	.00396	.00571	1.2370	.45458	-.00021	.81623
#1	.02445	.00396	.00604	1.2346	.45400	-.00025	.81496
#2	.02434	.00396	.00558	1.2370	.45334	-.00017	.81575
#3	.02485	.00395	.00551	1.2394	.45640	-.00022	.81797

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo

Avge	.81623	.01028	.02363	-.00124	.13524	.00641	1.6518
#1	.81496	.01020	.02360	-.00196	.13544	.00640	1.6466
#2	.81575	.01028	.02342	-.00126	.13545	.00635	1.6499
#3	.81797	.01037	.02386	-.00049	.13482	.00648	1.6588

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	1.0940	-.00004	.02982	.25354	1.2170	.00935	-.02631
#1	1.0942	-.00011	.02965	.25261	1.2173	.00934	-.02651
#2	1.0958	-.00007	.02985	.25399	1.2176	.00930	-.02600
#3	1.0919	.00007	.02994	.25402	1.2161	.00940	-.02642

Elem	Znlow	Znhigh
Avge	.00819	.02054
#1	.00822	.02042
#2	.00814	.02040
#3	.00823	.02080

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	83593	--	--	--	--	--	--
#1	83734	--	--	--	--	--	--
#2	84074	--	--	--	--	--	--
#3	82971	--	--	--	--	--	--

Method: S5Y Standard: ten2

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00780	.01016	.00053	-.00095	.38734	.00008	1.4548
#1	-.00776	.01014	.00077	-.00047	.38666	.00007	1.4522
#2	-.00780	.01019	.00048	-.00111	.38809	.00009	1.4576
#3	-.00785	.01015	.00032	-.00128	.38728	.00009	1.4546

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.19893	1.5505	1.2509	-.00183	-.00702	.38188	.00252
#1	.19857	1.5515	1.2476	-.00167	-.00696	.38190	.00258
#2	.19956	1.5494	1.2550	-.00195	-.00690	.38181	.00252
#3	.19866	1.5505	1.2500	-.00188	-.00718	.38193	.00247

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00252	.01446	.02509	.09094	.00207	1.5765	.00089
#1	.00258	.01446	.02508	.09158	.00209	1.5726	.00129
#2	.00252	.01451	.02508	.09084	.00206	1.5816	.00109
#3	.00247	.01441	.02511	.09041	.00205	1.5753	.00028

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01846	.11133	-.00090	.00012	.00264	.00897	.98846
#1	.01841	.11153	-.00095	-.00026	.00265	.00895	.98885
#2	.01848	.11177	-.00092	.00009	.00267	.00898	.98862

#3	.01849	.11068	-.00082	.00052	.00259	.00897	.98791

Elem	Znlow	Znhigh
Avge	.90501	.03368
#1	.90410	.03356
#2	.90773	.03368
#3	.90319	.03380

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84905	--	--	--	--	--	--
#1	85181	--	--	--	--	--	--
#2	84612	--	--	--	--	--	--
#3	84921	--	--	--	--	--	--

Method: S5Y Standard: ten3

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00093	.03771	.22133	.00043	.05465	.66413	.00059
#1	-.00102	.03769	.22173	-.00002	.05425	.66563	.00062
#2	-.00086	.03769	.22117	.00057	.05498	.66380	.00057
#3	-.00091	.03775	.22108	.00075	.05473	.66296	.00057

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02459	.01586	.00052	.00244	-.00016	.00028	3.5995
#1	.02452	.01593	.00043	.00233	-.00011	.00030	3.5890
#2	.02451	.01582	.00060	.00239	-.00037	.00025	3.6042
#3	.02476	.01584	.00054	.00261	.00000	.00030	3.6054

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	3.5995	.34334	.04962	-.00132	.00205	.00689	.00016
#1	3.5890	.34262	.04946	-.00243	.00205	.00685	.00001
#2	3.6042	.34354	.04968	-.00100	.00206	.00694	.00022
#3	3.6054	.34386	.04972	-.00053	.00203	.00688	.00025

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02751	-.00005	.00006	.00048	.00248	.83088	.00058
#1	.02759	-.00005	.00009	.00080	.00246	.83039	.00049
#2	.02755	-.00010	.00003	.00038	.00247	.83130	.00062
#3	.02740	.00001	.00005	.00027	.00249	.83094	.00062

Elem	Znlow	Znhigh
Avge	.00881	.01954
#1	.00879	.01939
#2	.00881	.01955
#3	.00882	.01968

IntStd	1	2	3	4	5	6	7

Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87498	--	--	--	--	--	--
#1	87642	--	--	--	--	--	--
#2	87362	--	--	--	--	--	--
#3	87490	--	--	--	--	--	--

Standardization Report Fri 05-18-90 03:09:52 PM page 1

Method: S5Y

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
B	249.600	ten2	blnk	26217.5	-155.133	05/18/90 03:05:36
Allow	396.100	ten3	blnk	44904.6	61.4206	05/18/90 03:08:12
Cr	205.500	ten1	blnk	21999.7	-.597642	05/18/90 03:03:07
Pb	220.300	ten1	blnk	336292.	-26.7007	05/18/90 03:03:07

Method: S5Y Sample Name: INSTR BLANK 1 Operator:
Run Time: 05/18/90 15:12:19
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-2.4905	L-.09987	L-4.4992	L23.757	L1.0034	L-.32340	L.21325
#1	L-3.8834	L-.11093	L-14.414	L42.297	L1.9347	L-.38290	L.25396
#2	L-2.0643	L-.09817	L.95987	L-5.4098	L.77797	L-.03245	L.07713
#3	L-1.5238	L-.09052	L-.04332	L34.383	L.29741	L-.55485	L.30866

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.08066	L-.10533	L-2.6270	L1.0180	L-2.9766	L-4.1921	-.04533
#1	L-.08063	L-.10537	L-3.9960	L1.5807	L-2.1242	L-3.4992	-.04541
#2	L-.08158	L-.10529	L-.41161	L.26759	L-3.1488	L-3.4742	-.04536
#3	L-.07977	L-.10531	L-3.4734	L1.2058	L-3.6567	L-5.6030	-.04522

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.01213	L-15.057	L.06563	L.18658	L4.1011	L.16184	L4.4023
#1	-.01220	L-15.172	L.00847	L.03635	L4.6515	L.04017	L3.5003
#2	-.01215	L-15.608	L.07903	L.91119	L2.5782	L-.05845	L1.2715
#3	-.01202	L-14.391	L.10939	L-.38779	L5.0737	L.50378	L8.4350

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.40657	L1.5573	L-2.4658	L5.7597	L-.04224	L1.0195	L.88111
#1	L-.41111	L6.4047	L9.9398	L-7.4943	L-.14617	L1.0803	L1.0330
#2	L-.41028	L-2.9453	L-17.390	L15.100	L.01594	L1.1638	L1.0409
#3	L-.39833	L1.2126	L.05330	L9.6737	L.00352	L.81455	L.56948

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-23.564	L.22463
#1	L-22.881	L.17376
#2	L-23.237	L.31988
#3	L-24.575	L.18025

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86272	--	--	--	--	--	--
#1	86452	--	--	--	--	--	--
#2	86154	--	--	--	--	--	--
#3	86209	--	--	--	--	--	--

Method: S5Y Sample Name: AQC 1 Operator:
Run Time: 05/18/90 15:14:54
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-6.1158	6.2112	Q4836.0	4869.2	Q4658.6	5072.6	4938.5
#1	Q-6.0267	6.1625	Q4833.7	4868.6	Q4652.0	5075.2	4936.2
#2	Q-6.5387	6.2212	Q4837.1	4866.9	Q4656.4	5065.5	4937.2
#3	Q-5.7818	6.2500	Q4837.3	4872.0	Q4667.3	5077.3	4942.2

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	4.8200	4.8245	4884.0	4850.1	4775.9	4969.6	5.0241
#1	4.7979	4.8250	4878.8	4844.3	Q4744.5	4970.3	5.0176
#2	4.8260	4.8235	4876.4	4835.5	4800.4	4970.6	5.0239
#3	4.8363	4.8249	4896.7	4870.6	4782.6	4967.9	5.0306

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.9261	5140.0	6.7575	.69698	4865.6	4979.6	4833.0
#1	4.9198	5134.6	6.7159	.52927	4869.2	4977.6	4818.6
#2	4.9260	5142.2	6.7858	-.35391	4847.7	4977.2	4830.9
#3	4.9325	5143.1	6.7710	1.9156	4880.0	4983.8	4849.6

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.42300	5008.1	4797.1	4802.4	5035.1	5047.0	4847.6
#1	-.43344	5014.5	4763.0	4778.3	5034.9	5042.2	4852.1
#2	-.42547	5015.6	4822.6	4792.7	5033.4	5048.1	4843.8
#3	-.41009	4994.3	4805.5	4836.2	5036.9	5050.9	4846.9

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	4917.1	4.9440
#1	4911.0	4.9134
#2	4914.0	4.9874
#3	4926.2	4.9311

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86123	--	--	--	--	--	--
#1	86378	--	--	--	--	--	--
#2	86036	--	--	--	--	--	--
#3	85956	--	--	--	--	--	--

Method: S5Y Sample Name: HIGH AQC 1 Operator:
Run Time: 05/18/90 15:17:37

Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-5.0125	99.221	Q97751.	Q20.649	Q-185.31	Q1.3410	Q2.9477
#1	Q-6.4877	99.358	Q97822.	Q32.134	Q-184.79	Q1.7404	Q3.1400
#2	Q-4.3202	99.265	Q97763.	Q-24.795	Q-183.56	Q1.0551	Q2.7898
#3	Q-4.2296	99.040	Q97668.	Q54.608	Q-187.57	Q1.2274	Q2.9133

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	100.02	Q64.233	Q-1.3326	Q.16489	Q4.8984	Q-2.4325	99.482
#1	99.835	Q63.740	Q.15982	Q.61842	Q6.7730	Q-2.4096	98.885
#2	100.02	Q64.650	Q.52057	Q-.35020	Q9.4318	Q-3.6936	99.837
#3	100.22	Q64.310	Q-4.6781	Q.22645	Q-1.5097	Q-1.1944	99.723

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	97.193	Q100380.	100.89	102.91	Q18.554	Q15.673	Q9.7293
#1	96.607	Q100230.	100.63	102.60	Q19.166	Q15.226	Q4.6684
#2	97.541	Q100370.	101.07	103.33	Q18.874	Q15.888	Q14.416
#3	97.430	Q100540.	100.98	102.82	Q17.621	Q15.904	Q10.104

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	106.11	Q2.5408	Q-10.009	Q-9.1763	Q4.4843	Q8.9815	Q1.1668
#1	106.23	Q-9.3709	Q22.913	Q-15.019	Q4.4895	Q8.1080	Q1.5718
#2	106.21	Q6.9095	Q-59.179	Q-16.209	Q4.5091	Q9.1173	Q.14455
#3	105.90	Q10.084	Q6.2393	Q3.6997	Q4.4545	Q9.7194	Q1.7842

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q95358.	96.990
#1	Q95175.	96.718
#2	Q95442.	97.081
#3	Q95457.	97.170

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84716	--	--	--	--	--	--
#1	85156	--	--	--	--	--	--
#2	84400	--	--	--	--	--	--
#3	84593	--	--	--	--	--	--

Method: S5Y Sample Name: AG AQC 1 Operator:
Run Time: 05/18/90 15:20:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	49.069	-.00156	Q87.136	Q20.055	Q350.80	Q.42165	Q.30620
#1	50.439	.00356	Q88.321	Q4.8216	Q349.60	Q.30520	Q.30934
#2	47.300	.00575	Q84.713	Q47.979	Q352.24	Q.47882	Q.30295
#3	49.469	-.01399	Q88.373	Q7.3648	Q350.55	Q.48094	Q.30630

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	-.06223	Q-.08239	Q-1.5263	Q.64918	Q-5.9194	Q1.7562	-.03434
#1	-.06370	Q-.08045	Q-.24065	Q3.0702	Q-6.6771	Q.73831	-.03237
#2	-.05784	Q-.08230	Q-2.0220	Q-.83888	Q-8.2014	Q3.1686	-.03406
#3	-.06516	Q-.08441	Q-2.3162	Q-.28380	Q-2.8795	Q1.3618	-.03660

Elem	Maglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.00143	Q4.2547	.12157	.22426	Q3.0280	Q.22795	Q.52234
#1	.00049	Q1.7015	.10882	.28705	Q4.0476	Q.10029	Q2.6597
#2	-.00116	Q11.564	.13509	1.1841	Q2.4178	Q.26563	Q-.96410
#3	-.00362	Q-.50150	.12080	-.79835	Q2.6188	Q.31792	Q-.12852

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.19794	Q5.5486	Q38.987	Q21.663	Q.39209	Q1.1161	Q.82337
#1	-.19510	Q7.4396	Q4.0718	Q-7.4149	Q.43865	Q.93414	Q.19605
#2	-.21548	Q2.2829	Q75.807	Q37.534	Q.45010	Q.99495	Q1.0095
#3	-.18325	Q6.9232	Q37.081	Q34.871	Q.28751	Q1.4191	Q1.2646

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q-12.831	.16724
#1	Q-11.121	.15018
#2	Q-12.347	.14194
#3	Q-15.025	.20959

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86729	--	--	--	--	--	--
#1	86802	--	--	--	--	--	--
#2	86752	--	--	--	--	--	--
#3	86634	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S20 Operator:
Run Time: 05/18/90 15:25:07
Comment: SF7171
Mode: CONC Corr. Factor: .0978474

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L

Avge	L.03464	L4.2294	3809.6	L-13.875	L-10.994	28.556	L.27026
#1	L.16989	L4.2378	3806.5	L-15.718	L-11.361	28.499	L.29610
#2	L-.07579	L4.2268	3814.8	L-10.809	L-11.024	28.606	L.27700
#3	L.00981	L4.2237	3807.6	L-15.099	L-10.596	28.563	L.23766

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L7.5914	6.7567	L.22246	L5.9108	11.556	26.396	4.5088
#1	L7.6051	6.7619	L.20673	L5.9215	11.318	26.433	4.5073
#2	L7.5667	6.7639	L-.01695	L5.7618	10.937	26.177	4.5044
#3	L7.6024	6.7445	L.47761	6.0492	12.415	26.579	4.5149

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.3988	6762.7	L6.6339	L.59815	L6.9926	151.38	L.68795
#1	4.3972	6743.5	L6.6256	L.61348	L7.2523	151.17	L.35646
#2	4.3944	6766.5	L6.6352	L.55522	L6.7004	151.35	L.64321
#3	4.4046	6778.2	L6.6409	L.62573	L7.0250	151.63	L1.0642

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.40423	315.40	L19.165	L3.5384	19.310	185.90	11.780
#1	L.40510	312.17	L16.854	L2.4708	19.293	185.80	11.811
#2	L.40414	318.83	L16.182	L4.8966	19.336	185.79	11.536
#3	L.40346	315.21	L24.460	L3.2479	19.301	186.11	11.994

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	251.65	L.31549
#1	251.49	L.31098
#2	251.34	L.31296
#3	252.13	L.32253

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	78797	--	--	--	--	--	--
#1	78748	--	--	--	--	--	--
#2	78737	--	--	--	--	--	--
#3	78905	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S21 Operator:
Run Time: 05/18/90 15:27:59
Comment: SF7171
Mode: CONC Corr. Factor: .0933881

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.33811	L3.7575	3370.9	L-3.9817	L-15.419	52.824	L.32059

#1	L-.28302	L3.7613	3369.8	L-4.2950	L-15.375	52.913	L.27855
#2	L-.38465	L3.7548	3372.0	L-5.0368	L-15.562	52.785	L.34139
#3	L-.34666	L3.7565	3371.0	L-2.6132	L-15.318	52.775	L.34182

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L11.214	8.7387	L1.0022	L2.9545	13.237	24.141	6.5750
#1	L11.220	8.6448	L1.1144	L3.1617	12.796	24.247	6.5807
#2	L11.198	8.8618	L1.1148	L2.9245	13.293	24.162	6.5646
#3	L11.223	8.7095	L.77762	L2.7771	13.622	24.014	6.5797

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	6.4172	9287.2	L9.1185	L.44554	L5.5517	180.60	L.86858
#1	6.4228	9297.3	L9.1333	L.47949	L5.4987	180.96	L.94105
#2	6.4070	9280.9	L9.1043	L.40710	L5.6077	180.34	L.93806
#3	6.4218	9283.4	L9.1179	L.45003	L5.5489	180.50	L.72664

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.10909	L8.9809	L50.509	L1.6047	15.641	132.66	8.0858
#1	L.10823	L9.1003	L48.629	L.99514	15.621	132.82	8.0908
#2	L.10920	L8.0244	L48.067	L.17297	15.648	132.49	8.0766
#3	L.10984	L9.8180	L54.831	L3.6460	15.654	132.67	8.0899

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	2466.3	L2.5278
#1	2469.4	L2.5503
#2	2463.2	L2.5083
#3	2466.4	L2.5247

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	79666	--	--	--	--	--	--
#1	79523	--	--	--	--	--	--
#2	79796	--	--	--	--	--	--
#3	79678	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S22 Operator:
Run Time: 05/18/90 15:31:36
Comment: SF7171
Mode: CONC Corr. Factor: .0954381

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.36227	L3.4311	3059.1	L-2.4686	L-8.6862	37.046	L.19884
#1	L-.27718	L3.4307	3058.2	L-.36712	L-8.8709	36.992	L.21277
#2	L-.40542	L3.4339	3061.1	L-3.3149	L-8.3850	37.060	L.18245

#3	L-.40421	L3.4287	3057.9	L-3.7237	L-8.8026	37.085	L.20131

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.92536	1.0454	L-.07015	L2.0316	L4.1184	L2.6682	.79955
#1	L.92556	1.0456	L-.18505	L2.0924	L4.5232	L2.6522	.79981
#2	L.92488	1.0459	L.10788	L2.0043	L3.8712	L2.5905	.80016
#3	L.92563	1.0447	L-.13328	L1.9980	L3.9609	L2.7618	.79869

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.78196	4306.0	L4.1970	L.37456	L3.5258	212.53	L.72637
#1	.78221	4305.1	L4.1935	L.36124	L3.5016	212.51	L.38273
#2	.78255	4309.0	L4.2125	L.40108	L3.4796	212.51	L.63387
#3	.78112	4304.0	L4.1850	L.36138	L3.5962	212.57	L1.1625

