

Wednesday, February 17, 2010

Page 1 of 3  
REQUEST NUMBER: 10-1906

**LOS ALAMOS**  
**NATIONAL LABORATORY**

ATTN: Valerie Davis

These Samples are on:

General Engineering Laboratories, Inc., Charleston, SC.  
2040 Savage Rd  
Charleston, SC 29407

LANL Request Number: 10-1906  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 2/17/2010  
TURNAROUND/REPORT DUE: 3/19/2010  
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background  
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	EPA:353.2	1	RE15-10-8379	W	2/12/2010	
	SW-846:6010B	1	RE15-10-8342	R	2/12/2010	

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REQUEST NUMBER: 10-1906

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:6020		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
SW-846:6850		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
		1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
SW-846:7470A		1	RE15-10-8379	W	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
		1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	

Wednesday, February 17, 2010

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REQUEST NUMBER: 10-1906

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	SW-846:9012A	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:9045C	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	

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Wednesday, February 17, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1906

LOS ALAMOS

REQUEST NUMBER: 10-1906

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/19/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8379	1	POLY	METALS+U-GEL	Nitric Acid	W
RE15-10-8379	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
RE15-10-8379	1	POLY	SW-846:6850	Ice	W
RE15-10-8379	1	POLY	TCN	Sodium Hydroxide	W
RE15-10-8346	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8346	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8347	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8347	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8344	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8344	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8345	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8345	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8342	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8342	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8343	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8343	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8377	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8377	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature



## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8342

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	QBT3	2/12/10	Fill
TIME COLLECTED (HH:MM)		0945		SUB-MEDIA:	TUFF 1	NA	
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA	DL	
LOCATION ID:	15-610841	OK		FIELD QC TYPE:	NA	OK	
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA	OK	
TOP DEPTH:	0	3.0		SAMPLE USAGE:	INV	OK	
BOTTOM DEPTH:	0	3.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		EXCAVATED:	YES/NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA	NO			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice		
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+U-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: brown soil and tuff mix

SAMPLE COMMENTS: base of inlet to R44 tank

LOCATION DESC: base of inlet to R44 tank

## FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 11 dpm  
Beta/Gamma = 2170 dpm

PID  $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm} = \frac{0.0}{0.0}$

COLLECTED BY (PRINT)

Jon Roberson

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY (Printed Name) S. MARCZAK (Signature) <i>SM</i>	Date/Time 2/12/10 1635
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8343

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	QBT3		L11
TIME COLLECTED(HH:MM)		11:15		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		DC
LOCATION ID:	15-610841	OK		FIELD QC TYPE:	NA		OK
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		OK
TOP DEPTH:	0	8.0		SAMPLE USAGE:	INV		OK
BOTTOM DEPTH:	0	8.5		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	S		EXCAVATED:	<input checked="" type="checkbox"/> YES / NO / NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE:	YES / <input checked="" type="checkbox"/> NO / NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		METALS+U-GEL	125 ML POLY	Ice	Y	
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Brown Soil with some tuff - some roots

Finside collected: RE15-10-8379

SAMPLE COMMENTS: Base of inlet to R-44 tank location

LOCATION DESC: 5 feet below inlet to R44 tank

## FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 11 dpm  
Beta/Gamma = 2240 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.0}{0.0} \text{ ppm}$

COLLECTED BY (PRINT)

REVIEWED BY (PRINT) Jon Roberson

RELINQUISHED BY

(Printed Name) Jon Roberson

(Signature)

Date/Time

2/12/10

1635

RECEIVED BY

(Printed Name)

(Signature)

S. MARCIN

[Signature]

Date/Time

2/12/10

1635

RELINQUISHED BY

Date/Time

RECEIVED BY

Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8344

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	OBT3		5:11
TIME COLLECTED (HH:MM)		10:35		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		DC
LOCATION ID:	15-610842	OK		FIELD QC TYPE:	NA		OK
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		OK
TOP DEPTH:	0	7.0		SAMPLE USAGE:	INV		OK
BOTTOM DEPTH:	0	7.5		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	S		EXCAVATED:	YES/NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA	NO/NA			BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION:
					NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice		
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+U-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	

SAMPLE DESC: brown soil w pinkish gray tuff fragments  
dupe collected: RE15-10-8377

SAMPLE COMMENTS: none

LOCATION DESC: 5 feet below outlet to R44 tank

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 5 dpm  
Beta/Gamma = 2270 dpm

PID  $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm} = \frac{0.0}{0.0}$

COLLECTED BY (PRINT)

Jon Roberson

REVIEWED BY (PRINT)

Lorey A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Jon Roberson	2/12/10	S. MARZAN	2/12/10
(Signature)	1635		1635
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8345

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA: QBT3		JR 2/12/10 Att F.11	
TIME COLLECTED (HH:MM)		0950		SUB-MEDIA: TUFF 1		NA	
PRS ID: 15-009(c)		OK		SAMPLE TECH CODE: HA		DC	
LOCATION ID: 15-610842		OK		FIELD QC TYPE: NA		OK	
LOCATION TYPE: GENERIC		OK		FIELD PREP: NA		↓	
TOP DEPTH: 0		2.0		SAMPLE USAGE: INV			
BOTTOM DEPTH: 0		2.5		SCREEN/PORT DESC: NA			
FIELD MATRIX: R		S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice		
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+U-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: brown soil and tuff mix

SAMPLE COMMENTS: none

LOCATION DESC: below outlet to R44 tank

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  2.2 dpm  
Beta/Gamma  $\leq$  2260 dpm

PID  $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm} = \frac{0.0}{0.0}$

COLLECTED BY (PRINT)

Jon Roberson

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY (Printed Name) S. Martinez (Signature) <i>S. Martinez</i>	Date/Time 2/12/10 1635
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8346

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	OBT3		Fill
TIME COLLECTED (HH:MM)		955		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		PL
LOCATION ID:	15-610843	OK		FIELD QC TYPE:	NA		OK
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		OK
TOP DEPTH:	0	10.5		SAMPLE USAGE:	INV		OK
BOTTOM DEPTH:	0	11		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	OK 2/12/10 OK S		EXCAVATED:	YES/NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA	NO			BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice		
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+U-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Dark brown soil and tuff mix

FTB  
 +insala collected: RE15-10-8385  
 2/12/10

SAMPLE COMMENTS: none

LOCATION DESC: base of tank

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  5 dpm  
 Beta/Gamma  $\leq$  2160 dpm

PID  $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm} = \frac{0.0}{0.0}$

COLLECTED BY (PRINT)

REVIEWED BY (PRINT)

Jon Roberson

Larry A. Lopez

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY S. MARCHAY (Printed Name) (Signature) <i>SM</i>	Date/Time 2/12/10 1635
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8347

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		1020		SUB-MEDIA:	TUFF 1		OK
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		DC
LOCATION ID:	15-610843	OK		FIELD QC TYPE:	NA		OK
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		↓
TOP DEPTH:	0	15.5		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	16		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	OK		EXCAVATED:	YES/NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO	NO			BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice		
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+U-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: light pink ash flow tuff

SAMPLE COMMENTS: none

LOCATION DESC: 5 feet below base of tank

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 27 dpm  
Beta/Gamma = 2140 dpm

PID  $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm} = \frac{0.0}{0.0}$

COLLECTED BY (PRINT)

Jon Roberson

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY (Printed Name) G. MAROZAR (Signature) <i>G. Marozar</i>	Date/Time 2/12/10 1635
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8377

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	QBT3		Fill
TIME COLLECTED (HH:MM)		10:35		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	HA		DC
LOCATION ID:	UNK	15-610842		FIELD QC TYPE:	ED		OK
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		OK
TOP DEPTH:	0	7.0		SAMPLE USAGE:	QC		OK
BOTTOM DEPTH:	0	7.5		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	5		EXCAVATED:	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO <input checked="" type="checkbox"/> NA
BOREHOLE: YES/NO	<input checked="" type="checkbox"/> NA			BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION:
					NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	y	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice		
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+U-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of RE15-10-8344  
Brown Soil with pinkish gray tuff fragments

SAMPLE COMMENTS: none

LOCATION DESC: 5 feet below outlet to R44 tank

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 5 dpm  
Beta/Gamma = 2270 dpm

PID  $\frac{\text{Ambient Reading}}{\text{Reading}} = \text{ppm} = \frac{0.0}{0.0}$

COLLECTED BY (PRINT)

Jon Roberson

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY S. M. ROTH (Printed Name) (Signature) <i>SMR</i>	Date/Time 2/12/10 1635
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8379

WORK ORDER:

AS PLANNED	AS COLLECTED	AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):	02/12/2010	MEDIA:	NA
TIME COLLECTED (HH:MM)	11:45	SUB-MEDIA:	OTHER
PRS ID: 15-009(c)	OK	SAMPLE TECH CODE:	DC
LOCATION ID: UNK		FIELD QC TYPE:	FR
LOCATION TYPE: GENERIC		FIELD PREP:	UF
TOP DEPTH: 0		SAMPLE USAGE:	QC
BOTTOM DEPTH: 0		SCREEN/PORT DESC:	NA
FIELD MATRIX: W		EXCAVATED: YES/NO	NA
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA	
		WATER FLOWING: YES/NO	NA
BOREHOLE: YES/NO NA		BOREHOLE DECLINATION: NA	
		BOREHOLE DIRECTION: NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	METALS+U-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)	N	
1		SW-846:6850	250 ML POLY	Ice	Y	
1	✓	TCN	500 ML POLY	Sodium Hydroxide	Y	

SAMPLE DESC: QC Sample of RE15-10-8343

SAMPLE COMMENTS: none

LOCATION DESC: Run septic tank

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

Jon Roberson

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY (Printed Name) S. MARCAY (Signature) <i>W</i>	Date/Time 2/12/10 1635
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time



## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2507

EVENT NAME: 4th Qtr. FY09 - SWMU 15-009(c) - Threemile Canyon

SAMPLE ID: RE15-10-8385

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		02/12/2010		MEDIA:	FILL		
TIME COLLECTED (HH:MM)		10:10		SUB-MEDIA:	SOIL		
PRS ID:	15-009(c)	OK		SAMPLE TECH CODE:	DC		
LOCATION ID:	UNK			FIELD QC TYPE:	FTB		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0			SAMPLE USAGE:	QC		
BOTTOM DEPTH:	0			SCREEN/PORT DESC:	NA		
FIELD MATRIX:	S			EXCAVATED: YES/NO	NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO	NA		
BOREHOLE: YES/NO	NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of RE15-10-8346

SAMPLE COMMENTS: none

LOCATION DESC: R44 Septic tank

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

REVIEWED BY (PRINT)

RELINQUISHED BY (Printed Name) Jon Roberson (Signature) <i>Jon Roberson</i>	Date/Time 2/12/10 1635	RECEIVED BY (Printed Name) S. Martinez (Signature) <i>S. Martinez</i>	Date/Time 2/12/10 1635
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number):

REIS-10-8343  
REIS-10-8342  
REIS-10-8346  
REIS-10-8347  
REIS-10-8345  
REIS-10-8377  
REIS-10-8344

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

.....

The following samples do not require rad screening data for the reasons stated (list sample numbers):

REIS-10-8346 - FTB  
REIS-10-8379 - rinsade

Reason:

.....

Print Last Name

Roberson

Signature



Date

2/12/10

## DATA VALIDATION COVER SHEET

5121-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1906 VALIDATION DATE: 3/31/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- |  |  |   |   |
|--|--|---|---|
| <input type="checkbox"/> TPH-GRO           | <input type="checkbox"/> HIGH EXPLOSIVES | <input type="checkbox"/> DIOXIN FURANS          | <input checked="" type="checkbox"/> LCMSMS PERCHLORATES |
| <input type="checkbox"/> TPH-DRO           | <input type="checkbox"/> METALS          | <input type="checkbox"/> PCB CONGENERS          | <input type="checkbox"/> ORGANOCHLORINE                 |
| <input type="checkbox"/> GENERAL CHEMISTRY | <input type="checkbox"/> RADIOCHEMISTRY  | <input type="checkbox"/> LCMSMS HIGH EXPLOSIVES | PESTICIDES/POLYCHLORINATED BIPHENYLS                    |
| <input type="checkbox"/> OTHER (DESCRIBE): |  |   |   |

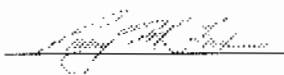
## Section II. Completeness Check

- | YES                                 | NO                       | N/A                                 | (CHECK ONE)                 | YES                                 | NO                       | N/A                                 | (CHECK ONE)              |
|-------------------------------------|--------------------------|-------------------------------------|-----------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 1. CHAIN-OF-CUSTODY FORM(S) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 6. RAW/BSS DATA          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 2. CASE NARRATIVE           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 7. QUALITY CONTROL FORMS |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 3. SAMPLE RESULT FORMS      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 8. QUANTITATION REPORTS  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 4. SAMPLE CHROMATOGRAMS     | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. TICS FORMS            |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. STANDARD CHROMATOGRAMS   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. TICS MASS SPECTRA    |


Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the aqueous and soil MS and MSD parent samples were from other LANL RNs and the raw data for the parent samples were not included in the package. No sample data were qualified as a result.


Reviewed by: Mary Donovan Level: I Date: 04/01/10

VALIDATOR'S SIGNATURE: 


DATE: 3/31/10

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2	Records Use only
LC/MS/MS Perchlorate Analytical Data Validation Checklist	

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The Internal Standard (IS) relative retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC1d	R, PERC1d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The sample result is $\leq 5X$ the concentration of the related analyte in the method blank.	U, PERC4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was $>5X$ .	N/A	J+, PERC4a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is $<0.99$ .	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST		
5121-2		Records Use only
LC/MS/MS Perchlorate Analytical Data Validation Checklist		

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R, PERC7f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2	Records Use only
LC/MS/MS Perchlorate Analytical Data Validation Checklist	

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	31. The Interference Check Sample was not within $\pm 20\%$ of the known value.	UJ, PERC16a	J, PERC16a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 255726

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE15-10-8379

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906

GEL Sample ID: 247335001

Date Filtered: 02-MAR-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	06-MAR-10 21:32	per0306047a
	Perchlorate Isotope Ratio						1	06-MAR-10 21:32	per0306047a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	06-MAR-10 21:32	per0306047a
	Perchlorate-O(18)			0.455	ug/L		1	06-MAR-10 21:32	per0306047a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X  $\frac{1}{\% \text{Solids}}$  Aliquot

LMF

3/31/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8346  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336001  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 89

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.559	2.24	0.598	ug/kg	J	1	09-MAR-10 22:23	per0309019a
	Perchlorate Isotope Ratio			2.8			1	09-MAR-10 22:23	per0309019a
14797-73-0	Perchlorate-101	.559	2.24	0.687	ug/kg	J	1	09-MAR-10 22:23	per0309019a
	Perchlorate-O(18)			5.46	ug/kg		1	09-MAR-10 22:23	per0309019a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

LMF  
 3/31/10



**Perchlorate Analysis Data Sheet**

**Lab Name:** GEL Laboratories LLC

**Lab Code:** GEL

**Instrument:** LCMSMS

**Method:** SW846 6850 Modified

**Matrix:** SOIL

**Extraction Batch ID:** 955717

**Extraction Type:** Solid Prep

**Sample Volume/Weight:** 2.00 g

**Concentrated Extract Volume:** 20.0

**Client Sample No.**

RE15-10-8347

**Date Received:** 18-FEB-10

**GEL Job No (SDG):** 10-1906-1

**GEL Sample ID:** 247336002

**Date Filtered:** 05-MAR-10

**Injection Volume (uL):** 20

**%Solids:** 97.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.514	2.06	0.514	ug/kg	U	1	09-MAR-10 22:31	per0309020a
	Perchlorate Isotope Ratio						1	09-MAR-10 22:31	per0309020a
14797-73-0	Perchlorate-101	.514	2.06	0.514	ug/kg	U	1	09-MAR-10 22:31	per0309020a
	Perchlorate-O(18)			5.01	ug/kg		1	09-MAR-10 22:31	per0309020a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

LMF  
3/31/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 255717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8344  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336003  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 94.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	1.10	ug/kg	J	1	09-MAR-10 22:39	per0309021a
	Perchlorate Isotope Ratio			3.14			1	09-MAR-10 22:39	per0309021a
14797-73-0	Perchlorate-101	.529	2.11	1.12	ug/kg	J	1	09-MAR-10 22:39	per0309021a
	Perchlorate-O(18)			5.06	ug/kg		1	09-MAR-10 22:39	per0309021a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X  $\frac{1}{\% \text{Solids}}$   
 Aliquot

LMF  
 3/31/10

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

**Lab Name:** GEL Laboratories LLC  
**Lab Code:** GEL  
**Instrument:** LCMSMS  
**Method:** SW846 6850 Modified  
**Matrix:** SOIL  
**Extraction Batch ID:** 955717  
**Extraction Type:** Solid Prep  
**Sample Volume/Weight:** 2.00 g  
**Concentrated Extract Volume:** 20.0  
**Client Sample No.**  
RE15-10-8345  
**Date Received:** 18-FEB-10  
**GEL Job No (SDG):** 10-1906-1  
**GEL Sample ID:** 247336004  
**Date Filtered:** 05-MAR-10  
**Injection Volume (uL):** 20  
**%Solids:** 93.7

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.533	2.13	1.36	ug/kg	J	1	09-MAR-10 23:11	per0309025a
	Perchlorate Isotope Ratio			3.04			1	09-MAR-10 23:11	per0309025a
14797-73-0	Perchlorate-101	.533	2.13	1.43	ug/kg	J	1	09-MAR-10 23:11	per0309025a
	Perchlorate-O(18)			5.10	ug/kg		1	09-MAR-10 23:11	per0309025a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

LMF  
 3/31/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Client Sample No.

RE15-10-8342

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336005

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	0.529	ug/kg	U	1	09-MAR-10 23:19	per0309026a
	Perchlorate Isotope Ratio						1	09-MAR-10 23:19	per0309026a
14797-73-0	Perchlorate-101	.529	2.11	0.529	ug/kg	U	1	09-MAR-10 23:19	per0309026a
	Perchlorate-O(18)			5.13	ug/kg		1	09-MAR-10 23:19	per0309026a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

LMF  
3/31/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8343

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336006

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 95.9

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.645	ug/kg	J	1	09-MAR-10 23:28	per0309027a
	Perchlorate Isotope Ratio			3.16			1	09-MAR-10 23:28	per0309027a
14797-73-0	Perchlorate-101	.522	2.09	0.657	ug/kg	J	1	09-MAR-10 23:28	per0309027a
	Perchlorate-O(18)			4.61	ug/kg		1	09-MAR-10 23:28	per0309027a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{\% \text{Solids}}{100}$

LMF  
3/31/10

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 955717Extraction Type: Solid Prep

Client Sample No.

RE15-10-8377Date Received: 18-FEB-10GEL Job No (SDG): 10-1906-1GEL Sample ID: 247336007Date Filtered: 05-MAR-10Injection Volume (uL): 20%Solids: 94.6Sample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0


CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.528	2.11	1.42	ug/kg	J	1	09-MAR-10 23:36	per0309028a
	Perchlorate Isotope Ratio			3.21			1	09-MAR-10 23:36	per0309028a
14797-73-0	Perchlorate-101	.528	2.11	1.42	ug/kg	J	1	09-MAR-10 23:36	per0309028a
	Perchlorate-O(18)			4.94	ug/kg		1	09-MAR-10 23:36	per0309028a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

LMF  
3/31/10

DATA VALIDATION COVER SHEET	
<b>5118-1</b>  <div style="text-align: center;"><b>Data Validation Cover Sheet</b></div>	Records Use only  

**Section I.**

REQUEST NUMBER: 10-1906      VALIDATION DATE: 3/31/10      LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui      ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

<input type="checkbox"/> TPH-GRO	<input type="checkbox"/> HIGH EXPLOSIVES	<input type="checkbox"/> DIOXIN FURANS	<input type="checkbox"/> LCMSMS PERCHLORATES
<input type="checkbox"/> TPH-DRO	<input checked="" type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS	<input type="checkbox"/> ORGANOCHLORINE
<input type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES	<input type="checkbox"/> PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____			


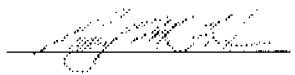
**Section II. Completeness Check**

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. CHAIN-OF-CUSTODY FORM(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. QUANTITATION REPORTS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. SAMPLE CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. STANDARD CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. TICS MASS SPECTRA


Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

- The soil MS %R was <10% for Ba. Thus, the associated sample results were qualified R,I6. The soil MS %Rs were < the laboratory LAL but ≥10% for Ni, Sb, and Se. The associated sample results for Ni were detects and, thus, were qualified J-,I6a. All other associated sample results were NDs and, thus, were qualified UJ,I6a. The soil MS %Rs were > the laboratory UAL for K, Mg, Mn, and Zn. The associated sample results were detects and, thus, were qualified J+,I6b. The soil MS %Rs were <10% for Ca and > the laboratory UAL for Al and Fe. However, the associated parent sample results were >4X the spike concentrations and, thus, no sample results were qualified, based on professional judgment. The aqueous MS %R was < the laboratory LAL but ≥10% for Tl. The associated sample result was an ND and, thus, was qualified UJ,I6a.
- In the aqueous ICB and/or CCBs, Tl and U were detected. In the soil ICB and/or CCBs, Sb was detected. The associated sample results were NDs and, thus, were not qualified.
- In the FR blank, Ca, Cu, Fe, K, and Na were detected. The result for Cu in sample RE15-10-8347 was a detect ≤5X the FR blank concentration and, thus, was qualified U,I4d. All other associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
- It should be noted that the aqueous and soil matrix QC parent samples were from other LANL RNs. No sample results were qualified as a result.


Reviewed by: Mary DonovanLevel: IDate: 04/01/10

DATA VALIDATION COVER SHEET	
<b>5118-1</b>  <b>Data Validation Cover Sheet</b>	Records Use only   <small>EST. 1943</small>
VALIDATOR'S SIGNATURE: <u></u> DATE: <u>3/31/10</u>	
Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project




METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2  Metals Analytical Data Validation Checklist	Records Use only  


Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2  Metals Analytical Data Validation Checklist	Records Use only  

Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. Metals interference check sample percent recovery value is $\geq 50\%$ and $< 80\%$	UJ, I2a	J-, I2a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Metals interference check sample percent recovery value is $> 120\%$ .	N/A	J+, I2b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The sample result is $\leq 5X$ the concentration of the related analyte in the method blank.	U, I4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was $> 5X$ .	N/A	J, I4a
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18. The sample result is $\leq 5X$ the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22. The associated matrix spike recovery was $< 10\%$ . Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23. The associated matrix spike recovery was $<$ the LAL but $> 10\%$ . Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24. The associated matrix spike recovery was $>$ the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	Records Use only  

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS Information.	R, I6c	R, I6c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The sample and the duplicate sample results were $\geq 5X$ the RL and the duplicate RPD was $>20\%$ for water samples and $>35\%$ for soil samples.	UJ, I10a	J, I10a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	28. The LCS percent recovery was $<10\%$ . Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29. The LCS percent recover was $<$ the LAL but $>10\%$ . Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30. The LCS percent recovery was $>$ the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	32. The quantitating IS area count is $<10\%$ for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	Records Use only  

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247335001

BASIS: As Received

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8379

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: WATER

%SOLIDS: 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	RMJ	03/20/10 04:41	100319-6	966864
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7440-70-2	Calcium	66	ug/L	J	50	200	200	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-50-8	Copper	4.78	ug/L	J	3	10	10	1	P	HSC	03/16/10 15:43	031610B-1	955132
7439-89-6	Iron	31.4	ug/L	J	30	100	100	1	P	HSC	03/16/10 15:43	031610B-1	955132
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	03/16/10 15:43	031610B-1	955132
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL	02/25/10 13:06	022510W1-7	957034
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-09-7	Potassium	170	ug/L		50	150	150	1	P	HSC	03/16/10 15:43	031610B-1	955132
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-23-5	Sodium	194	ug/L	J	100	300	300	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-28-0	Thallium UJ,16a	1	ug/L	U	0.3	1	1	1	MS	PRB	03/18/10 13:42	100318-4	955134
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	PRB	03/18/10 00:13	100317-3	955134
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	03/16/10 15:43	031610B-1	955132

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt/vol	Units	Final wt/vol	Units	Date	Analyst
955132	955131	SW846 3005A	50	mL	50	mL	02/24/10	FGA
955134	955133	SW846 3005A	50	mL	50	mL	02/24/10	FGA
957034	957032	SW846 7470A Prep	20	mL	20	mL	02/24/10	TXB3
966864	966863	SW846 3005A	25	mL	25	mL	03/19/10	AXG2

LMF  
3/31/10

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336001

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8346

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3990000	ug/Kg		7350	21600	21600	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-36-0	Antimony UJ,16a	1080	ug/Kg	U	357	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-38-2	Arsenic	1.7	mg/kg		0.22	1.1	1.1	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-39-3	Barium R,16	51400	ug/Kg		108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-41-7	Beryllium	0.647	mg/kg		0.022	0.11	0.11	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-43-9	Cadmium	247	ug/Kg	J	108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-70-2	Calcium	5300000	ug/Kg		8650	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-47-3	Chromium	5150	ug/Kg		162	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-48-4	Cobalt	1510	ug/Kg		162	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-50-8	Copper	7240	ug/Kg		324	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-89-6	Iron	10300000	ug/Kg		8650	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-92-1	Lead	130000	ug/Kg		270	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-95-4	Magnesium J+,16b	801000	ug/Kg		9190	32400	32400	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-96-5	Manganese J+,16b	315000	ug/Kg		216	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-97-6	Mercury	13.3	ug/kg		4.33	12.7	12.7	1	AV	JXL1	03/03/10 12:40	030310S2-4	958626
7440-02-0	Nickel J-,16a	4.29	mg/kg		0.11	0.44	0.44	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-09-7	Potassium J+,16b	651000	ug/Kg		6920	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7782-49-2	Selenium UJ,16a	1.1	mg/kg	U	0.55	1.1	1.1	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-22-4	Silver	127	ug/Kg	J	108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-23-5	Sodium	203000	ug/Kg		7570	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-28-0	Thallium	0.220	mg/kg	U	0.066	0.22	0.22	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-61-1	Uranium	3.27	mg/kg		0.0145	0.044	0.044	2	MS	RMJ	03/18/10 22:14	100318-3	955138
7440-62-2	Vanadium	9070	ug/Kg		108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-66-6	Zinc J+,16b	56300	ug/Kg		357	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt/vol	Units	Final wt/vol	Units	Date	Analyst
955136	955135	SW846 3050B	0.517	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.508	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.527	g	30	mL	03/02/10	TXB3

LMF  
3/31/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336002

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8347

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 97.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1780000	ug/Kg		6790	20000	20000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-36-0	Antimony UJ,16a	998	ug/Kg	U	329	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-38-2	Arsenic	0.639	mg/kg	J	0.203	1.02	1.02	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-39-3	Barium R,16	18100	ug/Kg		99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-41-7	Beryllium	0.458	mg/kg		0.0203	0.102	0.102	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-43-9	Cadmium	124	ug/Kg	J	99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-70-2	Calcium	500000	ug/Kg		7990	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-47-3	Chromium	1200	ug/Kg		150	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-48-4	Cobalt	546	ug/Kg		150	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-50-8	Copper U,14d	2310	ug/Kg		299	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-89-6	Iron	7100000	ug/Kg		7990	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-92-1	Lead	4780	ug/Kg		250	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-95-4	Magnesium J+,16b	360000	ug/Kg		8480	29900	29900	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-96-5	Manganese J+,16b	232000	ug/Kg		200	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-97-6	Mercury	5.92	ug/kg	J	4.03	11.8	11.8	1	AV	JXL	03/03/10 12:42	030310S2-4	958626
7440-02-0	Nickel J-,16a	1.14	mg/kg		0.102	0.406	0.406	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-09-7	Potassium J+,16b	480000	ug/Kg		6390	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7782-49-2	Selenium UJ,16a	1.02	mg/kg	U	0.508	1.02	1.02	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-22-4	Silver	499	ug/Kg	U	99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-23-5	Sodium	315000	ug/Kg		6990	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-28-0	Thallium	0.203	mg/kg	U	0.061	0.203	0.203	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-61-1	Uranium	0.593	mg/kg		0.0134	0.0406	0.0406	2	MS	RMJ	03/18/10 22:24	100318-3	955138
7440-62-2	Vanadium	2880	ug/Kg		99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-66-6	Zinc J+,16b	41700	ug/Kg		329	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.515	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.506	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.521	g	30	mL	03/02/10	TXB3

LMF  
3/31/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336003

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8344

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4180000	ug/Kg		6900	20300	20300	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-36-0	Antimony UJ,16a	1010	ug/Kg	U	335	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-38-2	Arsenic	1.43	mg/kg		0.205	1.03	1.03	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-39-3	Barium R,16	51100	ug/Kg		101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-41-7	Beryllium	0.547	mg/kg		0.0205	0.103	0.103	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-43-9	Cadmium	161	ug/Kg	J	101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-70-2	Calcium	1350000	ug/Kg		8120	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-47-3	Chromium	3970	ug/Kg		152	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-48-4	Cobalt	1810	ug/Kg		152	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-50-8	Copper	5150	ug/Kg		304	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-89-6	Iron	11000000	ug/Kg		8120	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-92-1	Lead	11200	ug/Kg		254	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-95-4	Magnesium J+,16b	714000	ug/Kg		8630	30400	30400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-96-5	Mangancsc J+,16b	268000	ug/Kg		203	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-97-6	Mercury	14.6	ug/kg		4.04	11.9	11.9	1	AV	JXL1	03/03/10 12:44	030310S2-4	958626
7440-02-0	Nickel J-,16a	3.4	mg/kg		0.103	0.411	0.411	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-09-7	Potassium J+,16b	702000	ug/Kg		6490	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7782-49-2	Selenium UJ,16a	1.03	mg/kg	U	0.513	1.03	1.03	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-22-4	Silver	132	ug/Kg	J	101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-23-5	Sodium	183000	ug/Kg		7100	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-28-0	Thallium	0.0712	mg/kg	J	0.0616	0.205	0.205	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-61-1	Uranium	1.51	mg/kg		0.0136	0.0411	0.0411	2	MS	RMJ	03/18/10 22:27	100318-3	955138
7440-62-2	Vanadium	8780	ug/Kg		101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-66-6	Zinc J+,16b	35900	ug/Kg		335	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.521	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.515	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.534	g	30	mL	03/02/10	TXB3

LMF  
3/31/10



**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

**SAMPLE ID:** 247336004      **BASIS:** Dry Weight      **DATE COLLECTED** 12-FEB-10  
**CLIENT ID:** RE15-10-8345      **LEVEL:** Low      **DATE RECEIVED** 18-FEB-10  
**MATRIX:** SOIL      **%SOLIDS:** 93.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4370000	ug/Kg		7100	20900	20900	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-36-0	Antimony UJ,16a	1040	ug/Kg	U	344	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-38-2	Arsenic	1.92	mg/kg		0.21	1.05	1.05	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-39-3	Barium R,16	56800	ug/Kg		104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-41-7	Beryllium	0.579	mg/kg		0.021	0.105	0.105	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-43-9	Cadmium	304	ug/Kg	J	104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-70-2	Calcium	6730000	ug/Kg		8350	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-47-3	Chromium	4800	ug/Kg		157	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-48-4	Cobalt	2030	ug/Kg		157	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-50-8	Copper	8650	ug/Kg		313	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-89-6	Iron	11700000	ug/Kg		8350	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-92-1	Lead	20900	ug/Kg		261	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-95-4	Magnesium J+,16b	810000	ug/Kg		8870	31300	31300	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-96-5	Manganesec J+,16b	286000	ug/Kg		209	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-97-6	Mercury	15.6	ug/kg		3.75	11	11	1	AV	JXL1	03/03/10 12:45	030310S2-4	958626
7440-02-0	Nickel J-,16a	7.99	mg/kg		0.105	0.42	0.42	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-09-7	Potassium J+,16b	883000	ug/Kg		6680	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7782-49-2	Selenium UJ,16a	1.05	mg/kg	U	0.525	1.05	1.05	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-22-4	Silver	150	ug/Kg	J	104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-23-5	Sodium	281000	ug/Kg		7310	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-28-0	Thallium	0.0729	mg/kg	J	0.063	0.21	0.21	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-61-1	Uranium	8.19	mg/kg		0.0139	0.042	0.042	2	MS	RMJ	03/18/10 22:31	100318-3	955138
7440-62-2	Vanadium	11100	ug/Kg		104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-66-6	Zinc J+,16b	47200	ug/Kg		344	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.511	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.508	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.581	g	30	mL	03/02/10	TXB3

LMF  
3/31/10

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336005

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8342

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3070000	ug/Kg		7120	20900	20900	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-36-0	Antimony UJ,16a	1050	ug/Kg	U	345	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-38-2	Arsenic	1.42	mg/kg		0.208	1.04	1.04	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-39-3	Barium R,16	42100	ug/Kg		105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-41-7	Beryllium	0.605	mg/kg		0.0208	0.104	0.104	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-43-9	Cadmium	194	ug/Kg	J	105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-70-2	Calcium	3780000	ug/Kg		8370	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-47-3	Chromium	3030	ug/Kg		157	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-48-4	Cobalt	1280	ug/Kg		157	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-50-8	Copper	6690	ug/Kg		314	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-89-6	Iron	8920000	ug/Kg		8370	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-92-1	Lead	8090	ug/Kg		262	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-95-4	Magnesium J+,16b	603000	ug/Kg		8900	31400	31400	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-96-5	Manganese J+,16b	282000	ug/Kg		209	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-97-6	Mercury	10.8	ug/kg	J	4.16	12.2	12.2	1	AV	JXL	03/03/10 12:47	030310S2-4	958626
7440-02-0	Nickel J-,16a	7.35	mg/kg		0.104	0.415	0.415	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-09-7	Potassium J+,16b	532000	ug/Kg		6700	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7782-49-2	Selenium UJ,16a	1.04	mg/kg	U	0.519	1.04	1.04	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-22-4	Silver	523	ug/Kg	U	105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-23-5	Sodium	260000	ug/Kg		7330	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-28-0	Thallium	0.208	mg/kg	U	0.0623	0.208	0.208	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-61-1	Uranium	1.8	mg/kg		0.0137	0.0415	0.0415	2	MS	RMJ	03/18/10 22:35	100318-3	955138
7440-62-2	Vanadium	6680	ug/Kg		105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-66-6	Zinc J+,16b	53800	ug/Kg		345	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.505	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.509	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.518	g	30	mL	03/02/10	TXB3

LMF  
3/31/10

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336006

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8343

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 95.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2880000	ug/Kg		6830	20100	20100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-36-0	Antimony UJ,16a	1000	ug/Kg	U	332	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-38-2	Arsenic	0.996	mg/kg	J	0.203	1.02	1.02	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-39-3	Barium R,16	31300	ug/Kg		100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-41-7	Beryllium	0.534	mg/kg		0.0203	0.102	0.102	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-43-9	Cadmium	145	ug/Kg	J	100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-70-2	Calcium	1730000	ug/Kg		8040	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-47-3	Chromium	2340	ug/Kg		151	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-48-4	Cobalt	983	ug/Kg		151	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-50-8	Copper	3960	ug/Kg		301	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-89-6	Iron	9290000	ug/Kg		8040	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-92-1	Lead	9530	ug/Kg		251	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-95-4	Magnesium J+,16b	555000	ug/Kg		8540	30100	30100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-96-5	Manganese J+,16b	250000	ug/Kg		201	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-97-6	Mercury	9.53	ug/kg	J	3.93	11.5	11.5	1	AV	JXL1	03/03/10 12:49	030310S2-4	958626
7440-02-0	Nickel J-,16a	2.18	mg/kg		0.102	0.407	0.407	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-09-7	Potassium J+,16b	538000	ug/Kg		6430	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7782-49-2	Selenium UJ,16a	1.02	mg/kg	U	0.508	1.02	1.02	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-22-4	Silver	502	ug/Kg	U	100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-23-5	Sodium	236000	ug/Kg		7030	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-28-0	Thallium	0.203	mg/kg	U	0.061	0.203	0.203	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-61-1	Uranium	1.22	mg/kg		0.0134	0.0407	0.0407	2	MS	RMJ	03/18/10 22:38	100318-3	955138
7440-62-2	Vanadium	5950	ug/Kg		100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-66-6	Zinc J+,16b	49400	ug/Kg		332	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt/vol	Units	Final wt/vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.519	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.513	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.542	g	30	mL	03/02/10	TXB3

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3/31/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336007

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8377

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL


%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4820000	ug/Kg		7090	20800	20800	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-36-0	Antimony UJ,16a	1040	ug/Kg	U	344	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-38-2	Arsenic	1.57	mg/kg		0.201	1	1	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-39-3	Barium R,16	63300	ug/Kg		104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-41-7	Beryllium	0.605	mg/kg		0.0201	0.1	0.1	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-43-9	Cadmium	184	ug/Kg	J	104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-70-2	Calcium	1930000	ug/Kg		8340	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-47-3	Chromium	3810	ug/Kg		156	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-48-4	Cobalt	1850	ug/Kg		156	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-50-8	Copper	6200	ug/Kg		313	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-89-6	Iron	10200000	ug/Kg		8340	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-92-1	Lead	11800	ug/Kg		260	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-95-4	Magnesium J+,16b	749000	ug/Kg		8860	31300	31300	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-96-5	Manganese J+,16b	296000	ug/Kg		208	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-97-6	Mercury	18.6	ug/kg		4.13	12.1	12.1	1	AV	JXL	03/03/10 12:54	030310S2-4	958626
7440-02-0	Nickel J-,16a	4.27	mg/kg		0.1	0.402	0.402	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-09-7	Potassium J+,16b	803000	ug/Kg		6670	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7782-49-2	Selenium UJ,16a	1	mg/kg	U	0.502	1	1	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-22-4	Silver	132	ug/Kg	J	104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-23-5	Sodium	222000	ug/Kg		7290	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-28-0	Thallium	0.0789	mg/kg	J	0.0603	0.201	0.201	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-61-1	Uranium	1.35	mg/kg		0.0133	0.0402	0.0402	2	MS	RMJ	03/18/10 22:42	100318-3	955138
7440-62-2	Vanadium	10400	ug/Kg		104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-66-6	Zinc J+,16b	42700	ug/Kg		344	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.507	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.526	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.522	g	30	mL	03/02/10	TXB3

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3/31/10

DATA VALIDATION COVER SHEET	
<b>5120-1</b>  <p style="text-align: center;"><b>Data Validation Cover Sheet</b></p>	Records Use only  

Section I.			
REQUEST NUMBER:	10-1906	VALIDATION DATE:	3/31/10
		LAB CODE:	GEL
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>			
VALIDATOR: <u>Larry Fukui</u>		ORGANIZATION: <u>Analytical Quality Associates, Inc.</u>	
ANALYTICAL SUITE (CHECK ALL THAT APPLY):			
<input type="checkbox"/> TPH-GRO	<input type="checkbox"/> HIGH EXPLOSIVES	<input type="checkbox"/> DIOXIN FURANS	<input type="checkbox"/> LCMSMS PERCHLORATES
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS	<input type="checkbox"/> ORGANOCHLORINE
<input checked="" type="checkbox"/> GENERAL CHEMISTRY	<input type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES	<input type="checkbox"/> PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____			

Section II. Completeness Check							
YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. CHAIN-OF-CUSTODY FORM(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. RAW/BSS DATA
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. CASE NARRATIVE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. QUALITY CONTROL FORMS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. SAMPLE RESULT FORMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. QUANTITATION REPORTS
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. SAMPLE CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. TICS FORMS
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. STANDARD CHROMATOGRAMS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. TICS MASS SPECTRA


Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The aqueous MS %R was < the laboratory LAL but  $\geq 10\%$  for  $\text{NO}_3/\text{NO}_2\text{-N}$ . The associated sample result was an ND and, this was qualified UJ16a.
2. It should be noted that the aqueous and soil matrix QC analyses for total CN were performed on parent samples from other LANL RNs. No sample data were qualified as a result.
3. It should also be noted that the laboratory did not receive a  $\text{NO}_3/\text{NO}_2\text{-N}$  container for water sample RE15-10-8379. An aliquot was taken from the perchlorate container and preserved prior to analysis. No sample data were qualified as a result.


Reviewed by: Mary DonovanLevel: IDate: 04/01/10

VALIDATOR'S SIGNATURE: \_\_\_\_\_


DATE: 3/31/10

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5120-2</b>  <b>General Chemistry Analytical Data Validation Checklist</b>	Records Use only  

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5120-2</b>  <b>General Chemistry Analytical Data Validation Checklist</b>	Records Use only  

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2  General Chemistry Analytical Data Validation Checklist	Records Use only   Los Alamos NATIONAL LABORATORY EST. 1942

Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 11, 2010

Client SDG: 10-1906

Client Sample ID: RE15-10-8379  
Sample ID: 247335001  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "As Received"</i>											
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2	02/23/10	1345	955981	1
<b>Nutrient Analysis</b>											
<i>EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"</i>											
Nitrogen, Nitrate/Nitrite	U	ND	UJ,l6a	0.100	0.500	mg/L	10	AXH3	02/25/10	1404	956483 2

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1200	955979

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

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## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8377  
Sample ID: 247336007  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 5.35%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.3C	H	9.17	0.010	0.100	SU	1	TXT1	02/18/10	1636	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	67.8	249	ug/kg	1	AXC2	02/23/10	1550	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.93	0.317	1.06	mg/kg	1	MAR1	03/07/10	1322	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8346  
Sample ID: 247336001  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 10.5%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 20.0C	H	11.4	0.010	0.100	SU	1	TXT1	02/18/10	1621	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	73.1	269	ug/kg	1	AXC2	02/23/10	1541	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.22	0.335	1.12	mg/kg	1	MAR1	03/06/10	2108	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8347  
Sample ID: 247336002  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 2.74%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.9C	H	9.05	0.010	0.100	SU	1	TXT1	02/18/10	1625	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	62.4	230	ug/kg	1	AXC2	02/23/10	1542	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.308	1.03	mg/kg	1	MAR1	03/06/10	2303	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

LMF  
3/31/10

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8344  
Sample ID: 247336003  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 5.43%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.9C	H	8.77	0.010	0.100	SU	1	TXT1	02/18/10	1627	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.9	264	ug/kg	1	AXC2	02/23/10	1543	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		2.14	0.317	1.06	mg/kg	1	MAR103/06/10	2332	955448		3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

LMF  
3/31/10

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8345  
Sample ID: 247336004  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 6.26%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 20.1C	H	11.1	0.010	0.100	SU	1	TXT1	02/18/10	1629	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total		1690	72.5	267	ug/kg	1	AXC2	02/23/10	1544	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		2.24	0.320	1.07	mg/kg	1	MAR103	07/10	0001	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

LMF  
3/31/10

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8342  
Sample ID: 247336005  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 5.4%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.8C	H	10.4	0.010	0.100	SU	1	TXT1	02/18/10	1631	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	70.5	259	ug/kg	1	AXC2	02/23/10	1545	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.317	1.06	mg/kg	1	MAR1	03/07/10	0030	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

LMF  
3/31/10

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8343  
Sample ID: 247336006  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 4.13%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.2C	H	10.0	0.010	0.100	SU	1	TXT1	02/18/10	1632	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	64.5	237	ug/kg	1	AXC2	02/23/10	1545	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.64	0.313	1.04	mg/kg	1	MAR1	03/07/10	1253	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

LMF  
3/31/10



Wednesday, February 17, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1906

LOS ALAMOS

REQUEST NUMBER: 10-1906

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/19/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

247335%. 247336%.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8379	1	POLY	METALS+U-GEL	Nitric Acid	W
RE15-10-8379	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
RE15-10-8379	1	POLY	SW-846:6850	Ice	W
RE15-10-8379	1	POLY	TCN	Sodium Hydroxide	W
RE15-10-8346	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8346	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8347	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8347	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8344	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8344	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8345	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8345	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8342	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8342	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8343	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8343	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8377	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8377	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:

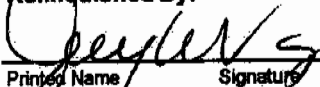
Date

Time

Received By:

Date

Time

 2/17/10 1400 Mercedes Simmons Mercedes Simmons 2/18/10 0845  
 Printed Name Signature Printed Name Signature

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Signature

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Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Page 1 of 3  
REQUEST NUMBER: 10-1906

Wednesday, February 17, 2010  
**LOS ALAMOS**  
NATIONAL LABORATORY

These Samples are on:  
LANL Request Number: 10-1906  
Per Agreement Number: 128310011  
Project Cost Code: MR3A05529E00

ATTN: Valerie Davis  
General Engineering Laboratories, Inc., Charleston, SC.  
2040 Savage Rd  
Charleston, SC 29407

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 2/17/2010  
TURNAROUND/REPORT DUE: 3/19/2010  
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background  
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:  
Signature: 

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-300.0	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	EPA-353.2	1	RE15-10-8379	W	2/12/2010	
	SW-846:6010B	1	RE15-10-8342	R	2/12/2010	

Wednesday, February 17, 2010

Page 2 of 3

REQUEST NUMBER: 10-1906

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	SW-846:6020	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:6850	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:7470A	1	RE15-10-8342	R	2/12/2010	
	SW-846:7471A	1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	

Wednesday, February 17, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	SW-846:9012A	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:9045C	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	

Final Page of REQUEST NUMBER 10-1906



February 23, 2010

[www.gel.com](http://www.gel.com)

Ms. Joylene Valdez  
Los Alamos National Laboratory  
PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545

Re: LANL ER Project  
Work Orders: 247335 247336  
SDG: 10-1906

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on February 18, 2010, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

Valerie Davis  
Project Manager

Purchase Order: 72733-001-09  
Chain of Custody: 10-1906  
Enclosures

**Los Alamos National Laboratory (72733-001-09)**  
**LANL ER Project**  
**Work Order #: 247335 and 247336**  
**SDG: 10-1906**

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# Case Narrative

**Case Narrative for  
Los Alamos National Laboratory (72733-001-09)  
LANL ER Project  
Workorder #: 247335 and 247336  
SDG # : 10-1906**

**February 23, 2010**

**Laboratory Identification:**

GEL Laboratories LLC  
2040 Savage Road  
Charleston, South Carolina 29407  
(843) 556-8171

**Summary**

**Sample receipt** The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on February 18, 2010 for analysis. The sample was prepared/analyzed within the required holding time. Shipping container temperature was checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The lab did not receive a NO3NO2 container for sample RE15-10-8379. Los Alamos was notified. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

**Sample Identification** The laboratory received the following samples:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
247335001	RE15-10-8379
247336001	RE15-10-8346
247336002	RE15-10-8347
247336003	RE15-10-8344
247336004	RE15-10-8345
247336005	RE15-10-8342
247336006	RE15-10-8343
247336007	RE15-10-8377

**Case Narrative**

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

**Data Package** The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Perchlorates by LCMSMS.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.



Valerie Davis  
Project Manager

**List of current GEL Certifications as of 23 February 2010**

<b>State</b>	<b>Certification</b>
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California -- NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida -- NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois -- NELAP	200029
Indiana	C-SC-01
Kansas -- NELAP	E-10332
Kentucky	90129
Louisiana -- NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey -- NELAP	SC002
New Mexico	FL NELAP E87156
New York -- NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania -- NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas -- NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah -- NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

# **Chain of Custody and Supporting Documentation**

Wednesday, February 17, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1906

**LOS ALAMOS**

REQUEST NUMBER: 10-1906

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 3/19/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

247335% 247336%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-8379	1	POLY	METALS+U-GEL	Nitric Acid	W
RE15-10-8379	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
RE15-10-8379	1	POLY	SW-846:6850	Ice	W
RE15-10-8379	1	POLY	TCN	Sodium Hydroxide	W
RE15-10-8346	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8346	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8347	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8347	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8344	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8344	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8345	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8345	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8342	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8342	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8343	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8343	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE15-10-8377	1	POLY	METALS+U-GEL	Ice	R
RE15-10-8377	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Wednesday, February 17, 2010

**LOS ALAMOS**

**NATIONAL LABORATORY**

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

Please analyse the enclosed samples  
according to the schedule indicated:

**SHIP DATE: 2/17/2010**

**TURNAROUND/REPORT DUE: 3/19/2010**

**TURNAROUND REQ'D: 30 Days**

**RAD SCREENING: Yes, Below Background**

**LAB REQUEST COMMENTS:**

LANL ER SMO CONTACT:

Signature:

Page 1 of 3

REQUEST NUMBER: 10-1906

These Samples are on:

LANL Request Number: 10-1906

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	EPA:353.2	1	RE15-10-8379	W	2/12/2010	
	SW-846:6010B	1	RE15-10-8342	R	2/12/2010	

Wednesday, February 17, 2010

REQUEST NUMBER: 10-1906

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	SW-846:6020	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:6650	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:7470A	1	RE15-10-8379	W	2/12/2010	
	SW-846:7471A	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	

Wednesday, February 17, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
	SW-846:9012A	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	
		1	RE15-10-8379	W	2/12/2010	
	SW-846:9045C	1	RE15-10-8342	R	2/12/2010	
		1	RE15-10-8343	R	2/12/2010	
		1	RE15-10-8344	R	2/12/2010	
		1	RE15-10-8345	R	2/12/2010	
		1	RE15-10-8346	R	2/12/2010	
		1	RE15-10-8347	R	2/12/2010	
		1	RE15-10-8377	R	2/12/2010	

Final Page of REQUEST NUMBER 10-1906



Client: LANL			SDG/ARCOC/Work Order: 10-1906		
Received By: Mercedes Simmons			Date Received: 2/18/10		
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.		
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 60cpm		
Classified Radioactive II by RSO?		X			
COC/Samples marked containing PCBs?		X			
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:		
Samples identified as Foreign Soil?		X			
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)	
1 Shipping containers received intact and sealed?	X			Circle Applicable: seals broken    damaged container    leaking container    other (describe)	
2 Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags    blue ice    dry ice    none    other 1,2                          10	
3 Chain of custody documents included with shipment?	X				
4 Sample containers intact and sealed?	X			Circle Applicable: seals broken    damaged container    leaking container    other (describe)	
5 Samples requiring chemical preservation at proper pH?	X			Sample ID's, containers affected and observed pH:  If Preservation added, Lot#:	
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:	
7 Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)	
8 Samples received within holding time?	X			ID's and tests affected:	
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:	
10 Date & time on COC match date & time on bottles?		X		Sample ID's affected:  No time on Chain of Custody.	
11 Number of containers received match number indicated on COC?	X <sup>42</sup>		X	Sample ID's affected: RE15-10-8314 the Lab did NOT rec. a container for NO3NO2	
12 COC form is properly signed in relinquished/received sections?	X				
<b>Comments:</b> <b>Fed Ex Tracking Numbers:</b> 7209 7850 1047 1C 7209 7850 1014 2C 7209 7850 1036 2C 7209 7850 1025 2C 7209 7850 0990 10C 7209 7850 1003 10C					

**Subject:** Sample Receipt for 2/18/10

**From:** Dionne Francis <Dionne.Francis@gel.com>

**Date:** Mon, 22 Feb 2010 17:35:10 -0500

**To:** "Keith R. Greene" <kgreene@lanl.gov>, Joylene Valdez <joylenev@lanl.gov>, Valerie Davis <vsd@gel.com>

Keith,

RN 10-1906: the lab did not receive a NO3NO2 container for sample RE15-10-8379. An aliquot will be taken from the Perchlorate container and preserved prior to analysis.

Thanks,  
Dionne

--  
Dionne Francis  
Project Manager Assistant  
GEL Laboratories, LLC  
2040 Savage Road  
Charleston, SC (USA) 29407  
Direct: 843.769.7376 Ext. 4432  
Main: 843.556.8171  
Fax: 843.766.1178  
E-mail: [daf@gel.com](mailto:daf@gel.com)  
Web: [www.gel.com](http://www.gel.com)

Let the Bible fill the memory, rule the heart, and guide the feet.

ORIGIN ID: SAFA (505) 565-9958  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TA00 BLDG 1237 DPU 03

LOS ALAMOS NM 87545  
UNITED STATES US

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-0171  
REF: 68010AMR3A05529E00

SHIP DATE: 17FEB10  
ACTMGT: 51.0 LB MAN  
CAD: 0014176/CAPE2450

SHIP DATE: 17FEB10  
ACTMGT: 51.0 LB MAN  
CAD: 0014176/CAPE2450

BILL SENDER

TA00 BLDG 1237 DPU 03

LOS ALAMOS NM 87545  
UNITED STATES US

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-0171  
REF: 68010AMR2A0515BYDO

SHIP DATE: 17FEB10  
ACTMGT: 51.0 LB MAN  
CAD: 0014176/CAPE2450



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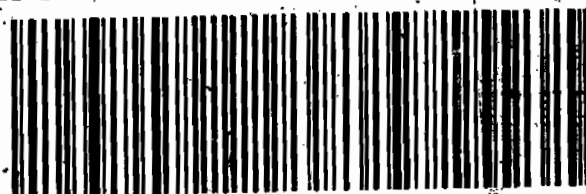


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LOS ALAMOS NM 87545  
UNITED STATES US

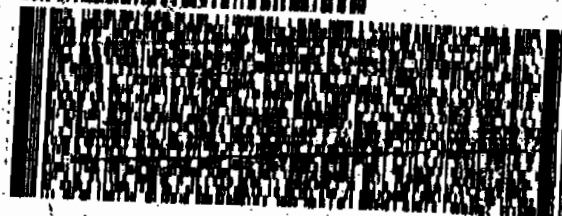
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ACTMGT: 51.0 LB MAN  
CAD: 0014176/CAPE2450

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(843) 556-0171  
REF: 68010AMR3A05529E00

SHIP DATE: 17FEB10  
ACTMGT: 51.0 LB MAN  
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Page 1 of 1

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REF: 68010AMR3A05529E00

SHIP DATE: 17FEB10  
ACTMGT: 51.0 LB MAN  
CAD: 0014176/CAPE2450



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ORIGIN ID: SAFA (805) 885-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGO BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 17FEB18  
ACTNGT: 67.0 LB MAN  
CRD: 0014178/CAFE2450

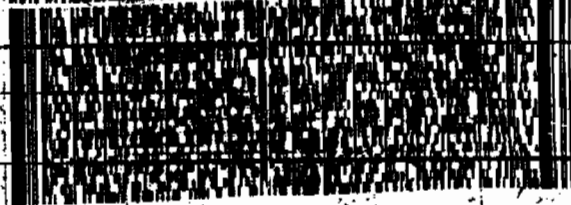
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REF: 68010AMR2A0515BYDO

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Part# 158149-434 NRIT V3 09-09



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JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGO BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 17FEB18  
ACTNGT: 42.0 LB MAN  
CRD: 0014178/CAFE2450

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
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# **Data Review Qualifier Flag Definition Sheet**

## Data Review Qualifier Definitions

Qualifier    Explanation

- \*    A quality control analyte recovery is outside of specified acceptance criteria
- \*\*   Analyte is a surrogate compound
- <    Result is less than value reported
- >    Result is greater than value reported
- ^    RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
- A    The TIC is a suspected aldol-condensation product
- B    Target analyte was detected in the associated blank
- B    Metals-Either presence of analyte detected in the associated blank, or  
MDL/IDL < sample value < PQL
- BD   Results are either below the MDC or tracer recovery is low
- C    Analyte has been confirmed by GC/MS analysis
- D    Results are reported from a diluted aliquot of the sample
- d    5-day BOD-The 2:1 depletion requirement was not met for this sample
- E    Organics-Concentration of the target analyte exceeds the instrument calibration range
- E    Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- H    Analytical holding time was exceeded
- h    Preparation or preservation holding time was exceeded
- J    Value is estimated
- N    Metals-The Matrix spike sample recovery is not within specified control limits
- N    Organics-Presumptive evidence based on mass spectral library search to make a tentative  
identification of the analyte (TIC). Quantitation is based on nearest internal standard  
response factor
- N/A   Spike recovery limits do not apply. Sample concentration exceeds spike concentration  
by 4X or more
- ND   Analyte concentration is not detected above the reporting limit
- UI   Gamma Spectroscopy-Uncertain identification
- X    Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y    QC Samples were not spiked with this compound
- Z    Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

# LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS  
Los Alamos National Laboratory (LANL)  
SDG 10-1906**

**Method/Analysis Information**

**Procedure:** Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

**Analytical Method:** SW846 6850 Modified

**Prep Method:** SW846 6850 Modified

**Analytical Batch Number:** 955727

**Prep Batch Number:** 955726

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
247335001	RE15-10-8379
1202049073	Interference Check Sample (ICS)
1202049069	Method Blank (MB)
1202049070	Laboratory Control Sample (LCS)
1202049071	247139001(RE16-10-3910) Matrix Spike (MS)
1202049072	247139001(RE16-10-3910) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

**Preparation/Analytical Method Verification**

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

**Calibration Information**

**Initial Calibration**

All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

10-1906-PERLCMS

Page 1 of 4



**CCV Requirements**

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

**CCB Requirements**

All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

**CCV Requirements**

All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

**Low Level Standard (CRI) Requirements**

All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

**Quality Control (QC) Information****Method Blank (MB) Statement**

The MB(s) analyzed with this SDG met the acceptance criteria.

**Interference Check Sample (ICS)**

The interference check sample (ICS) met all recovery acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

**QC Sample Designation**

Client sample 247139001 (RE16-10-3910) from SDG 10-1854-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

**Matrix Spike (MS) Recovery Statement**

The MS recoveries were within the established acceptance limits.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries were within the established acceptance limits.

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPD(s) between the MS and MSD met the acceptance limits.

**Retention Time Standard Area Acceptance**

The retention time standard areas were within the required acceptance criteria for all samples and QC.

**Retention Time**

During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

10-1906-PERLCMS

Page 2 of 4

### **Technical Information**

#### **Holding Time Specifications**

All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

#### **Preparation/Analytical Method Verification**

All procedures were performed as stated in the SOP.

#### **Sample Dilutions**

The samples in this SDG did not require dilutions.

#### **Sample Re-extraction/Re-analysis**

Due to instrument problems, sample 247335001 (RE15-10-8379) was analyzed one day after the QC for the SDG was analyzed.

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

#### **Manual Integrations**

Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

#### **Method Comments**

The sample in this SDG was not originally analyzed using EPA Method 314.0.

#### **Additional Comments**

The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

#### **Perchlorate Isotope Ratio**

The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

### System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

### Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

### Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

### Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert K. Mauer

Date: 03/12/10

# SAMPLE DATA SUMMARY

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 955726

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE15-10-8379

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906

GEL Sample ID: 247335001

Date Filtered: 02-MAR-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	06-MAR-10 21:32	per0306047a
	Perchlorate Isotope Ratio						1	06-MAR-10 21:32	per0306047a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	06-MAR-10 21:32	per0306047a
	Perchlorate-O(18)			0.455	ug/L		1	06-MAR-10 21:32	per0306047a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

# QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1906

Extract Batch Code: 955726

Date Filtered: 02-MAR-10

Matrix: WATER

Sample ID: 1202049070

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.18	ug/L	90.1		85 - 115
Perchlorate Isotope Ratio		3.12				-
Perchlorate-101	0.200	.188	ug/L	93.9		85 - 115
Perchlorate-O(18)		.416	ug/L			-

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Form 5a

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1906

Extract Batch Code: 955726

Date Filtered: 02-MAR-10

Matrix: WATER

Sample ID: 1202049073

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.163	ug/L	81.6		70 - 130
Perchlorate Isotope Ratio		2.98				
Perchlorate-101	0.200	.178	ug/L	89.2		70 - 130
Perchlorate-O(18)		.456	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

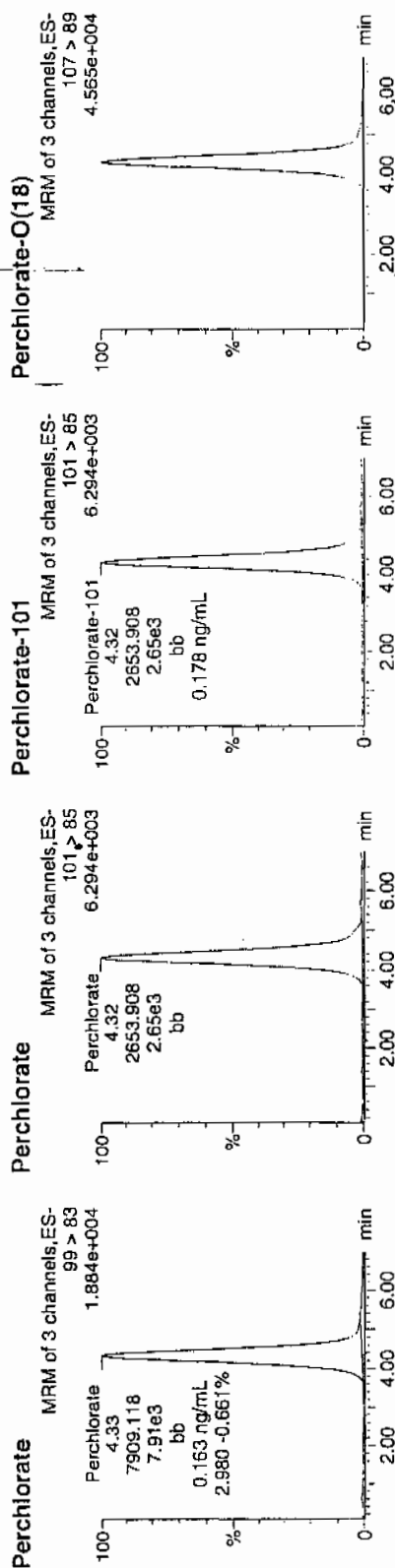
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Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305115a  
Date: 06-Mar-2010  
Time: 07:52:13  
ID: 1202049073  
Vial: 3:1,C

0.03  
03-06-10

1202049073 | 1202049073 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202049073	Perchlorate	99 > 83	4.33	7909.118	7909.118	bb			0.1631	81.55	-18.45	520.937	2.98
1202049073	Perchlorate-101	101 > 85	4.32	2653.908	2653.908	bb			0.1783	89.17	-10.83	114.573	
1202049073	Perchlorate-O(18)	107 > 89	4.32	19159.748	19159.748	bb			0.4555	91.11	-8.89	3028.5...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1906

Extract Batch Code: 955726

Date Extracted: 02-MAR-10

GEL MS/PS ID: 1202049071

Client ID: RE16-10-3910

GEL MSD/PSD ID: 1202049072

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00113	ug/L	0.176	87.6		.179	88.7		1.33		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.13			3.1			0			-
Perchlorate-101	0.200	0.00083	ug/L	0.184	91.4		.188	93.5		2.22		30	75 - 125
Perchlorate-O(18)	0	0.408	ug/L	0.414			.42			1.23			-

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1906

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	05-MAR-10	per0305001a	IPB001
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305001a	IPB001
Perchlorate	0.00	0	NA	05-MAR-10	per0305002a	IPB001
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305002a	IPB001
Perchlorate	0.00	0	NA	06-MAR-10	per0306001a	IPB001
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306001a	IPB001
Perchlorate	0.00	0	NA	06-MAR-10	per0306002a	IPB001
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306002a	IPB001

**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

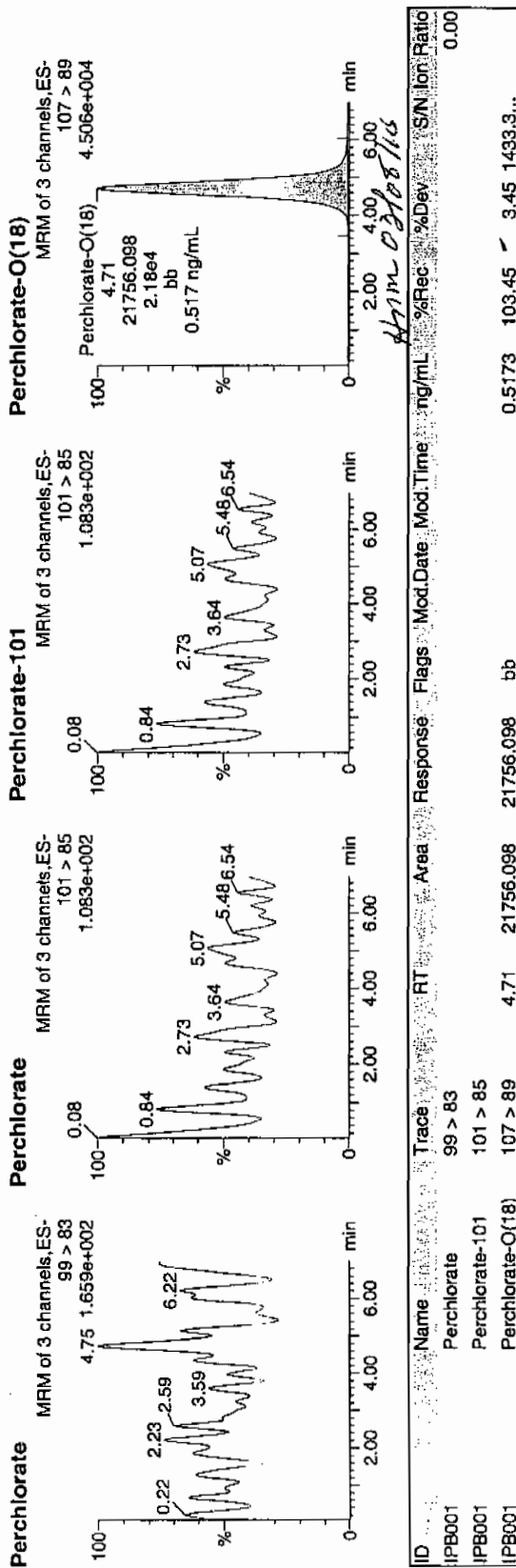
Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per030510a.mdb 06 Mar 2010 09:51:19  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per030510a.cdb 06 Mar 2010 09:51:51

Name: per0305001a  
Date: 05-Mar-2010  
Time: 12:39:45  
ID: IPB001  
Vial: 1:1,A

0305-10



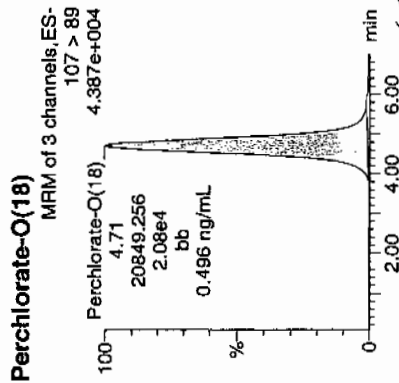
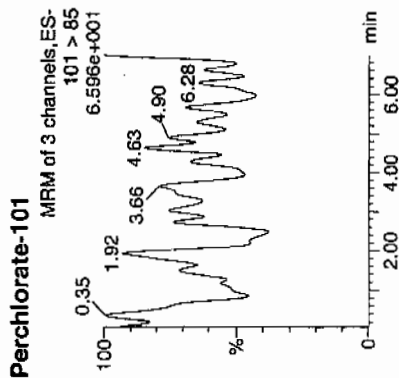
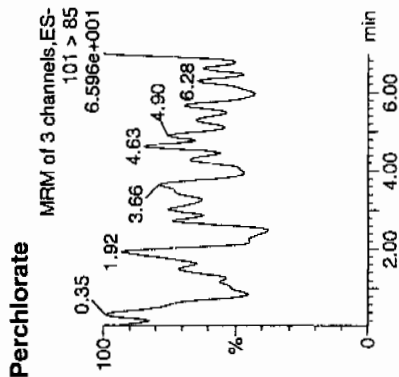
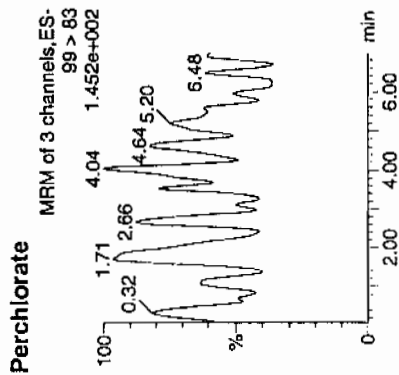
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305002a  
Date: 05-Mar-2010  
Time: 12:50:06  
ID: IPB001  
Vial: 1:1,A

03-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	4.71	20849.256	20849.256	bb			0.4957	99.14	-0.86	1295.4...	