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00393	L4.1800	L3.6196	L3.3182	L7.9436	76.965	7.0974
#1	L-.00337	L4.6084	L3.3196	L3.3370	L7.9564	77.012	7.1322
#2	L-.00338	L3.4460	L-.88293	L2.5593	L7.9439	77.044	7.1576
#3	L-.00506	L4.4856	L8.4221	L4.0583	L7.9304	76.839	7.0024

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L18.094	L.05627
#1	L18.081	L.06199
#2	L18.121	L.05610
#3	L18.079	L.05072

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81201	--	--	--	--	--	--
#1	81042	--	--	--	--	--	--
#2	81145	--	--	--	--	--	--
#3	81417	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S23 Operator:
Run Time: 05/18/90 15:35:02
Comment: SF7171
Mode: CONC Corr. Factor: .0968617

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.25400	L2.3433	2046.2	L-1.0610	L-5.3302	22.469	L.11709
#1	L-.29448	L2.3488	2045.1	L-.33383	L-5.5805	22.458	L.10893
#2	L-.24424	L2.3407	2045.1	L.79324	L-5.5521	22.467	L.12105
#3	L-.22327	L2.3403	2048.5	L-3.6425	L-4.8580	22.483	L.12131

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.90733	1.0200	L-.05612	L1.3337	L4.2618	L2.9969	.67857
#1	L.90638	1.0208	L.02123	L1.2920	L4.7726	L2.9755	.67764
#2	L.90618	1.0203	L-.02592	L1.1830	L3.6037	L3.0640	.67836
#3	L.90943	1.0190	L-.16367	L1.5262	L4.4089	L2.9512	.67970

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.66413	2851.9	L2.7866	L.21477	L3.3064	39.281	L.47155
#1	.66322	2850.9	L2.7763	L.22544	L3.2542	39.255	L.03491
#2	.66393	2853.0	L2.7868	L.19330	L3.3910	39.280	L.42753
#3	.66524	2852.0	L2.7967	L.22556	L3.2740	39.310	L.95220

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00998	L3.4730	L8.1013	L.94274	L6.1993	87.801	5.6562
#1	L.00850	L4.1537	L5.9900	L-.68014	L6.1961	87.885	5.5871
#2	L.01026	L3.2893	L9.5491	L2.2195	L6.1965	87.695	5.7155
#3	L.01117	L2.9761	L8.7648	L1.2888	L6.2053	87.822	5.6660

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L18.973	L.06040
#1	L18.862	L.05647
#2	L18.870	L.05569
#3	L19.186	L.06903

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	80813	--	--	--	--	--	--
#1	80779	--	--	--	--	--	--
#2	80972	--	--	--	--	--	--
#3	80687	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S24 Operator:
Run Time: 05/18/90 15:37:51
Comment: SF7171
Mode: CONC Corr. Factor: .0910084

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.35849	L3.6218	3259.2	L.91981	L-6.7038	34.592	L.16955
#1	L-.34499	L3.6368	3257.2	L4.1203	L-6.6101	34.488	L.16379
#2	L-.36920	L3.6175	3260.5	L-.58892	L-6.8885	34.668	L.19802
#3	L-.36129	L3.6110	3260.0	L-.77198	L-6.6129	34.622	L.14684

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L

Avge	L.84019	.94227	L-.26769	L1.6331	L4.5431	L3.9183	.72858
#1	L.84237	.94151	L-.07472	L1.6810	L4.2079	L4.0140	.73041
#2	L.84049	.94278	L-.28976	L1.5845	L4.6808	L3.8755	.72828
#3	L.83772	.94252	L-.43859	L1.6339	L4.7405	L3.8655	.72704

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.71267	3554.7	L3.4593	L.22774	L4.1842	77.431	L.58769
#1	.71446	3558.0	L3.4765	L.19324	L4.1925	77.696	L.91475
#2	.71238	3553.1	L3.4456	L.21670	L4.2064	77.270	L.40355
#3	.71117	3553.1	L3.4558	L.27327	L4.1539	77.328	L.44477

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.02804	L4.1351	L5.0258	L.56638	L6.7636	90.413	6.3158
#1	L.03015	L4.0802	L5.9876	L1.6432	L6.7612	90.489	6.4325
#2	L.02832	L5.0637	L3.9197	L-2.1447	L6.7640	90.471	6.2833
#3	L.02565	L3.2613	L5.1701	L2.2007	L6.7657	90.278	6.2316

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L28.622	L.06303
#1	L28.721	L.07387
#2	L28.619	L.05293
#3	L28.526	L.06230

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81647	--	--	--	--	--	--
#1	81349	--	--	--	--	--	--
#2	81673	--	--	--	--	--	--
#3	81920	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S25 Operator:
Run Time: 05/18/90 15:40:49
Comment: SF7171
Mode: CONC Corr. Factor: .0929023

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.34543	L4.7516	4372.0	L-1.6271	L-11.150	34.523	L.25586
#1	L-.30041	L4.7433	4368.5	L1.2224	L-10.979	34.476	L.23353
#2	L-.48855	L4.7494	4375.1	L-2.7527	L-11.336	34.530	L.27282
#3	L-.24734	L4.7620	4372.6	L-3.3510	L-11.134	34.563	L.26124

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L1.1072	1.2598	L-.10035	L2.6324	L7.9175	L3.8889	1.1164

#1	L1.1053	1.2588	L-.20681	L2.6402	L7.6383	L3.8034	1.1164
#2	L1.1075	1.2608	L-.34905	L2.6915	8.2315	L3.7631	1.1159
#3	L1.1089	1.2598	L.25482	L2.5655	L7.8828	L4.1003	1.1170

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	1.0906	5578.9	L5.4356	L.36353	L4.1244	161.30	L.19638
#1	1.0906	5580.7	L5.4320	L.39987	L4.0679	161.39	L.00905
#2	1.0902	5581.3	L5.4331	L.33819	L4.2492	161.38	L.19250
#3	1.0912	5574.6	L5.4417	L.35254	L4.0561	161.14	L.38759

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.04668	L5.4667	L5.3126	L1.0727	L8.2250	125.72	9.9122
#1	L.04569	L5.7633	L4.5198	L1.1289	L8.1996	125.72	10.033
#2	L.04712	L5.4852	L6.8840	L2.7260	L8.2452	125.87	9.8243
#3	L.04722	L5.1516	L4.5340	L-.63675	L8.2301	125.56	9.8790

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L12.732	L.03616
#1	L12.863	L.03458
#2	L12.625	L.04338
#3	L12.708	L.03051

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81806	--	--	--	--	--	--
#1	81937	--	--	--	--	--	--
#2	81489	--	--	--	--	--	--
#3	81992	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S26 Operator:
Run Time: 05/18/90 15:43:54
Comment: SF7171
Mode: CONC Corr. Factor: .0895736

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.14332	L3.0856	2751.5	L1.2599	L-8.1644	24.007	L.20772
#1	L-.08855	L3.0809	2752.1	L.23168	L-8.0750	24.070	L.18974
#2	L-.10022	L3.0797	2750.3	L3.3177	L-8.1314	23.982	L.22730
#3	L-.24119	L3.0961	2752.1	L.23036	L-8.2869	23.968	L.20611

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.44409	L.49143	L-.08798	L2.0042	L5.1384	L1.7591	.67069
#1	L.44278	L.49160	L.13927	L2.2123	L4.8580	L1.8929	.67076
#2	L.44380	L.49147	L-.17832	L1.9478	L5.5524	L1.7490	.67064
#3	L.44570	L.49123	L-.22488	L1.8524	L5.0046	L1.6355	.67067

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.65623	3917.6	L3.8211	L.18714	L2.8008	116.01	L.00473
#1	.65630	3922.2	L3.8228	L.15920	L2.7451	116.19	L.09745
#2	.65618	3914.8	L3.8211	L.18943	L2.9035	115.94	L.34811
#3	.65621	3915.8	L3.8195	L.21277	L2.7537	115.89	L-.43139

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00414	L5.2366	L2.8080	L.29696	L4.3586	71.554	8.1865
#1	L.00371	L4.5693	L2.0650	L1.3466	L4.3699	71.643	8.1811
#2	L.00488	L5.3000	L6.8282	L-.69454	L4.3685	71.518	8.2257
#3	L.00381	L5.8406	L-.46919	L.23878	L4.3374	71.502	8.1528

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L7.4506	L.03913
#1	L7.4969	L.03951
#2	L7.5171	L.03920
#3	L7.3380	L.03867

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	82127	--	--	--	--	--	--
#1	82135	--	--	--	--	--	--
#2	82155	--	--	--	--	--	--
#3	82090	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S27 Operator:
Run Time: 05/18/90 15:46:46
Comment: SF7171
Mode: CONC Corr. Factor: .0977708

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.29251	L7.5720	7222.0	L-4.9834	L-17.951	154.95	L.55963
#1	L-.25765	L7.5697	7223.6	L-6.7801	L-17.921	154.92	L.58107
#2	L-.26292	L7.5667	7218.1	L-4.6041	L-17.845	154.97	L.57286
#3	L-.35696	L7.5795	7224.4	L-3.5661	L-18.085	154.95	L.52496

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L3.1599	3.6413	L.06297	L4.9599	11.078	7.3533	1.5584
#1	L3.1581	3.6438	L.10799	L4.9382	10.578	7.2044	1.5575
#2	L3.1664	3.6401	L-.04084	L5.0370	11.635	7.4130	1.5594
#3	L3.1553	3.6398	L.12176	L4.9044	11.022	7.4426	1.5584

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L

Avge	1.5215	9656.2	L9.4653	L1.0378	L7.5231	822.18	L.22942
#1	1.5206	9653.7	L9.4471	L1.0351	L7.6171	821.45	L.82785
#2	1.5225	9658.3	L9.4736	L1.0128	L7.4879	822.38	L.14543
#3	1.5214	9656.6	L9.4751	L1.0656	L7.4642	822.69	L-.28501

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.03369	L9.1792	L8.1018	L.88918	22.013	139.60	15.669
#1	L.03255	L8.3560	L8.2734	L3.6021	22.048	139.60	15.803
#2	L.03517	L10.420	L8.0504	L-1.2709	21.994	139.68	15.685
#3	L.03336	L8.7622	L7.9816	L.33642	21.997	139.51	15.519

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	42.630	L.08637
#1	42.617	L.08583
#2	42.551	L.09079
#3	42.721	L.08250

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81432	--	--	--	--	--	--
#1	81414	--	--	--	--	--	--
#2	81228	--	--	--	--	--	--
#3	81653	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15523 DUP Operator:
Run Time: 05/18/90 15:49:52
Comment: SF7171
Mode: CONC Corr. Factor: .097352

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.20471	L2.1889	1896.0	L.97796	L-5.1985	20.642	L.14145
#1	L-.17861	L2.1911	1898.3	L3.5042	L-5.3175	20.637	L.14147
#2	L-.20892	L2.1865	1893.3	L-.74225	L-5.3274	20.651	L.12662
#3	L-.22659	L2.1891	1896.5	L.17190	L-4.9505	20.638	L.15627

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.83160	.92473	L-.21333	L1.2782	L3.9196	L2.7221	.65348
#1	L.83259	.92498	L-.00462	L1.1406	L3.9483	L2.8908	.65376
#2	L.83077	.92475	L-.35206	L1.4497	L3.9245	L2.7045	.65261
#3	L.83143	.92447	L-.28330	L1.2442	L3.8861	L2.5709	.65407

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.63970	2688.1	L2.6190	L.14154	L3.1382	36.656	L.56596
#1	.63998	2691.7	L2.6209	L.11357	L3.2375	36.732	L.73429

#2	.63886	2684.0	L2.6167	L.21014	L3.1603	36.653	L.61159
#3	.64028	2688.6	L2.6194	L.10092	L3.0168	36.584	L.35199

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00980	L4.0424	L9.8736	L.05422	L5.7788	80.873	L4.8020
#1	L.01051	L4.6656	L8.5538	L.98089	L5.7771	81.152	L4.7772
#2	L.00898	L3.8687	L8.9591	L.70122	L5.7821	80.836	L4.7318
#3	L.00991	L3.5931	L12.108	L-1.5195	L5.7772	80.633	L4.8971

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L17.516	L.05441
#1	L17.296	L.05919
#2	L17.500	L.04837
#3	L17.752	L.05567

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81819	--	--	--	--	--	--
#1	81768	--	--	--	--	--	--
#2	81714	--	--	--	--	--	--
#3	81975	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S23 SPIKE Operator:
Run Time: 05/18/90 15:53:24
Comment: SF7171
Mode: CONC Corr. Factor: .094304

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	8.0636	L2.1725	1906.8	L1.0958	74.612	67.029	4.2741
#1	8.0708	L2.1745	1907.3	L2.9514	74.744	67.054	4.2725
#2	8.1216	L2.1745	1906.4	L.13235	74.276	67.106	4.2794
#3	7.9983	L2.1686	1906.8	L.20379	74.816	66.926	4.2703

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.82345	.92547	L7.5634	42.977	46.317	45.302	.66092
#1	L.82366	.92623	L7.6516	43.129	45.568	45.220	.66106
#2	L.82318	.92520	L7.5835	42.871	46.258	45.436	.66074
#3	L.82351	.92499	L7.4553	42.931	47.127	45.249	.66096

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.64686	2656.8	L2.5703	L.21059	45.264	208.28	L-.10779
#1	.64699	2659.0	L2.5674	L.21740	45.140	208.57	L-.07316
#2	.64669	2651.8	L2.5742	L.22650	45.378	207.84	L-.25780
#3	.64690	2659.6	L2.5694	L.18787	45.273	208.43	L.00759

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.04225	45.146	84.937	L1.4840	98.541	104.29	49.503
#1	L.04199	44.002	86.074	L3.5457	98.515	104.38	49.430
#2	L.04196	46.631	82.663	L.62555	98.558	104.24	49.591
#3	L.04280	44.806	86.075	L.28086	98.550	104.24	49.487

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	94.504	L.06593
#1	94.352	L.06605
#2	94.631	L.06210
#3	94.530	L.06966

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85678	--	--	--	--	--	--
#1	85541	--	--	--	--	--	--
#2	85790	--	--	--	--	--	--
#3	85704	--	--	--	--	--	--

Method: S5Y Sample Name: INSTR BLANK 2 Operator:
Run Time: 05/18/90 15:56:36
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-2.3412	L-.16957	L-4.5351	L25.281	L-5.6062	L-.62854	L-.09623
#1	L-3.0726	L-.17252	L4.1277	L40.780	L-5.4463	L-.40539	L-.19559
#2	L-2.6197	L-.17330	L-16.669	L22.196	L-7.4694	L-.90838	L-.04680
#3	L-1.3314	L-.16287	L-1.0638	L12.868	L-3.9029	L-.57185	L-.04629

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.09903	L-.10458	L-1.8992	L1.6802	L-2.4083	L-4.3024	-.04793
#1	L-.10337	L-.10472	L-3.0272	L1.7712	L-.59811	L-2.4463	-.04795
#2	L-.09917	L-.10466	L-.03168	L.59248	L-.59767	L-5.0832	-.04792
#3	L-.09455	L-.10437	L-2.6389	L2.6770	L-6.0290	L-5.3778	-.04792

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.01466	L-15.177	L-.00670	L.13746	L-1.0714	L-.36860	L3.4350
#1	-.01468	L-14.752	L-.01579	L.44606	L-1.8725	L-.66727	L4.8069
#2	-.01466	L-14.744	L-.00092	L.08503	L-1.5205	L-.15193	L4.0732
#3	-.01465	L-16.036	L-.00338	L-.11870	L.17875	L-.28660	L1.4249

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.40006	L7.4407	L10.588	L18.597	L-.34098	L-.99182	L-.02513

#1	L-.40122	L6.4382	L12.467	53.230	L-.31215	L-1.2589	L.96125
#2	L-.39963	L3.4244	L29.445	L-7.9076	L-.44952	L-.73249	L-.62223
#3	L-.39933	L12.460	L-10.149	L10.468	L-.26128	L-.98411	L-.41441

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-25.600	L-.01195
#1	L-25.740	L.03832
#2	L-25.538	L-.03847
#3	L-25.521	L-.03571

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	89198	--	--	--	--	--	--
#1	89350	--	--	--	--	--	--
#2	89131	--	--	--	--	--	--
#3	89113	--	--	--	--	--	--

Method: S5Y Sample Name: AQC 2 Operator:
Run Time: 05/18/90 15:59:45
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-7.4510	6.1221	Q4811.0	4876.0	Q4626.6	5037.9	4961.8
#1	Q-7.2099	6.1076	Q4823.5	4825.1	Q4616.7	5045.5	4966.4
#2	Q-8.0680	6.1231	Q4809.0	4873.3	Q4631.7	5028.6	4964.6
#3	Q-7.0753	6.1356	Q4800.7	4929.5	Q4631.6	5039.7	4954.4

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	4.8662	4.8071	4940.9	4878.9	4829.8	4943.9	5.0472
#1	4.8497	4.8099	4949.0	4879.1	4821.1	4949.8	5.0420
#2	4.8778	4.8035	4957.1	4894.7	4841.7	4939.8	5.0552
#3	4.8711	4.8080	4916.6	4862.9	4826.7	4942.1	5.0444

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.9486	5165.6	6.6588	.11687	4809.5	5005.2	4851.5
#1	4.9435	5163.6	6.6600	.94544	4818.0	5002.3	4845.9
#2	4.9564	5176.5	6.6421	-.84041	4796.9	5015.9	4863.4
#3	4.9459	5156.6	6.6743	.24559	4813.7	4997.4	4845.2

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.43284	5038.8	4844.9	4822.3	5011.9	5045.5	4860.4
#1	-.44781	5030.7	4852.5	4786.4	5018.7	5046.7	4853.8
#2	-.41753	5067.8	4857.8	4848.3	5007.8	5047.6	4863.3

#3	-.43319	5017.8	4824.2	4832.3	5009.1	5042.3	4864.1

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	4932.5	4.8131
#1	4928.1	4.7285
#2	4943.0	4.8816
#3	4926.4	4.8292

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	88581	--	--	--	--	--	--
#1	88770	--	--	--	--	--	--
#2	88456	--	--	--	--	--	--
#3	88516	--	--	--	--	--	--