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

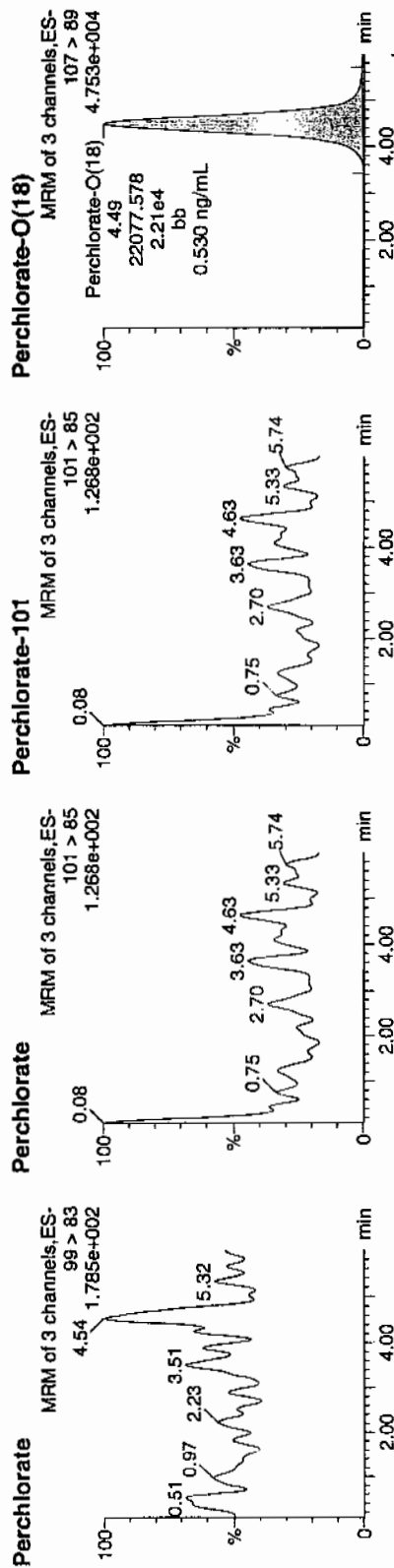
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Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per030610a.mdb 07 Mar 2010 10:54:54  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per030610a.cdb 07 Mar 2010 11:00:09

Name: per0306001a  
Date: 06-Mar-2010  
Time: 14:34:56  
ID: IPB001  
Vial: 1:1,A

0307-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	4.49	22077.578	22077.578	bb			0.5298	105.96	5.96	812.742	

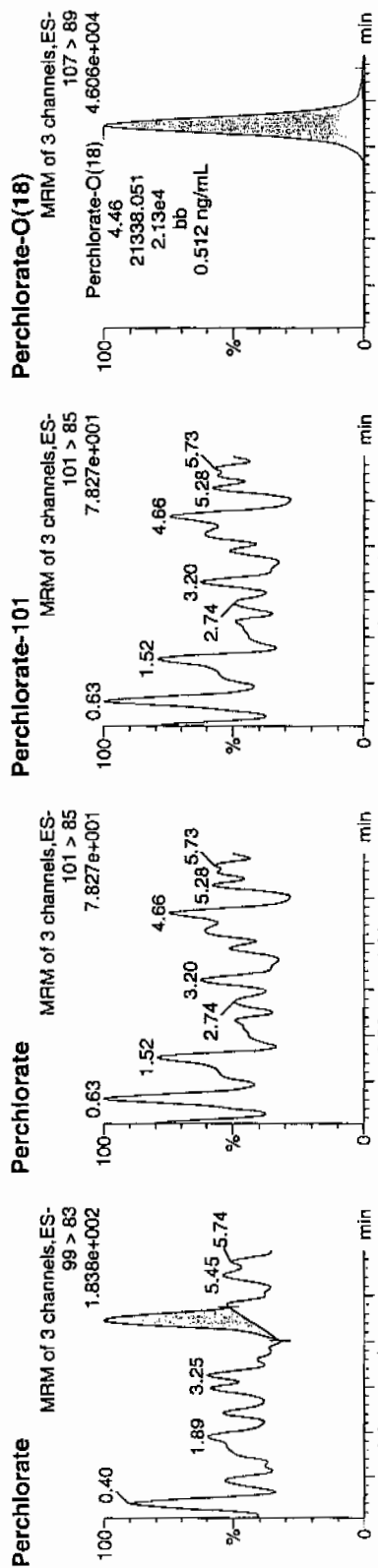
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per03060002a  
Date: 06-Mar-2010  
Time: 14:43:58  
ID: IPB001  
Vial: 1:1,A

03/07/10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB001	Perchlorate	99 > 83	4.46	33.306	33.306	bb			0.0007			5.502	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	4.46	21338.051	21338.051	bb			0.5121	102.41	2.41	1800.9...	

## Perchlorate Continuing Calibration Blank

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	05-MAR-10	per0305008a	IPB002
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305008a	IPB002
Perchlorate	0.00	0	NA	05-MAR-10	per0305010a	IPB003
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305010a	IPB003
Perchlorate	0.00	0	NA	05-MAR-10	per0305023a	IPB004
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305023a	IPB004
Perchlorate	0.00	0	NA	05-MAR-10	per0305036a	IPB005
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305036a	IPB005
Perchlorate	0.00	0	NA	05-MAR-10	per0305062a	IPB008
Perchlorate-101	0.00	0	NA	05-MAR-10	per0305062a	IPB008
Perchlorate	0.00	0	NA	06-MAR-10	per0305075a	IPB009
Perchlorate-101	0.00	0	NA	06-MAR-10	per0305075a	IPB009
Perchlorate	0.00	0	NA	06-MAR-10	per0305079a	IPB010



## Perchlorate Continuing Calibration Blank

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	06-MAR-10	per0305079a	IPB010
Perchlorate	0.00	0	NA	06-MAR-10	per0305088a	IPB011
Perchlorate-101	0.00	0	NA	06-MAR-10	per0305088a	IPB011
Perchlorate	0.00	0	NA	06-MAR-10	per0305099a	IPB012
Perchlorate-101	0.00	0	NA	06-MAR-10	per0305099a	IPB012
Perchlorate	0.00	0	NA	06-MAR-10	per0305111a	IPB013
Perchlorate-101	0.00	0	NA	06-MAR-10	per0305111a	IPB013
Perchlorate	0.00	0	NA	06-MAR-10	per0305124a	IPB014
Perchlorate-101	0.00	0	NA	06-MAR-10	per0305124a	IPB014
Perchlorate	0.00	0	NA	06-MAR-10	per0306008a	IPB002
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306008a	IPB002
Perchlorate	0.00	0	NA	06-MAR-10	per0306010a	IPB003
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306010a	IPB003

## Perchlorate Continuing Calibration Blank

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	06-MAR-10	per0306015a	IPB004
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306015a	IPB004
Perchlorate	0.00	0	NA	06-MAR-10	per0306023a	IPB005
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306023a	IPB005
Perchlorate	0.00	0	NA	06-MAR-10	per0306036a	IPB006
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306036a	IPB006
Perchlorate	0.00	0	NA	06-MAR-10	per0306049a	IPB007
Perchlorate-101	0.00	0	NA	06-MAR-10	per0306049a	IPB007

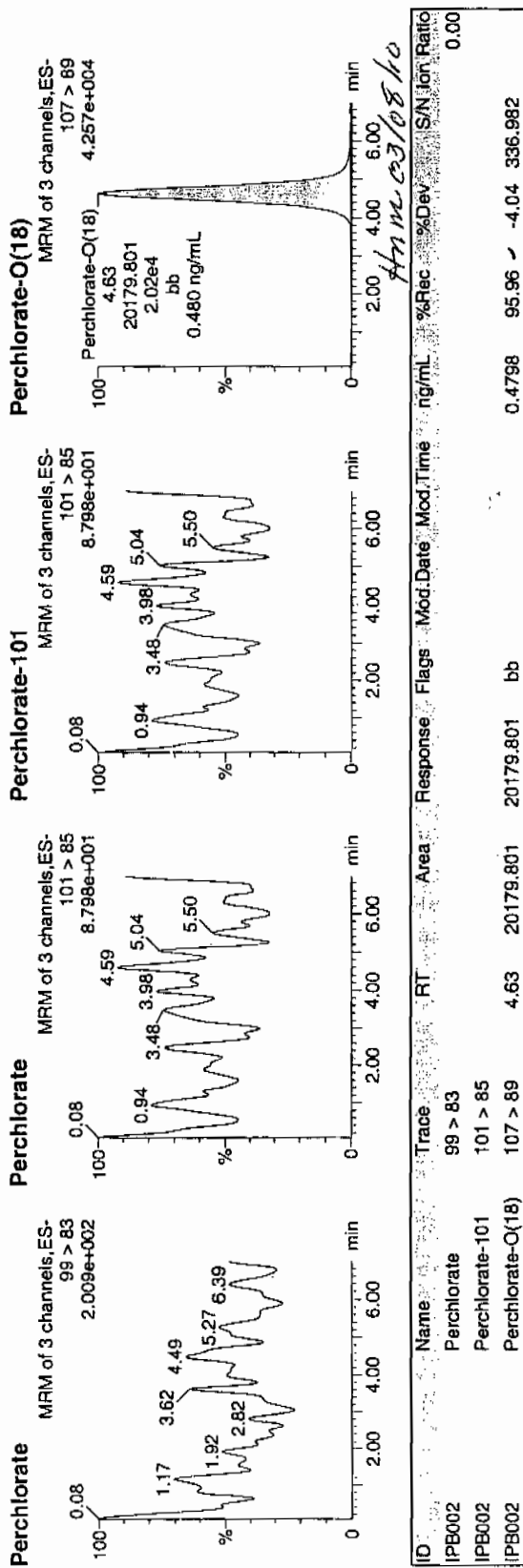
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305008a  
Date: 05-Mar-2010  
Time: 13:50:47  
ID: IPB002  
Vial: 1:1,A

03-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	4.63	20179.801	20179.801	bb			0.4798	95.96	-4.04	336.982	

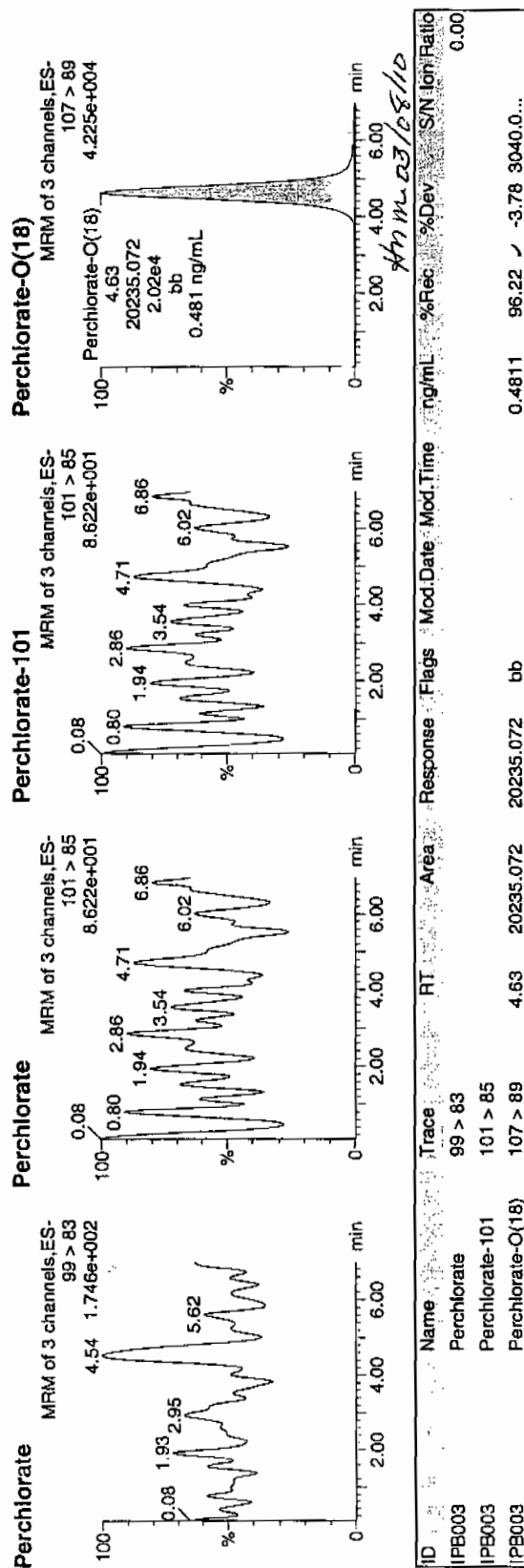
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305010a  
Date: 05-Mar-2010  
Time: 14:11:00  
ID: IPB003  
Vial: 1:1,A

3309-10



**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305023a

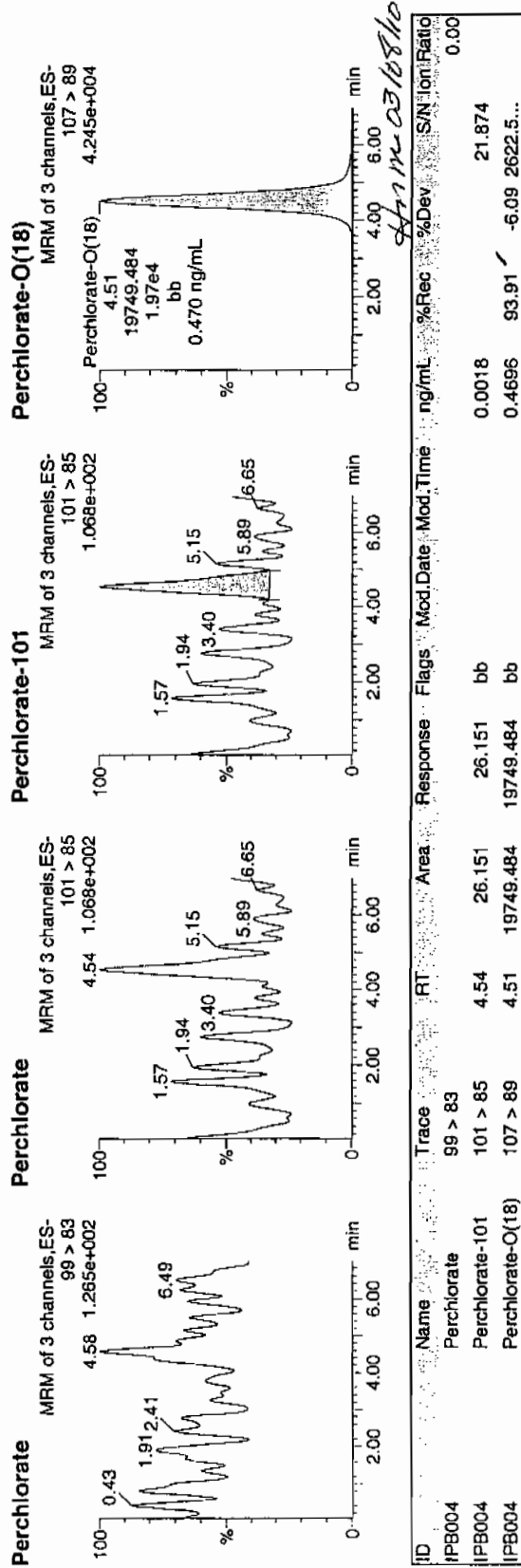
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Time: 16:21:48

ID: IPB004

Vial: 1:1,A

030510



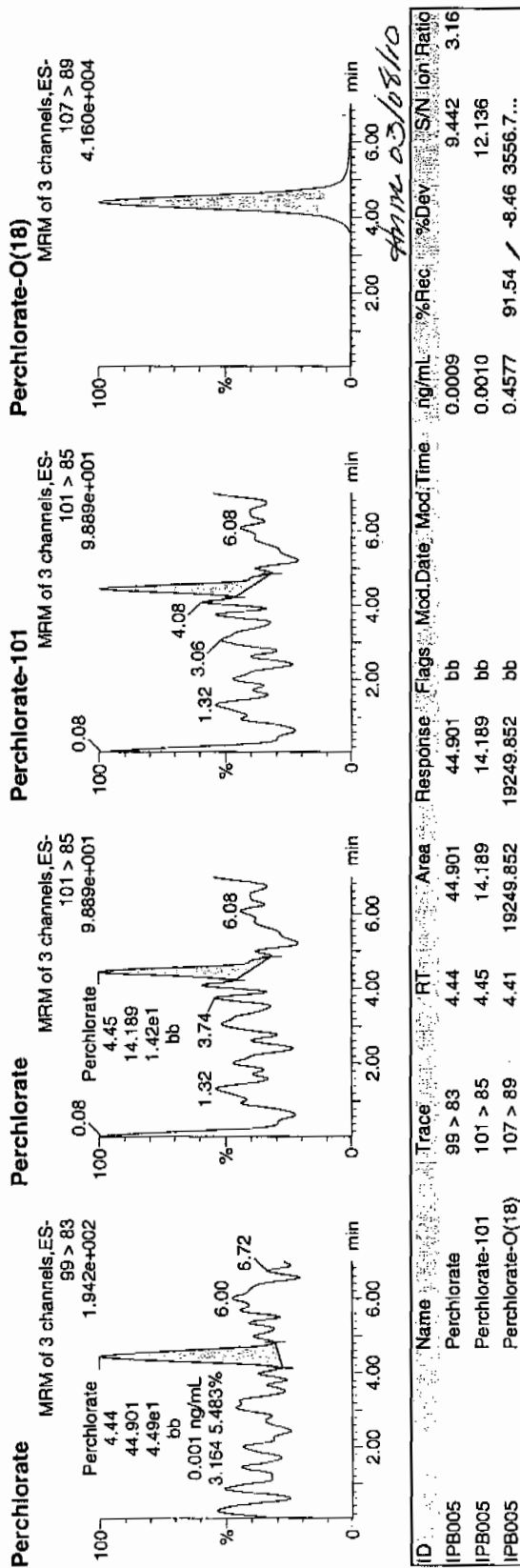
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

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Date: 05-Mar-2010  
Time: 18:32:44  
ID: IPB005  
Vial: 1:1,A

0305036-10



**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305062a

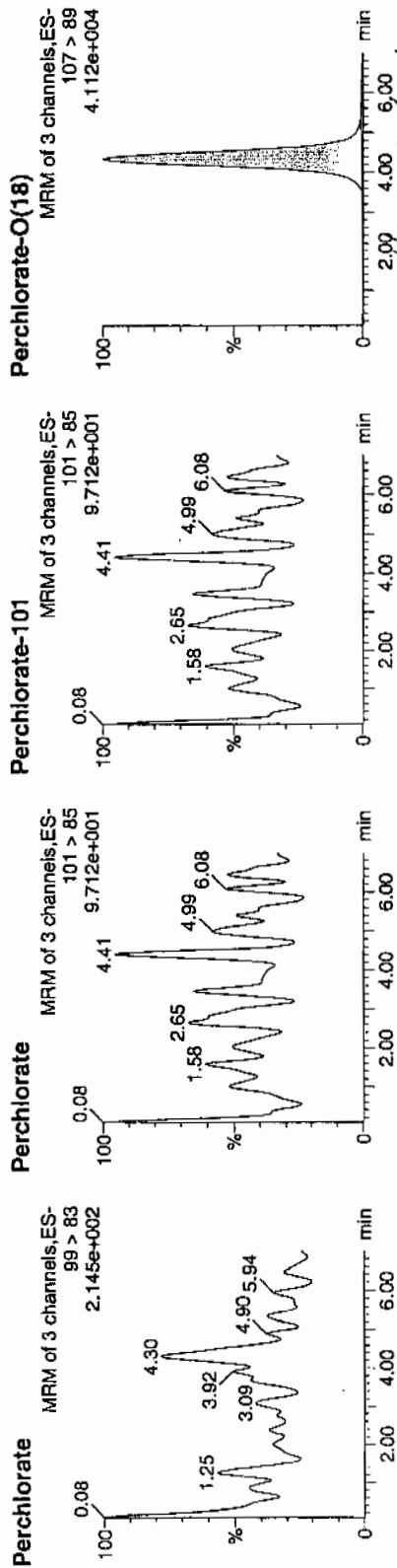
Date: 05-Mar-2010

Time: 22:55:56

ID: IPB008

Vial: 1:1,A

03-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83											0.00
IPB008	Perchlorate-101	101 > 85	4.34	18762.594	18762.594	bb			0.4461	89.22	-10.78	2075.7...	
IPB008	Perchlorate-O(18)	107 > 89											

Quantify Sample Report MassLynx 4.0 SP4

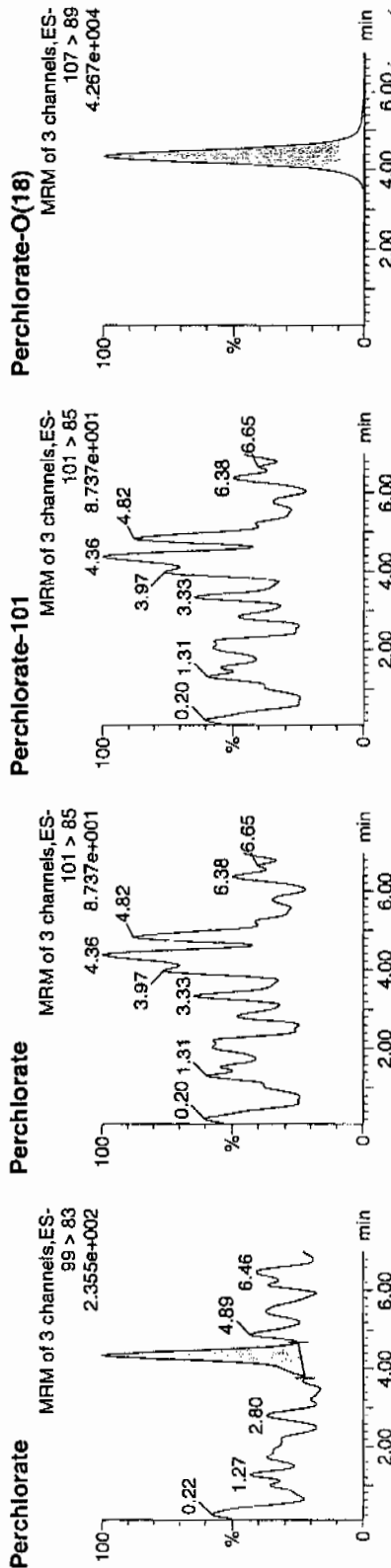
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

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Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305075a  
Date: 06-Mar-2010  
Time: 01:07:14  
ID: IPB009  
Vial: 1:1,A

03 06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB009	Perchlorate	99 > 83	4.35	56.745	56.745	bb			0.0012			28.981	0.00
IPB009	Perchlorate-101	101 > 85											
IPB009	Perchlorate-O(18)	107 > 89	4.34	19612.217	19612.217	bb			0.4563	93.26	-6.74	1489.6...	



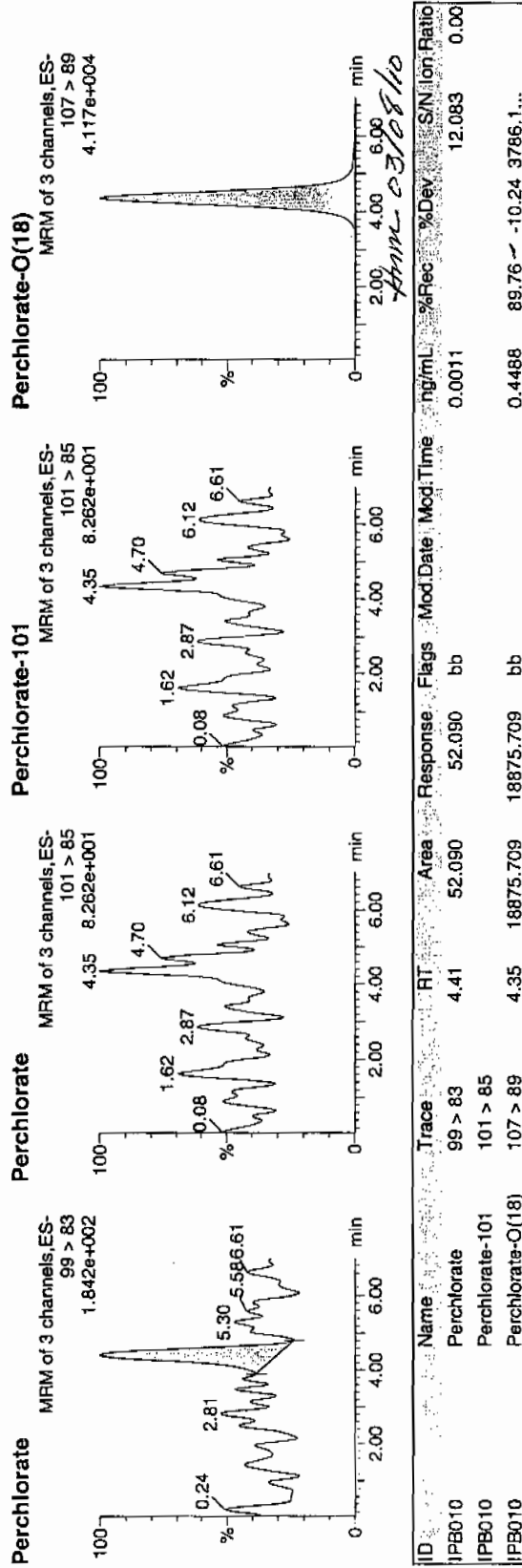
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

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Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305079a  
Date: 06-Mar-2010  
Time: 01:47:51  
ID: IPB010  
Vial: 1:1,A

0306-10



# Quantify Sample Report MassLynx 4.0 SP4

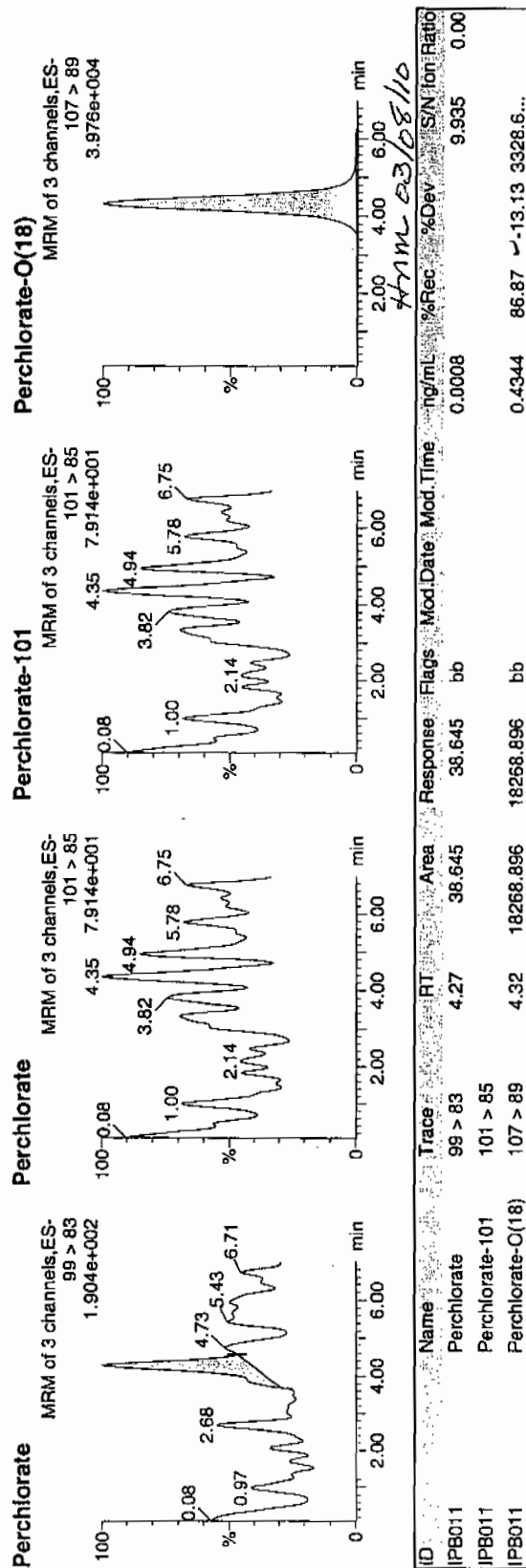
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

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Name: per0305088a  
 Date: 06-Mar-2010  
 Time: 03:19:03  
 ID: IPB011  
 Vial: 1:1,A

0306-10



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Page 99 of 125

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

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Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

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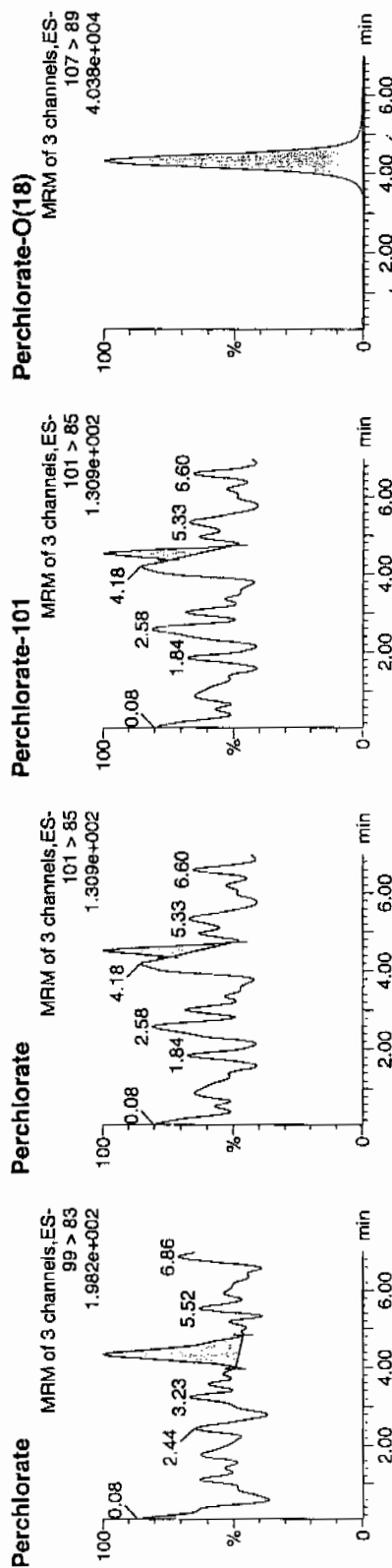
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Time: 05:10:08

ID: IPB012

Vial: 1:1,A

03-06-10



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IPB012	Perchlorate	99 > 83	4.34	38.264	38.264	bb			0.0008			12.046	3.88
IPB012	Perchlorate-101	101 > 85	4.51	9.873	9.873	bb			0.0007			12.423	
IPB012	Perchlorate-O(18)	107 > 89	4.32	18361.596	18361.596	bb			0.4366	87.31	-12.69	1563.3...	