Method: S5Y Sample Name: HIGH AQC 2 Operator:
Run Time: 05/18/90 16:02:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-3.3054	99.029	Q97392.	Q14.827	Q-192.11	Q1.0796	Q2.5283
#1	Q-2.8460	98.767	Q97532.	Q19.834	Q-189.56	Q1.3697	Q3.3692
#2	Q-4.6912	99.222	Q97320.	Q52.915	Q-192.75	Q.66897	Q2.5516
#3	Q-2.3789	99.099	Q97324.	Q-28.268	Q-194.01	Q1.2001	Q1.6639

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	101.04	Q63.629	Q-1.7641	Q-.06362	Q7.4519	Q-1.5557	99.124
#1	100.83	Q63.644	Q-1.5241	Q1.3786	Q2.9192	Q-2.1622	99.034
#2	101.04	Q63.412	Q-2.8805	Q-2.3817	Q9.5770	Q-1.5443	98.972
#3	101.26	Q63.831	Q-.88756	Q.81225	Q9.8595	Q-.96075	99.368

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	96.842	Q101090.	101.48	102.94	Q17.996	Q15.548	Q10.080
#1	96.753	Q101150.	101.49	103.19	Q17.927	Q15.720	Q13.403
#2	96.693	Q100980.	101.45	102.82	Q17.760	Q15.807	Q13.537
#3	97.081	Q101150.	101.51	102.81	Q18.299	Q15.118	Q3.3018

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	105.31	Q4.3055	Q13.888	Q-11.350	Q4.3828	Q8.8152	Q1.4350
#1	105.24	Q4.3114	Q56.443	Q-19.940	Q4.5005	Q8.9570	Q1.3805
#2	105.33	Q8.4812	Q-13.191	Q9.5890	Q4.2847	Q8.8407	Q1.2869
#3	105.35	Q.12380	Q-1.5873	Q-23.700	Q4.3631	Q8.6481	Q1.6374

Elem	Znlow	Znhigh

Units	ug/L	Mg/L
Avge	Q95760.	97.378
#1	Q95742.	97.469
#2	Q95684.	97.265
#3	Q95854.	97.401

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85767	--	--	--	--	--	--
#1	85803	--	--	--	--	--	--
#2	85891	--	--	--	--	--	--
#3	85608	--	--	--	--	--	--

Method: S5Y Sample Name: AG AQC 2 Operator:
Run Time: 05/18/90 16:05:57
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	49.579	-.04920	Q90.157	Q10.341	Q347.45	Q-.05464	Q.11170
#1	50.191	-.03807	Q89.998	Q17.364	Q348.24	Q.03092	Q.24365
#2	47.314	-.05668	Q88.475	Q8.7753	Q348.29	Q-.13921	Q.07915
#3	51.233	-.05286	Q91.999	Q4.8824	Q345.81	Q-.05563	Q.01231

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	-.06968	Q-.08249	Q-2.5369	Q-.79941	Q-1.7634	Q-.57079	-.03275
#1	-.06714	Q-.08153	Q-3.4616	Q-1.7180	Q-1.5959	Q-.56975	-.03134
#2	-.06997	Q-.08308	Q-1.7255	Q.48426	Q-4.8462	Q-1.1587	-.03330
#3	-.07194	Q-.08287	Q-2.4236	Q-1.1645	Q1.1518	Q.01606	-.03362

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00012	Q1.7137	.07162	.54711	Q1.4135	Q.06665	Q5.0237
#1	.00150	Q3.8644	.06258	.68811	Q2.0283	Q.17675	Q3.5821
#2	-.00041	Q1.2141	.09784	.77283	Q2.0685	Q-.10471	Q2.4858
#3	-.00073	Q.06251	.05444	.18040	Q.14364	Q.12791	Q9.0033

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.20398	Q8.9650	Q23.336	Q8.5952	Q1.9673	Q.02121	Q.87927
#1	-.21392	Q15.065	Q3.6462	Q10.067	Q2.0371	Q-.21778	Q.30637
#2	-.19029	Q5.4054	Q45.577	Q13.180	Q1.8562	Q-.18931	Q-1.0837
#3	-.20774	Q6.4241	Q20.785	Q2.5389	Q2.0086	Q.47073	Q3.4152

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q-12.032	.10696

#1	Q-10.908	.13848
#2	Q-11.890	.12625
#3	Q-13.297	.05615

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	88024	--	--	--	--	--	--
#1	87993	--	--	--	--	--	--
#2	87969	--	--	--	--	--	--
#3	88110	--	--	--	--	--	--

Method: S5Y Sample Name: DIGEST BLANK "A" Operator:
Run Time: 05/18/90 16:09:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-3.1052	L.05039	L5.9565	L20.414	L4.2772	L-.32293	L-.01168
#1	L-1.0211	L.06642	L8.7940	L24.722	L3.1674	L-.13191	L.15142
#2	L-4.1324	L.03421	L11.899	L15.546	L3.0951	L-.51292	L-.17683
#3	L-4.1622	L.05052	L-2.8238	L20.975	L6.5690	L-.32396	L-.00962

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.11890	L.06044	L-1.6303	L-.40800	L1.9930	L-1.0388	-.00313
#1	L.12560	L.06099	L-2.9524	L-.68644	L3.2947	L-.79300	-.00206
#2	L.11769	L.06042	L-.05454	L-1.4820	L2.7200	L-1.1675	-.00300
#3	L.11342	L.05990	L-1.8841	L.94449	L-.03566	L-1.1559	-.00432

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.02898	L53.675	L.33935	L.42257	L8.1795	L2.1183	L3.1992
#1	.03001	L58.067	L.37380	L.61264	10.547	L2.2954	L2.9352
#2	.02910	L50.857	L.31344	L1.1777	L5.9538	L2.2411	L6.6297
#3	.02782	L52.101	L.33081	L-.52259	L8.0380	L1.8183	L.03252

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.26406	L-.98105	L19.059	L9.5400	L1.1337	L8.4302	L.12214
#1	L-.24791	L5.1846	L23.418	L3.0032	L1.2690	L8.3874	L.89717
#2	L-.26168	L-.40905	L56.918	L-2.8463	L.94831	L8.0662	L-.00776
#3	L-.28260	L-7.7187	L-23.158	L28.463	L1.1837	L8.8370	L-.52299

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-.59993	L.78719
#1	L-.16566	L.91080
#2	L-.47603	L.69740
#3	L-1.1581	L.75337

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	79611	--	--	--	--	--	--
#1	79354	--	--	--	--	--	--
#2	79796	--	--	--	--	--	--
#3	79682	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S25 DUP Operator:
Run Time: 05/18/90 16:13:17
Comment: SF7171
Mode: CONC Corr. Factor: .0936505

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.18091	L5.0545	4649.4	L-1.3775	L-10.725	34.769	L.26951
#1	L-.12587	L5.0617	4643.7	L-2.5988	L-10.545	34.691	L.26339
#2	L-.13173	L5.0527	4655.4	L-2.3664	L-10.662	34.878	L.26332
#3	L-.28512	L5.0491	4649.0	L.83266	L-10.967	34.738	L.28183

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L1.1447	1.3023	L-.09638	L2.5678	L7.9914	L3.8998	1.1484
#1	L1.1440	1.3024	L-.20151	L2.7087	8.2229	L3.8580	1.1480
#2	L1.1474	1.3018	L.10307	L2.4182	L7.7375	L3.9295	1.1503
#3	L1.1428	1.3029	L-.19069	L2.5766	8.0138	L3.9120	1.1467

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	1.1218	5713.4	L5.5680	L.47637	L4.3181	163.42	L.46122
#1	1.1214	5706.5	L5.5685	L.45013	L4.3092	163.32	L.38480
#2	1.1237	5721.3	L5.5842	L.47297	L4.3518	163.65	L.72647
#3	1.1202	5712.5	L5.5514	L.50600	L4.2935	163.30	L.27240

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.04191	L6.4052	L3.8747	L.36869	L9.3972	135.85	10.335
#1	L.04165	L6.0257	L2.5940	L2.1274	L9.3979	135.72	10.409
#2	L.04345	L7.3738	L7.7743	L-1.3600	L9.3868	135.92	10.246
#3	L.04061	L5.8162	L1.2557	L.33869	L9.4068	135.90	10.352

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L13.220	L.03863
#1	L13.098	L.03770
#2	L13.267	L.04408
#3	L13.294	L.03412

IntStd	1	2	3	4	5	6	7

Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	81720	--	--	--	--	--	--
#1	81761	--	--	--	--	--	--
#2	81567	--	--	--	--	--	--
#3	81833	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S25 SPIKE Operator:
Run Time: 05/18/90 16:17:29
Comment: SF7171
Mode: CONC Corr. Factor: .0931272

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	7.9451	L4.1286	3746.7	L-3.6241	68.016	77.835	4.3368
#1	8.0306	L4.1234	3749.7	L-2.7392	68.152	77.918	4.3313
#2	7.8758	L4.1327	3742.1	L-7.0926	68.354	77.841	4.3330
#3	7.9289	L4.1298	3748.4	L-1.0405	67.542	77.747	4.3460

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.94293	1.0543	L7.6990	43.644	47.645	45.336	1.0550
#1	L.94236	1.0549	L7.4470	43.596	48.434	45.392	1.0550
#2	L.94136	1.0541	L7.9412	43.800	46.898	45.323	1.0540
#3	L.94508	1.0538	L7.7088	43.536	47.604	45.292	1.0561

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	1.0308	5144.8	L5.0098	L.39192	44.944	324.45	L.31035
#1	1.0308	5151.4	L5.0066	L.39701	45.063	324.55	L.24335
#2	1.0298	5135.5	L5.0010	L.34827	44.989	324.32	L.44155
#3	1.0318	5147.5	L5.0217	L.43049	44.781	324.48	L.24615

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.01177	46.561	80.882	L1.9222	97.209	131.93	52.112
#1	L.01219	46.761	81.562	L1.5109	97.321	132.00	52.404
#2	L.01244	46.284	77.948	L2.1468	97.209	131.66	51.869
#3	L.01068	46.638	83.135	L2.1088	97.096	132.13	52.064

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	90.677	L.06736
#1	90.685	L.07082
#2	90.460	L.06463
#3	90.885	L.06664

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--

Wavlen	371.000	--	--	--	--	--	--
Avge	85438	--	--	--	--	--	--
#1	85186	--	--	--	--	--	--
#2	85530	--	--	--	--	--	--
#3	85597	--	--	--	--	--	--

Method: S5Y Sample Name: DIGEST BLANK "B" Operator:
Run Time: 05/18/90 16:22:58
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-2.0995	L.01346	L5.2173	L15.705	L.28323	L-.26316	L-.29033
#1	L-2.1103	L.03680	L9.6132	L4.3421	L1.1358	L-.13651	L-.18619
#2	L-1.5181	L.00723	L2.9774	L40.391	L-.43808	L-.13846	L-.17891
#3	L-2.6701	L-.00363	L3.0614	L2.3806	L.15194	L-.51452	L-.50588

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.07131	L.02344	L-3.2134	L-.19403	L.70158	L-3.5839	-.02050
#1	L.07388	L.02351	L-3.4584	L-1.0754	L3.8269	L-3.1324	-.01970
#2	L.06823	L.02335	L-4.6214	L.54878	L3.2664	L-3.1451	-.02071
#3	L.07184	L.02345	L-1.5605	L-.05545	L-4.9885	L-4.4741	-.02108

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01206	L53.457	L.31276	L.91633	L7.3265	L2.1946	L4.0728
#1	.01284	L54.102	L.35070	L2.1407	L6.9894	L2.4235	L4.4368
#2	.01185	L54.886	L.32505	L.33678	L7.6047	L2.1848	L6.3944
#3	.01149	L51.384	L.26252	L.27146	L7.3852	L1.9753	L1.3870

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.25667	L-6.0021	L23.761	L2.7244	L.78711	L5.2468	L.02662
#1	L-.25128	L-9.3903	L37.871	L14.760	L.96212	L5.7055	L.76045
#2	L-.26397	L-3.7570	L14.590	L25.478	L.71408	L4.8684	L.11965
#3	L-.25474	L-4.8590	L18.821	L-32.064	L.68512	L5.1665	L-.80023

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-7.1100	L.58624
#1	L-6.0951	L.58355
#2	L-6.9956	L.57146
#3	L-8.2393	L.60371

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	79891	--	--	--	--	--	--

#1	79742	--	--	--	--	--	--
#2	79908	--	--	--	--	--	--
#3	80023	--	--	--	--	--	--

Method: S5Y Sample Name: LCS EPA 0287 Operator:
Run Time: 05/18/90 16:27:18
Comment: SF7171
Mode: CONC Corr. Factor: .0913743

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	26.831	L.48430	232.92	972.67	L-29.418	L5.4959	22.281
#1	26.775	L.48591	232.73	979.89	L-29.276	L5.4894	22.322
#2	26.769	L.48429	232.37	967.13	L-29.497	L5.4933	22.312
#3	26.950	L.48272	233.66	971.00	L-29.479	L5.5050	22.209

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	S57.503	?.00000	45.659	145.09	102.93	7456.4	?.00000
#1	S57.436	?.00000	45.735	144.46	102.20	7461.0	?.00000
#2	S57.476	?.00000	45.774	144.83	102.10	7460.6	?.00000
#3	S57.597	?.00000	45.467	145.98	104.48	7447.4	?.00000

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	?.00000	H21032.	21.437	L.01026	L9.0305	219.96	40.253
#1	?.00000	H20991.	21.381	L.01176	L9.0046	219.28	40.627
#2	?.00000	H21033.	21.426	L.01995	L8.8279	219.89	39.026
#3	?.00000	H21073.	21.505	L-.00094	L9.2591	220.71	41.107

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.04595	59.825	229.31	L-2.1427	61.309	L21.714	67.734
#1	L.04562	59.293	225.16	L-1.2583	61.335	L21.677	67.586
#2	L.04433	58.872	228.16	L-3.5174	61.294	L21.668	67.647
#3	L.04790	61.308	234.62	L-1.6525	61.298	L21.796	67.969

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	199.38	L.46806
#1	199.93	L.46788
#2	198.99	L.45817
#3	199.21	L.47814

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	70772	--	--	--	--	--	--
#1	70854	--	--	--	--	--	--

#2	70805	--	--	--	--	--	--
#3	70657	--	--	--	--	--	--

Method: S5Y Sample Name: LCS EPA 0287 Operator:
Run Time: 05/18/90 16:30:24
Comment: 1/10 Dilution
Mode: CONC Corr. Factor: .913743

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	26.104	L.40900	98.451	1008.4	L-30.128	L4.7338	22.276
#1	27.179	L.41253	83.261	1021.2	L-29.942	L4.8979	22.480
#2	26.672	L.41695	107.00	990.11	L-31.568	L4.7320	22.252
#3	24.460	L.39752	105.09	1013.8	L-28.875	L4.5716	22.096

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	193.28	?.00000	44.445	155.22	114.49	7151.4	98.041
#1	193.74	?.00000	44.402	156.05	114.91	7143.1	98.188
#2	192.98	?.00000	42.962	154.83	118.50	7158.3	97.984
#3	193.11	?.00000	45.970	154.79	110.08	7152.8	97.951

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	95.822	H22861.	23.416	L.21928	22.952	233.74	42.724
#1	95.967	H22844.	23.478	L.81007	23.620	233.76	41.014
#2	95.766	H22869.	23.380	L-.27395	21.854	233.97	43.137
#3	95.734	H22870.	23.392	L.12173	23.383	233.49	44.023

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.24699	64.766	258.51	L21.571	61.181	L21.875	69.820
#1	L-.24367	58.498	227.44	L.10318	61.166	L22.669	69.924
#2	L-.24941	65.541	288.41	L29.003	61.157	L21.496	70.490
#3	L-.24790	70.259	259.67	L35.607	61.221	L21.461	69.046

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	187.52	L.69691
#1	187.48	L.74380
#2	186.41	L.72018
#3	188.67	L.62674

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86259	--	--	--	--	--	--
#1	86180	--	--	--	--	--	--
#2	86285	--	--	--	--	--	--
#3	86311	--	--	--	--	--	--

Method: S5Y Sample Name: INSTR BLANK 3 Operator:
Run Time: 05/18/90 16:36:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-2.0342	L-.11276	L-2.9829	L23.592	L-8.7838	L-.70545	L-.02764
#1	L-2.5911	L-.14261	L.04198	L13.817	L-13.083	L-.64965	L-.06354
#2	L-1.4155	L-.05928	L-4.7410	60.023	L-6.5052	L-.90401	L.05554
#3	L-2.0961	L-.13639	L-4.2497	L-3.0644	L-6.7629	L-.56270	L-.07492

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.07447	L-.08398	L-2.5607	L1.6129	L-1.9334	L-3.5187	-.03449
#1	L-.07257	L-.08213	L-1.2599	L1.6778	L-6.1094	L-5.0447	-.03296
#2	L-.07373	L-.08323	L-2.5714	L.83784	L-2.1117	L-2.5803	-.03410
#3	L-.07711	L-.08658	L-3.8507	L2.3231	L2.4210	L-2.9313	-.03641

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	-.00157	L-13.582	L.09959	L-.04704	L1.6107	L-.29670	L.93700
#1	-.00008	L-15.982	L.03920	L-.13941	L2.3653	L-.60271	L.96811
#2	-.00119	L-11.682	L.17923	L.33698	L1.3522	L.06257	L2.8039
#3	-.00344	L-13.080	L.08033	L-.33867	L1.1147	L-.34996	L-.96103

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.41161	L.44416	L10.675	L16.936	L-.19742	L.17210	L-.22325
#1	L-.40635	L9.9873	L-19.520	L23.842	L-.34707	L-.39390	L-.39891
#2	L-.39915	L4.3500	L23.043	L19.999	L.04362	L1.1251	L-.60100
#3	L-.42932	L-13.005	L28.500	L6.9687	L-.28882	L-.21489	L.33017

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-25.192	L.17155
#1	L-25.556	L.09001
#2	L-24.709	L.29251
#3	L-25.313	L.13214

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87397	--	--	--	--	--	--
#1	87792	--	--	--	--	--	--
#2	86875	--	--	--	--	--	--
#3	87525	--	--	--	--	--	--

Method: S5Y Sample Name: AQC 3 Operator:
Run Time: 05/18/90 16:40:20
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-6.8679	6.1850	Q4817.5	4832.1	Q4631.1	5038.2	4960.0
#1	Q-6.1583	6.1451	Q4818.3	4854.2	Q4633.7	5038.4	4951.7
#2	Q-6.9507	6.1849	Q4813.9	4814.2	Q4641.8	5038.7	4962.0
#3	Q-7.4948	6.2249	Q4820.2	4828.0	Q4617.8	5037.5	4966.4

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	4.8024	4.8020	4928.4	4871.7	4805.8	4936.2	5.0238
#1	4.7926	4.8022	4915.3	4865.9	4803.6	4933.1	5.0209
#2	4.8014	4.8033	4921.9	4866.5	4809.2	4935.7	5.0211
#3	4.8131	4.8005	4948.1	4882.9	4804.8	4939.7	5.0294

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.9258	5169.8	6.7325	-.21508	4814.0	5005.3	4835.8
#1	4.9230	5177.3	6.7024	-.06032	4816.0	5001.9	4824.0
#2	4.9232	5163.3	6.6902	-.89903	4815.7	5002.2	4847.7
#3	4.9313	5168.8	6.8050	.31410	4810.3	5011.7	4835.8

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.41604	5003.3	4831.2	4754.6	5015.0	5038.2	4842.8
#1	-.39958	5031.4	4802.0	4767.0	5014.8	5035.9	4837.4
#2	-.42329	4991.2	4790.4	Q4731.7	5015.0	5037.4	4846.3
#3	-.42524	4987.2	4901.1	4765.0	5015.3	5041.1	4844.7

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	4919.6	4.9922
#1	4917.0	5.0188
#2	4921.2	4.9575
#3	4920.5	5.0003

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87155	--	--	--	--	--	--

Method: S5Y Sample Name: HIGH AQC 3 Operator:
Run Time: 05/18/90 16:43:10
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-5.2309	98.853	Q97567.	Q-2.3656	Q-189.00	Q1.1090	Q2.9085
#1	Q-4.9303	99.050	Q97492.	Q-34.767	Q-186.57	Q1.1974	Q2.6865
#2	Q-5.6653	98.725	Q97612.	Q44.896	Q-192.00	Q.84531	Q3.1956
#3	Q-5.0969	98.784	Q97598.	Q-17.226	Q-188.42	Q1.2843	Q2.8435

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	99.414	Q63.803	Q-2.0148	Q1.2544	Q8.2939	Q-2.2492	98.716
#1	99.611	Q63.896	Q-2.7025	Q2.8860	Q9.3260	Q-1.0144	98.868
#2	99.138	Q63.780	Q-3.1069	Q.06380	Q8.2848	Q-2.2690	98.561
#3	99.492	Q63.733	Q-.23501	Q.81342	Q7.2708	Q-3.4642	98.718

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	96.441	Q100830.	101.04	101.79	Q17.449	Q15.601	Q12.321
#1	96.591	Q100870.	101.13	102.23	Q19.843	Q15.524	Q10.615
#2	96.289	Q100780.	100.87	100.95	Q16.178	Q15.918	Q18.348
#3	96.443	Q100840.	101.11	102.20	Q16.326	Q15.361	Q8.0013

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	105.65	Q-11.860	Q-20.722	Q-17.645	Q4.3874	Q8.2712	Q.86513
#1	105.68	Q-8.2186	Q-16.588	Q15.402	Q4.5268	Q8.7981	Q3.0361
#2	105.81	Q-19.148	Q-61.792	Q-25.527	Q4.3068	Q7.2479	Q-.98962
#3	105.46	Q-8.2144	Q16.215	Q-42.809	Q4.3287	Q8.7677	Q.54890

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q95223.	96.874
#1	Q95303.	97.196
#2	Q95144.	96.744
#3	Q95222.	96.682

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85751	--	--	--	--	--	--
#1	85709	--	--	--	--	--	--
#2	85811	--	--	--	--	--	--
#3	85732	--	--	--	--	--	--

Method: S5Y Sample Name: AG AQC 3 Operator:
Run Time: 05/18/90 16:46:05

Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	49.801	.00238	Q84.226	Q5.7452	Q350.42	Q-.10315	Q.33677
#1	51.434	-.01121	Q85.001	Q5.4210	Q351.70	Q-.22081	Q.39828
#2	49.469	-.00527	Q85.100	Q13.158	Q347.09	Q.12652	Q.38661
#3	48.500	.02363	Q82.577	Q-1.3431	Q352.47	Q-.21517	Q.22542

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	-.07543	Q-.08285	Q-.99568	Q-.51273	Q-4.5515	Q-.30951	-.03064
#1	-.07875	Q-.08117	Q-2.1891	Q-1.9202	Q.40895	Q.65973	-.02895
#2	-.07300	Q-.08263	Q-1.9629	Q.65629	Q-7.9079	Q-1.7070	-.03052
#3	-.07455	Q-.08475	Q1.1650	Q-.27430	Q-6.1554	Q.11872	-.03244

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00218	Q4.2055	.10488	.36984	Q2.0877	Q.52466	Q3.2228
#1	.00382	Q4.5180	.06779	.41763	Q.99445	Q.48994	Q2.4933
#2	.00229	Q3.0061	.11603	.20624	Q3.3122	Q.49768	Q4.8676
#3	.00042	Q5.0925	.13081	.48564	Q1.9566	Q.58637	Q2.3074

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.18041	Q1.2838	Q-14.727	Q.97620	Q.86229	Q1.1862	Q.81146
#1	-.19574	Q6.4182	Q-17.262	Q13.193	Q.82104	Q1.0859	Q1.9387
#2	-.17587	Q-5.8939	Q-23.158	Q7.8618	Q.90581	Q1.2495	Q.30058
#3	-.16963	Q3.3271	Q-3.7618	Q-18.126	Q.86003	Q1.2233	Q.19513

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q-9.7941	.16761
#1	Q-8.9580	.17701
#2	Q-8.5478	.17866
#3	Q-11.877	.14716

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87284	--	--	--	--	--	--
#1	87597	--	--	--	--	--	--
#2	87232	--	--	--	--	--	--
#3	87024	--	--	--	--	--	--

Run 789
5-24-90
R. Dilg

Method: S5Y Standard: blnk

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00064	.00878	-.00129	-.00107	.00622	.00003	-.00007
#1	-.00061	.00882	-.00129	-.00073	.00615	.00002	-.00007
#2	-.00066	.00876	-.00142	-.00121	.00611	.00002	-.00007
#3	-.00063	.00877	-.00117	-.00127	.00638	.00005	-.00007

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02258	.00529	.00037	-.00022	-.00002	.00014	.00097
#1	.02266	.00533	.00045	-.00025	.00012	.00012	.00093
#2	.02258	.00527	.00038	-.00049	.00007	.00014	.00105
#3	.02250	.00526	.00027	.00007	-.00025	.00016	.00092

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00097	.00954	.01931	-.00046	.00203	.00607	.00082
#1	.00093	.00956	.01930	.00014	.00204	.00608	.00146
#2	.00105	.00947	.01924	-.00131	.00201	.00604	.00079
#3	.00092	.00959	.01940	-.00021	.00204	.00609	.00021

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01666	-.00016	.00019	.00010	.00240	.00890	.00022
#1	.01674	-.00019	.00027	-.00038	.00242	.00895	.00028
#2	.01661	-.00021	.00012	.00009	.00239	.00886	.00014
#3	.01664	-.00009	.00016	.00058	.00240	.00889	.00023

Elem	Znlow	Znhigh
Avge	.00806	.02034
#1	.00817	.02038
#2	.00795	.02024
#3	.00805	.02038

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85533	--	--	--	--	--	--
#1	85164	--	--	--	--	--	--
#2	85755	--	--	--	--	--	--
#3	85679	--	--	--	--	--	--

Method: S5Y Standard: ten1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	.04334	.00951	.00360	.30602	.00779	.00005	-.00008
#1	.04349	.00956	.00351	.30750	.00778	.00007	-.00005
#2	.04335	.00946	.00378	.30502	.00782	.00004	-.00008
#3	.04318	.00949	.00350	.30554	.00778	.00003	-.00011

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02461	.00366	.00698	1.2542	.45347	-.00020	.82172
#1	.02477	.00366	.00687	1.2534	.45609	-.00014	.82195
#2	.02452	.00366	.00703	1.2548	.45215	-.00021	.82154
#3	.02454	.00366	.00703	1.2542	.45216	-.00024	.82167

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.82172	.01029	.02390	-.00106	.13551	.00649	1.6407
#1	.82195	.01037	.02408	-.00088	.13531	.00653	1.6418
#2	.82154	.01025	.02378	-.00062	.13561	.00649	1.6377
#3	.82167	.01025	.02385	-.00166	.13560	.00645	1.6427

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	1.1013	-.00015	.03028	.22121	1.2139	.00939	-.02471
#1	1.0998	-.00022	.03037	.21912	1.2136	.00947	-.02405
#2	1.1020	-.00019	.03041	.22180	1.2141	.00935	-.02480
#3	1.1021	-.00005	.03007	.22272	1.2140	.00937	-.02527

Elem	Znlow	Znhigh
Avge	.00849	.02066
#1	.00855	.02078
#2	.00839	.02064
#3	.00851	.02057

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	83947	--	--	--	--	--	--
#1	83643	--	--	--	--	--	--
#2	84104	--	--	--	--	--	--
#3	84095	--	--	--	--	--	--

Method: S5Y Standard: ten2

Elem	Ao	Alhigh	Allow	As	B	Ba	Be
Avge	-.00751	.01035	.00059	-.00113	.39309	.00009	1.4779
#1	-.00741	.01035	.00060	-.00093	.39384	.00007	1.4785
#2	-.00758	.01036	.00057	-.00107	.39171	.00009	1.4778
#3	-.00753	.01033	.00061	-.00137	.39371	.00009	1.4774

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.20088	1.5541	1.2644	-.00209	-.00723	.37932	.00258
#1	.20073	1.5551	1.2635	-.00180	-.00752	.37942	.00267
#2	.20137	1.5535	1.2634	-.00217	-.00715	.37918	.00264
#3	.20055	1.5537	1.2664	-.00231	-.00701	.37935	.00245

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00258	.01472	.02532	.09221	.00210	1.5950	.00056
#1	.00267	.01473	.02519	.09275	.00210	1.5952	.00061

#2	.00264	.01471	.02540	.09180	.00209	1.5935	.00088
#3	.00245	.01471	.02538	.09208	.00210	1.5964	.00019

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01901	.11328	-.00081	-.00017	.00267	.00912	.98951
#1	.01906	.11254	-.00066	.00005	.00271	.00910	.98953
#2	.01888	.11397	-.00077	-.00042	.00266	.00910	.99049
#3	.01909	.11335	-.00102	-.00012	.00265	.00915	.98851

Elem	Znlow	Znhigh
Avge	.92602	.03408
#1	.92570	.03408
#2	.92628	.03407
#3	.92608	.03410

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84742	--	--	--	--	--	--
#1	84790	--	--	--	--	--	--
#2	84867	--	--	--	--	--	--
#3	84568	--	--	--	--	--	--

Method: S5Y Standard: ten3

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00093	.03770	.22250	.00036	.05763	.66391	.00054
#1	-.00097	.03771	.22263	.00003	.05804	.66398	.00060
#2	-.00088	.03778	.22264	.00087	.05765	.66339	.00055
#3	-.00093	.03763	.22225	.00016	.05721	.66436	.00047

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02494	.01531	.00056	.00249	.00002	.00028	3.6547
#1	.02490	.01535	.00059	.00246	.00005	.00028	3.6514
#2	.02505	.01533	.00061	.00221	-.00002	.00032	3.6585
#3	.02486	.01524	.00049	.00280	.00005	.00024	3.6543

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	3.6547	.34477	.05045	-.00037	.00209	.00706	.00033
#1	3.6514	.34467	.05028	-.00031	.00209	.00709	.00007
#2	3.6585	.34498	.05053	-.00039	.00209	.00710	.00094
#3	3.6543	.34467	.05055	-.00040	.00209	.00700	-.00002

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.02848	-.00012	.00016	.00013	.00251	.83262	.00039
#1	.02857	-.00010	.00014	.00060	.00250	.83232	.00045
#2	.02864	-.00016	.00007	.00033	.00252	.83306	.00044
#3	.02823	-.00010	.00026	-.00055	.00250	.83248	.00030

Elem	Znlow	Znhigh

Avge	.00925	.01990
#1	.00927	.01983
#2	.00926	.02001
#3	.00921	.01987

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87151	--	--	--	--	--	--
#1	87159	--	--	--	--	--	--
#2	87012	--	--	--	--	--	--
#3	87281	--	--	--	--	--	--

Method: S5Y Standard: cazn

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00071	.00941	-.00857	-.00192	.00665	.00008	.00002
#1	-.00083	.00939	-.00828	-.00158	.00664	.00005	.00001
#2	-.00063	.00940	-.00865	-.00222	.00649	.00009	.00002
#3	-.00069	.00944	-.00877	-.00196	.00683	.00009	.00002

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	7.2429	13.053	.00034	-.00002	.00020	.00024	.00160
#1	7.2226	13.010	.00022	-.00005	.00012	.00022	.00168
#2	7.2581	13.061	.00054	-.00015	.00022	.00027	.00159
#3	7.2480	13.087	.00027	.00012	.00026	.00022	.00154

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00160	.01206	.02095	-.00015	.00247	.00669	.00529
#1	.00168	.01206	.02077	-.00056	.00246	.00666	.00450
#2	.00159	.01206	.02100	-.00010	.00249	.00671	.00482
#3	.00154	.01206	.02109	.00022	.00247	.00668	.00656

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01793	.00001	.00002	.00036	.00392	.01085	.00034
#1	.01775	-.00002	.00002	.00049	.00391	.01083	.00029
#2	.01807	.00001	.00000	-.00043	.00393	.01089	.00039
#3	.01796	.00004	.00004	.00102	.00391	.01084	.00033

Elem	Znlow	Znhigh
Avge	29.223	.59684
#1	29.124	.59581
#2	29.242	.59746
#3	29.304	.59725

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--

Avge	81971	--	--	--	--	--	--
#1	82250	--	--	--	--	--	--
#2	81918	--	--	--	--	--	--
#3	81744	--	--	--	--	--	--

Method: S5Y Standard: fehi

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00412	.00916	-.00259	.00071	.01043	.00021	.01439
#1	-.00403	.00905	-.00258	.00072	.01043	.00023	.01446
#2	-.00418	.00921	-.00262	.00173	.01044	.00021	.01421
#3	-.00416	.00921	-.00257	-.00030	.01043	.00020	.01449

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02372	.01175	-.00061	.00024	-.00053	-.00249	.00132
#1	.02386	.01387	-.00056	.00042	-.00057	-.00252	.00139
#2	.02366	.01100	-.00042	.00003	-.00072	-.00248	.00129
#3	.02364	.01038	-.00085	.00026	-.00030	-.00247	.00129

Elem	Molow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00132	13.008	1.2530	-.00077	.00202	.01193	-.00636
#1	.00139	12.991	1.2527	-.00092	.00201	.01188	-.00671
#2	.00129	13.011	1.2536	-.00060	.00202	.01195	-.00629
#3	.00129	13.022	1.2528	-.00079	.00202	.01196	-.00610

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01625	-.00005	.00261	-.00230	.00245	.00890	-.00202
#1	.01618	-.00001	.00241	-.00271	.00245	.00886	-.00199
#2	.01621	-.00009	.00273	-.00218	.00246	.00893	-.00188
#3	.01635	-.00005	.00270	-.00203	.00243	.00893	-.00219

Elem	Znlow	Znhigh
Avge	.01733	.02009
#1	.01868	.02012
#2	.01684	.02008
#3	.01646	.02007

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86324	--	--	--	--	--	--
#1	86500	--	--	--	--	--	--
#2	86218	--	--	--	--	--	--
#3	86254	--	--	--	--	--	--

Method: S5Y Standard: alhi

Elem	Ag	Alhigh	Allow	As	B	Ba	Be

Avge	-.00067	.27705	2.2053	.01429	.00610	.00006	-.00004
#1	-.00071	.27704	2.2072	.01316	.00609	.00007	-.00002
#2	-.00060	.27656	2.2024	.01506	.00612	.00006	-.00006
#3	-.00070	.27755	2.2062	.01466	.00610	.00006	-.00005

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Avge	.02290	.01029	.00012	-.00030	.00010	.00017	.00186
#1	.02290	.01056	.00007	-.00029	.00024	.00021	.00189
#2	.02294	.01023	-.00007	-.00037	-.00013	.00021	.00185
#3	.02287	.01007	.00036	-.00024	.00019	.00009	.00183

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Avge	.00186	.01184	.01939	-.00065	.00214	.00718	-.00014
#1	.00189	.01214	.01939	-.00046	.00215	.00713	.00009
#2	.00185	.01170	.01944	-.00023	.00215	.00723	-.00046
#3	.00183	.01167	.01935	-.00126	.00212	.00717	-.00003

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Avge	.01763	-.00003	-.00041	.00028	.00242	.00886	.00015
#1	.01759	-.00006	-.00055	.00045	.00240	.00884	.00020
#2	.01761	-.00003	-.00029	.00079	.00243	.00889	.00019
#3	.01768	.00000	-.00039	-.00039	.00244	.00885	.00007

Elem	Znlow	Znhigh
Avge	.01164	.02018
#1	.01175	.02015
#2	.01163	.02020
#3	.01153	.02018

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86389	--	--	--	--	--	--
#1	86637	--	--	--	--	--	--
#2	86319	--	--	--	--	--	--
#3	86211	--	--	--	--	--	--