0.004  
2.0000

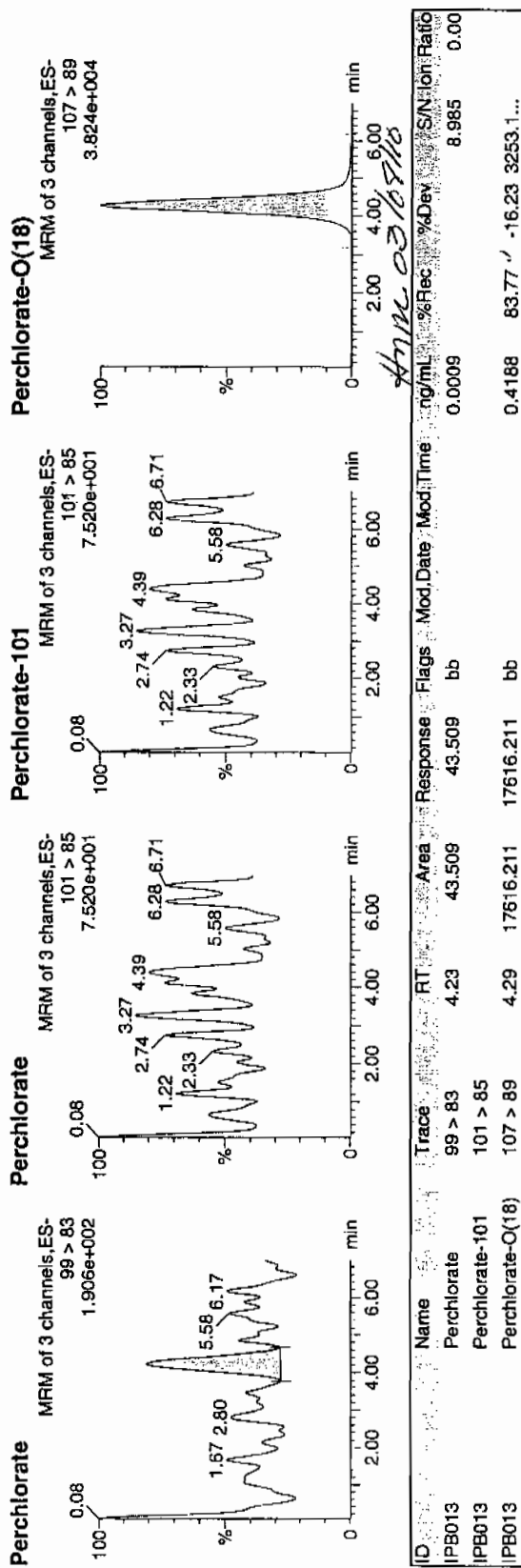
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

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Date: 06-Mar-2010  
Time: 07:11:35  
ID: IPB013  
Vial: 1:1,A

03-26-10

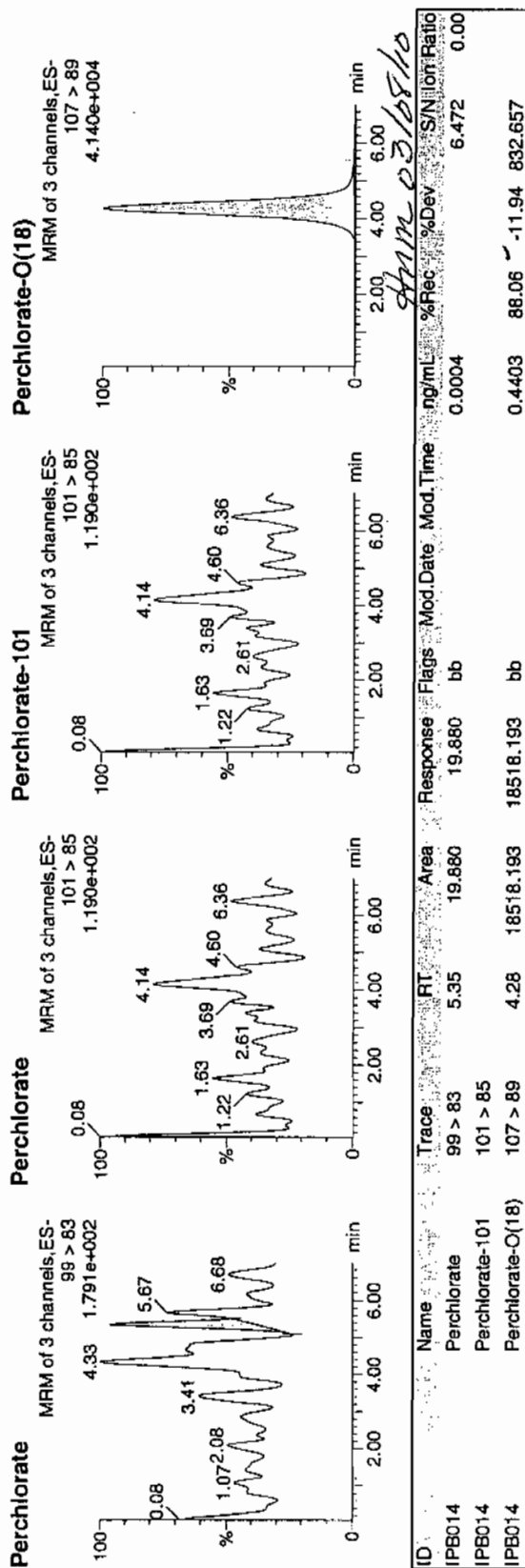


**Quantify Sample Report MassLynx 4.0 SP4**  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

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Date: 06-Mar-2010  
Time: 09:23:06  
ID: IPB014  
Vial: 1:1,A

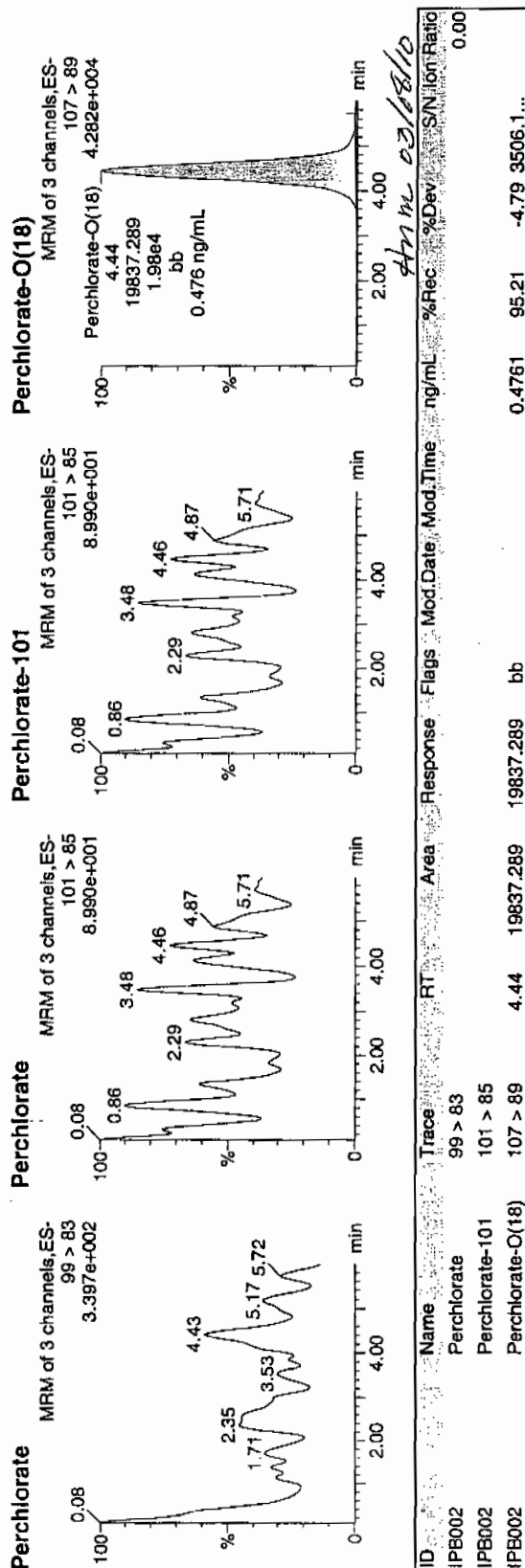


Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

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Date: 06-Mar-2010  
Time: 15:38:29  
ID: IPB002  
Vial: 1:1,A



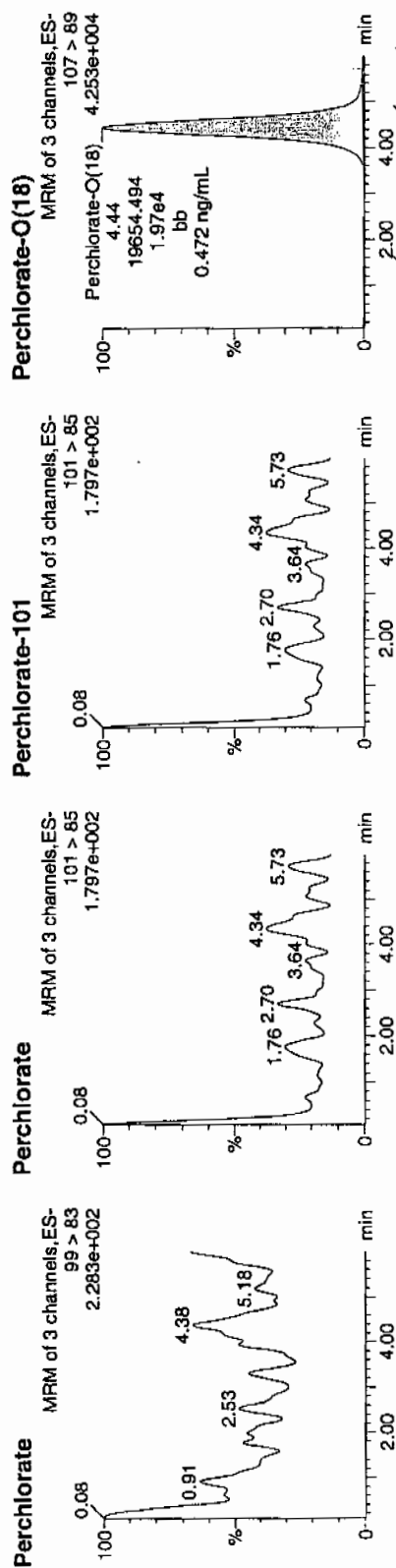
ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	4.44	19837.289	19837.289	bb			0.4761	95.21	-4.79	3506.1...	0.00

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

On: Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

**Name:** per0306010a  
**Date:** 06-Mar-2010  
**Time:** 15:56:49  
**ID:** IPB003  
**Vial:** 1:1,A

33-57-2



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	4.44	19654.494	19654.494	bb			0.4717	94.33	-5.67	617.145	

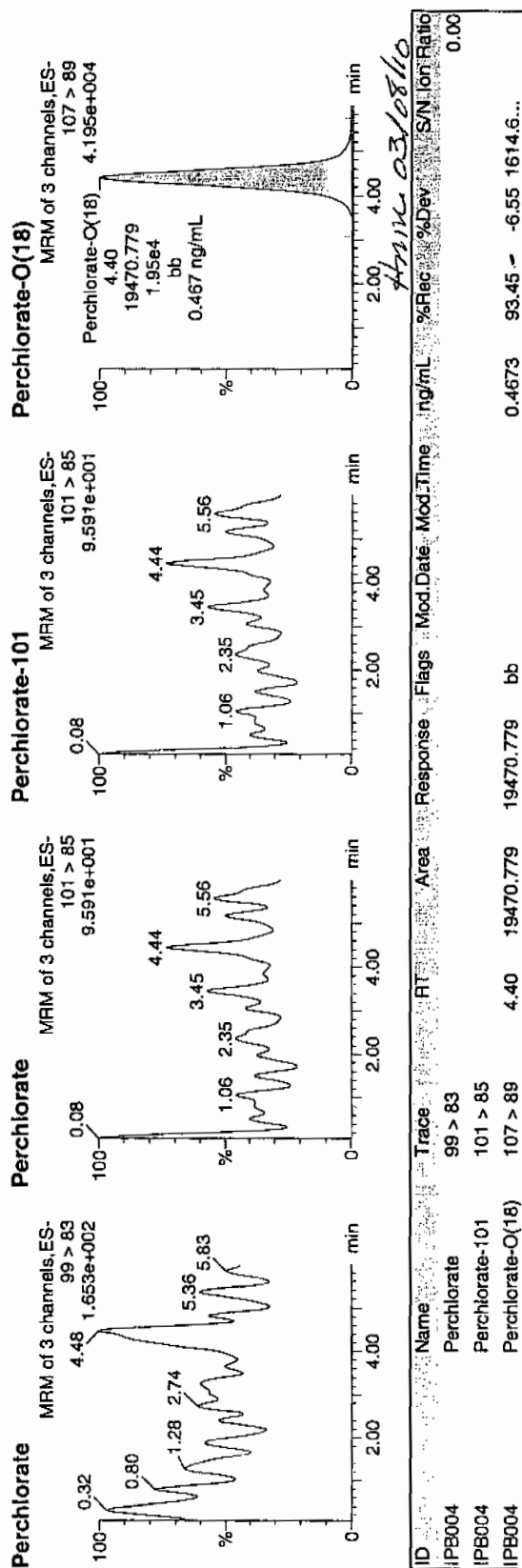
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

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Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306015a  
Date: 06-Mar-2010  
Time: 16:42:19  
ID: IPB004  
Vial: 1:1,A

0307-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	4.40	19470.779	19470.779	bb			0.4673	93.45	-	-6.55	1614.6...



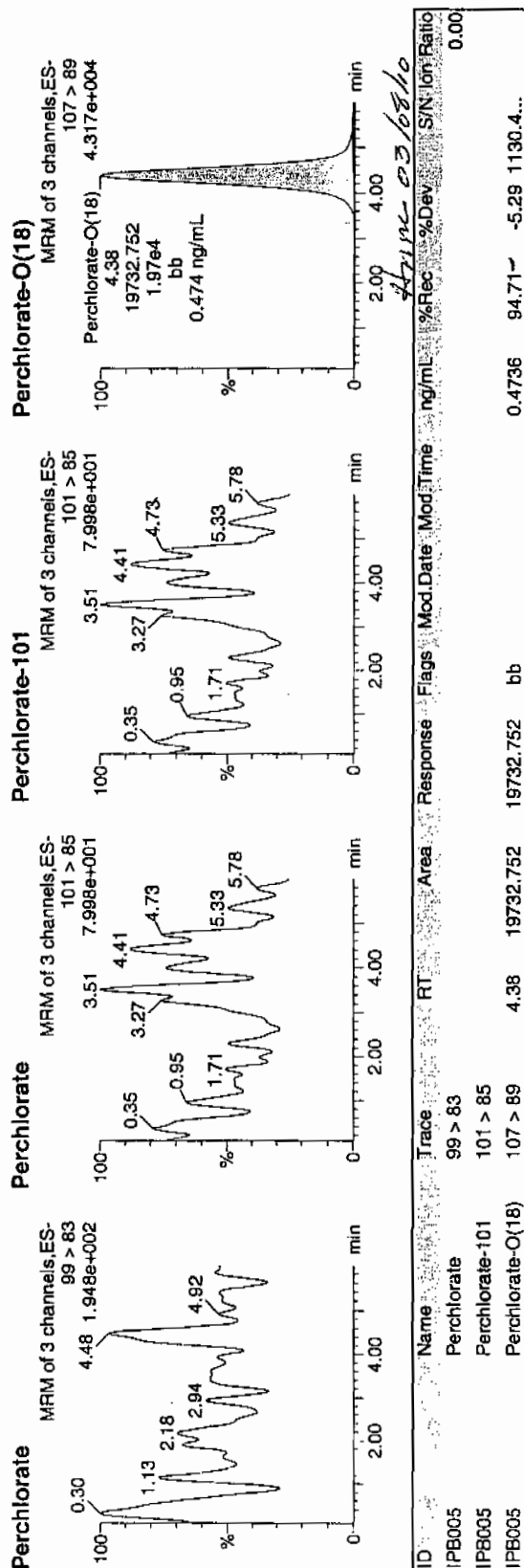
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306023a  
Date: 06-Mar-2010  
Time: 17:54:53  
ID: IPB005  
Vial: 1:1,A

03-07-10



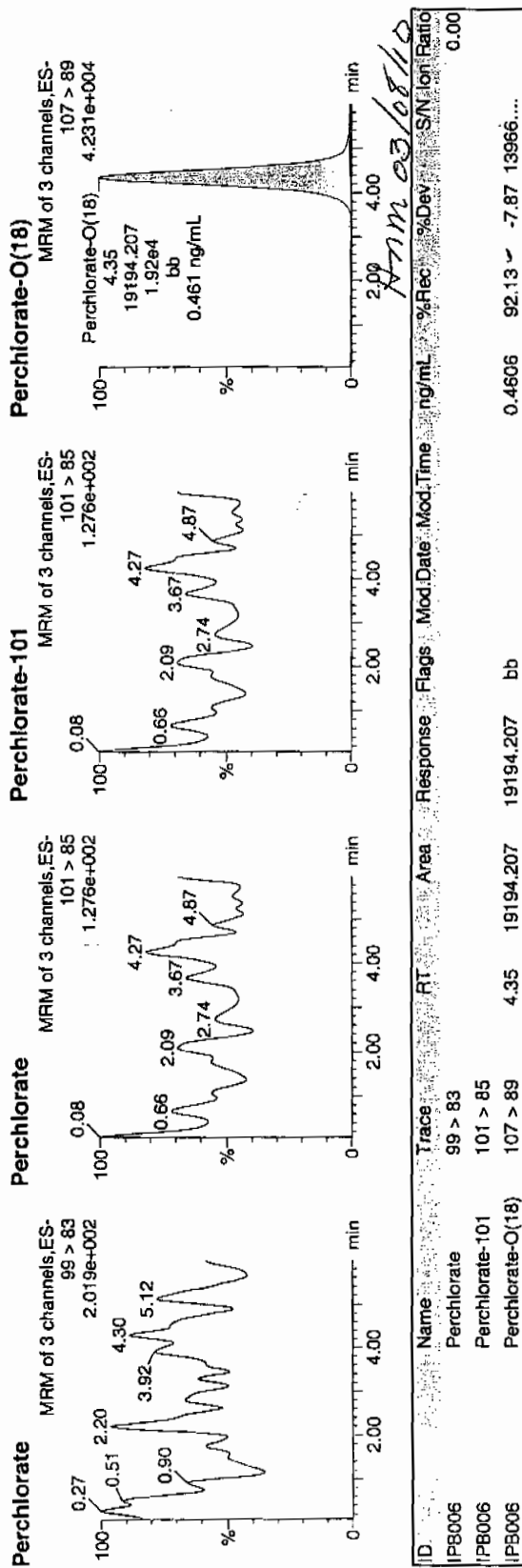
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306036a  
Date: 06-Mar-2010  
Time: 19:52:45  
ID: IPB006  
Vial: 1:1,A

03-07-10



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306049a

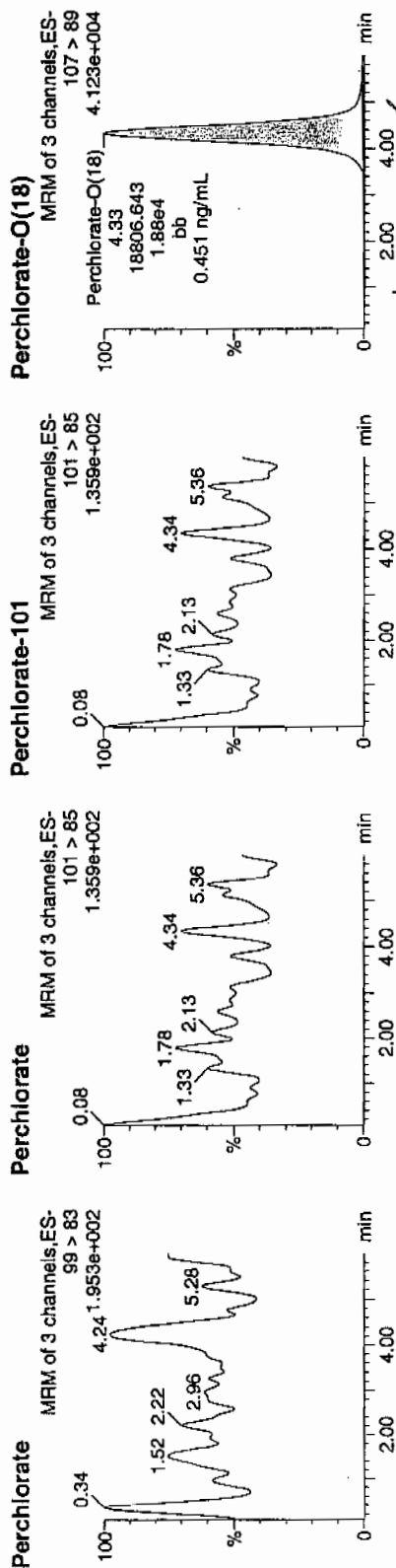
Date: 06-Mar-2010

Time: 21:50:46

ID: IPB007

Vial: 1:1,A

030610



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	4.33	18806.643	18806.643	bb			0.4513	90.27	-9.73	5015.8...	

Nairb.ref

;Positive ion monoisotopic and average masses from solution  
 ;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H<sub>2</sub>O.  
 ;Most useful general purpose calibrant for all low  
 ;MW applications, including MS/MS work.  
 ;At high resolution, readily covers from m/z 50-2000.  
 ;At reduced resolution, can be used to over m/z 3000.  
 ;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.  
 Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

QUANTO ULTIMA: nairb\_01\_08\_08.cal

Calibration Report - MS1 Static

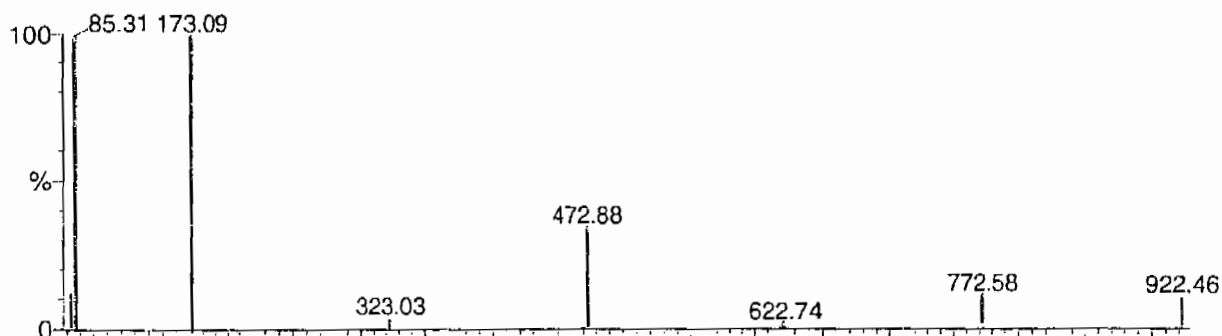
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

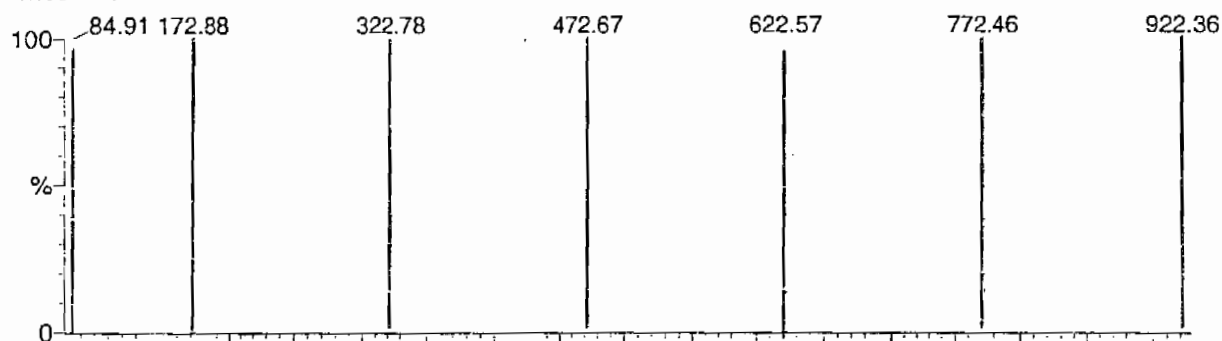
POINTS HIGHLIGHTED BY CURVED 01-01-03

Data file: STATMS1 - Uncalibrated

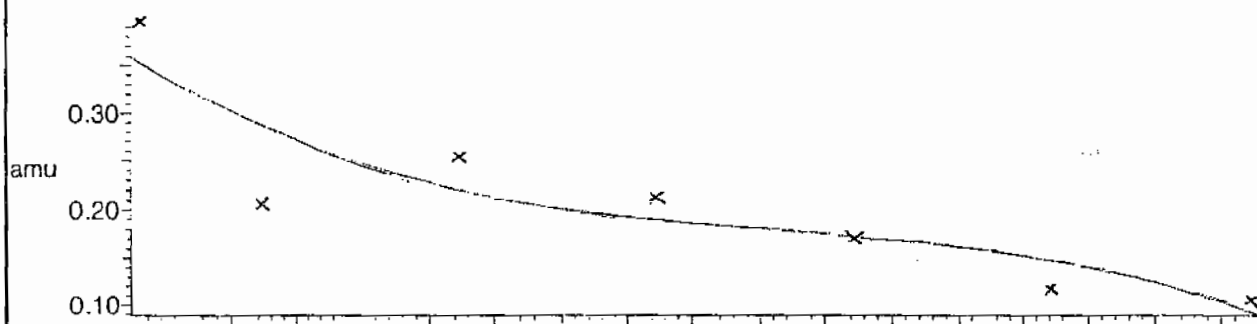
7 matches of 7 tested references



Reference file: Nairb

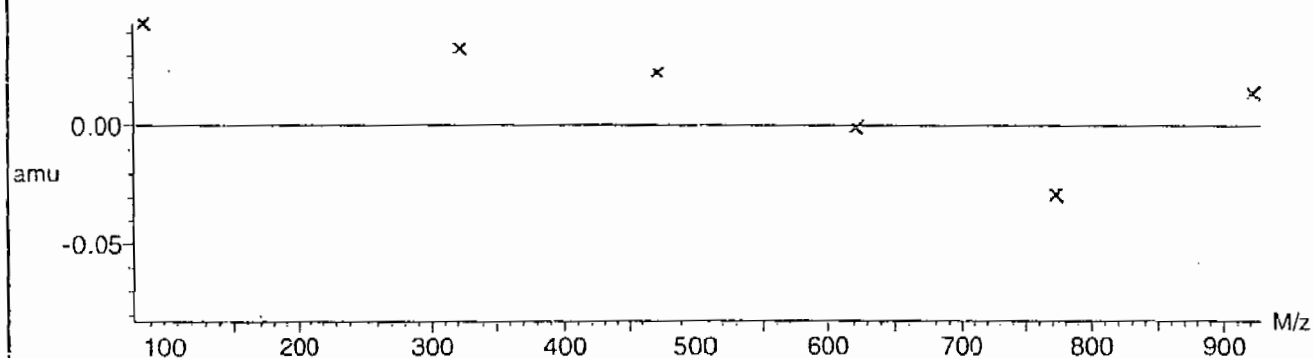


Mass difference (Raw - Ref mass)



Residuals

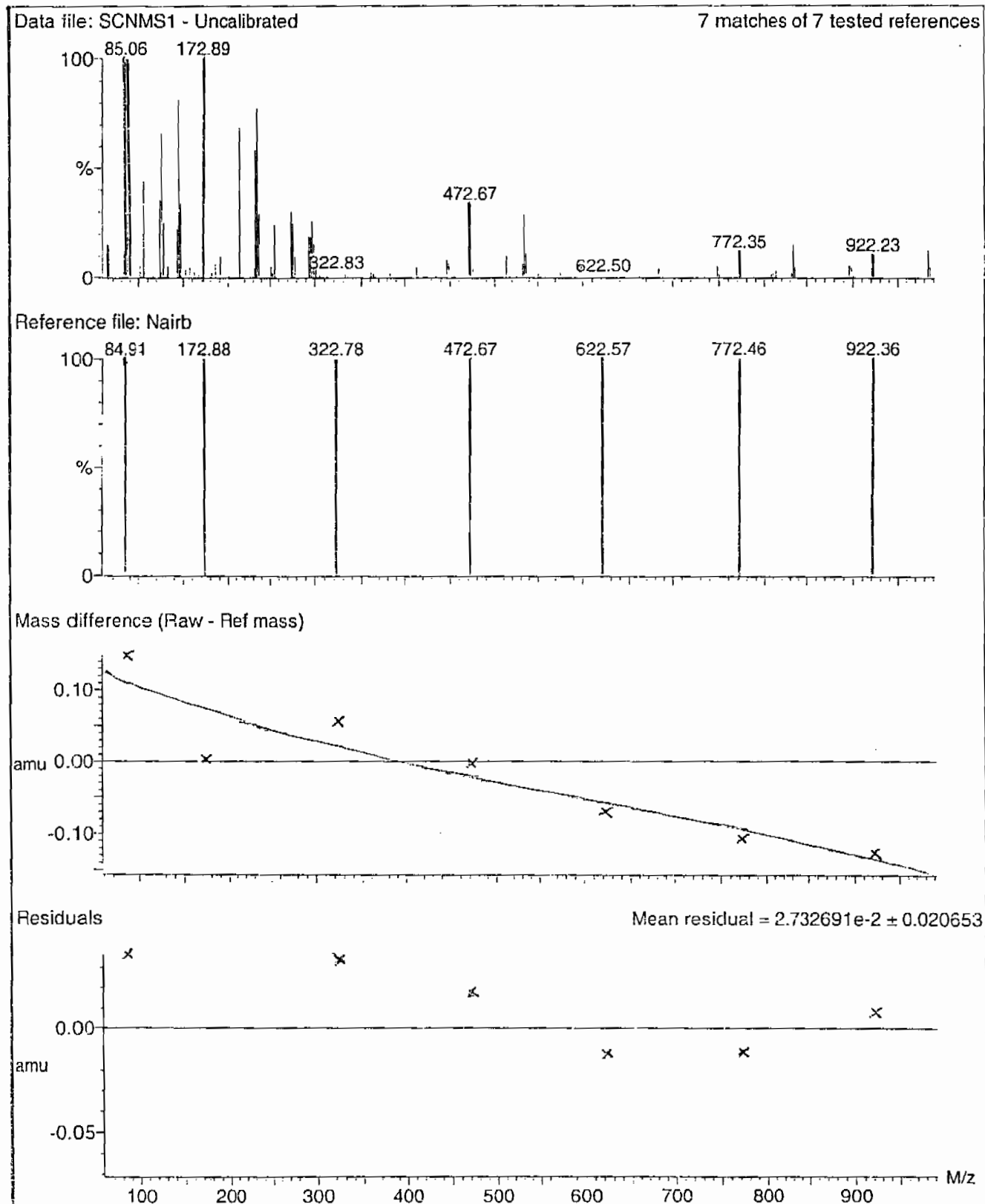
Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