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Method: S5Y

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag	328.000	ten1	blnk	22739.6	14.4437	05/23/90 11:31:30
Alhigh	308.200	alhi	blnk	1.22344	-.000622	05/23/90 11:45:14
Allow	396.100	ten3	blnk	44683.2	57.8116	05/23/90 11:36:42
As	193.600	ten1	blnk	32564.1	34.8756	05/23/90 11:31:30
B	249.600	ten2	blnk	25848.5	-160.670	05/23/90 11:34:06
Ba	493.400	ten3	blnk	15063.0	-.469423	05/23/90 11:36:42
Be	234.800	ten2	blnk	6766.04	.474633	05/23/90 11:34:06
Cahigh	315.800	cazn	blnk	55.3991	-1.25092	05/23/90 11:39:41
Calow	393.300	ten2	blnk	17.7295	-.030233	05/23/90 11:34:06
Cd	228.800	ten2	blnk	7911.15	-2.89933	05/23/90 11:34:06
Co	228.600	ten1	blnk	7972.12	1.77066	05/23/90 11:31:30
Cr	205.500	ten1	blnk	22051.4	.424221	05/23/90 11:31:30
Cu	324.700	ten2	blnk	26372.9	-3.69884	05/23/90 11:34:06
Mghigh	279.553	ten3	blnk	15.7424	-.011083	05/23/90 11:36:42
Mglow	279.553	ten1	blnk	15.7556	-.013626	05/23/90 11:31:30
Felow	259.900	ten3	blnk	29830.2	-284.588	05/23/90 11:36:42
Fehigh	271.400	fehi	blnk	324.227	-6.26221	05/23/90 11:42:16
K	766.400	ten2	blnk	1079.12	.494679	05/23/90 11:34:06
Li	670.700	ten1	blnk	74920.5	-152.122	05/23/90 11:31:30
Mn	257.600	ten2	blnk	6293.46	-38.2126	05/23/90 11:34:06
Mo	202.000	ten1	blnk	6097.93	-4.99838	05/23/90 11:31:30
Na	589.000	ten1	blnk	92.1973	-1.53641	05/23/90 11:31:30
Ni	231.600	ten2	blnk	88146.8	14.4310	05/23/90 11:34:06
Pb	220.300	ten1	blnk	332273.	-61.5712	05/23/90 11:31:30
Sn	189.900	ten1	blnk	45225.6	-4.53939	05/23/90 11:31:30
Sr	421.500	ten1	blnk	8254.37	-19.8482	05/23/90 11:31:30
Ti	334.900	ten3	blnk	12140.1	-108.061	05/23/90 11:36:42
V	292.400	ten2	blnk	10108.3	-2.20755	05/23/90 11:34:06
Znlow	213.800	ten2	blnk	10893.7	-87.7983	05/23/90 11:34:06
Znhigh	481.000	cazn	blnk	693.835	-14.1094	05/23/90 11:39:41

Method: S5Y Sample Name: CU IEC Operator:
Run Time: 05/23/90 11:48:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.72496	L-.07540	L-8.7346	L-8.0668	55.557	L.05610	L.15976
#1	L1.7605	L-.08014	L-8.6481	L-23.397	52.884	L.23070	L.16015
#2	L-2.7299	L-.08050	L-5.5269	L10.661	56.168	L.05562	L.16018
#3	L-1.2055	L-.06556	L-12.029	L-11.464	57.618	L-.11803	L.15895

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.02373	L-.01245	L-.47509	L-.51923	L.08459	10102.	-.02919
#1	L-.02526	L-.01147	L-.78501	L.65904	L-.08825	10104.	-.02911
#2	L-.02666	L-.01305	L-.55541	L-.08187	L-1.6255	10097.	-.02939
#3	L-.01929	L-.01283	L-.08486	L-2.1349	L1.9675	10104.	-.02907

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00358	L13.181	L.00840	L-.23752	L-.45473	L-.18691	L-2.1094
#1	.00366	L16.976	L.00691	L-.39561	L-.64262	L-.18514	L-1.4555
#2	.00339	L11.402	L-.00874	L-.20746	L-.65670	L-.18867	L-5.7069
#3	.00370	L11.167	L.02704	L-.10950	L-.06485	L-.18691	L.83409

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00678	L11.188	L-212.31	L14.959	L-.19331	L.27126	L-1.5778
#1	L-.01941	20.064	L-165.82	L34.874	L-.28152	L.41936	L-2.2076
#2	L-.01527	L-.93152	L-281.63	L-27.660	L-.09152	L-.01389	L-2.9122
#3	L.01433	L14.431	L-189.47	L37.662	L-.20689	L.40831	L.38637

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L37.844	L-.10129
#1	L38.532	L-.12938
#2	L37.002	L-.09843
#3	L37.998	L-.07606

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85953	--	--	--	--	--	--
#1	86059	--	--	--	--	--	--
#2	86067	--	--	--	--	--	--
#3	85732	--	--	--	--	--	--

Method: S5Y Sample Name: AL IEC Operator:
Run Time: 05/23/90 11:53:23
Comment:
Mode: CONC Corr. Factor: .005

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00383	L.91392	1014.1	L5.4029	L.07876	L.00287	L.00077
#1	L.00061	L.91363	1015.9	L5.4638	L.09350	L.00392	L.00077
#2	L.00197	L.91337	1012.4	L5.3513	L.06580	L.00257	L.00077
#3	L.00892	L.91477	1014.1	L5.3936	L.07697	L.00211	L.00077

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.00015	L.00006	L-.00886	L-.00471	L.06362	L.01489	-.00010
#1	L.00015	L.00006	L-.01191	L-.00062	L.03618	L.00814	-.00010
#2	L.00018	L.00006	L.00078	L-.00535	L.08465	L.01911	-.00010
#3	L.00013	L.00006	L-.01543	L-.00815	L.07004	L.01743	-.00010

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00006	L.33037	L.00095	L.00260	L.11684	L.08036	L-.00618
#1	.00006	L.34579	L.00101	L.00222	L.12072	L.08039	L-.02934
#2	.00006	L.32440	L.00105	L.00049	L.12066	L.08037	L.01449
#3	.00006	L.32093	L.00080	L.00509	L.10914	L.08031	L-.00368

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00133	L.05995	L-2.2502	L-.03080	L.00429	L.00921	L-.00144
#1	L.00128	L.07215	L-2.2030	L.02029	L.00473	L.01002	L-.01344
#2	L.00137	L.04597	L-2.2029	L-.13017	L.00472	L.01215	L.01058
#3	L.00134	L.06171	L-2.3448	L.01748	L.00343	L.00546	L-.00146

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L.15367	L.00094
#1	L.15645	L.00126
#2	L.15252	L.00101
#3	L.15204	L.00055

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84246	--	--	--	--	--	--
#1	84158	--	--	--	--	--	--
#2	84164	--	--	--	--	--	--
#3	84417	--	--	--	--	--	--

Method: S5Y Sample Name: FE IEC Operator:
Run Time: 05/23/90 11:56:54

Comment:
Mode: CONC Corr. Factor: .0025

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.20094	L.00030	L-.08029	L.07511	L.25884	L.00521	L.25111
#1	L-.20227	L.00037	L-.07865	L.03991	L.26412	L.00495	L.25268
#2	L-.20008	L.00021	L-.07917	L.13404	L.24982	L.00576	L.24647
#3	L-.20047	L.00031	L-.08306	L.05138	L.26258	L.00493	L.25417

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.00003	L-.00004	L-.01669	L.00481	L-.03060	L-.17499	-.00007
#1	L.00004	L-.00004	L-.01506	L.00350	L-.02391	L-.17467	-.00007
#2	L.00000	L-.00004	L-.02068	L.00511	L-.03066	L-.17315	-.00007
#3	L.00004	L-.00004	L-.01435	L.00581	L-.03723	L-.17715	-.00007

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00002	969.69	L.99761	L-.00118	L.00606	L.09216	L-.09788
#1	.00002	970.68	L.99752	L-.00196	L.01131	L.09271	L-.09519
#2	.00002	969.72	L.99697	L-.00084	L.00124	L.09134	L-.10320
#3	.00002	968.66	L.99835	L-.00073	L.00562	L.09242	L-.09526

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00011	L.03003	L2.0912	L-.23246	L.00034	L-.00171	L-.05580
#1	L-.00010	L.00024	L2.0750	L-.20834	L.00048	L-.00011	L-.05894
#2	L-.00015	L.06398	L2.0688	L-.16489	L.00025	L-.00329	L-.05322
#3	L-.00009	L.02587	L2.1298	L-.32415	L.00030	L-.00174	L-.05525

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L.12386	L-.00062
#1	L.12152	L-.00050
#2	L.12465	L-.00082
#3	L.12539	L-.00054

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86456	--	--	--	--	--	--
#1	86091	--	--	--	--	--	--
#2	86890	--	--	--	--	--	--
#3	86388	--	--	--	--	--	--

Method: S5Y Sample Name: AS IEC Operator:
Run Time: 05/23/90 12:01:09
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.72517	L.14657	263.67	9691.4	913.33	L1.3766	L.11737
#1	L.90312	L.14641	266.61	9721.3	919.10	L1.2390	L.01419
#2	L2.2663	L.15664	265.36	9701.7	915.23	L.97404	L.16951
#3	L-.99394	L.13665	259.03	9651.2	905.67	L1.9167	L.16841

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.00537	L.04718	77.511	L-1.5333	L-.40385	L2.6655	-.01333
#1	L.00953	L.04722	76.152	L.14309	L4.9262	L4.0784	-.01335
#2	L-.00054	L.04715	76.034	L-2.1839	L.42422	L2.8424	-.01351
#3	L.00712	L.04717	80.348	L-2.5591	L-6.5620	L1.0756	-.01314

Elem	Maglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01913	L35.479	L-.14672	L-.44081	L-3.8296	L-.93744	L-2.1605
#1	.01911	L36.832	L-.12827	L-.33761	L-1.7151	L-.80882	L1.3646
#2	.01895	L36.246	L-.15416	L-.56376	L-5.1529	L-1.1045	L-8.2295
#3	.01932	L33.358	L-.15773	L-.42107	L-4.6207	L-.89896	L.38336

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.75645	L9.1233	L-12.714	L-11.571	L-.24279	L-1.9678	L-2.2092
#1	L.75596	L12.431	L-5.0411	L-39.420	L-.18761	L-1.4859	L-2.8954
#2	L.76922	L3.4996	L-9.1268	L4.1284	L-.30575	L-2.4000	L-1.2959
#3	L.74417	L11.439	L-23.975	L.57778	L-.23499	L-2.0174	L-2.4363

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L30.568	L-.44705
#1	L31.558	L-.42428
#2	L29.367	L-.45176
#3	L30.777	L-.46511

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	88416	--	--	--	--	--	--
#1	88167	--	--	--	--	--	--
#2	88700	--	--	--	--	--	--
#3	88380	--	--	--	--	--	--

Method: S5Y Sample Name: CR IEC Operator:
Run Time: 05/23/90 12:03:47
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L

Avge	L.62373	L.24729	286.97	L22.717	1316.5	L.15997	L.03777
#1	L1.9755	L.26025	289.54	L-11.994	1316.5	L.04677	L.16548
#2	L.21800	L.23260	287.54	L31.912	1320.6	L.04457	L.08984
#3	L-.32231	L.24902	283.82	L48.231	1312.3	L.38857	L-.14200

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.01389	L.00086	L-.15036	L3.0744	9904.4	L.71121	-.02441
#1	L-.01059	L.00090	L-.45937	L4.6847	9945.6	L2.3263	-.02456
#2	L-.01713	L.00089	L1.0150	L2.9495	9885.7	L-.09914	-.02435
#3	L-.01394	L.00080	L-1.0067	L1.5890	9881.8	L-.09352	-.02432

Elem	Malow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00827	L31.121	L.13271	L.26963	L-2.4161	L-.48621	L-3.7900
#1	.00812	L32.308	L.16730	L.79052	L-1.4988	L-.54221	L.99206
#2	.00833	L29.603	L.11413	L.37194	L-3.8439	L-.55929	L-2.7789
#3	.00835	L31.453	L.11670	L-.35357	L-1.9055	L-.35713	L-9.5833

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	1.1013	L6.4007	L-57.149	L-.05383	L.15746	L2.2538	L-36.230
#1	1.1053	L10.403	L-46.389	L10.959	L.14111	L2.8794	L-36.386
#2	1.1129	L1.3970	L-46.454	L-16.885	L.05607	L1.5789	L-35.550
#3	1.0855	L7.4017	L-78.605	L5.7649	L.27521	L2.3032	L-36.754

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L1.0931	L-.34550
#1	L1.2994	L-.30296
#2	L.42474	L-.36169
#3	L1.5553	L-.37185

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87747	--	--	--	--	--	--
#1	87543	--	--	--	--	--	--
#2	87917	--	--	--	--	--	--
#3	87780	--	--	--	--	--	--

Method: S5Y Sample Name: V IEC Operator:
Run Time: 05/23/90 12:06:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-151.86	L.32811	L78.820	64.181	108.50	L.47295	L-.01304

#1	L-150.41	L.30149	82.145	51.501	109.71	L.55594	L.01406
#2	L-152.40	L.35234	L76.110	51.174	106.90	L.47297	L.08981
#3	L-152.78	L.33049	L78.205	89.867	108.90	L.38993	L-.14298

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.05311	L.06860	L.49313	L-.28572	L-2.0908	L1.5025	-.01064
#1	L.04823	L.06851	L-1.6876	L.86620	L4.1769	L1.6869	-.01141
#2	L.05227	L.06864	L2.2751	L-1.8567	L-7.6026	L.50110	-.01092
#3	L.05882	L.06867	L.89191	L.13332	L-2.8467	L2.3196	-.00959

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.02177	L32.951	L1.6242	L.45284	L-1.8215	L.02185	L-3.2886
#1	.02101	L32.185	L1.6171	L1.4986	L-3.3724	L-.08420	L-4.9984
#2	.02149	L35.393	L1.6083	L-.59781	L-.42487	L.01599	L1.3138
#3	.02280	L31.273	L1.6473	L.45774	L-1.6673	L.13376	L-6.1812

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.13206	L9.2559	L-28.824	L.65861	L-.12733	L-1.5272	9783.4
#1	L.12884	L6.4305	L-23.874	L-34.299	L-.18203	L-2.0066	9788.8
#2	L.14370	L8.4149	L-23.775	L13.981	L-.13036	L-1.4517	9782.3
#3	L.12363	L12.922	L-38.823	L22.294	L-.06961	L-1.1233	9779.0

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L21.430	L-.41654
#1	L21.705	L-.47550
#2	L21.001	L-.37654
#3	L21.585	L-.39757

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87898	--	--	--	--	--	--
#1	88142	--	--	--	--	--	--
#2	87911	--	--	--	--	--	--
#3	87641	--	--	--	--	--	--

Method: S5Y Sample Name: TI IEC Operator:
Run Time: 05/23/90 12:09:25
Comment: 50 PPM
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-21.045	L5.8028	2028.3	L-2.3406	6687.0	16.883	L.62860
#1	L-21.221	L5.7852	2022.1	L-6.2056	6676.7	16.650	L.78223
#2	L-21.469	L5.7973	2026.6	L-31.964	6694.4	17.050	L.62894

#3	L-20.443	L5.8260	2036.1	L31.147	6690.0	16.949	L.47463

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.44164	L.04674	L.11025	78.453	9.4005	25.275	-.00978
#1	L.43270	L.04669	L.60727	77.155	L7.4416	27.474	-.00998
#2	L.44713	L.04681	L-2.1776	80.495	8.7221	23.367	-.00933
#3	L.44510	L.04671	L1.9011	77.709	12.038	24.986	-.01004

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.02261	104.18	L.09591	L.47028	L-.58818	L3.9954	L.63656
#1	.02241	106.65	L.11275	L.27392	L-.55591	L3.8454	L.06087
#2	.02305	101.83	L.08214	L.66695	L-.05297	L3.8415	L.70347
#3	.02235	104.07	L.09286	L.46997	L-1.1556	L4.2992	L1.1453

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	5.2950	19.956	L31.253	105.83	L1.7432	H49174.	11.435
#1	5.2914	19.941	L38.503	116.77	L1.5413	H49162.	11.808
#2	5.2877	23.477	L36.941	97.571	L1.8005	H49158.	10.933
#3	5.3058	16.449	L18.317	103.16	L1.8877	H49202.	11.564

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L13.923	L-.31854
#1	L13.231	L-.30954
#2	L13.815	L-.35869
#3	L14.723	L-.28739

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87676	--	--	--	--	--	--
#1	87987	--	--	--	--	--	--
#2	87696	--	--	--	--	--	--
#3	87344	--	--	--	--	--	--

Element:	Ag	Al	Al	As	B
Wavelength:	328.000	308.200	396.100	193.600	249.600
Use IECs:	YES	NO	YES	YES	YES
Number of IECs:	3	0	1	2	1
Affecting Element:	Fehigh	--n/a--	Cahigh	Alhigh	Fehigh
k1 factor:	-.20094	--n/a--	0	5.4029	.25884
k2 factor:	0	--n/a--	0	0	0
use?:	YES	--n/a--	NO	YES	YES
Affecting Element:	V	--n/a--	--n/a--	Fehigh	--n/a--
k1 factor:	-.01519	--n/a--	--n/a--	.07511	--n/a--
k2 factor:	0	--n/a--	--n/a--	0	--n/a--
use?:	YES	--n/a--	--n/a--	YES	--n/a--
Affecting Element:	Ti	--n/a--	--n/a--	--n/a--	--n/a--
k1 factor:	-.00042	--n/a--	--n/a--	--n/a--	--n/a--
k2 factor:	0	--n/a--	--n/a--	--n/a--	--n/a--
use?:	YES	--n/a--	--n/a--	--n/a--	--n/a--

Element:	Ba	Be	Ca	Ca	Cd
Wavelength:	493.400	234.800	315.800	393.300	228.800
Use IECs:	NO	YES	YES	NO	YES
Number of IECs:	0	1	0	0	3
Affecting Element:	--n/a--	Fehigh	--n/a--	--n/a--	As
k1 factor:	--n/a--	.25111	--n/a--	--n/a--	.007751
k2 factor:	--n/a--	0	--n/a--	--n/a--	0
use?:	--n/a--	YES	--n/a--	--n/a--	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	-.01669
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Ni
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	NO

Element:	Co	Cr	Cu	Mg	2Mg
Wavelength:	228.600	205.500	324.700	279.553	279.553
Use IECs:	NO	YES	YES	YES	YES
Number of IECs:	2	1	1	0	0
Affecting Element:	Ni	Fehigh	Fehigh	--n/a--	--n/a--
k1 factor:	0	-.0306	-.17499	--n/a--	--n/a--
k2 factor:	0	0	0	--n/a--	--n/a--
use?:	NO	YES	YES	--n/a--	--n/a--
Affecting Element:	Ti	--n/a--	--n/a--	--n/a--	--n/a--
k1 factor:	.001569	--n/a--	--n/a--	--n/a--	--n/a--
k2 factor:	0	--n/a--	--n/a--	--n/a--	--n/a--
use?:	YES	--n/a--	--n/a--	--n/a--	--n/a--