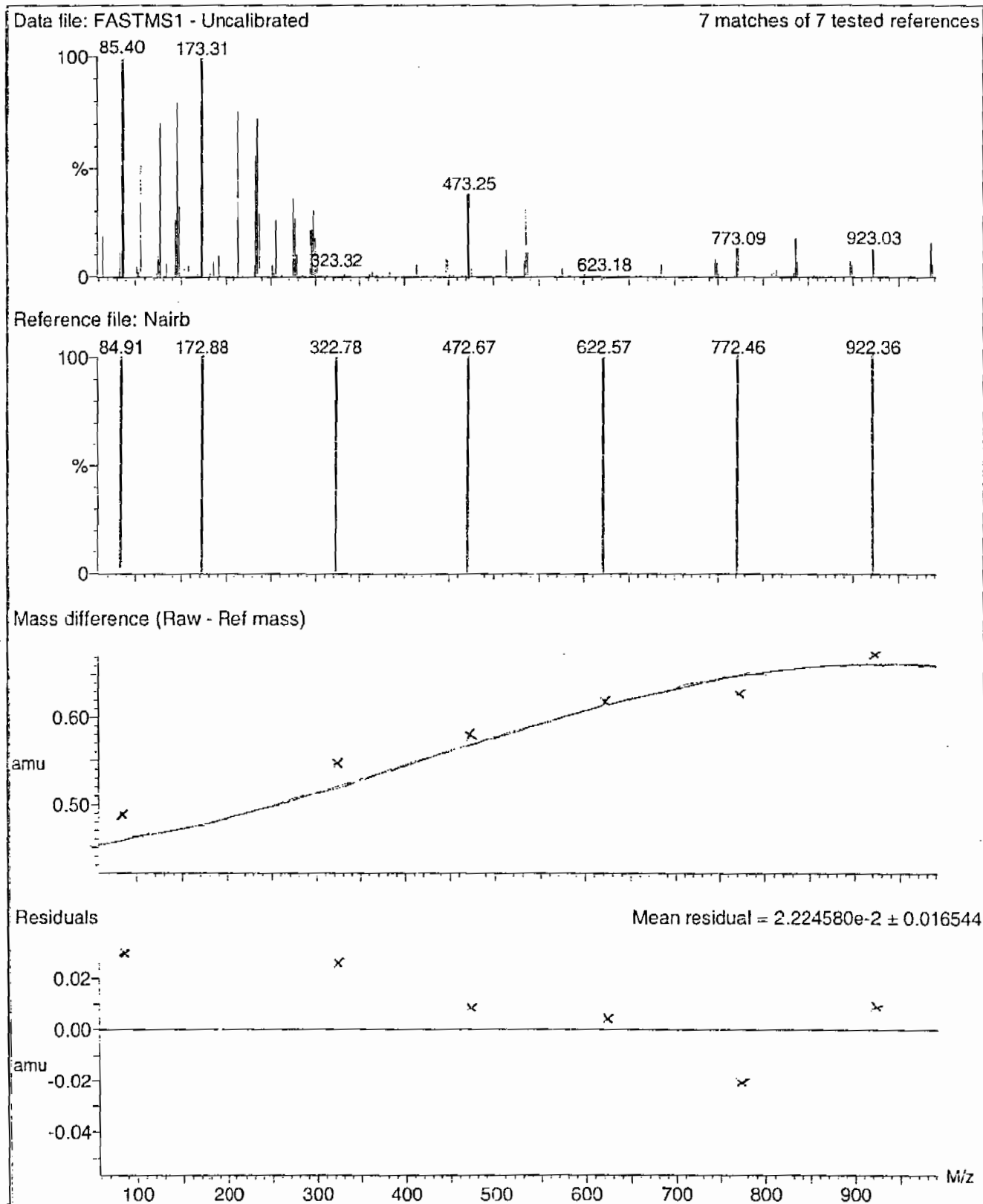
Printed: Tue Jan 08 12:20:09 2008



Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

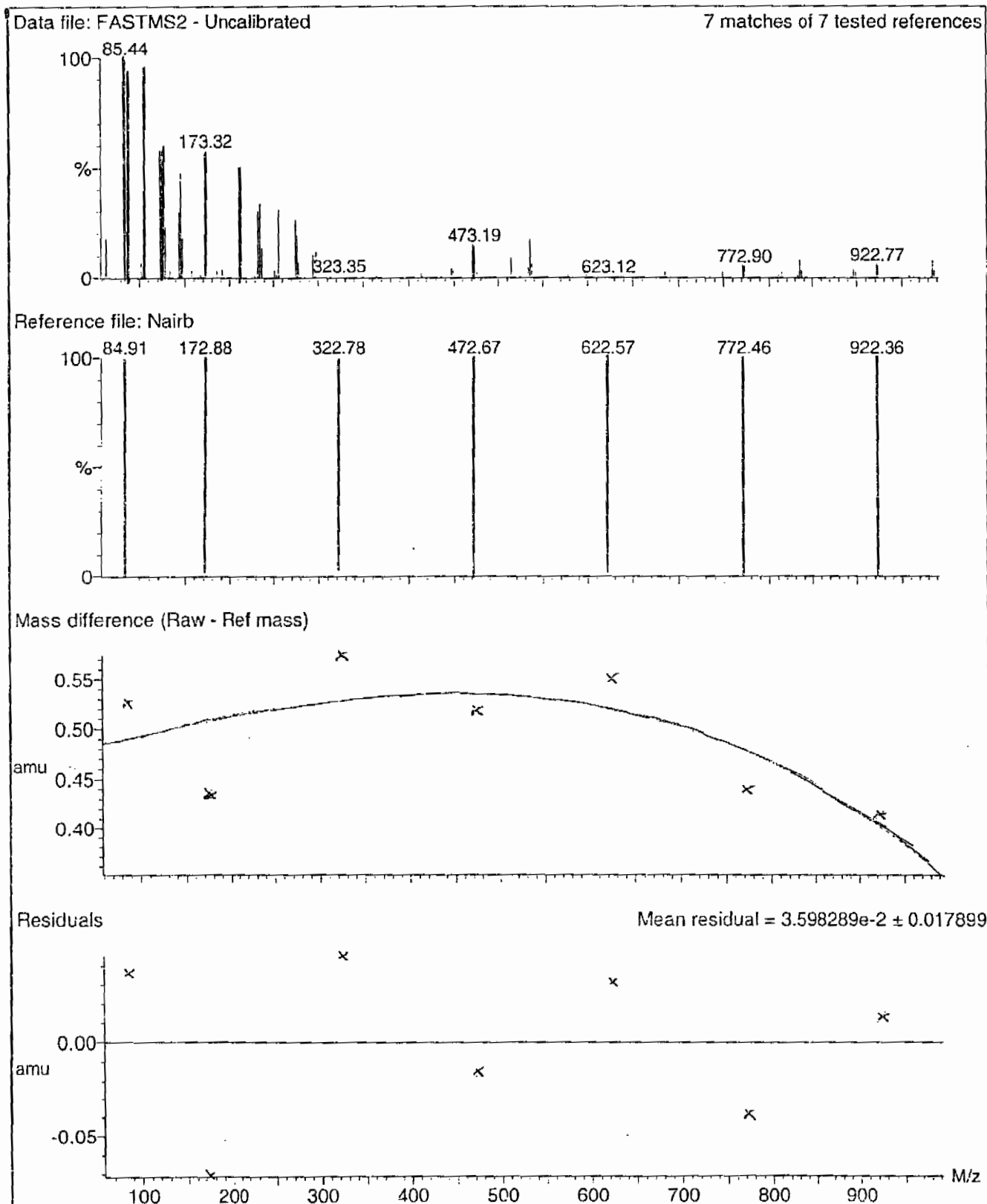
Printed: Tue Jan 08 12:21:04 2008



Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

Printed: Tue Jan 08 12:23:51 2008

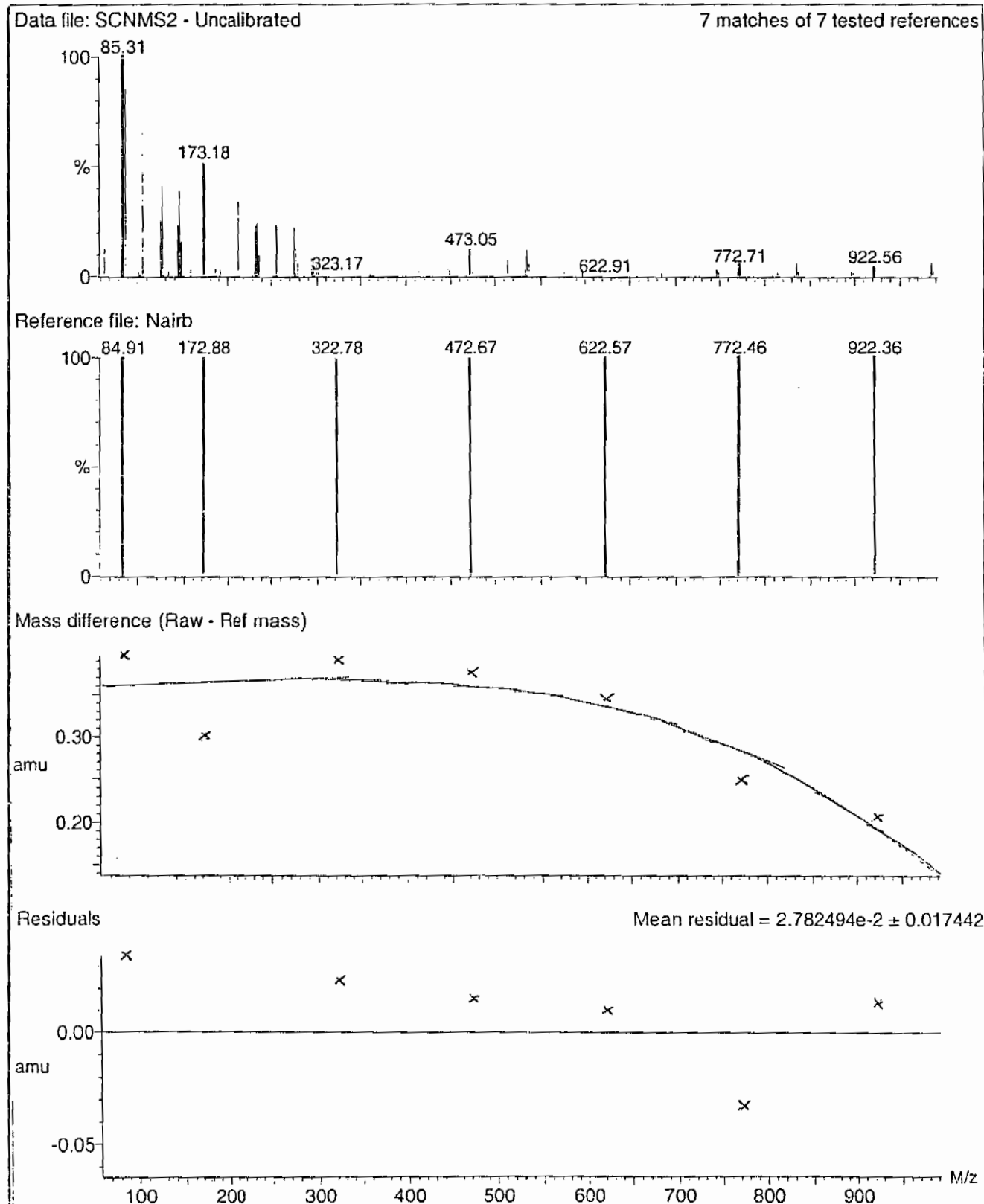




Calibration Report - MS2 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:22:56 2008



Calibration Report - MS2 Static

Page 1 of 1

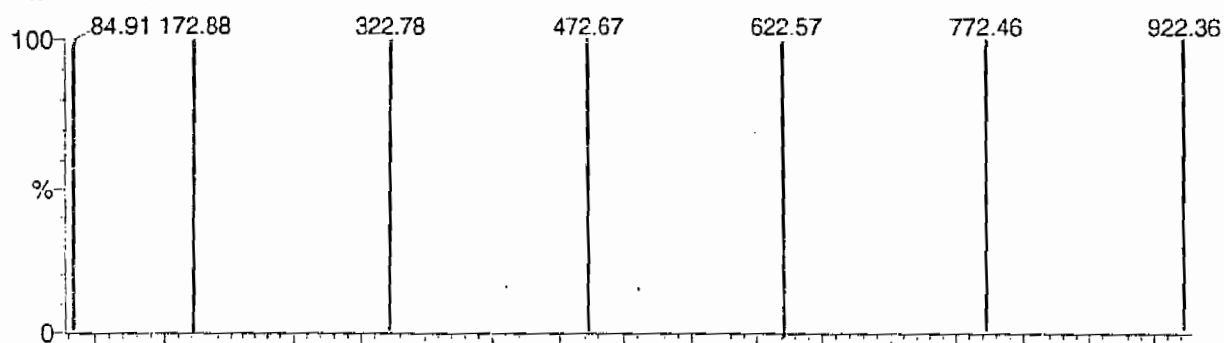
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

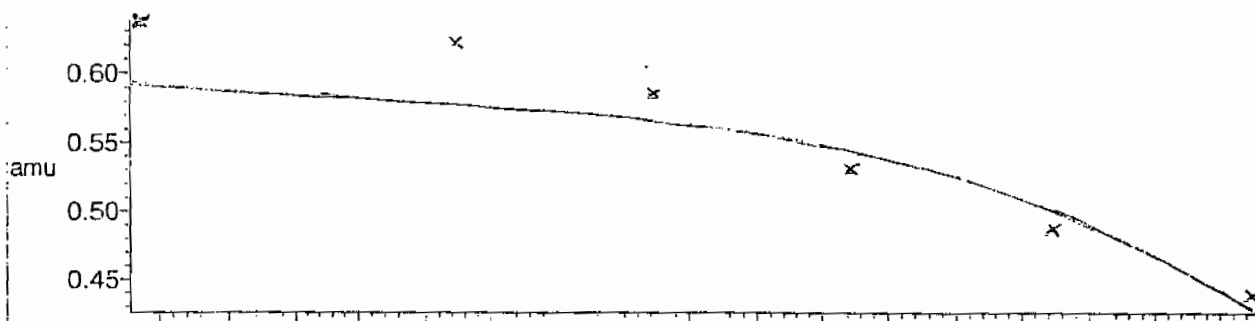
7 matches of 7 tested references



Reference file: Nairb

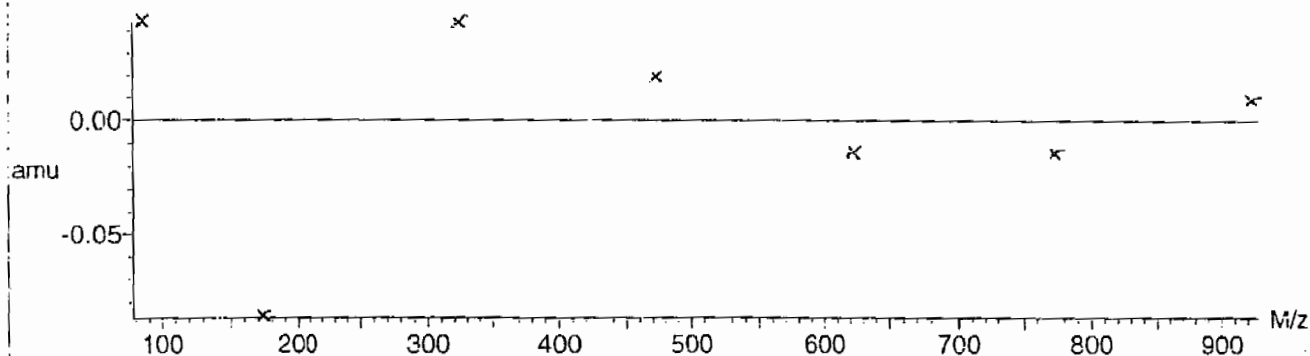


Mass difference (Raw - Ref mass)



Residuals

Mean residual =  $3.295980 \times 10^{-2} \pm 0.025603$



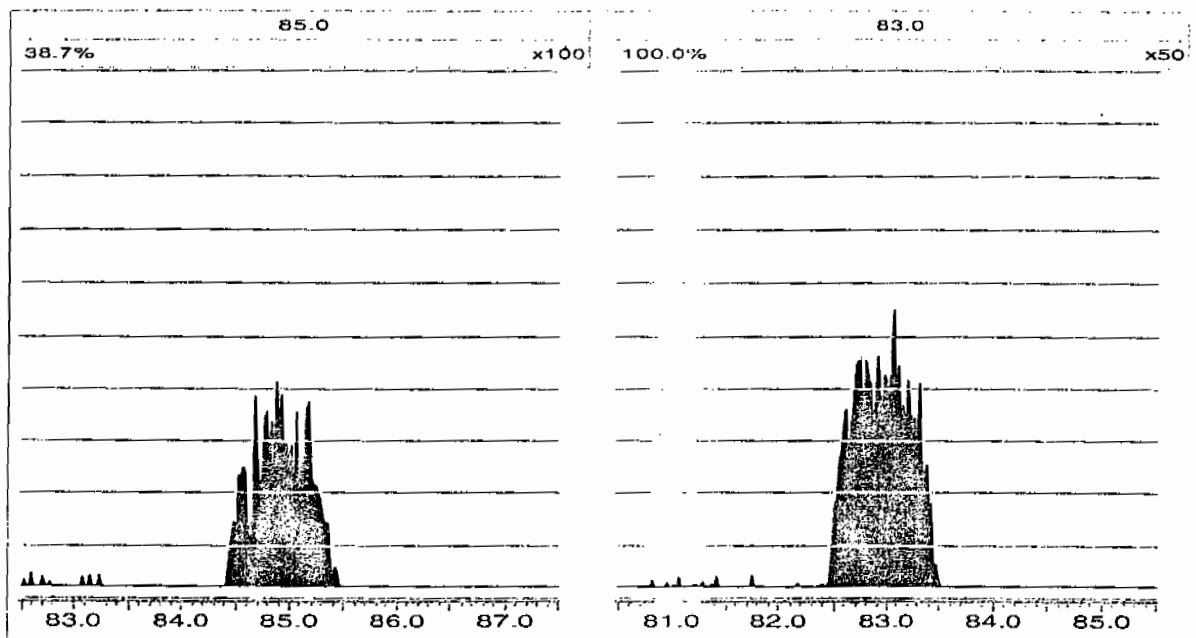
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Friday, March 05, 2010 10:31:47 Eastern Standard Time



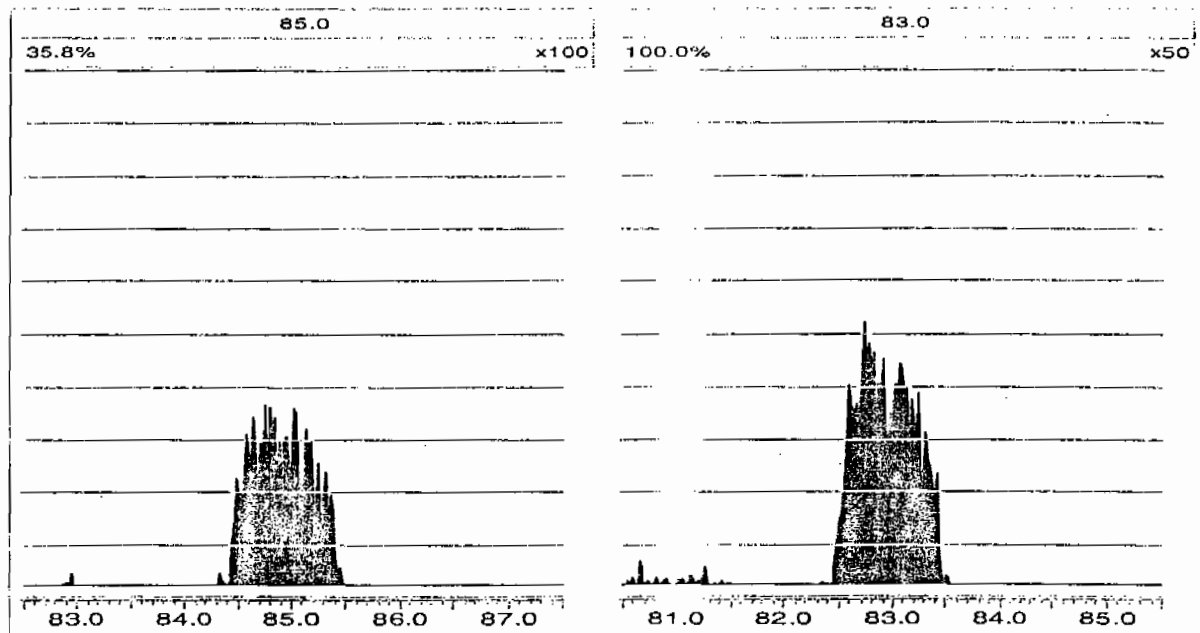
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Saturday, March 06, 2010 11:02:44 Eastern Standard Time



Form 8

Perchlorate RT And Area Summary

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0305006a	05-MAR-10	21416.7				
Lower Area Limit			10708.35				
Upper Area Limit			42833.4				
1202049069	per0305113a	06-MAR-10 07:31	18340.5	4.29	4.2778	.997	
1202049070	per0305114a	06-MAR-10 07:42	17497.8	4.29	4.30265	1.003	
1202049073	per0305115a	06-MAR-10 07:52	19159.7	4.32	4.3276	1.002	

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1906

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0306006a	06-MAR-10	20712.4				
Lower Area Limit			10356.2				
Upper Area Limit			41424.8				
247335001	per0306047a	06-MAR-10 21:32	18957.6	4.33			

# SAMPLE DATA

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 955726  
 Extraction Type: Filter/DAI  
 Client Sample No. RE15-10-8379  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906  
 GEL Sample ID: 247335001  
 Date Filtered: 02-MAR-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 10.0 mL  
 % Solids:

Concentrated Extract Volume: 10.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	06-MAR-10 21:32	per0306047a
	Perchlorate Isotope Ratio						1	06-MAR-10 21:32	per0306047a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	06-MAR-10 21:32	per0306047a
	Perchlorate-O(18)			0.455	ug/L		1	06-MAR-10 21:32	per0306047a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{ Solids}}$



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

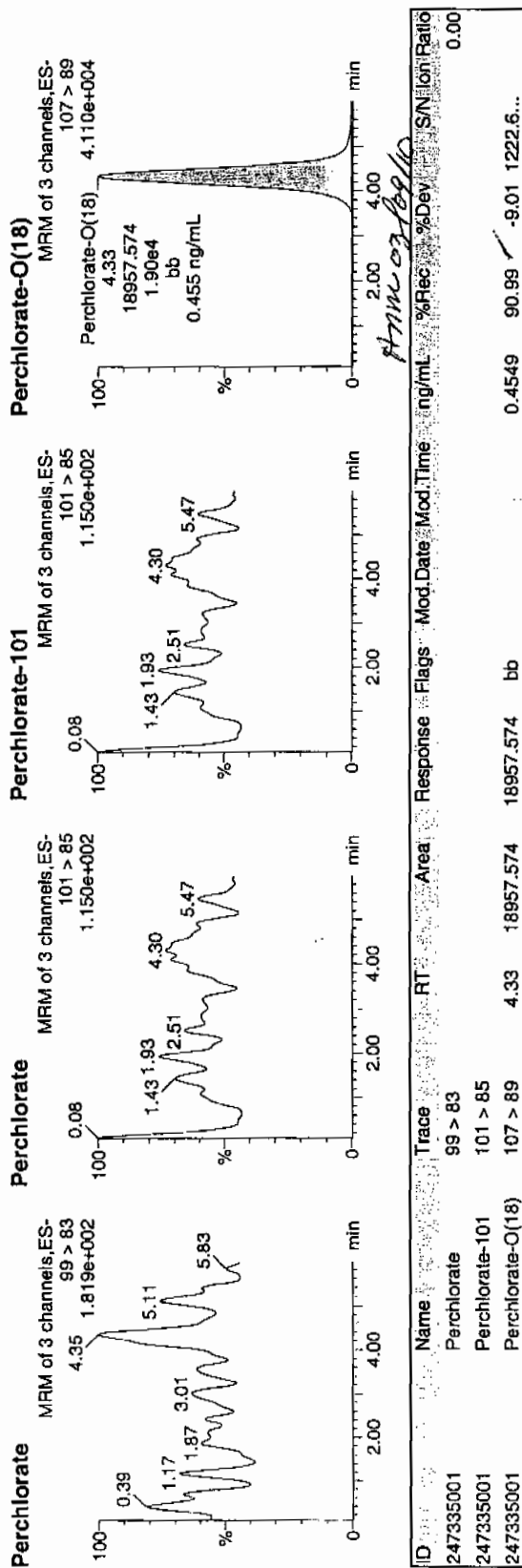
Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306047a  
Date: 06-Mar-2010  
Time: 21:32:32  
ID: 247335001  
Vial: 1:8,C

03-07-10

1222 | 11



ID	Name	Trace	Area	RT	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247335001	Perchlorate	99 > 83											
247335001	Perchlorate-101	101 > 85											
247335001	Perchlorate-O(18)	107 > 89	4.33	18957.574	18957.574	bb			0.4549	90.99	-9.01	1222.6...	0.00

# STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1906

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 05-MAR-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Paramname Perchlorate

Coefficient of Determination:

Calibration Curve: 48489.74

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1906

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 05-MAR-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 14881.82

Response Type: External Standard

Curve Type: RF

# Quantify Calibration Report MassLynx 4.0 SP4

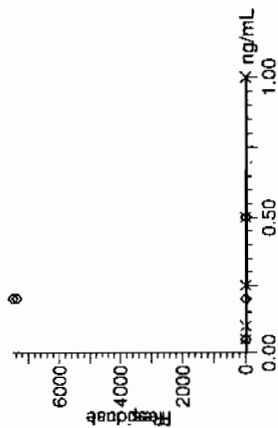
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

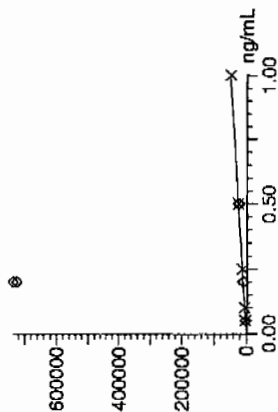
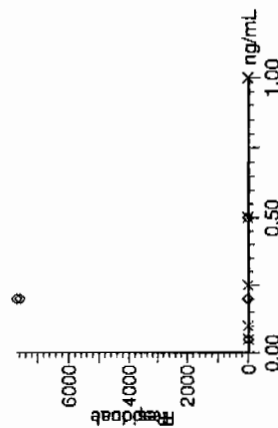
Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per030510a.mdb 06 Mar 2010 09:51:19  
 Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per030510a.cdb 06 Mar 2010 09:51:51

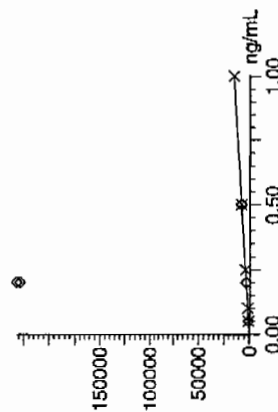
Compound name: Perchlorate  
 Response Factor: 48489.7  
 RRF SD: 1243.24, % Relative SD: 2.56392 ✓  
 Response type: External Std, Area  
 Curve type: RF ✓



Compound name: Perchlorate-101  
 Response Factor: 14881.8  
 RRF SD: 415.715, % Relative SD: 2.79344 ✓  
 Response type: External Std, Area  
 Curve type: RF ✓



03-06-10



03-06-10

# Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

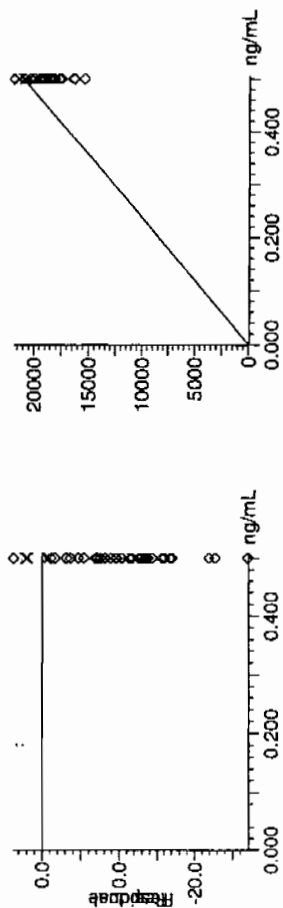
Compound name: Perchlorate-O(18)

Response Factor: 42059.8

RRF SD: 811.21, % Relative SD: 1.9287

Response type: External Std, Area

Curve type: RF



Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1906

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 06-MAR-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parname Perchlorate

Coefficient of Determination:

Calibration Curve: 49865.1

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 06-MAR-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 15687.1

Response Type: External Standard

Curve Type: RF



Quantify Calibration Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per030610a.mdb 07 Mar 2010 10:54:54  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per030610a.cdb 07 Mar 2010 11:00:09

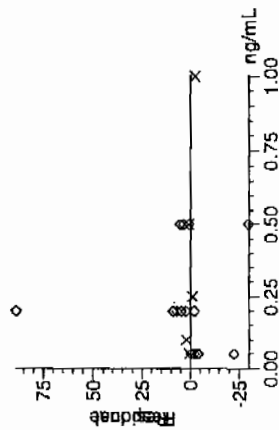
Compound name: Perchlorate

Response Factor: 49865.1

RRF SD: 927.627, % Relative SD: 1.86027

Response type: External Std, Area

Curve type: RF



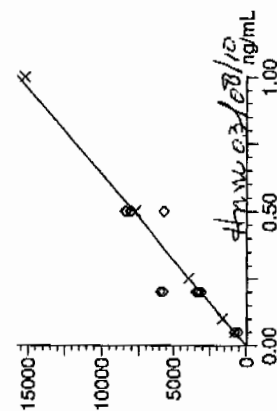
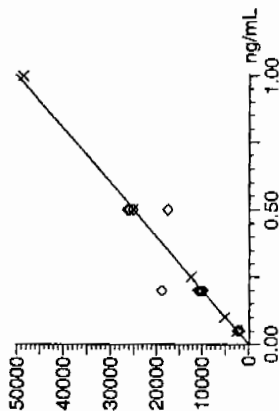
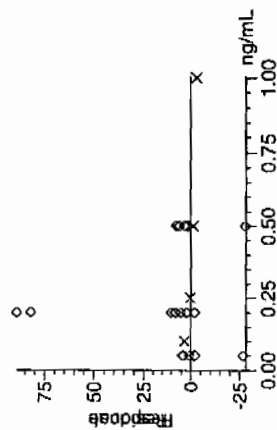
Compound name: Perchlorate-101

Response Factor: 15687.1

RRF SD: 395.517, % Relative SD: 2.52129

Response type: External Std, Area

Curve type: RF



030610

Quantify Calibration Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

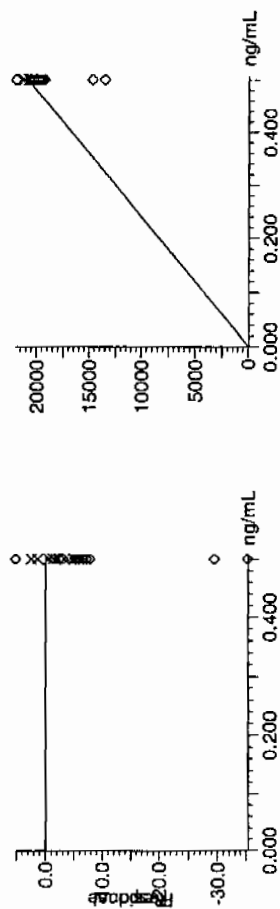
Compound name: Perchlorate-O(18)

Response Factor: 41669.8

RRF SD: 770.369, % Relative SD: 1.84875

Response type: External Std, Area

Curve type: RF



Perchlorate Initial Calibration Verification

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.51	101.59	05-MAR-10 14:00	per0305009a
Perchlorate Isotope Ratio		3.02		05-MAR-10 14:00	per0305009a
Perchlorate-101	.5	.55	109.45	05-MAR-10 14:00	per0305009a
Perchlorate	.5	.53	105.64	06-MAR-10 15:47	per0306009a
Perchlorate Isotope Ratio		3.17		06-MAR-10 15:47	per0306009a
Perchlorate-101	.5	.53	105.93	06-MAR-10 15:47	per0306009a