Element:	Fe	Fe	K	Li	Mn
Wavelength:	259.900	271.400	766.400	670.700	257.600
Use IECs:	YES	NO	YES	YES	YES
Number of IECs:	0	0	0	0	1
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	.09216
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	YES

Element:	Mo	Na	Ni	Pb	Sn
Wavelength:	202.000	589.000	231.600	220.300	189.900
Use IECs:	YES	YES	YES	YES	YES
Number of IECs:	1	0	0	3	2
Affecting Element:	Fehigh	--n/a--	--n/a--	Alhigh	Alhigh
k1 factor:	-.09788	--n/a--	--n/a--	-2.2502	-.0308
k2 factor:	0	--n/a--	--n/a--	0	0
use?:	YES	--n/a--	--n/a--	YES	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	Cu	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	-.02123	-.23246
k2 factor:	--n/a--	--n/a--	--n/a--	0	0
use?:	--n/a--	--n/a--	--n/a--	YES	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	Fehigh	--n/a--
k1 factor:	--n/a--	--n/a--	--n/a--	2.0912	--n/a--
k2 factor:	--n/a--	--n/a--	--n/a--	0	--n/a--
use?:	--n/a--	--n/a--	--n/a--	YES	--n/a--

Element:	Sr	Ti	V	Zn	Zn
Wavelength:	421.500	334.900	292.400	213.800	481.000
Use IECs:	YES	YES	YES	YES	YES
Number of IECs:	0	0	4	3	0
Affecting Element:	--n/a--	--n/a--	Cr	Cu	--n/a--
k1 factor:	--n/a--	--n/a--	-.00362	.003784	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	YES	YES	--n/a--
Affecting Element:	--n/a--	--n/a--	Fehigh	Fehigh	--n/a--
k1 factor:	--n/a--	--n/a--	-.0558	.12386	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	YES	YES	--n/a--
Affecting Element:	--n/a--	--n/a--	Mo	Ni	--n/a--
k1 factor:	--n/a--	--n/a--	0	0	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	NO	NO	--n/a--
Affecting Element:	--n/a--	--n/a--	Ti	--n/a--	--n/a--
k1 factor:	--n/a--	--n/a--	0	--n/a--	--n/a--
k2 factor:	--n/a--	--n/a--	0	--n/a--	--n/a--
use?:	--n/a--	--n/a--	NO	--n/a--	--n/a--

Method: S5Y Sample Name: INSTR BLANK 1 Operator:
Run Time: 05/23/90 12:23:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.83205	L-.10830	L-5.8977	L6.6892	L2.8982	L-.00852	L.03971
#1	L.09820	L-.13269	L-6.7966	L-9.9886	L3.6907	L.22200	L.03875
#2	L-1.5124	L-.09028	L-1.7031	L-4.2618	L5.5649	L.04944	L.03759
#3	L-1.0819	L-.10193	L-9.1935	L34.318	L-.56107	L-.29700	L.04280

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.02580	L-.00205	L-.59450	L.03544	L-3.0345	L-.39211	-.02701
#1	L-.02014	L-.00207	L1.4430	L-1.1552	L-7.1710	L1.7278	-.02700
#2	L-.02834	L-.00205	L-2.2324	L1.2230	L1.4335	L-.99376	-.02672
#3	L-.02891	L-.00201	L-.99410	L.03844	L-3.3661	L-1.9104	-.02731

Elem	Maglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00572	L-4.7522	L-.12204	L.19388	L-2.0487	L-.95911	L-1.1871
#1	.00573	L-2.5189	L-.11937	L.39561	L-2.5252	L-.93563	L.44813
#2	.00601	L-7.1522	L-.11584	L.35838	L-2.4393	L-.91456	L-2.2090
#3	.00542	L-4.5854	L-.13092	L-.17237	L-1.1816	L-1.0271	L-1.8003

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.03076	L14.430	L-10.760	L13.590	L-.37917	L-1.0436	L.32570
#1	L-.02980	L14.431	L-8.2014	L37.986	L-.33525	L-1.0681	L2.0517
#2	L-.03105	L13.419	L-11.956	L2.1816	L-.32404	L-1.0067	L-.35179
#3	L-.03143	15.440	L-12.121	L.60401	L-.47821	L-1.0560	L-.72283

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-2.4118	L-.32519
#1	L-1.7827	L-.32701
#2	L-2.4739	L-.31113
#3	L-2.9787	L-.33742

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87198	--	--	--	--	--	--
#1	87142	--	--	--	--	--	--
#2	87092	--	--	--	--	--	--
#3	87359	--	--	--	--	--	--

Method: S5Y Sample Name: AQC 1 Operator:
Run Time: 05/23/90 12:26:29
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-3.3261	6.1891	Q4802.7	4846.0	Q4681.4	5077.8	4958.5
#1	Q-3.0016	6.1912	Q4802.0	4871.5	Q4685.8	5085.3	4956.7
#2	Q-3.7066	6.2131	Q4801.6	4820.9	Q4677.9	5076.4	4957.5
#3	Q-3.2702	6.1630	Q4804.6	4845.5	Q4680.4	5071.8	4961.2

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	4.8763	4.8651	4931.2	4890.5	4810.1	4941.1	5.0357
#1	4.8780	4.8673	4938.3	4888.4	4801.8	4936.9	5.0316
#2	4.8663	4.8661	4938.2	4886.5	4805.6	4939.6	5.0362
#3	4.8846	4.8618	4917.0	4896.7	4822.9	4946.9	5.0393

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.9699	5158.1	6.4674	-.10988	4866.5	5012.9	4843.1
#1	4.9658	5156.0	6.4738	-.64896	4879.4	5012.8	4851.7
#2	4.9704	5150.6	6.4668	.49468	4860.4	5006.9	4828.4
#3	4.9734	5167.6	6.4616	-.17535	4859.8	5019.1	4849.1

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.04772	5045.1	4845.0	4809.0	5018.4	5032.1	4839.1
#1	-.05165	5093.5	4885.5	4750.5	5022.6	5033.4	4835.8
#2	-.04560	4984.7	4784.2	4811.5	5017.1	5030.2	4840.2
#3	-.04590	5057.3	4865.3	4865.0	5015.3	5032.7	4841.3

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	4922.2	4.5041
#1	4913.4	4.4493
#2	4923.7	4.5998
#3	4929.4	4.4630

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86828	--	--	--	--	--	--
#1	86810	--	--	--	--	--	--
#2	86705	--	--	--	--	--	--
#3	86970	--	--	--	--	--	--

Method: S5Y Sample Name: HIGH AQC 1 Operator:
Run Time: 05/23/90 12:29:20

Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q.20722	98.616	Q97285.	Q-28.140	Q44.873	Q1.1193	Q-.12972
#1	Q-1.8844	98.684	Q97337.	Q-26.739	Q43.482	Q1.4715	Q.33316
#2	Q1.1262	98.321	Q97277.	Q-47.640	Q45.557	Q1.1187	Q-.36504
#3	Q1.3798	98.845	Q97241.	Q-10.039	Q45.580	Q.76771	Q-.35728

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	99.995	Q72.328	Q-.32394	Q.38984	Q7.9821	Q.08362	100.03
#1	99.880	Q72.603	Q1.2060	Q-.66803	Q7.1096	Q-.35795	99.815
#2	100.05	Q72.339	Q-1.2223	Q1.1057	Q4.5348	Q.92288	100.11
#3	100.05	Q72.042	Q-.95546	Q.73185	Q12.302	Q-.31405	100.17

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	98.638	Q100870.	100.52	102.81	Q13.547	Q14.976	Q5.4347
#1	98.420	Q100620.	100.30	102.33	Q14.621	Q14.763	Q1.2475
#2	98.717	Q101020.	100.57	102.59	Q12.884	Q15.188	Q11.917
#3	98.778	Q100960.	100.68	103.52	Q13.137	Q14.978	Q3.1394

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	105.91	Q6.1610	Q-1.1623	Q-37.346	Q4.0157	Q6.7653	Q2.1277
#1	105.85	Q10.301	Q9.1151	Q-27.982	Q4.1307	Q6.8409	Q.45479
#2	105.94	Q11.333	Q-50.611	Q-10.982	Q3.9399	Q7.1374	Q2.4731
#3	105.93	Q-3.1508	Q38.009	Q-73.073	Q3.9764	Q6.3174	Q3.4552

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q95447.	97.103
#1	Q95304.	96.943
#2	Q95610.	96.996
#3	Q95427.	97.370

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85320	--	--	--	--	--	--
#1	85370	--	--	--	--	--	--
#2	85361	--	--	--	--	--	--
#3	85230	--	--	--	--	--	--

Method: S5Y Sample Name: AG AQC 1 Operator:
Run Time: 05/23/90 12:32:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	50.544	.00242	Q78.125	Q-44.621	Q365.40	Q.39385	Q.44531
#1	50.425	-.00358	Q77.289	Q-56.614	Q367.13	Q.56728	Q.65487
#2	50.187	.01132	Q80.392	Q-40.728	Q367.78	Q.39557	Q.33576
#3	51.020	-.00049	Q76.694	Q-36.522	Q361.30	Q.21871	Q.34530

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Maghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	-.02975	Q-.00600	Q-.92328	Q-1.0009	Q-.66884	Q2.3309	-.01694
#1	-.03018	Q-.00379	Q-1.0102	Q-2.4346	Q1.4330	Q2.3341	-.01515
#2	-.02549	Q-.00603	Q-.85840	Q-1.1586	Q.16895	Q2.9533	-.01666
#3	-.03358	Q-.00818	Q-.90121	Q.59036	Q-3.6084	Q1.7053	-.01901

Elem	Maglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01560	Q11.890	-.08863	-.14256	Q-1.5942	Q-.27043	Q-3.0844
#1	.01735	Q13.105	-.09959	1.0765	Q-2.5870	Q-.08655	Q-4.6584
#2	.01587	Q14.159	-.06588	-.21176	Q1.0404	Q.10219	Q-7.5261
#3	.01357	Q8.4058	-.10042	-1.2924	Q-3.2360	Q-.82692	Q2.9313

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	.18356	Q8.1951	Q-29.611	Q-6.6153	Q.01489	Q-1.1290	Q-.86306
#1	.18745	Q6.3420	Q-19.396	Q-2.4876	Q.03543	Q-.83382	Q.34298
#2	.18959	Q5.8258	Q-42.265	Q-.39903	Q.06010	Q-.42196	Q-1.5141
#3	.17365	Q12.418	Q-27.172	Q-16.959	Q-.05086	Q-2.1311	Q-1.4181

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q8.2410	-.33370
#1	Q9.4234	-.32474
#2	Q8.2863	-.30764
#3	Q7.0133	-.36872

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87269	--	--	--	--	--	--
#1	87178	--	--	--	--	--	--
#2	87070	--	--	--	--	--	--
#3	87558	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S20 Operator:
Run Time: 05/23/90 12:36:19
Comment: SF7171
Mode: CONC Corr. Factor: .093301

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L

Avge	L-.10035	L5.1511	4739.5	L-14.171	L1.8184	34.247	L.12170
#1	L-.36501	L5.1573	4741.4	L-13.514	L1.8384	34.294	L.10849
#2	L.03527	L5.1464	4743.2	L-13.290	L1.5817	34.182	L.11867
#3	L.02871	L5.1498	4733.8	L-15.710	L2.0351	34.265	L.13795

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L3.0314	3.5593	L.25984	L3.1081	14.750	28.790	2.0791
#1	L3.0239	3.5634	L.30559	L3.3832	15.114	28.913	2.0767
#2	L3.0337	3.5589	L.18672	L3.0372	15.133	28.727	2.0805
#3	L3.0365	3.5557	L.28723	L2.9039	14.003	28.729	2.0802

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	2.0429	8044.0	L7.8237	L.63916	L6.6572	162.52	L.30910
#1	2.0405	8036.8	L7.8218	L.64221	L6.8520	162.42	L.34243
#2	2.0442	8047.2	L7.8266	L.63579	L6.6282	162.69	L.31408
#3	2.0439	8048.1	L7.8225	L.63949	L6.4914	162.44	L.27078

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.18269	L11.002	L8.9712	L1.0059	11.455	239.82	14.904
#1	L.18190	L10.502	L5.0194	L2.0340	11.466	239.83	14.781
#2	L.18356	L11.259	L9.6429	L.38269	11.446	239.79	14.974
#3	L.18260	L11.246	L12.251	L.60118	11.455	239.83	14.956

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	299.08	L.30828
#1	299.45	L.30991
#2	299.02	L.32096
#3	298.77	L.29397

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	79345	--	--	--	--	--	--
#1	79052	--	--	--	--	--	--
#2	79230	--	--	--	--	--	--
#3	79754	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S20 Operator:
Run Time: 05/23/90 12:38:21
Comment: SF7171
Mode: CONC Corr. Factor: .093301

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.01401	L5.1329	4734.1	L-13.880	L1.7183	34.189	L.06924

#1	L.04807	L5.1307	4732.3	L-17.924	L1.6177	34.279	L.05272
#2	L-.02385	L5.1375	4735.7	L-13.972	L1.8334	34.092	L.08542
#3	L.01781	L5.1304	4734.4	L-9.7437	L1.7039	34.196	L.06958

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L3.0531	3.5535	L.17837	L3.1776	15.003	28.834	2.0885
#1	L3.0552	3.5559	L.58456	L3.4288	15.693	28.862	2.0884
#2	L3.0537	3.5520	L-.17825	L3.2521	14.521	28.752	2.0882
#3	L3.0504	3.5525	L.12881	L2.8520	14.795	28.889	2.0890

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	2.0521	8081.4	L7.8460	L.67424	L6.8254	163.41	L.07704
#1	2.0519	8080.2	L7.8449	L.69984	L6.9278	163.25	L.01736
#2	2.0518	8076.9	L7.8485	L.67164	L6.6930	163.42	L-.05939
#3	2.0525	8087.0	L7.8445	L.65124	L6.8553	163.56	L.27315

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.18057	L10.774	L10.547	L.20847	11.428	240.04	14.943
#1	L.18197	L10.896	L11.297	L.08295	11.437	240.21	15.031
#2	L.17954	L11.278	L9.1184	L-2.1181	11.399	239.88	14.868
#3	L.18021	L10.147	L11.225	L2.6606	11.449	240.04	14.931

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	299.44	L.29455
#1	299.51	L.29849
#2	299.56	L.29545
#3	299.26	L.28972

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	80261	--	--	--	--	--	--
#1	80092	--	--	--	--	--	--
#2	80323	--	--	--	--	--	--
#3	80368	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S20 DUP Operator:
Run Time: 05/23/90 12:42:46
Comment: SF7171
Mode: CONC Corr. Factor: .0914913

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.11536	L5.2487	4866.1	L-10.049	L1.6671	34.716	L.06568
#1	L.27327	L5.2470	4864.4	L-9.8203	L1.4745	34.794	L.04153
#2	L.06388	L5.2389	4864.5	L-10.419	L1.6703	34.667	L.09264

#3	L.00893	L5.2602	4869.3	L-9.9061	L1.8565	34.688	L.06288

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L3.1046	3.6106	L.38227	L3.4578	15.084	29.516	2.1020
#1	L3.1026	3.6114	L.44829	L3.4816	15.618	29.574	2.1013
#2	L3.1005	3.6114	L.47450	L3.2785	15.177	29.543	2.0996
#3	L3.1108	3.6092	L.22403	L3.6132	14.458	29.431	2.1051

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	2.0653	8204.2	L7.9678	L.66233	L6.6641	166.50	L.41292
#1	2.0646	8202.8	L7.9810	L.69498	L6.8032	166.43	L.12260
#2	2.0629	8201.3	L7.9539	L.63793	L6.6987	166.39	L.45990
#3	2.0683	8208.5	L7.9685	L.65407	L6.4903	166.66	L.65625

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.17439	L11.923	L9.8112	L2.8338	11.946	255.47	16.023
#1	L.17350	L11.754	L10.155	L2.8369	11.938	255.27	15.993
#2	L.17467	L11.744	L8.2852	L3.2406	11.963	255.38	15.998
#3	L.17498	L12.271	L10.993	L2.4238	11.938	255.76	16.078

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	299.36	L.29980
#1	299.45	L.29956
#2	298.61	L.30281
#3	300.01	L.29702

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	80373	--	--	--	--	--	--
#1	80385	--	--	--	--	--	--
#2	80460	--	--	--	--	--	--
#3	80274	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S20 SPIKE 1 Operator:
Run Time: 05/23/90 12:46:34
Comment: SF7171
Mode: CONC Corr. Factor: .0911577

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	7.8365	L4.7622	4378.1	L-9.3485	77.053	77.323	4.0237
#1	7.7480	L4.7594	4381.2	L-8.2448	76.792	77.489	4.0225
#2	7.8558	L4.7671	4374.9	L-9.1852	77.048	77.139	4.0552
#3	7.9059	L4.7600	4378.3	L-10.616	77.318	77.342	3.9935

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L2.8644	3.2809	L7.7271	43.653	52.155	71.115	1.9983
#1	L2.8547	3.2856	L7.9895	43.500	52.854	71.196	1.9971
#2	L2.8723	3.2765	L7.5792	43.579	50.890	71.073	2.0001
#3	L2.8663	3.2807	L7.6125	43.881	52.720	71.076	1.9976

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	1.9634	7730.0	L7.5033	L.65628	46.826	322.71	L.23913
#1	1.9622	7735.3	L7.5132	L.68902	46.713	323.08	L.02926
#2	1.9652	7729.8	L7.4962	L.61992	46.768	322.44	L-.07915
#3	1.9628	7724.9	L7.5006	L.65991	46.996	322.61	L.76729

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.15435	49.684	84.364	L.59507	98.281	269.80	56.067
#1	L.15513	49.817	85.723	L.40376	98.530	269.86	55.995
#2	L.15329	49.608	84.311	L-.38887	98.129	269.72	55.891
#3	L.15462	49.627	83.058	L1.7703	98.185	269.83	56.313

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	364.95	L.30586
#1	364.97	L.29640
#2	365.23	L.30660
#3	364.66	L.31459

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84170	--	--	--	--	--	--
#1	84327	--	--	--	--	--	--
#2	84025	--	--	--	--	--	--
#3	84159	--	--	--	--	--	--

Method: S5Y Sample Name: 90FS15S20 SPIKE 2 Operator:
Run Time: 05/23/90 12:50:41
Comment: SF7171
Mode: CONC Corr. Factor: .0924214

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	7.9720	L4.5535	4164.0	L-6.2494	77.318	77.130	4.0700
#1	7.9728	L4.5506	4154.7	L-4.7465	77.272	76.956	4.0588
#2	8.0215	L4.5520	4170.7	L-6.1136	77.273	77.396	4.0704
#3	7.9218	L4.5579	4166.5	L-7.8881	77.410	77.039	4.0807

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L

Avge	L2.7901	3.1774	L7.7352	43.837	52.480	68.498	1.9673
#1	L2.8019	3.1746	L7.9765	43.956	52.186	68.622	1.9717
#2	L2.7745	3.1805	L7.6598	43.692	52.316	68.415	1.9619
#3	L2.7940	3.1771	L7.5692	43.865	52.938	68.459	1.9682

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	1.9330	7419.7	L7.1852	L.64956	46.716	322.81	L.10401
#1	1.9373	7427.5	L7.2142	L.78232	46.624	323.48	L.27073
#2	1.9278	7408.5	L7.1601	L.53967	46.670	322.11	L.27884
#3	1.9339	7423.0	L7.1813	L.62670	46.852	322.85	L-.23755

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.14604	49.677	84.998	L.68510	98.394	255.40	55.717
#1	L.14674	48.835	83.705	L1.2007	98.219	255.49	55.807
#2	L.14512	50.733	86.498	L2.0274	98.565	255.15	55.499
#3	L.14625	49.463	84.792	L-1.1728	98.398	255.55	55.845

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	362.55	L.29925
#1	362.70	L.30338
#2	362.22	L.29228
#3	362.72	L.30208

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	84766	--	--	--	--	--	--
#1	84894	--	--	--	--	--	--
#2	84601	--	--	--	--	--	--
#3	84803	--	--	--	--	--	--

Method: S5Y Sample Name: LCS EPA 0287 Operator:
Run Time: 05/23/90 12:55:06
Comment: SF7171
Mode: CONC Corr. Factor: .093791

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	23.399	L.50858	251.42	1004.7	19.135	L5.8057	21.368
#1	23.283	L.50764	251.29	1014.7	19.149	L5.7971	21.399
#2	23.408	L.51132	247.97	998.62	19.477	L5.8165	21.367
#3	23.505	L.50677	255.01	1000.9	18.780	L5.8035	21.337

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	S59.131	?.00000	46.619	147.56	104.62	7404.4	?.00000

#1	S59.145	?.00000	45.950	146.75	105.58	7406.5	?.00000
#2	S59.240	?.00000	46.723	147.80	103.68	7394.1	?.00000
#3	S59.006	?.00000	47.182	148.13	104.60	7412.6	?.00000

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	?.00000	H22322.	22.449	L-.03624	L8.8353	221.52	41.136
#1	?.00000	H22334.	22.435	L-.04018	L8.6740	221.55	40.426
#2	?.00000	H22329.	22.482	L.02038	L9.0117	221.66	42.028
#3	?.00000	H22304.	22.431	L-.08893	L8.8201	221.35	40.953

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.07946	61.430	286.56	L2.8515	62.155	L21.837	68.319
#1	L.08005	62.173	285.42	L-.27464	62.156	L21.812	68.307
#2	L.07794	60.205	281.80	L3.1201	62.060	L21.896	68.166
#3	L.08038	61.913	292.45	L5.7091	62.248	L21.802	68.484

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	186.36	L.42231
#1	186.29	L.41903
#2	186.39	L.42740
#3	186.39	L.42050

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	70159	--	--	--	--	--	--
#1	70141	--	--	--	--	--	--
#2	70029	--	--	--	--	--	--
#3	70306	--	--	--	--	--	--

Method: S5Y Sample Name: LCS EPA 0287 Operator:
Run Time: 05/23/90 12:58:42
Comment: 1/10 Dilution
Mode: CONC Corr. Factor: .93791

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	23.861	L.42073	102.88	1029.8	28.600	L5.7136	21.574
#1	25.379	L.40823	117.97	971.41	30.415	L5.6994	21.604
#2	22.008	L.42592	92.732	1042.8	27.858	L5.8884	21.693
#3	24.195	L.42803	97.949	1075.3	27.528	L5.5531	21.426

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	193.48	?.00000	50.068	161.13	114.63	7059.0	100.61
#1	193.36	?.00000	49.050	159.66	112.31	7058.2	100.28
#2	193.35	?.00000	50.630	160.77	115.18	7065.6	100.87
#3	193.72	?.00000	50.524	162.97	116.40	7053.3	100.68

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	99.281	H24309.	24.488	L-.19360	17.075	235.57	38.444
#1	98.954	H24277.	24.408	L-.12636	16.440	235.44	40.871
#2	99.539	H24316.	24.529	L-.32656	17.133	235.27	43.435
#3	99.351	H24334.	24.527	L-.12787	17.653	236.00	31.025

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.09339	74.345	272.86	L3.7275	61.016	L20.030	70.350
#1	L.08195	77.356	287.90	L-8.2733	60.892	L19.752	70.174
#2	L.09057	80.957	283.55	L4.3809	61.061	L20.017	70.716
#3	L.10766	64.722	247.13	L15.075	61.096	L20.322	70.159

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	194.95	L.17873
#1	193.95	L.10322
#2	195.12	L.19118
#3	195.79	L.24178

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	87239	--	--	--	--	--	--
#1	87440	--	--	--	--	--	--
#2	87061	--	--	--	--	--	--
#3	87217	--	--	--	--	--	--

Method: S5Y Sample Name: DIGESTION BLANK Operator:
Run Time: 05/23/90 13:09:51
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-1.0288	L.22309	149.78	L-8.7121	L-8.8259	L.35012	L.08664
#1	L.19093	L.22876	158.96	L-7.3280	L-8.2662	L.66716	L.08289
#2	L-1.7501	L.20894	140.47	L-2.8964	L-8.2183	L.09539	L.09695
#3	L-1.5273	L.23156	149.91	L-15.912	L-9.9932	L.28780	L.08008

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.13792	L.14484	L-.06591	L-.44363	L-2.3311	L1.8496	.01920
#1	L.13550	L.14493	L1.5882	L-.64872	L-4.0066	L2.9702	.01933
#2	L.13809	L.14477	L.19104	L.16451	L-5.6346	L2.2620	.01912
#3	L.14016	L.14482	L-1.9770	L-.84669	L2.6479	L.31645	.01914

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L

Avge	.05102	93.072	L.19276	L-.42105	L5.8056	L1.4643	L-3.4561
#1	.05115	93.555	L.20464	L-.11601	L6.1667	L1.6582	L-5.3618
#2	.05095	93.477	L.15693	L-.65179	L7.0701	L1.1037	L.04733
#3	.05096	92.184	L.21671	L-.49535	L4.1801	L1.6311	L-5.0538

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.03922	L8.3346	L11.536	L-.14158	L.72817	L7.9618	L-.89271
#1	L.03815	L3.3457	L-2.9204	L.06525	L.80924	L8.4282	L.07753
#2	L.02850	L14.982	L5.0676	L2.2868	L.57955	L7.5630	L-1.8402
#3	L.05102	L6.6763	L32.461	L-2.7767	L.79574	L7.8943	L-.91549

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L21.615	L.12484
#1	L22.586	L.21803
#2	L20.284	L.00887
#3	L21.974	L.14763

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	79698	--	--	--	--	--	--
#1	79517	--	--	--	--	--	--
#2	80007	--	--	--	--	--	--
#3	79569	--	--	--	--	--	--

Method: S5Y Sample Name: SED SPIKE + Ag Operator:
Run Time: 05/23/90 13:14:03
Comment: Undigested
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	90.213	L-.15109	L-4.7448	L-2.2899	867.24	503.61	44.181
#1	89.029	L-.15399	L-8.6929	L-11.237	867.87	504.48	44.085
#2	91.345	L-.13958	L.28337	L-5.5285	865.55	502.52	44.204
#3	90.267	L-.15970	L-5.8249	L9.8961	868.30	503.83	44.255

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L.03029	L.09150	82.595	461.09	461.59	453.06	-.01790
#1	L.02582	L.09156	82.966	460.63	468.11	453.20	-.01807
#2	L.03681	L.09145	81.357	461.60	458.54	450.97	-.01764
#3	L.02825	L.09148	83.463	461.04	458.11	455.00	-.01798

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.01465	L15.223	L-.08417	L.15495	450.79	1882.4	L-2.0269
#1	.01449	L13.363	L-.09819	L.31901	448.98	1879.8	L.30990

#2	.01490	L18.815	L-.06144	L.68413	452.93	1887.0	L-8.5016
#3	.01457	L13.491	L-.09287	L-.53829	450.47	1880.5	L2.1109

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.05250	464.59	862.90	L-13.317	999.01	L-3.6126	473.88
#1	L-.06556	466.43	859.72	L-27.705	998.88	L-4.1658	472.92
#2	L-.04293	472.50	881.18	L12.381	997.86	L-3.1982	473.04
#3	L-.04901	454.84	847.80	L-24.628	1000.3	L-3.4737	475.69

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	862.74	L.22859
#1	861.03	L.17856
#2	861.93	L.23194
#3	865.27	L.27526

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	85701	--	--	--	--	--	--
#1	86001	--	--	--	--	--	--
#2	85439	--	--	--	--	--	--
#3	85664	--	--	--	--	--	--

Method: S5Y Sample Name: INSTR BLANK 2 Operator:
Run Time: 05/23/90 13:21:31
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.46591	L-.14635	L-8.9941	L-23.977	L4.4099	L.06531	L.13883
#1	L-.32046	L-.18356	L-12.075	L-23.419	L5.1319	L.11956	L.06552
#2	L.60746	L-.12565	L-10.417	L-7.5747	L3.0557	L.20705	L.21489
#3	L1.1107	L-.12985	L-4.4899	L-40.938	L5.0421	L-.13068	L.13607

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	L-.04317	L-.00350	L-.63162	L.64257	L-2.3816	L-.27601	-.02656
#1	L-.04653	L-.00348	L-.86474	L.52905	L-3.2765	L-1.3727	-.02706
#2	L-.04426	L-.00347	L.53170	L.87962	L-2.7997	L-.76857	-.02564
#3	L-.03871	L-.00356	L-1.5618	L.51904	L-1.0686	L1.3133	-.02698

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.00616	L-8.2643	L-.17306	L.89131	L-3.1275	L-1.1193	L.71256
#1	.00567	L-9.3177	L-.17690	L.24151	L-3.1365	L-1.3541	L-1.9501
#2	.00707	L-9.2851	L-.17569	L1.0762	L-4.0761	L-1.0293	L-.49692
#3	.00575	L-6.1900	L-.16659	L1.3562	L-2.1698	L-.97452	L4.5847

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.02753	L6.8511	L-16.245	L-4.2805	L-.50117	L-2.6840	L-.18649
#1	L-.03877	L8.5224	L-2.2500	L17.645	L-.66725	L-3.3573	L.48097
#2	L-.01475	L2.0601	L-3.6787	L-29.973	L-.38628	L-2.5628	L-.86561
#3	L-.02906	L9.9708	L-42.806	L-.51388	L-.44999	L-2.1320	L-.17483

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	L-3.3994	L-.42003
#1	L-3.3099	L-.46698
#2	L-3.6251	L-.36782
#3	L-3.2633	L-.42528

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	89171	--	--	--	--	--	--
#1	89511	--	--	--	--	--	--
#2	89067	--	--	--	--	--	--
#3	88934	--	--	--	--	--	--

Method: S5Y Sample Name: AQC 2 Operator:
Run Time: 05/23/90 13:24:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-.90245	6.0899	Q4780.9	4913.6	Q4653.6	5045.9	4978.7
#1	Q-.28982	6.0723	Q4780.9	4921.5	Q4633.5	5046.1	4976.2
#2	Q-1.9935	6.0915	Q4793.4	4929.4	Q4648.0	5045.7	4978.9
#3	Q-.42399	6.1061	Q4768.5	4889.9	Q4679.5	5045.9	4981.0

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	4.8684	4.8382	4982.3	4937.0	4828.0	4895.8	5.0244
#1	4.8742	4.8373	4985.1	4945.4	4827.8	4885.8	5.0240
#2	4.8647	4.8377	4975.6	4934.8	4796.1	4899.7	5.0213
#3	4.8662	4.8396	4986.3	4930.8	4860.2	4901.8	5.0278

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	4.9588	5213.3	6.4846	.07276	4804.8	5044.8	4882.9
#1	4.9584	5210.3	6.4917	.26338	4787.0	5043.7	4886.3
#2	4.9557	5205.2	6.4806	-.01660	4812.3	5037.5	4879.9
#3	4.9621	5224.4	6.4817	-.02852	4815.0	5053.2	4882.5

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	-.06393	5118.3	4952.6	4915.3	5000.1	5031.8	4844.2

#1	-.05536	5131.5	4975.0	4931.1	4995.8	5026.7	4843.4
#2	-.06786	5107.5	4906.0	4860.1	4998.4	5031.6	4841.0
#3	-.06857	5116.0	4976.8	4954.7	5006.0	5036.9	4848.3

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	4959.9	4.3436
#1	4954.5	4.3624
#2	4966.7	4.3152
#3	4958.7	4.3532

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	88661	--	--	--	--	--	--
#1	88646	--	--	--	--	--	--
#2	88647	--	--	--	--	--	--
#3	88690	--	--	--	--	--	--

Method: S5Y Sample Name: HIGH AQC 2 Operator:
Run Time: 05/23/90 13:29:00
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q0.60649	97.776	Q96986.	Q-30.873	Q47.687	Q1.2495	Q-.77807
#1	Q1.5204	97.979	Q96874.	Q-62.890	Q50.028	Q1.1027	Q-.68431
#2	Q-.22213	97.390	Q97079.	Q-40.881	Q48.973	Q1.4487	Q-1.0060
#3	Q0.52114	97.959	Q97005.	Q11.153	Q44.059	Q1.1972	Q-.64393

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	100.17	Q77.977	Q.92221	Q.34160	Q7.6162	Q.50654	100.00
#1	100.01	Q78.311	Q.55577	Q-.27302	Q11.693	Q.49288	99.836
#2	100.21	Q78.247	Q1.9428	Q1.0229	Q1.4736	Q.54741	99.814
#3	100.29	Q77.374	Q.26804	Q.27497	Q9.6818	Q.47933	100.35

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	98.604	Q101920.	101.00	103.31	Q12.516	Q14.811	Q3.5972
#1	98.441	Q101740.	100.85	103.18	Q12.953	Q14.819	Q1.4789
#2	98.418	Q101960.	101.03	103.44	Q10.932	Q14.695	Q1.3610
#3	98.953	Q102050.	101.11	103.31	Q13.664	Q14.918	Q7.9518

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	105.05	Q12.549	Q-5.8525	Q-20.106	Q3.9107	Q6.2579	Q2.8702
#1	104.90	Q14.431	Q-28.873	Q-16.887	Q3.8908	Q6.2541	Q2.2902
#2	105.21	Q14.431	Q21.318	Q9.3809	Q4.0406	Q6.0556	Q3.7333

#3	105.02	Q8.7847	Q-10.002	Q-52.813	Q3.8008	Q6.4639	Q3.5870

Elem	Znlow	Znhigh
Units	ug/L	Mg/L
Avge	Q96026.	97.445
#1	Q95956.	97.312
#2	Q96017.	97.496
#3	Q96105.	97.526

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	86160	--	--	--	--	--	--
#1	86233	--	--	--	--	--	--
#2	86383	--	--	--	--	--	--
#3	85863	--	--	--	--	--	--

Method: S5Y Sample Name: AG AQC 2 Operator:
Run Time: 05/23/90 13:31:44
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	49.929	-.00696	Q84.846	Q-33.661	Q363.05	Q.10012	Q.37005
#1	49.776	.01501	Q88.748	Q-22.858	Q368.60	Q-.04201	Q.33925
#2	49.493	-.01826	Q83.147	Q-61.028	Q358.18	Q.04302	Q.42672
#3	50.519	-.01764	Q82.644	Q-17.098	Q362.36	Q.29936	Q.34418

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mghigh
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avge	-.03322	Q.00065	Q.27674	Q.32598	Q-2.9986	Q1.7694	-.00902
#1	-.02984	Q.00504	Q.14996	Q2.3149	Q-7.5870	Q.77844	-.00450
#2	-.03280	Q-.00020	Q-.76854	Q-.75869	Q.42071	Q1.6643	-.01005
#3	-.03701	Q-.00287	Q1.4488	Q-.57829	Q-1.8295	Q2.8656	-.01253

Elem	Mglow	Felow	Fehigh	K	Li	Mn	Mo
Units	mg/L	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L
Avge	.02335	Q21.994	-.09298	.28257	Q-1.6922	Q-.55642	Q-.07399
#1	.02779	Q27.575	-.07250	.53142	Q-3.3117	Q-.34766	Q-3.6213
#2	.02235	Q20.533	-.11475	.01743	Q-.89450	Q-.66272	Q1.0756
#3	.01992	Q17.875	-.09171	.29885	Q-.87049	Q-.65888	Q2.3237

Elem	Na	Ni	Pb	Sn	Sr	Ti	V
Units	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	.17744	Q10.099	Q-38.750	Q11.170	Q.00276	Q-1.1020	Q-.46548
#1	.17975	Q13.430	Q-80.226	Q-2.5026	Q.20075	Q-.86090	Q-.74761
#2	.17196	Q8.4335	Q-34.961	Q-9.6952	Q-.00419	Q-1.2311	Q.19474
#3	.18060	Q8.4325	Q-1.0615	Q45.706	Q-.18828	Q-1.2141	Q-.84355

Elem	Znlow	Znhigh

Units	ug/L	Mg/L
Avge	Q16.671	-.31460
#1	Q20.766	-.32818
#2	Q16.225	-.27743
#3	Q13.022	-.33819

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.000	--	--	--	--	--	--
Avge	88153	--	--	--	--	--	--
#1	88106	--	--	--	--	--	--
#2	88184	--	--	--	--	--	--
#3	88170	--	--	--	--	--	--

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUN 0 4 1990

SUBJECT: Review of Region 5 data for Stern Rubber & Tool

FROM: Curtis Ross, Director Chi Yang for
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15 S16-S18, D17, 90FS02 R55, 90FS15 S20-27
Parameter(s): As, Cd, Pb, Sb, Se, Tl
Laboratory: CRL

Results Status:

(X) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 3-3805

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

RECEIVED BY/DATE: 6/5/90
Comments:

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUN 0 4 1990

SUBJECT: Review of Region 5 data for Stern Rubber & Tool

FROM: Curtis Ross, Director Chi Yang for
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15520-527
Parameter(s): ICP
Laboratory: CRL

Results Status:

(X) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 3-3805

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

TRANSMITTED BY

RECEIVED BY/DATE: 6/5/90 U.S. EPA CENTRAL REGIONAL LAB

Comments:

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUN 19 1990

SUBJECT: Review of Region 5 data for Steyn Rubber & Tool

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory
Chi Yang for

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15S16-18, D12, R5J
Parameter(s): ~~CRL-ESAT~~ CN, Hg
Laboratory: CRL

Results Status:

(X) DATA ACCEPTABLE FOR USE*.
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

RECEIVED BY/DATE: 6/20/90

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 0 9 1990

SUBJECT: Review of Region 5 data for Stern Rubber & Tool

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90FS15 520-527
Parameter(s): CN
Laboratory: CRL-ESAT

Results Status:

(X) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

RECEIVED BY/DATE: .....