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305009a

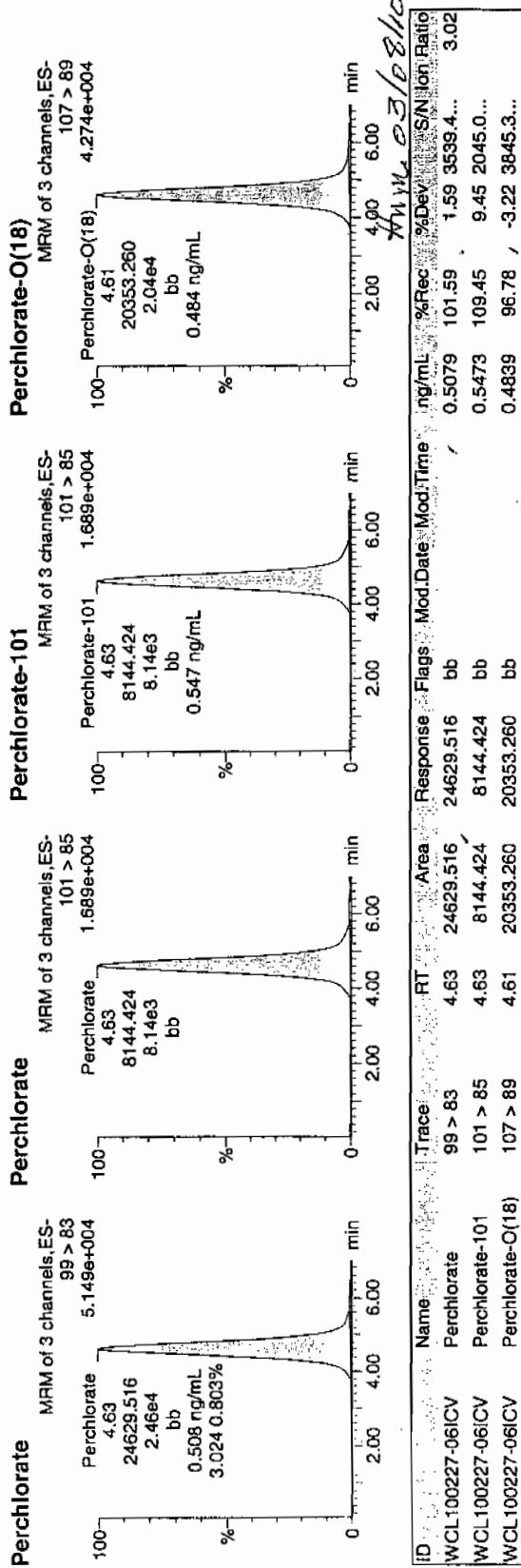
Date: 05-Mar-2010

Time: 14:00:49

ID: WCL100227-06ICV

Vial: 1:2,A

Per  
ans  
03-06-10

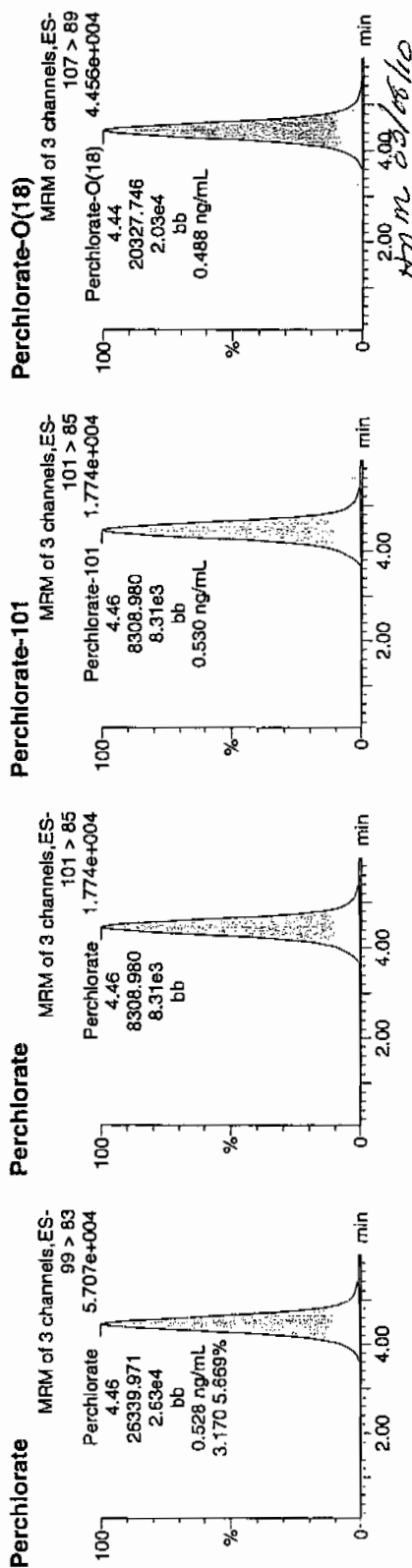


Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306009a  
Date: 06-Mar-2010  
Time: 15:47:39  
ID: WCL100227-06ICV  
Vial: 1:2,A



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-06ICV	Perchlorate	99 > 83	4.46	26339.971	26339.971	bb			0.5282	105.64	5.64	1460.8...	3.17
WCL100227-06ICV	Perchlorate-101	101 > 85	4.46	8308.980	8308.980	bb			0.5297	105.93	5.93	310.031	
WCL100227-06ICV	Perchlorate-O(18)	107 > 89	4.44	20327.746	20327.746	bb			0.4878	97.57	-2.43	842.834	

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.84	05-MAR-10 16:11	per0305022a
Perchlorate Isotope Ratio		3.08		05-MAR-10 16:11	per0305022a
Perchlorate-101	.5	.53	106.73	05-MAR-10 16:11	per0305022a
Perchlorate	.5	.5	100.86	05-MAR-10 18:22	per0305035a
Perchlorate Isotope Ratio		3.15		05-MAR-10 18:22	per0305035a
Perchlorate-101	.5	.52	104.17	05-MAR-10 18:22	per0305035a
Perchlorate	.5	.49	97.76	05-MAR-10 22:45	per0305061a
Perchlorate Isotope Ratio		3.15		05-MAR-10 22:45	per0305061a
Perchlorate-101	.5	.51	101.05	05-MAR-10 22:45	per0305061a
Perchlorate	.5	.49	98.25	06-MAR-10 00:56	per0305074a
Perchlorate Isotope Ratio		3.17		06-MAR-10 00:56	per0305074a
Perchlorate-101	.5	.51	101.04	06-MAR-10 00:56	per0305074a
Perchlorate	.5	.47	93.47	06-MAR-10 03:08	per0305087a

## Perchlorate Continuing Calibration Verification

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Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.06		06-MAR-10 03:08	per0305087a
Perchlorate-101	.5	.5	99.39	06-MAR-10 03:08	per0305087a
Perchlorate	.5	.46	92.94	06-MAR-10 04:59	per0305098a
Perchlorate Isotope Ratio		3.07		06-MAR-10 04:59	per0305098a
Perchlorate-101	.5	.49	98.61	06-MAR-10 04:59	per0305098a
Perchlorate	.5	.47	93.15	06-MAR-10 07:01	per0305110a
Perchlorate Isotope Ratio		3.12		06-MAR-10 07:01	per0305110a
Perchlorate-101	.5	.49	97.44	06-MAR-10 07:01	per0305110a
Perchlorate	.5	.46	92.21	06-MAR-10 09:12	per0305123a
Perchlorate Isotope Ratio		3.1		06-MAR-10 09:12	per0305123a
Perchlorate-101	.5	.49	97.06	06-MAR-10 09:12	per0305123a
Perchlorate	.5	.52	103.44	06-MAR-10 17:45	per0306022a
Perchlorate Isotope Ratio		3.23		06-MAR-10 17:45	per0306022a

Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906

Lab Code: GEL

Reporting Units: ug/L

Perchlorate-101	.5	.51	101.86	06-MAR-10 17:45	per0306022a
Perchlorate	.5	.53	105.31	06-MAR-10 19:43	per0306035a
Perchlorate Isotope Ratio		3.11		06-MAR-10 19:43	per0306035a
Perchlorate-101	.5	.54	107.48	06-MAR-10 19:43	per0306035a
Perchlorate	.5	.5	100.64	06-MAR-10 21:41	per0306048a
Perchlorate Isotope Ratio		3.1		06-MAR-10 21:41	per0306048a
Perchlorate-101	.5	.52	103.12	06-MAR-10 21:41	per0306048a



# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305022a

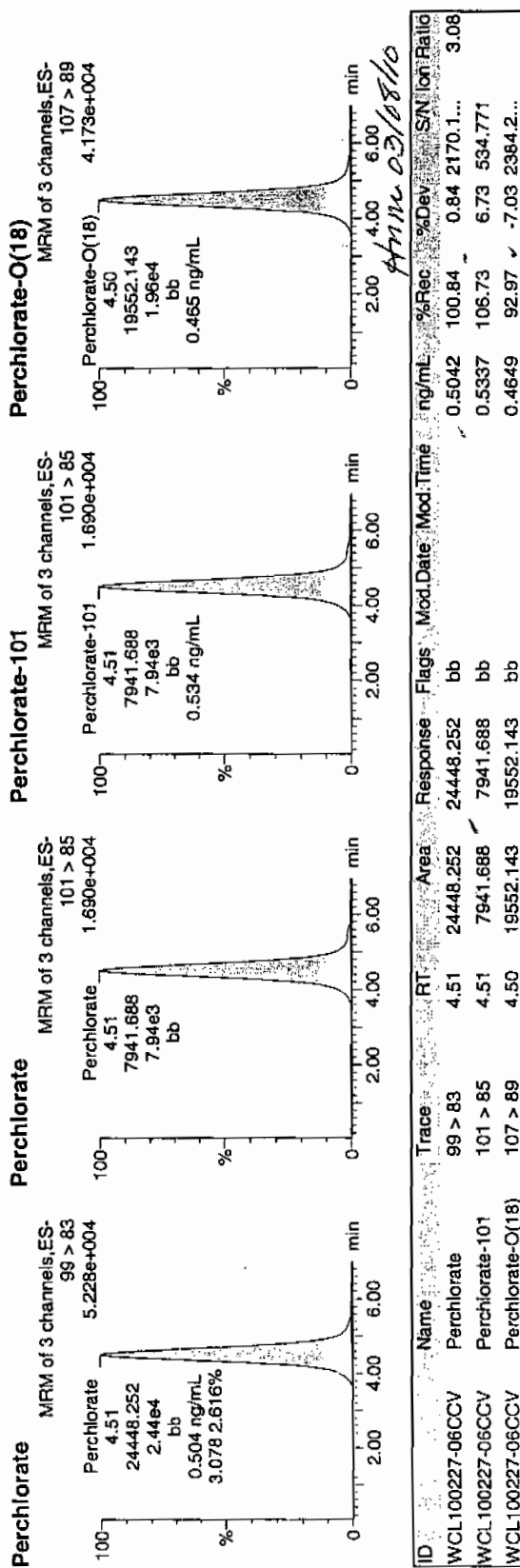
Date: 05-Mar-2010

Time: 16:11:38

ID: WCL100227-06CCV

Vial: 1:2,A

*Pass*  
*and*  
*07-06-10*



Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305035a

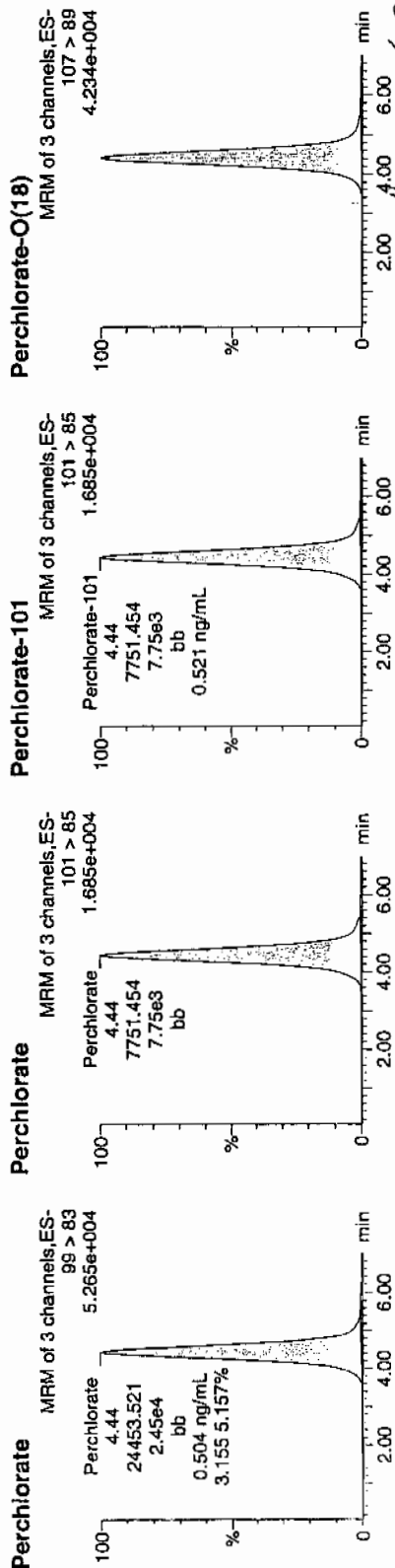
Date: 05-Mar-2010

Time: 18:22:27

ID: WCL100227-06CCV

Vial: 1:2,A

Per  
0305  
20-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.44	24453.521	24453.521	bb			0.5043	100.86	0.86	2843.3...	3.15
WCL100227-06CCV	Perchlorate-101	101 > 85	4.44	7751.454	7751.454	bb			0.5209	104.17	4.17	512.645	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.41	19898.803	19898.803	bb			0.4731	94.62	-5.38	2133.5...	

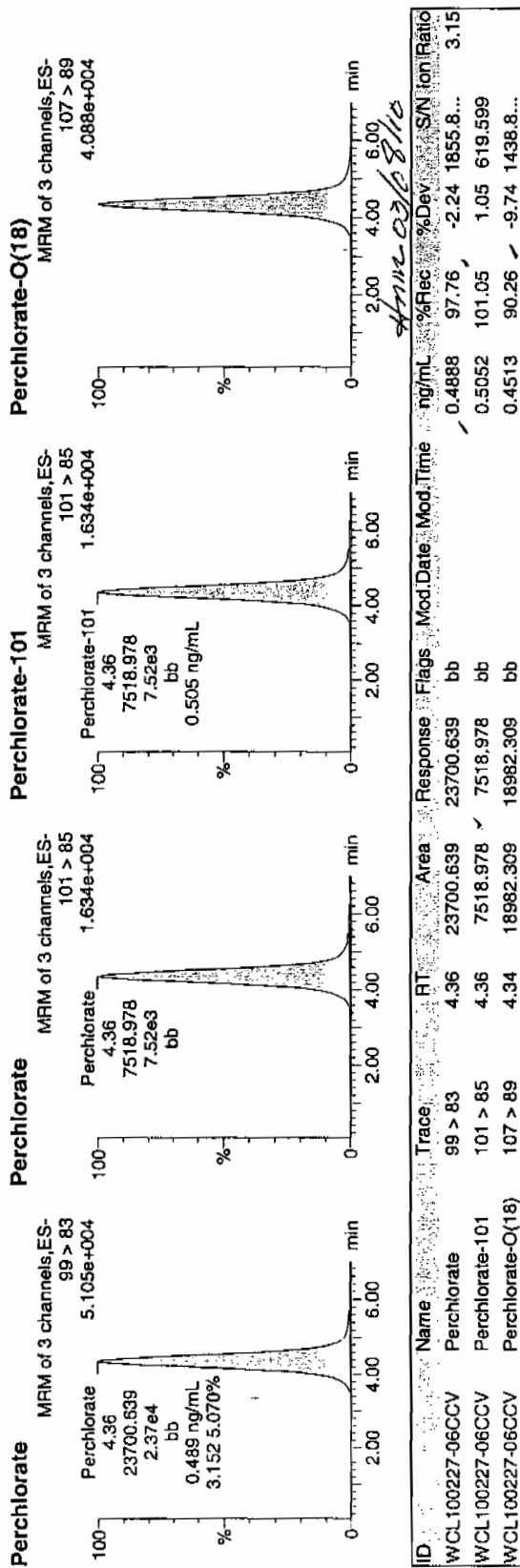
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305061a  
Date: 05-Mar-2010  
Time: 22:45:32  
ID: WCL100227-06CCV  
Vial: 1:2,A

Per  
and  
03-06-10



Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

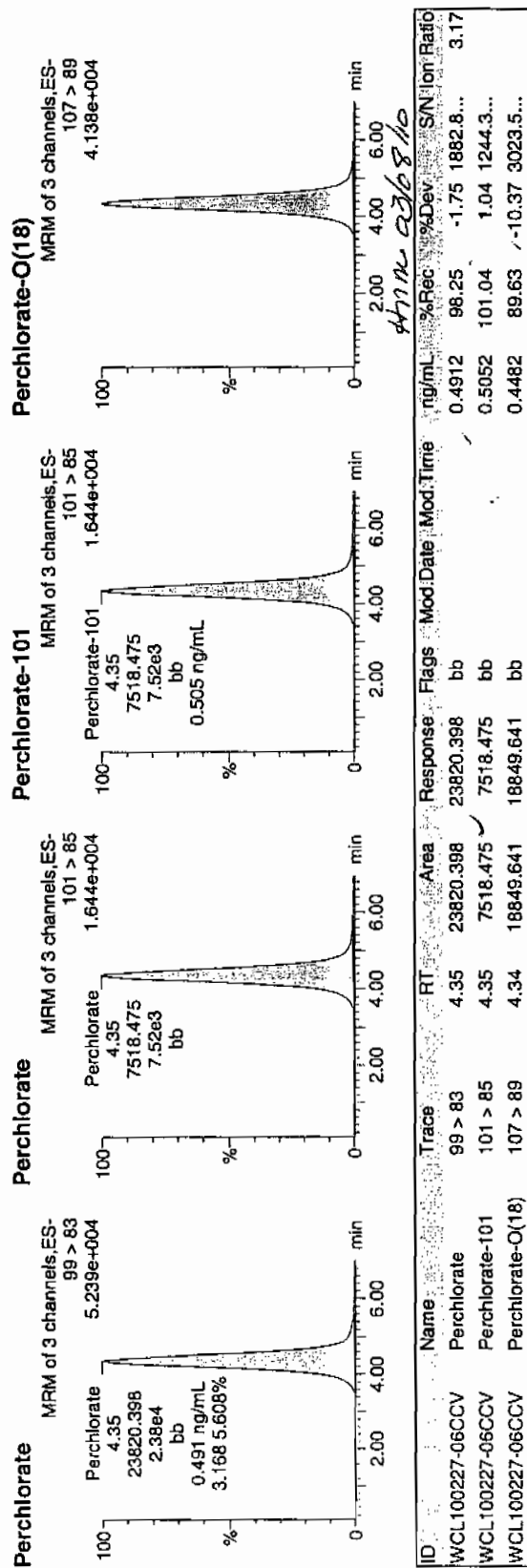
**Name: per0305074a**

Date: 06-Mar-2010

Time: 00:56:49

ID: WCL100227-06CCV

Vial: 1:2,A



Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

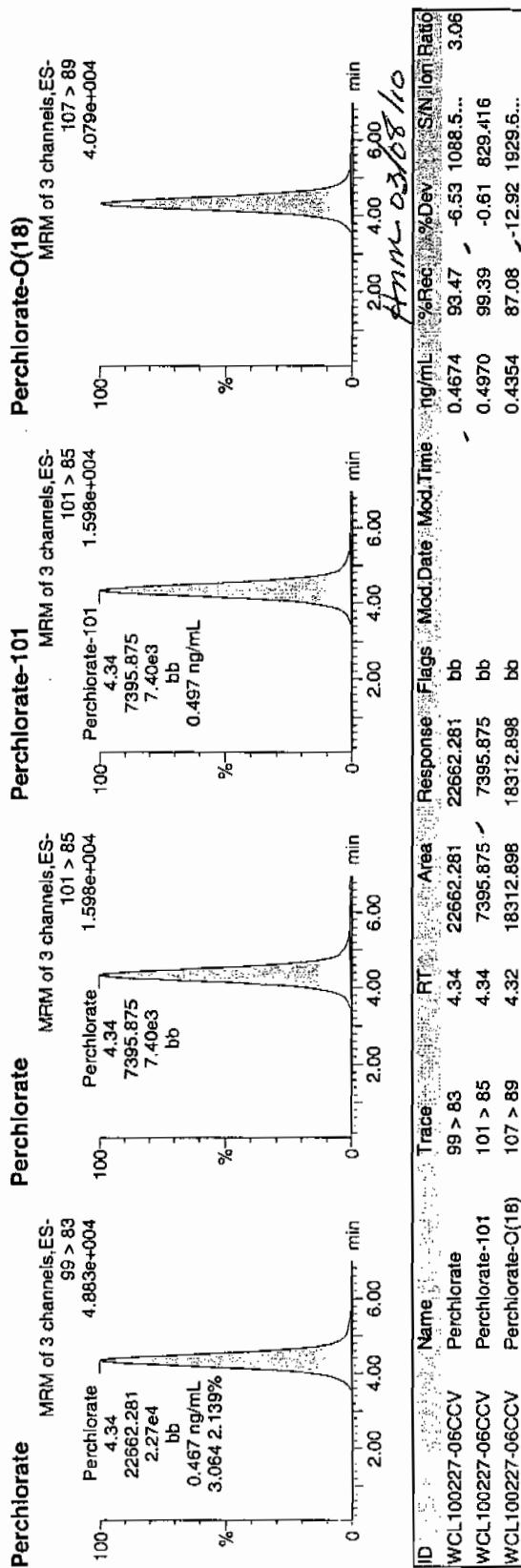
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Date: 06-Mar-2010

Time: 03:08:46

ID: WCL100227-06CCV

Vial: 1:2,A



Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305098a

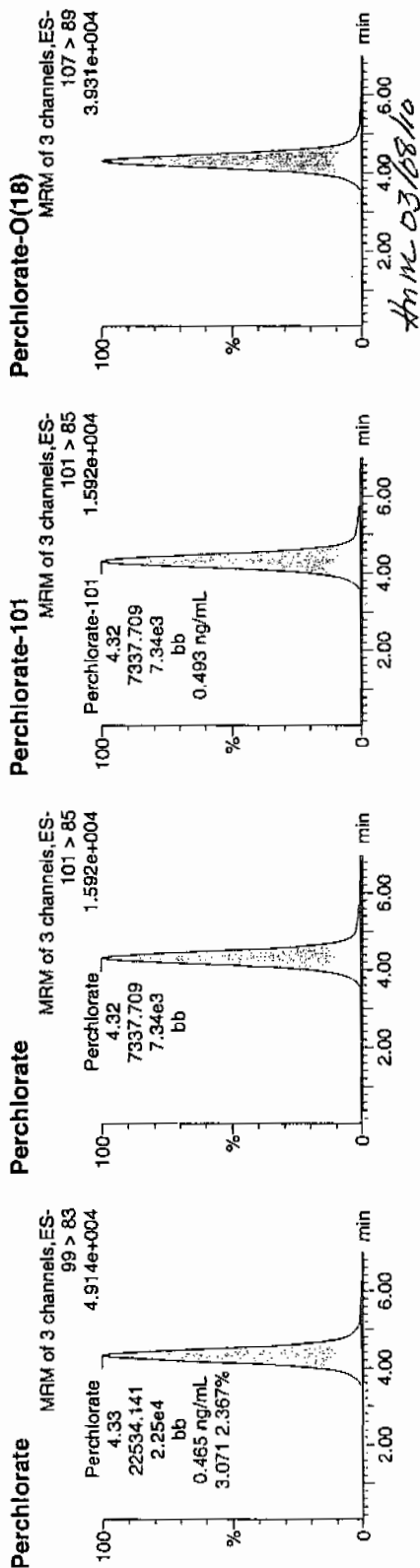
Date: 06-Mar-2010

Time: 04:59:51

ID: WCL100227-06CCV

Vial: 1;2,A

*Per  
ans  
03-06-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.33	22534.141	22534.141	bb			0.4647	92.94	-7.06	255.249	3.07
WCL100227-06CCV	Perchlorate-101	101 > 85	4.32	7337.709	7337.709	bb			0.4931	98.61	-1.39	1249.7...	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.30	18199.572	18199.572	bb			0.4327	86.54	-13.46	3457.1...	

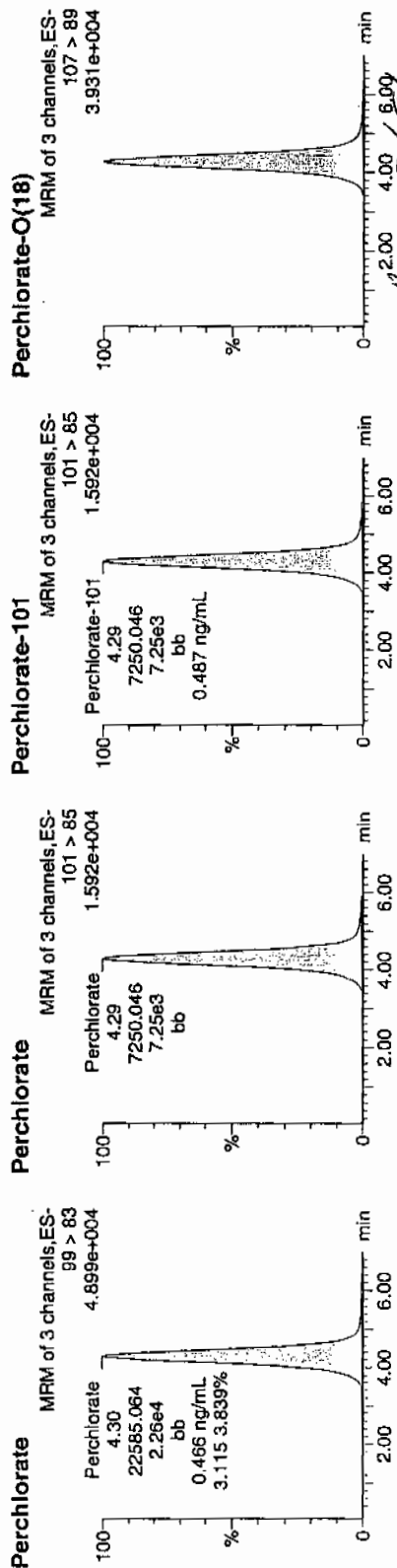
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305110a  
Date: 06-Mar-2010  
Time: 07:01:18  
ID: WCL100227-06CCV  
Vial: 1:2,A

Per  
WCL  
03-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.30	22585.064	22585.064	bb			0.4658	93.15	-6.85	2395.1...	3.12
WCL100227-06CCV	Perchlorate-101	101 > 85	4.29	7250.046	7250.046	bb			0.4872	97.43	-2.57	732.143	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.28	18011.781	18011.781	bb			0.4282	85.65	-14.35	2249.1...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305123a

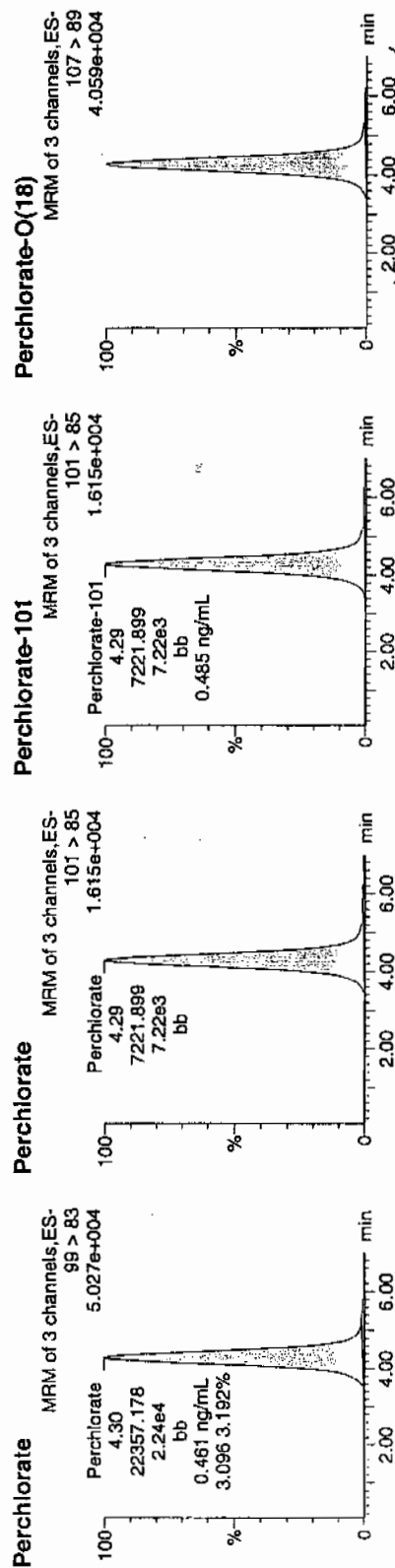
Date: 06-Mar-2010

Time: 09:12:51

ID: WCL100227-06CCV

Vial: 1;2,A

*Per*  
*03-06-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.30	22357.178	22357.178	bb			0.4611	92.21	-7.79	2720.1...	3.10
WCL100227-06CCV	Perchlorate-101	101 > 85	4.29	7221.899	7221.899	bb			0.4853	97.06	-2.94	1629.7...	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.28	18345.527	18345.527	bb			0.4362	87.24	-12.76	970.638	



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306022a

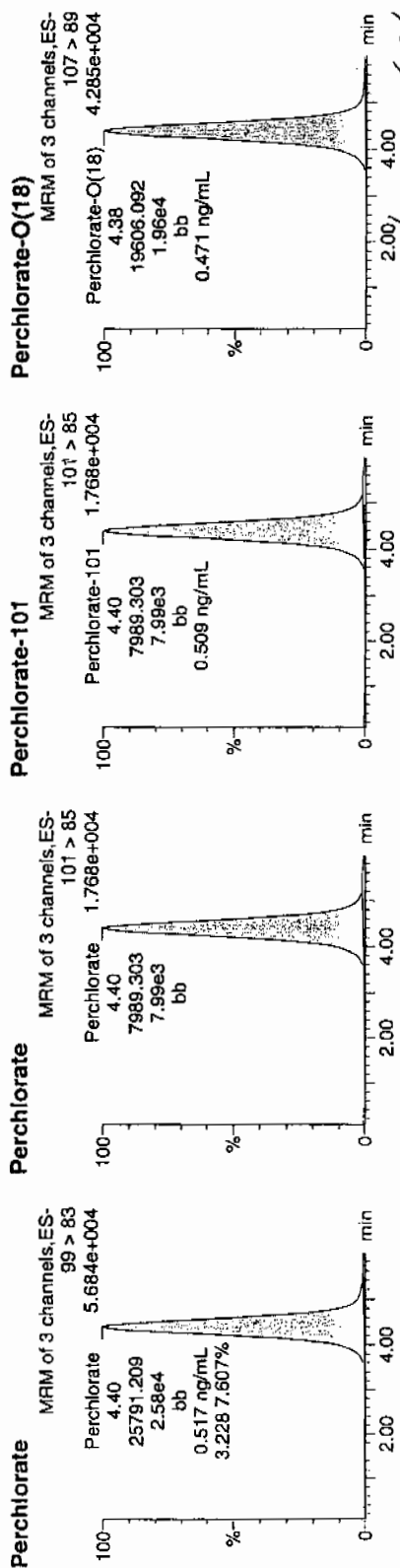
Date: 06-Mar-2010

Time: 17:45:51

ID: WCL100227-06CCV

Vial: 1:2,A

*Per*  
*03-07-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.40	25791.209	25791.209	bb			0.5172	103.44	3.44	2256.3...	3.23
WCL100227-06CCV	Perchlorate-101	101 > 85	4.40	7989.303	7989.303	bb			0.5093	101.86	1.86	1287.2...	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.38	19606.092	19606.092	bb			0.4705	94.10	-5.90	6406.1...	

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306035a

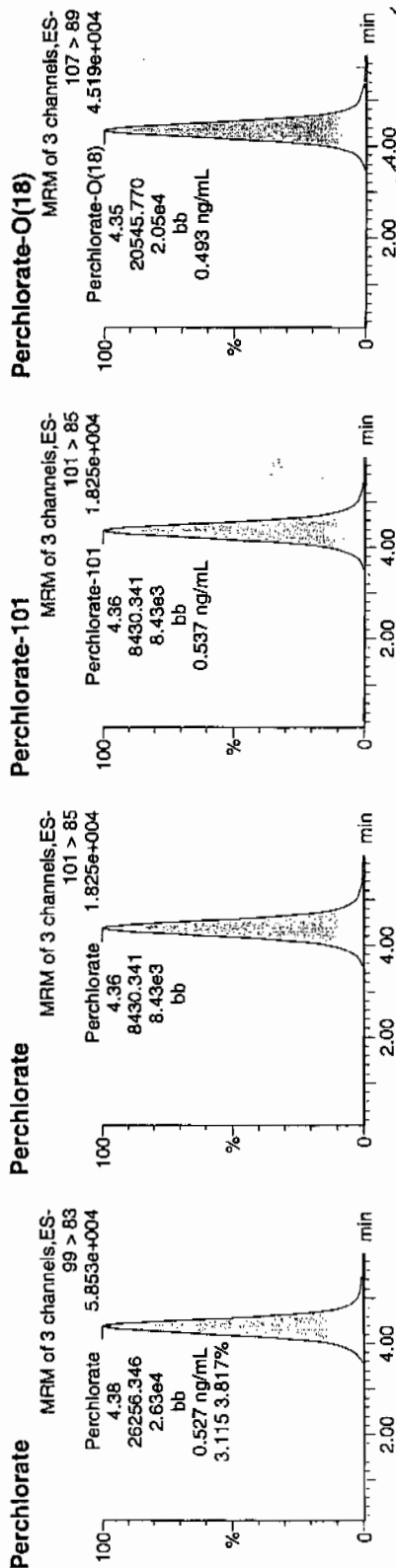
Date: 06-Mar-2010

Time: 19:43:43

ID: WCL100227-06CCV

Vial: 1:2,A

Pure  
03-07-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.38	26256.346	26256.346	bb			0.5265	105.31	5.31	4475.8...	3.11
WCL100227-06CCV	Perchlorate-101	101 > 85	4.36	8430.341	8430.341	bb			0.5374	107.48	7.48	247.813	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.35	20545.770	20545.770	bb			0.4931	98.61	-1.39	2866.5...	

Ann 03/08/10

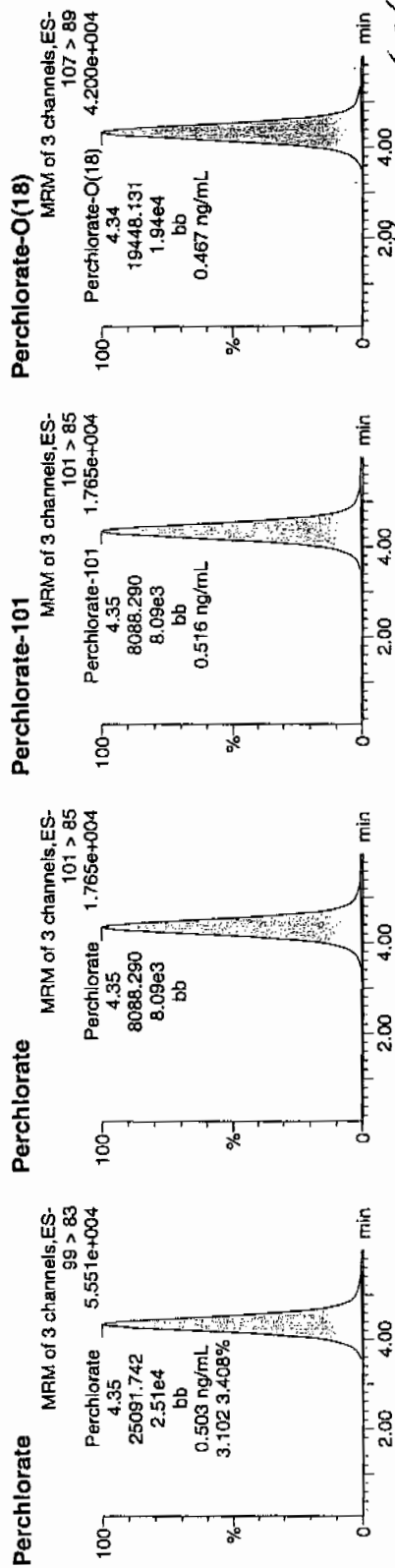
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306048a  
Date: 06-Mar-2010  
Time: 21:41:36  
ID: WCL100227-06CCV  
Vial: 1:2,A

*Run  
WCL  
307-D*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100227-06CCV	Perchlorate	99 > 83	4.35	25091.742	25091.742	bb			0.5032	100.64	0.64	6712.1...	3.10
WCL100227-06CCV	Perchlorate-101	101 > 85	4.35	8088.290	8088.290	bb			0.5156	103.12	3.12	2495.8...	
WCL100227-06CCV	Perchlorate-O(18)	107 > 89	4.34	19448.131	19448.131	bb			0.4667	93.34	-6.66	1228.5...	

Form 3

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	97.42	05-MAR-10 14:21	per0305011a
Perchlorate Isotope Ratio		3.39		05-MAR-10 14:21	per0305011a
Perchlorate-101	.05	.05	93.73	05-MAR-10 14:21	per0305011a
Perchlorate	.05	.05	94.34	05-MAR-10 16:31	per0305024a
Perchlorate Isotope Ratio		2.94		05-MAR-10 16:31	per0305024a
Perchlorate-101	.05	.05	104.64	05-MAR-10 16:31	per0305024a
Perchlorate	.05	.04	88.33	05-MAR-10 18:42	per0305037a
Perchlorate Isotope Ratio		2.97		05-MAR-10 18:42	per0305037a
Perchlorate-101	.05	.05	96.82	05-MAR-10 18:42	per0305037a
Perchlorate	.05	.04	85.02	05-MAR-10 23:06	per0305063a
Perchlorate Isotope Ratio		3.14		05-MAR-10 23:06	per0305063a

## Perchlorate MDL Verification

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Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906

Lab Code: GEL

Reporting Units: ug/L

Perchlorate-101	.05	.04	88.26	05-MAR-10 23:06	per0305063a
Perchlorate	.05	.04	89.21	06-MAR-10 01:17	per0305076a
Perchlorate Isotope Ratio		3.29		06-MAR-10 01:17	per0305076a
Perchlorate-101	.05	.04	88.45	06-MAR-10 01:17	per0305076a
Perchlorate	.05	.04	85.29	06-MAR-10 03:29	per0305089a
Perchlorate Isotope Ratio		3.36		06-MAR-10 03:29	per0305089a
Perchlorate-101	.05	.04	82.59	06-MAR-10 03:29	per0305089a
Perchlorate	.05	.04	88.04	06-MAR-10 05:20	per0305100a
Perchlorate Isotope Ratio		3.45		06-MAR-10 05:20	per0305100a
Perchlorate-101	.05	.04	83.27	06-MAR-10 05:20	per0305100a
Perchlorate	.05	.04	89.34	06-MAR-10 07:21	per0305112a

Form 3

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.08		06-MAR-10 07:21	per0305112a
Perchlorate-101	.05	.05	94.48	06-MAR-10 07:21	per0305112a
Perchlorate	.05	.05	90.32	06-MAR-10 09:33	per0305125a
Perchlorate Isotope Ratio		3.21		06-MAR-10 09:33	per0305125a
Perchlorate-101	.05	.05	91.78	06-MAR-10 09:33	per0305125a
Perchlorate	.05	.05	96.41	06-MAR-10 16:05	per0306011a
Perchlorate Isotope Ratio		2.95		06-MAR-10 16:05	per0306011a
Perchlorate-101	.05	.05	103.98	06-MAR-10 16:05	per0306011a
Perchlorate	.05	.05	97.89	06-MAR-10 18:04	per0306024a
Perchlorate Isotope Ratio		2.98		06-MAR-10 18:04	per0306024a
Perchlorate-101	.05	.05	104.42	06-MAR-10 18:04	per0306024a

Form 3

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1906

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units:  $\mu\text{g/L}$

Perchlorate	.05	.05	99.71	06-MAR-10 20:01	per0306037a
Perchlorate Isotope Ratio		3.24		06-MAR-10 20:01	per0306037a
Perchlorate-101	.05	.05	97.72	06-MAR-10 20:01	per0306037a
Perchlorate	.05	.05	95.51	06-MAR-10 21:59	per0306050a
Perchlorate Isotope Ratio		3.01		06-MAR-10 21:59	per0306050a
Perchlorate-101	.05	.05	100.9	06-MAR-10 21:59	per0306050a

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qid

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305011a

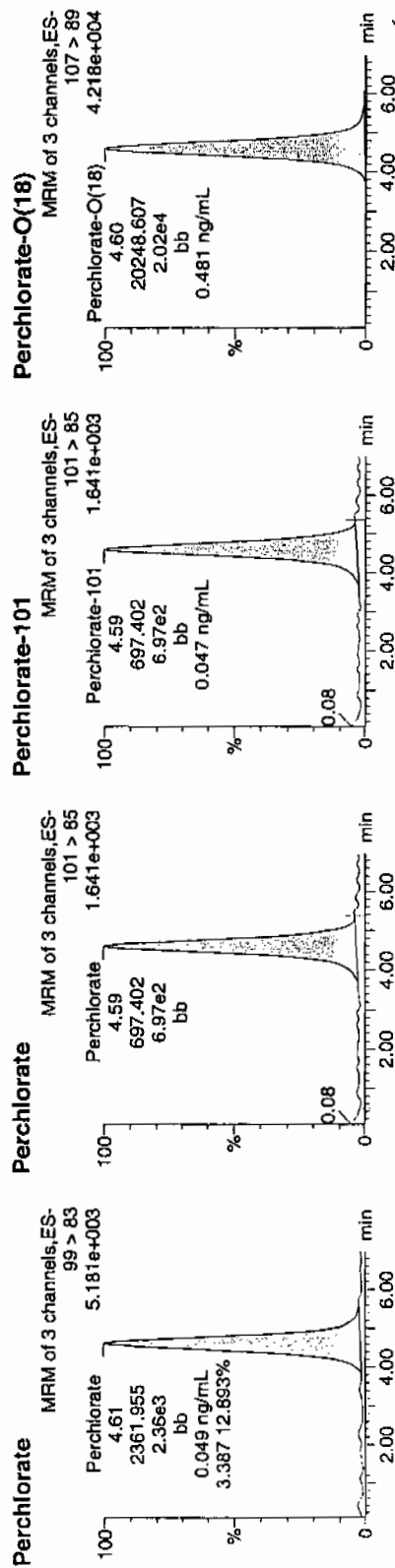
Date: 05-Mar-2010

Time: 14:21:02

ID: WCL100227-07CRI

Vial: 1:2,B

Per  
03-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.61	2361.955	2361.955	bb			0.0487	97.42	-2.58	227.404	3.39
WCL100227-07CRI	Perchlorate-101	101 > 85	4.59	697.402	697.402	bb			0.0469	93.73	-6.27	49.831	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.60	20248.607	20248.607	bb			0.4814	96.28	-3.72	305.789	



Quantify Sample Report MassLynx 4.0 SP4

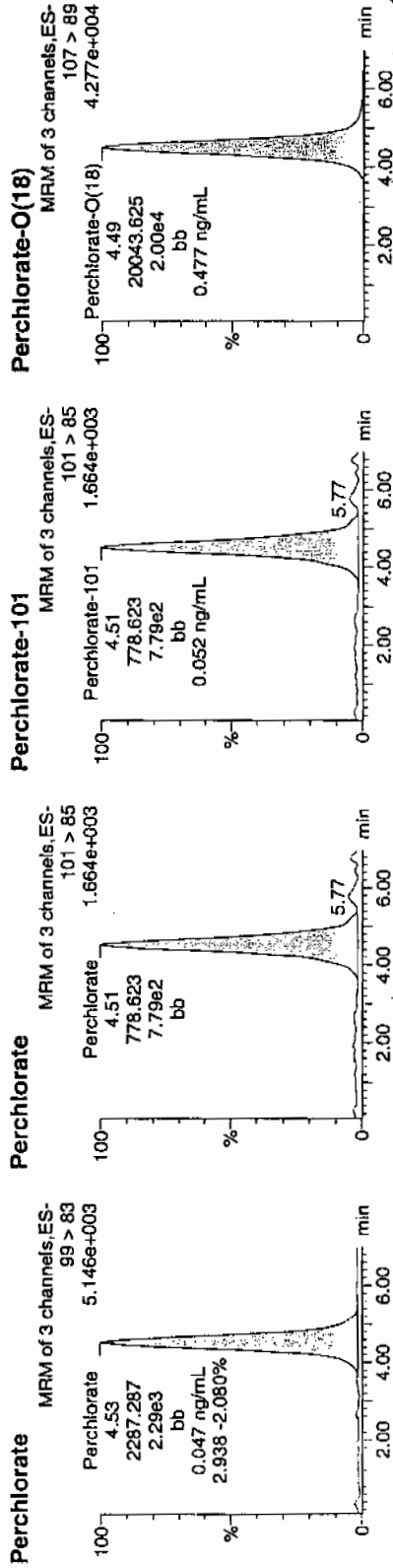
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305024a  
Date: 05-Mar-2010  
Time: 16:31:58  
ID: WCL100227-07CRI  
Vial: 1:2,B

Per  
and  
030610



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.53	2287.287	2287.287	bb			0.0472	94.34	-5.66	193.383	2.94
WCL100227-07CRI	Perchlorate-101	101 > 85	4.51	778.623	778.623	bb			0.0523	104.64	4.64	32.800	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.49	20043.625	20043.625	bb			0.4766	95.31	-4.69	1708.4...	

# Quantify Sample Report MassLynx 4.0 SP4

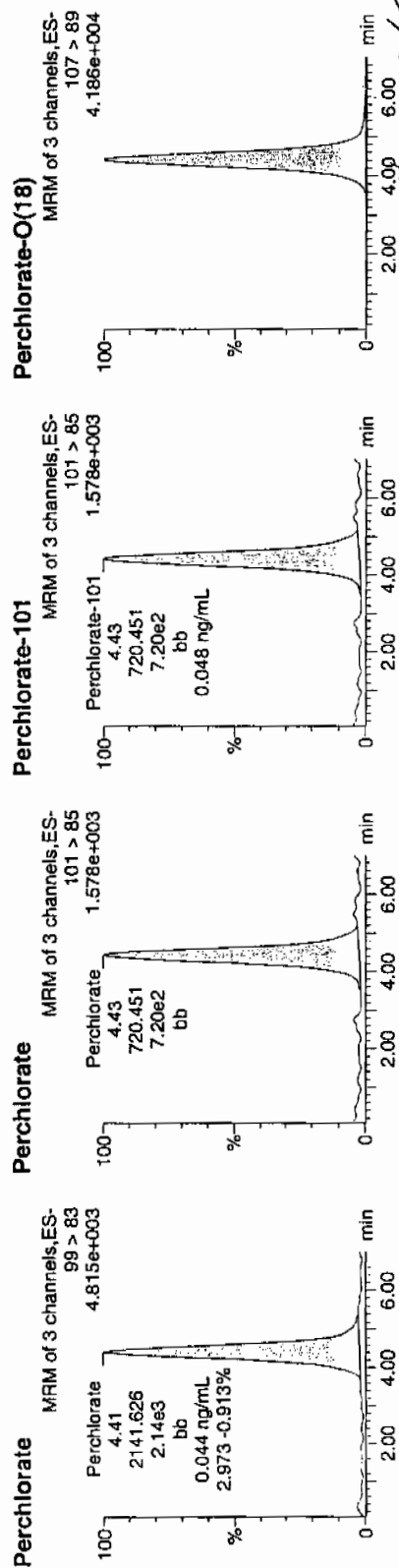
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305037a  
 Date: 05-Mar-2010  
 Time: 18:42:54  
 ID: WCL100227-07CRI  
 Vial: 1:2,B

Per  
 and  
 0306-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.41	2141.626	2141.626	bb			0.0442	88.33	-11.67	305.770	2.87
WCL100227-07CRI	Perchlorate-101	101 > 85	4.43	720.451	720.451	bb			0.0484	96.82	-3.18	132.935	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.41	19596.717	19596.717	bb			0.4659	93.19	-6.81	1590.0...	

4.43 min 03/06/10

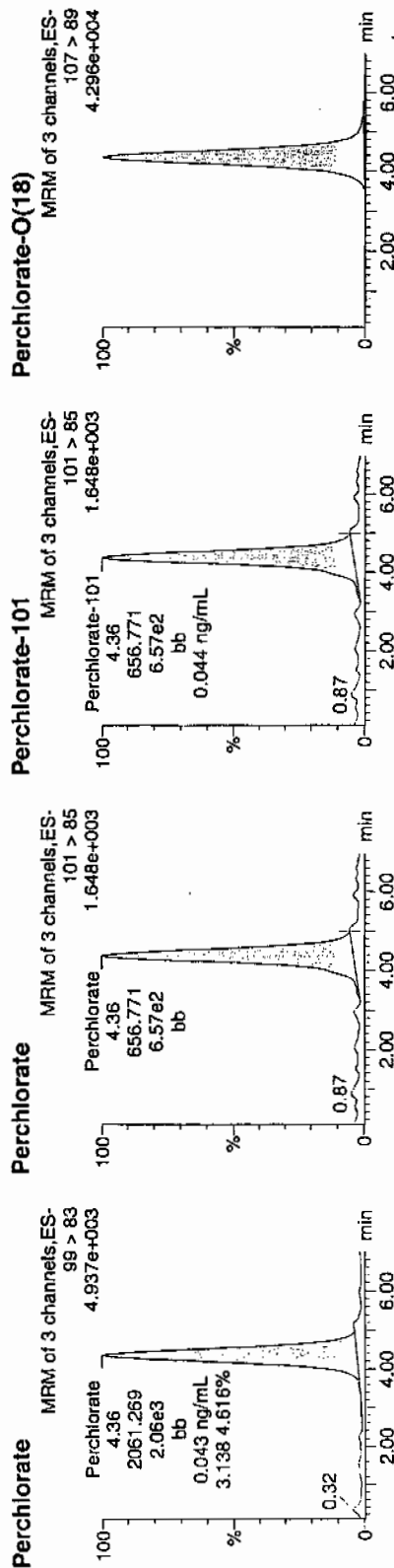
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305063a  
Date: 05-Mar-2010  
Time: 23:06:06  
ID: WCL100227-07CRI  
Vial: 1:2,B

Per  
0305063a  
0306-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.36	2061.269	2061.269	bb			0.0425	85.02	-14.98	66.938	3.14
WCL100227-07CRI	Perchlorate-101	101 > 85	4.36	656.771	656.771	bb			0.0441	88.26	-11.74	112.286	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.34	19344.582	19344.582	bb			0.4599	91.99	-8.01	2975.6...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305076a

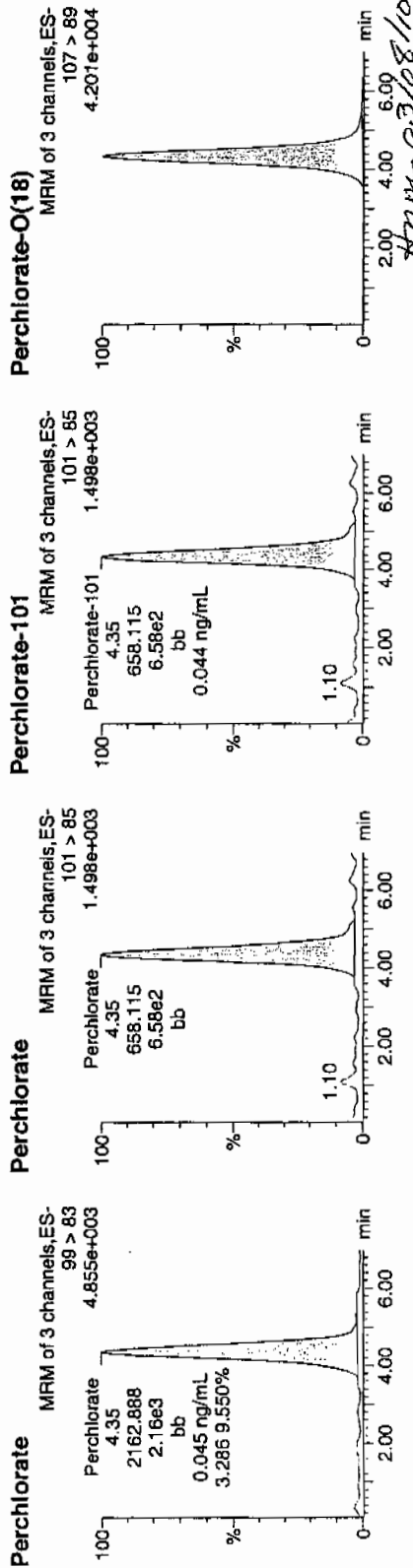
Date: 06-Mar-2010

Time: 01:17:24

ID: WCL100227-07CRI

Vial: 1:2,B

*Perchlorate*  
*03/06/10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.35	2162.888	2162.888	bb			0.0446	89.21	-10.79	223.515	3.29
WCL100227-07CRI	Perchlorate-101	101 > 85	4.35	658.115	658.115	bb			0.0442	88.45	-11.55	76.826	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.34	19454.201	19454.201	bb			0.4625	92.51	-7.49	1998.1...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305089a

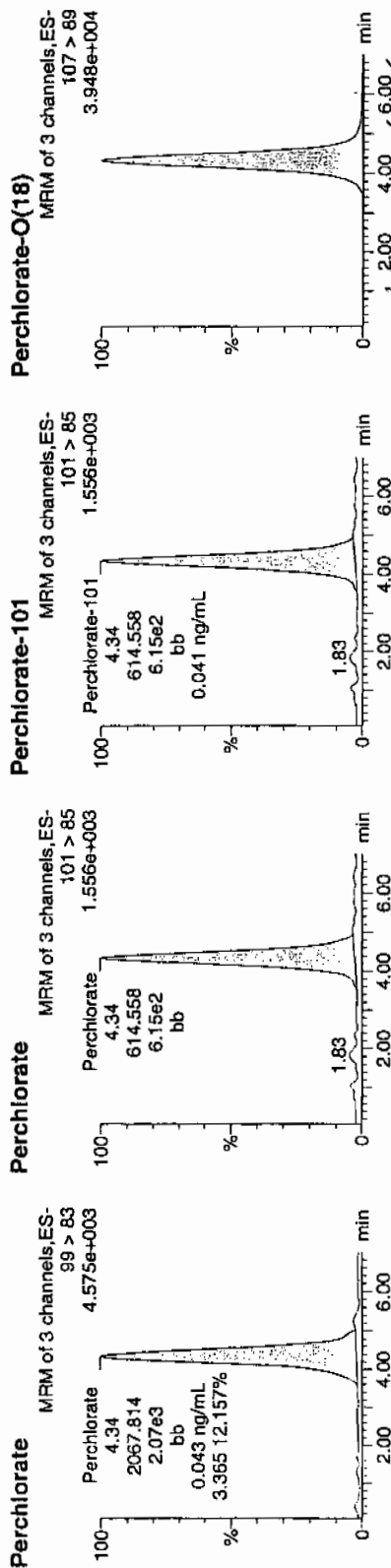
Date: 06-Mar-2010

Time: 03:29:13

ID: WCL100227-07CRI

Vial: 1:2,B

WCL 03-06-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.34	2067.814	2067.814	bb			0.0426	85.29	-14.71	261.095	3.36
WCL100227-07CRI	Perchlorate-101	101 > 85	4.34	614.558	614.558	bb			0.0413	82.59	-17.41	104.546	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.33	18267.762	18267.762	bb			0.4343	86.87	-13.13	1288.7...	

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305100a

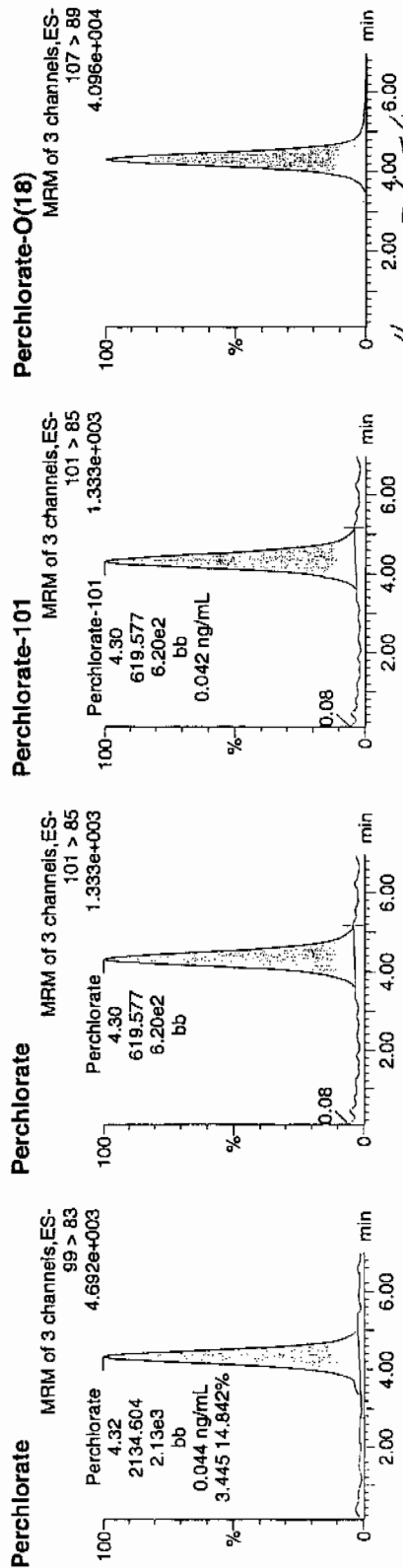
Date: 06-Mar-2010

Time: 05:20:11

ID: WCL100227-07CRI

Vial: 1:2,B

Per  
and  
03-06-10



ID	Name	Table	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.32	2134.604	2134.604	bb			0.0440	88.04	-11.96	100.010	3.45
WCL100227-07CRI	Perchlorate-101	101 > 85	4.30	619.577	619.577	bb			0.0416	83.27	-16.73	22.917	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.30	18652.084	18652.084	bb			0.4435	88.89	-11.31	1487.4...	

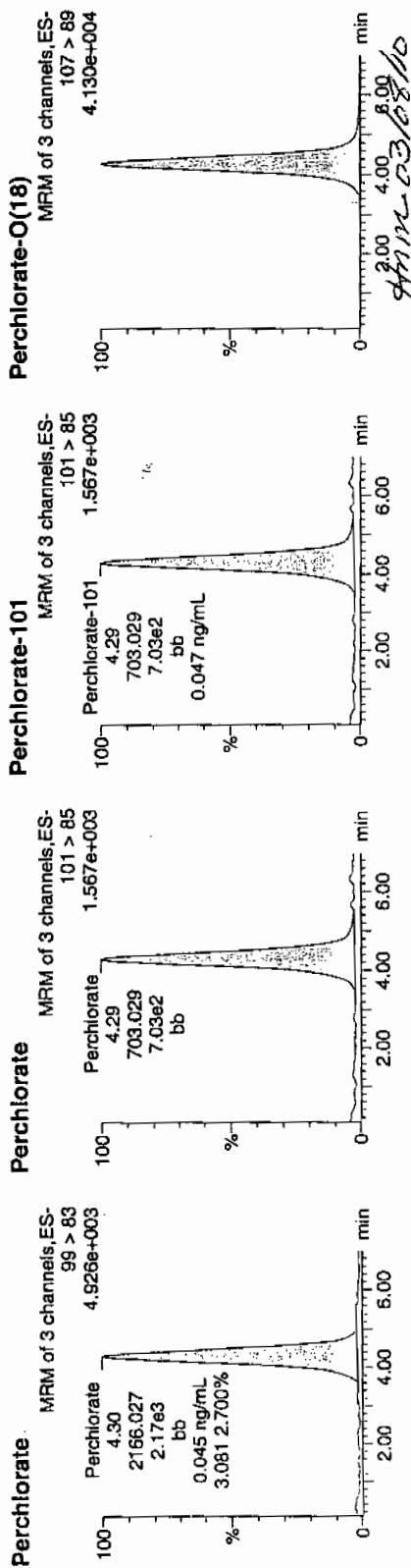
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305112a  
Date: 06-Mar-2010  
Time: 07:21:38  
ID: WCL100227-07CRI  
Vial: 1:2,B

Per  
030610



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.30	2166.027	2166.027	bb			0.0447	89.34	-10.66	111.737	3.08
WCL100227-07CRI	Perchlorate-101	101 > 85	4.29	703.029	703.029	bb			0.0472	94.48	-5.52	132.902	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.28	18598.717	18598.717	bb			0.4422	88.44	-11.56	2205.4...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

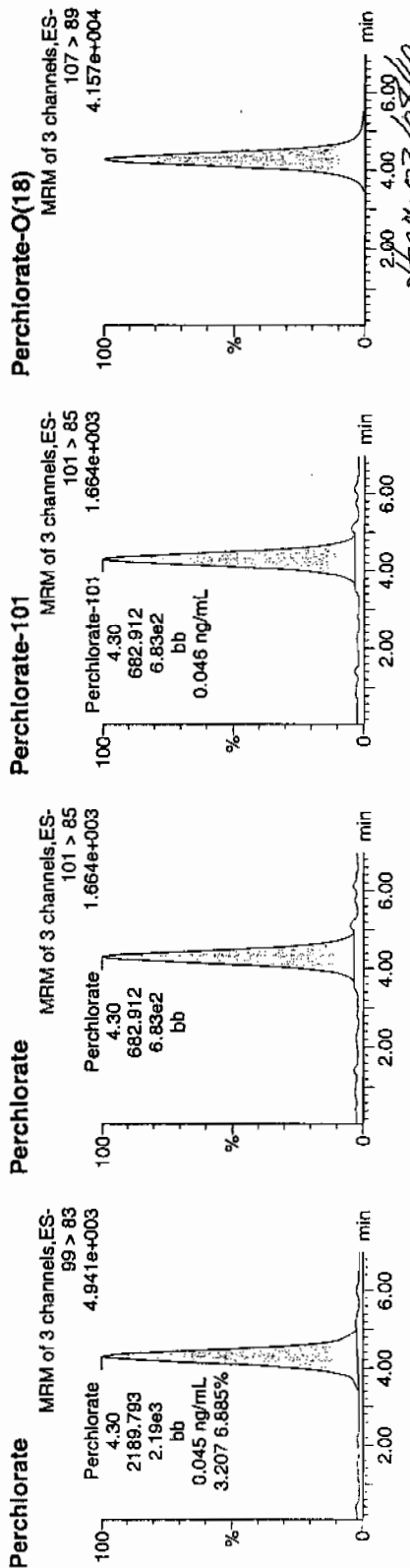
Name: per0305125a

Date: 06-Mar-2010

Time: 09:33:16

ID: WCL100227-07CRI

Vial: 1:2,B



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.30	2189.793	2189.793	bb			0.0452	90.32	-9.68	217.886	3.21
WCL100227-07CRI	Perchlorate-101	101 > 85	4.30	682.912	682.912	bb			0.0459	91.78	-8.22	123.453	
WCL100227-07CRI	Perchlorate-Q(18)	107 > 89	4.28	18871.918	18871.918	bb			0.4487	89.74	-10.26	3389.5...	



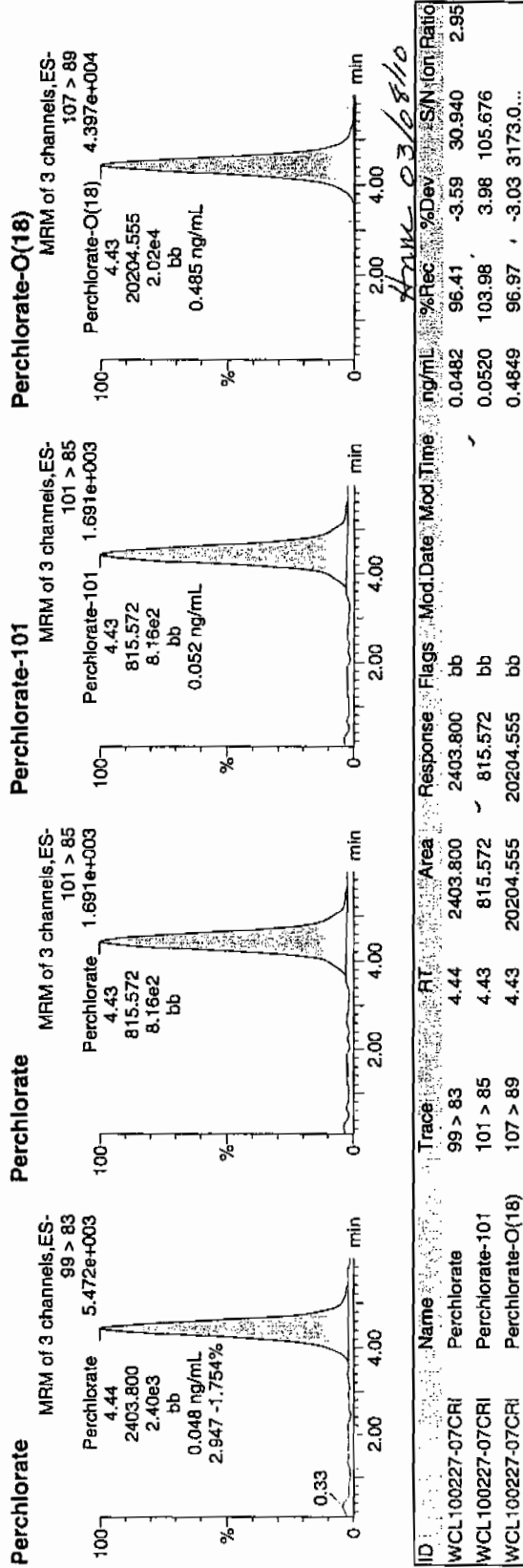
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306011a  
Date: 06-Mar-2010  
Time: 16:05:59  
ID: WCL100227-07CRI  
Vial: 1;2,B

*Per*  
*03-07-10*



**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306024a

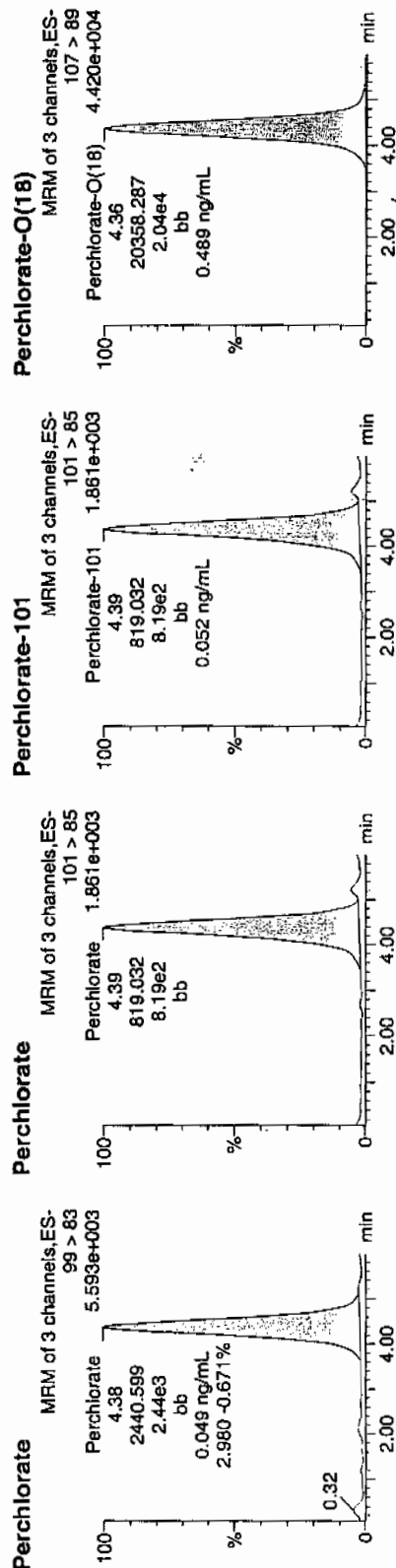
Date: 06-Mar-2010

Time: 18:04:03

ID: WCL100227-07CRI

Vial: 1:2,B

03-07-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.38	2440.599	2440.599	bb			0.0489	97.89	-2.11	254.348	2.98
WCL100227-07CRI	Perchlorate-101	101 > 85	4.39	819.032	819.032	bb			0.0522	104.42	4.42	96.508	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.36	20358.287	20358.287	bb			0.4886	97.71	-2.29	1453.1...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
 Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306037a

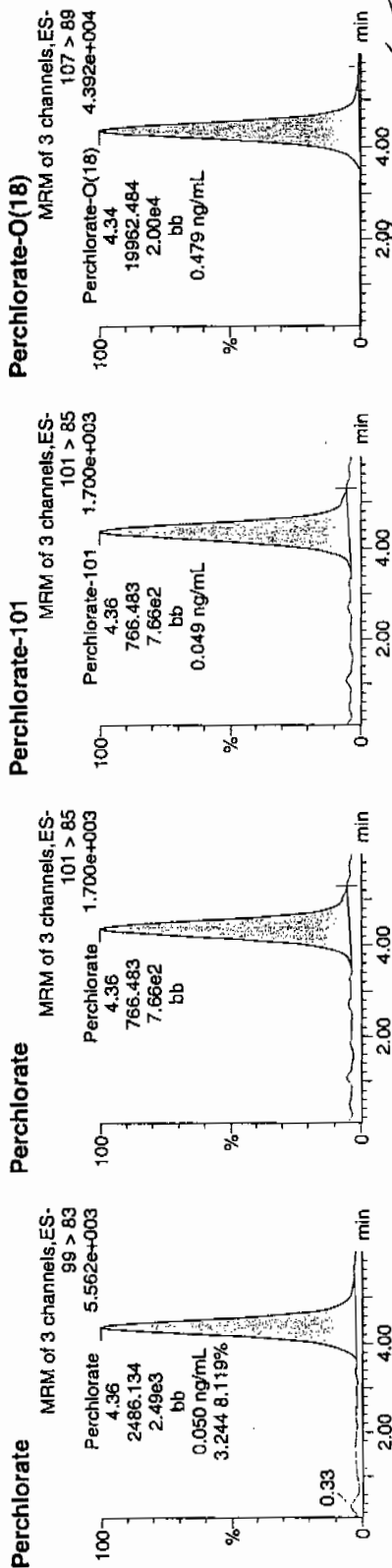
Date: 06-Mar-2010

Time: 20:01:55

ID: WCL100227-07CRI

Vial: 1;2,B

*Per*  
*03-07-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.36	2486.134	2486.134	bb			0.0499	99.71	-0.29	46.862	3.24
WCL100227-07CRI	Perchlorate-101	101 > 85	4.36	766.483	766.483	bb			0.0489	97.72	-2.28	9.797	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.34	19962.484	19962.484	bb			0.4791	95.81	-4.19	1837.9...	

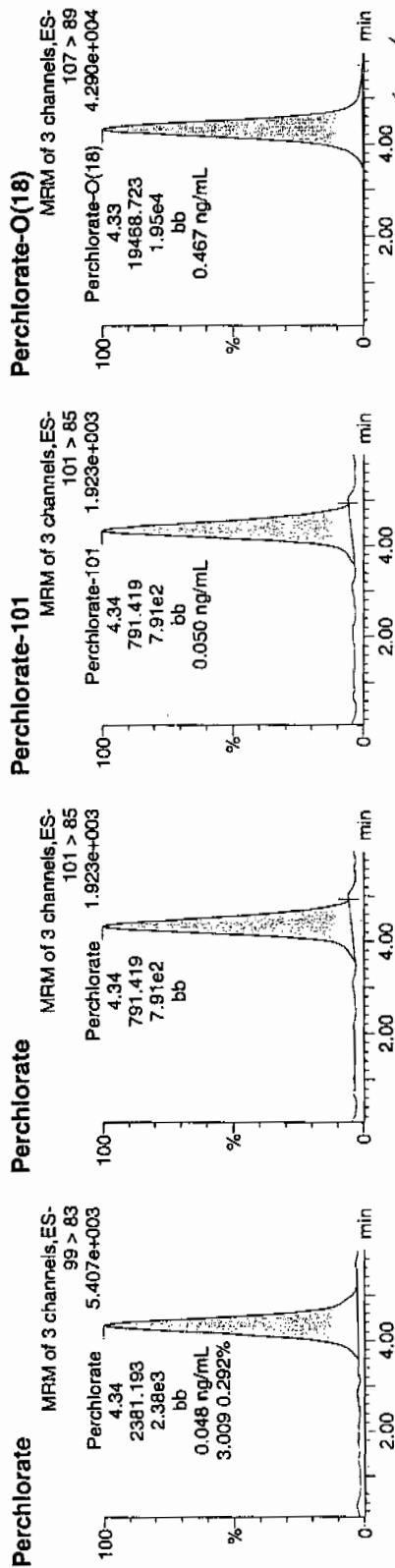
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030610a.qld

Last Altered: Sunday, March 07, 2010 11:00:09 AM Eastern Standard Time  
Printed: Sunday, March 07, 2010 11:08:57 AM Eastern Standard Time

Name: per0306050a  
Date: 06-Mar-2010  
Time: 21:59:56  
ID: WCL100227-07CRI  
Vial: 1:2,B

*Pure*  
*WCL100227-07CRI*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100227-07CRI	Perchlorate	99 > 83	4.34	2381.193	2381.193	bb			0.0478	95.51	-4.49	247.633	3.01
WCL100227-07CRI	Perchlorate-101	101 > 85	4.34	791.419	791.419	bb			0.0505	100.90	0.90	53.765	
WCL100227-07CRI	Perchlorate-O(18)	107 > 89	4.33	19468.723	19468.723	bb			0.4672	93.44	-6.56	1673.5...	

# QUALITY CONTROL

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: EPA 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 955726  
 Extraction Type: Filter/DAI  
 Sample Volume/Weight: 10.0 mL  
 Concentrated Extract Volume: 10.0  
 Client Sample No. MB  
 Date Received: 02-MAR-10  
 GEL Job No (SDG): 10-1906  
 GEL Sample ID: 1202049069  
 Date Filtered: 02-MAR-10  
 Injection Volume (uL): 20  
 %Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	06-MAR-10 07:31	per0305113a
	Perchlorate Isotope Ratio						1	06-MAR-10 07:31	per0305113a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	06-MAR-10 07:31	per0305113a
	Perchlorate-O(18)			0.436	ug/L		1	06-MAR-10 07:31	per0305113a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

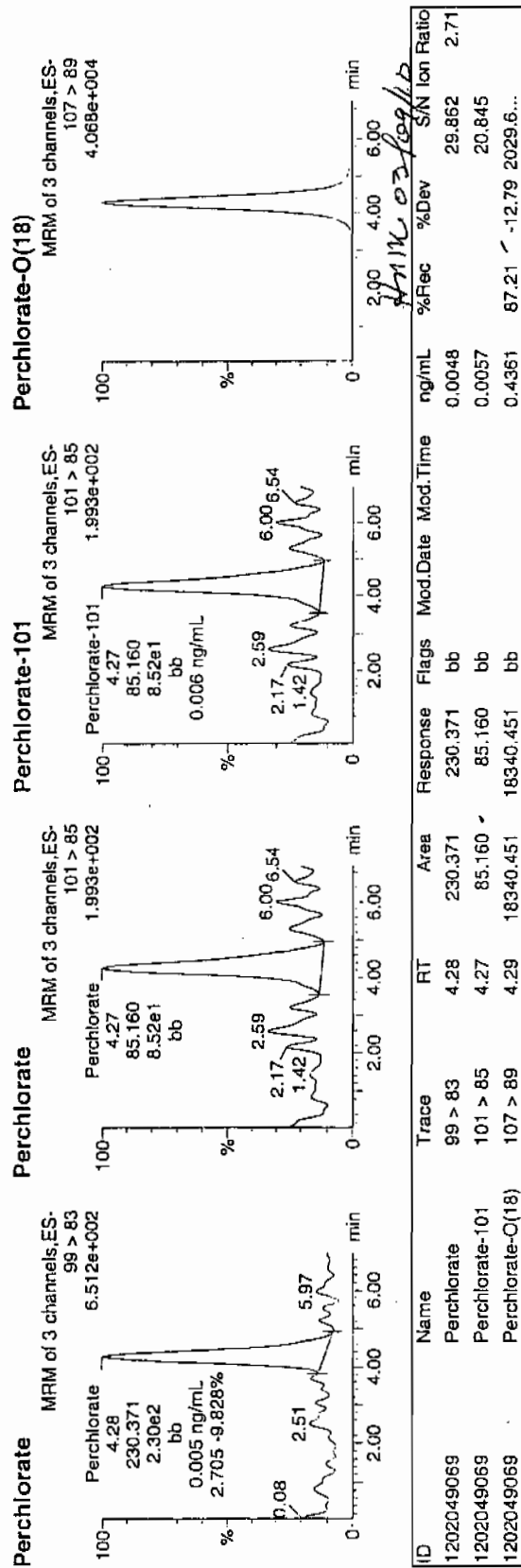
Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305113a  
Date: 06-Mar-2010  
Time: 07:31:49  
ID: 1202049069  
Vial: 3:1,A

155727 / 120 / 11

0306-10



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WATER

Extraction Batch ID: 955726

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

LCS

Date Received: 02-MAR-10

GEL Job No (SDG): 10-1906

GEL Sample ID: 1202049070

Date Filtered: 02-MAR-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.180	ug/L	J	1	06-MAR-10 07:42	per0305114a
	Perchlorate Isotope Ratio			3.12			1	06-MAR-10 07:42	per0305114a
14797-73-0	Perchlorate-101	.05	.2	0.188	ug/L	J	1	06-MAR-10 07:42	per0305114a
	Perchlorate-O(18)			0.416	ug/L		1	06-MAR-10 07:42	per0305114a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

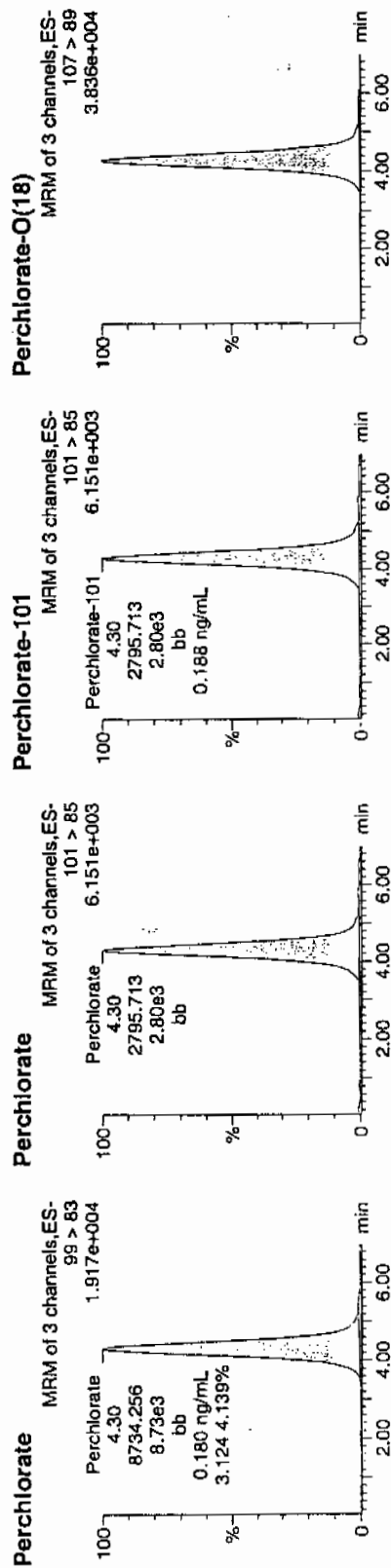
Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305114a  
Date: 06-Mar-2010  
Time: 07:42:03  
ID: 1202049070  
Vial: 3:1,B

Law 955727 | 220 | 65 | 11

330610



ID	Name	Trace	RT	Area	Response	Flags	Mod. Date	Mod. Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202049070	Perchlorate	99 > 83	4.30	8734.256	8734.256	bb			0.1801	90.06	-9.94	2607.4...	3.12
1202049070	Perchlorate-101	101 > 85	4.30	2795.713	2795.713	bb			0.1879	93.93	-6.07	624.279	
1202049070	Perchlorate-O(18)	107 > 89	4.29	17497.846	17497.846	bb			0.4160	83.20	-16.80	1738.9...	

8734.256  
48489.7  
= 0.1801  
HAW  
03/06/10

# MISCELLANEOUS DATA

# Prep Logbook

## Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 955726 Verified by:  
 Analyst: Kaylie Westmoreland  
 Method: SW846 6850 Modified  
 Lab SOP: GL-OA-E-067 REV# 6  
 Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202049069 MB	02-MAR-2010 14:28:00	10	10	1
1202049070 LCS	02-MAR-2010 14:28:00	10	10	1
247137001	02-MAR-2010 14:28:00	10	10	1
247139001	02-MAR-2010 14:28:00	10	10	1
247139001	02-MAR-2010 14:28:00	10	10	1
1202049071 MS (247139001)	02-MAR-2010 14:28:00	10	10	1
1202049072 MSD (247139001)	02-MAR-2010 14:28:00	10	10	1
247179001	02-MAR-2010 14:28:00	10	10	1
247183001	02-MAR-2010 14:28:00	10	10	1
247192001	02-MAR-2010 14:28:00	10	10	1
247203001	02-MAR-2010 14:28:00	10	10	1
247250001	02-MAR-2010 14:28:00	10	10	1
247250002	02-MAR-2010 14:28:00	10	10	1
247256001	02-MAR-2010 14:28:00	10	10	1
247256002	02-MAR-2010 14:28:00	10	10	1
247322001	02-MAR-2010 14:28:00	10	10	1
247322002	02-MAR-2010 14:28:00	10	10	1
247335001	02-MAR-2010 14:28:00	10	10	1
247335001	02-MAR-2010 14:28:00	10	10	1
247335002	02-MAR-2010 14:28:00	10	10	1
247350001	02-MAR-2010 14:28:00	10	10	1
1202049073 LCS	02-MAR-2010 14:28:00	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments
ICS	1202049073	10 ug/L ICS/CCV Second Source	UCL00210-02.2	2	mL	Desalting cartridges used: 100217-1-H & 100209-1-Ba
ICS	1202049070	10 ug/L ICS/CCV Second Source	UCL00210-02.2	2	mL	
MS	1202049071	10 ug/L ICS/CCV Second Source	UCL00210-02.2	2	mL	
MSD	1202049072	10 ug/L ICS/CCV Second Source	UCL00210-02.2	2	mL	
ICNT AM		500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1267890	10	mL	
ICNT AB		0.2% HPLC Grade Water	1271949	10	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 03/05/10  
 Extr. Injection Volume: 20uL  
 Sequence Number: per030510a  
 Initial Calibration Date: 03/05/10

Method: EPA 6850-Modified  
 Int. Std.: UCL100126-01  
 Mobile Phase Lot#: 1278668, 1271949  
 Standard-Samp Reagent Lot#: 1271949

Reviewed BY: *HW*  
 Date: *03/09/10*  
 SOP: GL-OA-E-067 Rev.6  
 Alt Check Std. ID: WCL100227-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0305001a	IPB001	CWW	3/5/2010 12:39			1		USE	B
per0305002a	IPB001	CWW	3/5/2010 12:50			1		USE	B
per0305003a	WCLICAL-01	CWW	3/5/2010 13:00			1		USE	I
per0305004a	WCLICAL-02	CWW	3/5/2010 13:10			1		USE	I
per0305005a	WCLICAL-03	CWW	3/5/2010 13:20			1		USE	I
per0305006a	WCLICAL-04	CWW	3/5/2010 13:30			1		USE	I
per0305007a	WCLICAL-05	CWW	3/5/2010 13:40			1		USE	I
per0305008a	IPB002	CWW	3/5/2010 13:50			1		USE	B
per0305009a	WCLICV	CWW	3/5/2010 14:00			1		USE	C
per0305010a	IPB003	CWW	3/5/2010 14:11			1		USE	B
per0305011a	WCLCRI	CWW	3/5/2010 14:21			1		USE	C
per0305012a	1202049034	CWW	3/5/2010 14:31	955706	VARIOUS	1	LANL	USE	S
per0305013a	1202049035	CWW	3/5/2010 14:41	955706	VARIOUS	1	LANL	USE	S
per0305014a	1202049038	CWW	3/5/2010 14:51	955706	VARIOUS	1	LANL	USE	S
per0305015a	247141001	CWW	3/5/2010 15:01	955706	10-1859	1	LANL	USE	S
per0305016a	247141002	CWW	3/5/2010 15:11	955706	10-1859	1	LANL	USE	S
per0305017a	247141003	CWW	3/5/2010 15:21	955706	10-1859	1	LANL	USE	S
per0305018a	247172001	CWW	3/5/2010 15:31	955706	10-1866	1	LANL	USE	S
per0305019a	247172002	CWW	3/5/2010 15:41	955706	10-1866	1	LANL	USE	S
per0305020a	247178001	CWW	3/5/2010 15:51	955706	10-1861	1	LANL	USE	S
per0305021a	247178002	CWW	3/5/2010 16:01	955706	10-1861	1	LANL	USE	S
per0305022a	WCLCCV	CWW	3/5/2010 16:11			1		USE	C
per0305023a	IPB004	CWW	3/5/2010 16:21			1		USE	B
per0305024a	WCLCRI	CWW	3/5/2010 16:31			1		USE	C
per0305025a	1202049036	CWW	3/5/2010 16:42	955706	10-1861	1	LANL	USE	S
per0305026a	1202049037	CWW	3/5/2010 16:52	955706	10-1861	1	LANL	USE	S
per0305027a	247178003	CWW	3/5/2010 17:02	955706	10-1861	1	LANL	USE	S
per0305028a	247178004	CWW	3/5/2010 17:12	955706	10-1861	1	LANL	USE	S
per0305029a	247178005	CWW	3/5/2010 17:22	955706	10-1861	1	LANL	USE	S

per0305030a	247178006	CWW	3/5/2010 17:32	955706	10-1861	1	LANL	USE	S
per0305031a	247178007	CWW	3/5/2010 17:42	955706	10-1861	1	LANL	USE	S
per0305032a	247178008	CWW	3/5/2010 17:52	955706	10-1861	1	LANL	USE	S
per0305033a	247178009	CWW	3/5/2010 18:02	955706	10-1861	1	LANL	USE	S
per0305034a	247178010	CWW	3/5/2010 18:12	955706	10-1861	1	LANL	USE	S
per0305035a	WCLCCV	CWW	3/5/2010 18:22			1		USE	C
per0305036a	IPB005	CWW	3/5/2010 18:32			1		USE	B
per0305037a	WCLCRI	CWW	3/5/2010 18:42			1		USE	C
per0305038a	247178011	CWW	3/5/2010 18:53	955706	10-1861	1	LANL	DUSE-RA	S
per0305039a	247197001	CWW	3/5/2010 19:03	955706	10-1865-1	1	LANL	DUSE-RA	S
per0305040a	247197002	CWW	3/5/2010 19:13	955706	10-1865-1	1	LANL	DUSE-RA	S
per0305041a	IPB006	CWW	3/5/2010 19:23			1		DUSE-RA	B
per0305042a	1202062446	CWW	3/5/2010 19:33	961557	248683	1	LANL	DUSE-RA	S
per0305043a	1202062447	CWW	3/5/2010 19:43	961557	248683	1	LANL	DUSE-RA	S
per0305044a	1202062450	CWW	3/5/2010 19:53	961557	248683	1	LANL	DUSE-RA	S
per0305045a	248683001	CWW	3/5/2010 20:03	961557	248683	1	LANL	DUSE-RA	S
per0305046a	1202062448	CWW	3/5/2010 20:13	961557	248683	1	LANL	DUSE-RA	S
per0305047a	1202062449	CWW	3/5/2010 20:23	961557	248683	1	LANL	DUSE-RA	S
per0305048a	WCLCCV	CWW	3/5/2010 20:34			1		DUSE	C
per0305049a	IPB007	CWW	3/5/2010 20:44			1		DUSE	B
per0305050a	WCLCRI	CWW	3/5/2010 20:54			1		DUSE	C
per0305051a	1202049039	CWW	3/5/2010 21:04	955709	VARIOUS	1	LANL	DUSE-RA	S
per0305052a	1202049040	CWW	3/5/2010 21:14	955709	VARIOUS	1	LANL	DUSE-RA	S
per0305053a	1202049043	CWW	3/5/2010 21:24	955709	VARIOUS	1	LANL	DUSE-RA	S
per0305054a	247187001	CWW	3/5/2010 21:34	955709	10-1867	1	LANL	DUSE-RA	S
per0305055a	247187002	CWW	3/5/2010 21:45	955709	10-1867	1	LANL	DUSE-RA	S
per0305056a	247187003	CWW	3/5/2010 21:55	955709	10-1867	1	LANL	DUSE-RA	S
per0305057a	247188001	CWW	3/5/2010 22:05	955709	10-1863	1	LANL	DUSE-RA	S
per0305058a	1202049041	CWW	3/5/2010 22:15	955709	10-1863	1	LANL	DUSE-RA	S
per0305059a	1202049042	CWW	3/5/2010 22:25	955709	10-1863	1	LANL	DUSE-RA	S
per0305060a	247188002	CWW	3/5/2010 22:35	955709	10-1863	1	LANL	DUSE-RA	S
per0305061a	WCLCCV	CWW	3/5/2010 22:45			1		USE	C
per0305062a	IPB008	CWW	3/5/2010 22:55			1		USE	B
per0305063a	WCLCRI	CWW	3/5/2010 23:06			1		USE	C
per0305064a	247188003	CWW	3/5/2010 23:16	955709	10-1863	1	LANL	USE	S
per0305065a	247188004	CWW	3/5/2010 23:26	955709	10-1863	1	LANL	USE	S
per0305066a	247188005	CWW	3/5/2010 23:36	955709	10-1863	1	LANL	USE	S

per0305067a	247188006	CWW	3/5/2010 23:46	955709	10-1863	1	LANL	USE	S
per0305068a	247188007	CWW	3/5/2010 23:56	955709	10-1863	1	LANL	USE	S
per0305069a	247188008	CWW	3/6/2010 0:06	955709	10-1863	1	LANL	USE	S
per0305070a	247188009	CWW	3/6/2010 0:16	955709	10-1863	1	LANL	USE	S
per0305071a	247188010	CWW	3/6/2010 0:26	955709	10-1863	1	LANL	USE	S
per0305072a	247188011	CWW	3/6/2010 0:36	955709	10-1863	1	LANL	USE	S
per0305073a	247188012	CWW	3/6/2010 0:46	955709	10-1863	1	LANL	USE	S
per0305074a	WCLCCV	CWW	3/6/2010 0:56			1		USE	C
per0305075a	IPB009	CWW	3/6/2010 1:07			1		USE	B
per0305076a	WCLCRI	CWW	3/6/2010 1:17			1		USE	C
per0305077a	247188013	CWW	3/6/2010 1:27	955709	10-1863	1	LANL	USE	S
per0305078a	247188014	CWW	3/6/2010 1:37	955709	10-1863	1	LANL	USE	S
per0305079a	IPB010	CWW	3/6/2010 1:47			1		USE	B
per0305080a	1202049044	CWW	3/6/2010 1:58	955712	VARIOUS	1	LANL	USE	S
per0305081a	1202049045	CWW	3/6/2010 2:08	955712	VARIOUS	1	LANL	USE	S
per0305082a	1202049048	CWW	3/6/2010 2:18	955712	VARIOUS	1	LANL	USE	S
per0305083a	247181001	CWW	3/6/2010 2:28	955712	10-1871-1	1	LANL	USE	S
per0305084a	247181002	CWW	3/6/2010 2:38	955712	10-1871-1	1	LANL	USE	S
per0305085a	247186001	CWW	3/6/2010 2:48	955712	10-1868-1	1	LANL	USE	S
per0305086a	247186002	CWW	3/6/2010 2:58	955712	10-1868-1	1	LANL	USE	S
per0305087a	WCLCCV	CWW	3/6/2010 3:08			1		USE	C
per0305088a	IPB011	CWW	3/6/2010 3:19			1		USE	B
per0305089a	WCLCRI	CWW	3/6/2010 3:29			1		USE	C
per0305090a	247186003	CWW	3/6/2010 3:39	955712	10-1868-1	1	LANL	USE	S
per0305091a	247186004	CWW	3/6/2010 3:49	955712	10-1868-1	1	LANL	USE	S
per0305092a	247186005	CWW	3/6/2010 3:59	955712	10-1868-1	1	LANL	USE	S
per0305093a	247186006	CWW	3/6/2010 4:09	955712	10-1868-1	1	LANL	USE	S
per0305094a	247186007	CWW	3/6/2010 4:19	955712	10-1868-1	1	LANL	USE	S
per0305095a	247186008	CWW	3/6/2010 4:29	955712	10-1868-1	1	LANL	USE	S
per0305096a	247186009	CWW	3/6/2010 4:39	955712	10-1868-1	1	LANL	USE	S
per0305097a	247186010	CWW	3/6/2010 4:49	955712	10-1868-1	1	LANL	USE	S
per0305098a	WCLCCV	CWW	3/6/2010 4:59			1		USE	C
per0305099a	IPB012	CWW	3/6/2010 5:10			1		USE	B
per0305100a	WCLCRI	CWW	3/6/2010 5:20			1		USE	C
per0305101a	247201001	CWW	3/6/2010 5:30	955712	10-1873	1	LANL	USE	S
per0305102a	1202049046	CWW	3/6/2010 5:40	955712	10-1873	1	LANL	USE	S
per0305103a	1202049047	CWW	3/6/2010 5:50	955712	10-1873	1	LANL	USE	S

per0305104a	247201002	CWW	3/6/2010 6:00	955712	10-1873	1	LANL	USE	S
per0305105a	247201003	CWW	3/6/2010 6:10	955712	10-1873	1	LANL	USE	S
per0305106a	247201004	CWW	3/6/2010 6:20	955712	10-1873	1	LANL	USE	S
per0305107a	247201005	CWW	3/6/2010 6:31	955712	10-1873	1	LANL	USE	S
per0305108a	247201006	CWW	3/6/2010 6:41	955712	10-1873	1	LANL	USE	S
per0305109a	247201007	CWW	3/6/2010 6:51	955712	10-1873	1	LANL	USE	S
per0305110a	WCLCCV	CWW	3/6/2010 7:01			1		USE	C
per0305111a	IPB013	CWW	3/6/2010 7:11			1		USE	B
per0305112a	WCLCRI	CWW	3/6/2010 7:21			1		USE	C
per0305113a	1202049069	CWW	3/6/2010 7:31	955727	VARIOUS	1	LANL	USE	S
per0305114a	1202049070	CWW	3/6/2010 7:42	955727	VARIOUS	1	LANL	USE	S
per0305115a	1202049073	CWW	3/6/2010 7:52	955727	VARIOUS	1	LANL	USE	S
per0305116a	247127001	CWW	3/6/2010 8:02	955727	10-1849-1	1	LANL	USE	S
per0305117a	247130001	CWW	3/6/2010 8:12	955727	10-1850-1	1	LANL	USE	S
per0305118a	247139001	CWW	3/6/2010 8:22	955727	10-1854-1	1	LANL	USE	S
per0305119a	1202049071	CWW	3/6/2010 8:32	955727	10-1854-1	1	LANL	USE	S
per0305120a	1202049072	CWW	3/6/2010 8:42	955727	10-1854-1	1	LANL	USE	S
per0305121a	247179001	CWW	3/6/2010 8:52	955727	10-1871	1	LANL	USE	S
per0305122a	247182001	CWW	3/6/2010 9:02	955727	10-1861-1	1	LANL	USE	S
per0305123a	WCLCCV	CWW	3/6/2010 9:12			1		USE	C
per0305124a	IPB014	CWW	3/6/2010 9:23			1		USE	B
per0305125a	WCLCRI	CWW	3/6/2010 9:33			1		USE	C

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 03/06/10  
 Extr. Injection Volume: 20uL  
 Sequence Number: per030610a  
 Initial Calibration Date: 03/06/10

Method: EPA 6850-Modified  
 Int. Std.: UCL100126-01  
 Mobile Phase Lot#: 1278668, 1271949  
 Standard-Samp Reagent Lot#: 1271949

Reviewed BY: *hml*  
 Date: *03/20/10*  
 SOP: GL-OA-E-067 Rev.6  
 Alt Check Std. ID: WCL100227-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0306001a	IPB001	CWW	3/6/2010 14:34			1		USE	B
per0306002a	IPB001	CWW	3/6/2010 14:43			1		USE	B
per0306003a	WCLICAL-01	CWW	3/6/2010 14:53			1		USE	I
per0306004a	WCLICAL-02	CWW	3/6/2010 15:02			1		USE	I
per0306005a	WCLICAL-03	CWW	3/6/2010 15:11			1		USE	I
per0306006a	WCLICAL-04	CWW	3/6/2010 15:20			1		USE	I
per0306007a	WCLICAL-05	CWW	3/6/2010 15:29			1		USE	I
per0306008a	IPB002	CWW	3/6/2010 15:38			1		USE	B
per0306009a	WCLICV	CWW	3/6/2010 15:47			1		USE	C
per0306010a	IPB003	CWW	3/6/2010 15:56			1		USE	B
per0306011a	WCLCRI	CWW	3/6/2010 16:05			1		USE	C
per0306012a	247178011	CWW	3/6/2010 16:15	955706	10-1861	1	LANL	USE	S
per0306013a	247197001	CWW	3/6/2010 16:24	955706	10-1865-1	1	LANL	USE	S
per0306014a	247197002	CWW	3/6/2010 16:33	955706	10-1865-1	1	LANL	USE	S
per0306015a	IPB004	CWW	3/6/2010 16:42			1		USE	B
per0306016a	1202062446	CWW	3/6/2010 16:51	961557	248683	1	LANL	USE	S
per0306017a	1202062447	CWW	3/6/2010 17:00	961557	248683	1	LANL	USE	S
per0306018a	1202062450	CWW	3/6/2010 17:09	961557	248683	1	LANL	USE	S
per0306019a	248683001	CWW	3/6/2010 17:18	961557	248683	50	LANL	USE	S
per0306020a	1202062448	CWW	3/6/2010 17:27	961557	248683	50	LANL	USE	S
per0306021a	1202062449	CWW	3/6/2010 17:36	961557	248683	50	LANL	USE	S
per0306022a	WCLCCV	CWW	3/6/2010 17:45			1		USE	C
per0306023a	IPB005	CWW	3/6/2010 17:54			1		USE	B
per0306024a	WCLCRI	CWW	3/6/2010 18:04			1		USE	C
per0306025a	1202049039	CWW	3/6/2010 18:13	955709	VARIOUS	1	LANL	USE	S
per0306026a	1202049040	CWW	3/6/2010 18:22	955709	VARIOUS	1	LANL	USE	S
per0306027a	1202049043	CWW	3/6/2010 18:31	955709	VARIOUS	1	LANL	USE	S
per0306028a	247187001	CWW	3/6/2010 18:40	955709	10-1867	1	LANL	USE	S
per0306029a	247187002	CWW	3/6/2010 18:49	955709	10-1867	1	LANL	USE	S



per0306030a	247187003	CWW	3/6/2010 18:58	955709	10-1867	1	LANL	USE	S
per0306031a	247188001	CWW	3/6/2010 19:07	955709	10-1863	1	LANL	USE	S
per0306032a	1202049041	CWW	3/6/2010 19:16	955709	10-1863	1	LANL	USE	S
per0306033a	1202049042	CWW	3/6/2010 19:25	955709	10-1863	1	LANL	USE	S
per0306034a	247188002	CWW	3/6/2010 19:34	955709	10-1863	1	LANL	USE	S
per0306035a	WCLCCV	CWW	3/6/2010 19:43			1		USE	C
per0306036a	IPB006	CWW	3/6/2010 19:52			1		USE	B
per0306037a	WCLCRI	CWW	3/6/2010 20:01			1		USE	C
per0306038a	247183001	CWW	3/6/2010 20:10	955727	10-1868	1	LANL	USE	S
per0306039a	247192001	CWW	3/6/2010 20:20	955727	10-1863-1	1	LANL	USE	S
per0306040a	247203001	CWW	3/6/2010 20:29	955727	10-1873-1	1	LANL	USE	S
per0306041a	247250001	CWW	3/6/2010 20:38	955727	10-1877-1	