Comments:

DATA SET	SITE	OU/ACT.
SF 7171	Stern rubber & tool	TFA

SAMPLES	PARAMETER(S)
90FS15 S20 - S27	CN

SAMPLED	RECEIVED	DUE	LAB
5/9/90	5/10/90	5/31/90	CRL-ESAT

SHIPPED	DATA RECEIVED	CONTRACT
—	N/A	—

Comments By Reviewer:

(✓) REVIEWED ( ) UNREVIEWED BP 8/6/90 TEAM LEADER/DATE

(✓) REVIEWED ( ) UNREVIEWED BP 8/6/90 SECTION CHIEF/DATE

(✓) REVIEWED ( ) UNREVIEWED James H. Adams, Jr. 8/9/90 QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR
8-9-90	8-9-90	Griffin

ESAT CONTRACT

TID NO: 05-06
TASK NO: 2864

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on 5-17, 1990 for:

DATASET NO: 7171 SITE NAME: Stern Rubber & Tool

PARAMETER : CN

MATRIX : SO11 SF DU/ACT NO: TFA 302 Y____ /C____

SAMPLE NUMBERS: 90FS15520-27

NUMBER OF SAMPLES: 8

ESAT APPROVALS:

M. Fletcher	6/21/90	D. Kruse	6/25/90
(ANALYST	DATE)	(TEAM LEADER	DATE)
C. Sims Bender	6/29/90	[illegible]	7-2-90
(QC COORDINATOR	DATE)	(ESAT TEAM MANAGER	DATE)

COMMENTS: Data held awaiting completion of Hg data; due to problems with analyses; CN data submitted without Hg data (see below)

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

S. Gamz	7/2/90	[illegible]	7/3/90
(DELIVERED BY	DATE)	(RECEIVED BY	DATE)

EPA APPROVALS:

[illegible] 8/6/90
(EPA TASK MONITOR DATE)

[X] Reviewed
[ ] Unreviewed
[X] Accepted
[ ] Rejected
[ ] Returned/_____ (Date)

Data is now corrected [illegible] 8/9/90

COMMENTS: CN data is not reported correctly. If sample is below det. limit then in reporting it should be first converted to mg/kg & then report that time as a 0.XXU mg/kg CN. so data was given to D. Kruse for correction 7/30/90 [illegible]

[illegible]	8/6/90	[X] Reviewed	[ ] Unreviewed
(SECTION CHIEF	DATE)		
		Sylvia Griffey 8/9/90	8/9/90
(ESAT DPO	DATE)	(DATA COORD'R REC'D	TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

→ Sample 90FS15516 was run with method 335.2. The other watersamples (SF 7171) were previously submitted; thus no other datasheets were submitted with the copy of the raw data. Sample 90FS15516 was reported with previous samples.

(9)

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH FIT SUPERFUND SAMPLING DATE 5.9.90 LAB ARRIVAL DATE 5.10.90 DUE DATE 5.31.90

CU NUMBER TFA DATASET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S CHEMICAL OXYGEN DEMAND MG COD/KG (DRY) MIN43327	SEDIMENTS SOLID S MERCURY MG HG/KG (DRY) MIN44728	SEDIMENTS SOLID S PHENOLICS MG PHENOL/KG (DRY) MIN44829	SEDIMENTS SOLID S CYANIDE MG CN/KG (DRY) MIN44930	
90FS15S20	S1		X		X 1.0 u	5188029
21	S2		X		X 1.0 u	5188033
22	S3		X		X 1.0 u	5188037
23	S4		X		X .69 u	5188041
24	S5		X		X .53 u	5188045
25	S6		X		X .51 u	5188049
26	S7		X		X 1.1 u	5188053
27	S8		X	(PP)	X 1.2 ~~1.3~~ u	5188057

Shipment is NOT Complete

all results obtained by Manual Distillation method 335.2

Analyzed by Myra Fletcher 6/21/90

[signature] 7/30/90

(9)

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH FIT SUPERFUND SAMPLING DATE 5.9.90 LAB ARRIVAL DATE 5.10.90 DUE DATE 5.31.90

CU NUMBER TFA DATASET NUMBER 7171 STUDY Stern Rubber & Tool PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S CHEMICAL OXYGEN DEMAND MG COD/KG (DRY) MIN43327	SEDIMENTS SOLID S MERCURY MG HG/KG (DRY) MIN44728	SEDIMENTS SOLID S PHENOLICS MG PHENOL/KG (DRY) MIN44829	SEDIMENTS SOLID S CYANIDE MG CN/KG (DRY) MIN44930	
90FS15S20	S1		X		X 1.0 u	5188029
21	S2		X		X 1.0 u	5188033
22	S3		X		X 1.0 u	5188037
23	S4		X		X .69 u	5188041
24	S5		X		X .53 u	5188045
25	S6		X		X .51 u	5188049
26	S7		X		X 1.1 u	5188053
27	S8		X	(PP)	X 1.2 ~~1.3~~ u	5188057

Shipment is Not Complete

all results obtained by Manual Distillation method 335.2

Analyzed by Myra Fletcher 6/21/90

[signature] 7/30/90

Myra Fletcher 5/17/90
Myra Fletcher 5/17/90

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: M. FLETCHER
PARAMETER NAME ----: CN
DATE OF ANALYSIS --: 05-17-1990

DATA SET NUMBER ---: 7171
DU NUMBER ---------: TFA302

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = +1.60730E+00
+2.35535E+00 * SIGNAL

COEFFICIENT OF DETERMINATION : .9984325

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.000	+0.000	+1.607
2	+8.900	+25.000	+22.569
3	+19.600	+50.000	+47.772
4	+43.800	+100.000	+104.771
5	+83.500	+200.000	+198.278

T-A-B-L-E O-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION		LIMITS
BLK UND	+0.000	+1.607		0 ± 8 ug/l
BLK DIS	+0.000	+1.607		0 ± 8 ug/l
AQC UND (100) TV=100 ug/l	+43.500	+104.065	rec=104	85-115 ug/l
AQC DIS (100) TV=100 ug/l	+46.400	+110.895	rec=111	85-115 ug/l
90FS15S20 SP7171	+0.200	+2.078	8u	
90FS15S21	+0.300	+2.313	8u	
90FS15S22	+0.000	+1.607	8u	
90FS15S23	+0.000	+1.607	8u	
90FS15S24	+0.200	+2.078	8u	
90FS15S25	+0.000	+1.607	8u	
90FS15S26	+0.000	+1.607	8u	
90FS15S26 LAB Spike	+45.200	+108.069	rec=108	85-115 ug/l
90FS15S27	+0.400	+2.549	8u	
90FS15S27 LAB DUP	+0.500	+2.784	8u Dup difference = -.24 ug/l;	Duplicate difference ≤ 15 ug/l
~~90FS15S27 LAB D~~	~~+0.500~~	~~+2.784~~	mFS 5/17/90 operator error	
~~BLK UND~~	~~+0.300~~	~~+2.313~~	mFS 5/17/90 operator error	
BLK UND	+0.000	+1.607		0 ± 8 ug/l
90FS15S16 SP7171	+0.100	+1.842	8u	
~~90FS15S16 LAB D~~	~~+0.100~~	~~+1.842~~	5/17/90 operator error mE	
90FS15S16 LAB Dup	+0.100	+1.842	8u dup difference = 0	Duplicate difference ≤ 15 ug/l
90FS15S16 LAB Spike	+47.400	+113.250	rec=113	85-115 ug/l
BLK UND	+0.300	+2.313		0 ± 8 ug/l
BLK DIS	+0.100	+1.842		0 ± 8 ug/l
AQC UND (100) TV=100 ug/l	+43.700	+104.536	rec=104	85-115
AQC DIS (100) TV=100 ug/l	+46.400	+110.895	rec=111	85-115
BLK UND	+0.200	+2.078		0 ± 8 ug/l

M. Fletcher
5/17/90

COMPUTATION SHEET

OFFICE

FILE NO.

SUBJECT CN Manual distillation method 335.2

COMPUTATION SF7171

COMPUTED BY M. Fletcher | CHECKED BY | DATE 5/17/90 | PAGE 1 OF 1 PAGES

(1)	(2)	(3)	(4)	(5) Reading	(6) Conc ug/l CN	(7)	(8) LIMITS	(9) Screen Cl2	(10) Screen Sulfide
primer									
primer									
Blk									
Blk									
standard	0 ug/l CN			0.0	1.61				
	25			8.9	22.57				
	50			19.6	47.77				
	100			43.8	104.77				
	200			83.5	198.28				
Blk und				0.00	1.61		0 ± 8 ug/l		
Blk dup				0.00	1.61		0 ± 8 ug/l		
AQC (und)	TV=100 ug/l			43.5	104.07	rec=104	85-115 ug/l		
AQC (dup)	TV=100 ug/l			46.4	110.90	rec=111	85-115 ug/l		
90FS1520	SF7171			0.20	2.08			neg	neg
S21				0.30	2.31				
S22				0.00	1.61				
S23				0.00	1.61				
S24				0.20	2.08				
S25				0.00	1.61				
S26				0.00	1.61				
S26	lab spike			45.20	108.67	rec=108	85-115 ug/l		
S27				0.40	2.55			neg.	neg.
S27	lab duplicate			0.50	2.78	dup diff -.23	dup diff < 15 ug/l		
Blk (und)				0.00	1.61		0 ± 8 ug/l		
90FS15	S16	SF7171		0.10	1.84			neg	neg
	S16 lab duplicate			0.10	1.84	dup diff = 0.0	dup diff < 15 ug/l		
	S16 lab spike			47.40	113.25	rec=113	85-115 ug/l		
Blk und				0.30	2.31				
Blk dup				0.10	1.84				
AQC (und)	TV=100 ug/l			43.70	104.54	rec=104	85-115 ug/l		
AQC (dup)	TV=100 ug/l			46.40	110.90	rec=111	85-115 ug/l		
Blk und				0.20	2.08		0 ± 8 ug/l		

M. Fletcher 5/17/90

CYANIDE MANUAL DISTILLATION

Element: cyanide

Analyst M. Fletcher

Date 5/17/90

Data Set 7171

Pos	ID	Spike	DF	Comment
1	Prim			
2	Prim			
3	Blank			
4	Blank			
5	Standard 0 ug/l			undistilled
6	Standard 25 ug/l			undistilled
7	Standard 50 ug/l			undistilled
8	Standard 100 ug/l			undistilled
9	Standard 200 ug/l			undistilled
10	Blank			undistilled
11	Blank			undistilled
12	Blank			distilled
13	(AQC) CS 100 ug/l (TV=100)			undistilled
14	(WQC) CS 100 ug/l (TV=100)			distilled
15	90F515 ~~Blank~~ S20			SF7171 ~~undistilled~~
16	S21			
17	S22			
18	S23			
19	S24			
20	S25			
21	S26			
22	S26			lab spike
23	S27			
24	S27			lab duplicate
25	Blank			und
26	90F515 S16			
27	S16			lab duplicate

cn3

M. Fletcher
5/17/90

CYANIDE MANUAL DISTILLATION

Element: cyanide

Analyst M. Fletcher

Dat 5/17/90

Data Set 7171

Pos	ID	Spike	DF	Comment
28	90F5155 16			lab spike
29	BLK und			
30	BLK dis			
31	(AQC)CS100 und TV=100			
32	(AQC)CS100 dis TV=100			
33	BLK und			
34				
35	~~Blank~~			undistilled
36	~~Blank~~			distilled
37	~~CS 100 ug/l~~			undistilled
38	~~CS 100 ug/l~~			distilled
39				
40				
	Start Wheel 2			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

cn4

M. Fletcher 5/17/9

COMPUTATION SHEET

OFFICE	FILE NO
SUBJECT CN Manual Distillation method 335.2	
COMPUTATION Distillation Log	SF 7171
COMPUTED BY M. Fletcher / CHECKED BY / DATE 5/16/90	PAGE 1 OF 1 PAGES

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 duplicate and spike was analyzed for each matrix (soil + water)									
1st run soils									
				Mass					
90FS15	S20			2.0000 g					
	S21	spilled x reweighed →		2.0025 g (x original mass 1.9991 g)					
	~~S22~~			2.0090 g					
	S23	slurry content		4.0099 g					
	S24	slurry content		5.0341 g					
	S25	slurry content		5.0757 g					
	S26			2.0057 g					
	S27			2.0260 g					
	~~S26~~								
	S26	lab duplicate		2.0203 g					
	S27	lab spike		2.0050 g					
All Cl2 + sulfide neg									
2nd run									
Blank									
90FS15	S16								
	S16	lab duplicate							
	S16	lab spike							
used 200 ml for distilling samples									
Soil weights were done by J. Ganz. MF 5/18/90									
see next page.									

M. Hetchu 5/18/90

5/15 SF 7171 Soil Weights

Sample	Wet Weight	Dry Weight 5/16	Tare 5/16
90FS15520	12.733	63.993	51.803
521	9.798	60.574	50.987
522	10.016	61.575	51.789
523	54.752	105.679	66.114
524	78.269	132.703	73.784
525	76.883	138.766	79.437
526	18.921	69.040	51.956
527	14.912	62.421	51.093

5/16 Sample 90FS15520 Wet Weight = 13.960 g
Dry 13.404 g

M. Fletcher
5/18/90

* SOLIDS * CSC VERSION 1.00 *

M. Fletcher 5/18/90

NAME OF ANALYST ----: M. Fletcher
DATE OF ANALYSIS ---: 05-18-1990

SAMPLE I.D.	DISH WT(GM)	DISH+WET WT	WET WT(GM)	DISH+DRY WT	DRY WT(GM)	% SOLID
90FS15S20	51.8030	64.5360	12.7330	63.9930	12.1900	95.74 %
90FS15S21	50.9870	60.7850	9.7980	60.5740	9.5870	97.85 %
90FS15S22	51.7890	61.8050	10.0160	61.5750	9.7860	97.70 %
90FS15S23	66.1140	120.8660	54.7520	105.6790	39.5650	72.26 %
90FS15S24	73.7840	152.0530	78.2690	132.7030	58.9190	75.28 %
90FS15S25	79.4370	156.3200	76.8830	138.7660	59.3290	77.17 %
90FS15S26	51.9560	70.8770	18.9210	69.0400	17.0840	90.29 %
90FS15S27	51.0530	66.0050	14.9120	62.4210	11.3280	75.97 %

M. Fletcher 5/18/90
M. Fletcher 5/18/90

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* SEDCAL * CSC VERSION 1.00 *

NAME OF ANALYST ----: M. FLETCHER
DATE OF ANALYSIS ---: 05-18-1990

SEDIMENT CALCULATION FOR CYANIDE

SAMPLE NO.	% SOLID	WET WT(GMS)	DRY WT(GM/L)	SED CONC(UG/L)	SED CONC(MG/KG)
90FS15S20	95.74	2.00	7.66	~~2.08~~ 8u	~~0.271~~ 1.04 u
90FS15S21	97.85	2.00	7.84	~~2.31~~ 8u	~~0.295~~ 1.02 u
90FS15S22	97.70	2.01	7.85	~~1.61~~ 8u	~~0.205~~ 1.02 u
90FS15S23	72.26	4.01	11.59	~~1.61~~ 8u	~~0.135~~ 0.69 u
90FS15S24	75.28	5.03	15.16	~~2.08~~ 8u	~~0.137~~ 0.53 u
90FS15S25	77.17	5.08	15.67	~~1.61~~ 8u	~~0.103~~ 0.51 u
90FS15S26	90.29	2.01	7.24	~~1.61~~ 8u	~~0.222~~ 1.10 u
90FS15S27	75.97	2.03	6.16	~~2.55~~ 8u	~~0.414~~ 1.23 u

all corrections by
Duane Kruse 7/30/90
all results are less than
detection limit.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 0 9 1990

SUBJECT: Review of Region 5 data for Stern Rubber v. Tool

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory
Chuck Elby for

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90ES15 520-527
Parameter(s): CN
Laboratory: CRL-ESAT

Results Status:

(✓) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

U.S. EPA REGION 5
RECORDS CENTER

RECEIVED BY/DATE: Cathy Kouris 8/13/90

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 0 1 1990

SUBJECT: Review of Region 5 data for Stern Rubber & Tool

FROM: Curtis Ross, Director for [illegible]
Region 5 Central Regional Laboratory

TO: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 7171
Sample Numbers: 90 P515520 - 527
Parameter(s): Hg
Laboratory: CRL-BAT

Results Status:

(PP) ~~(X)~~ DATA ACCEPTABLE FOR USE*
(X) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

[illegible]
[illegible]

RECEIVED BY/DATE:

Comments: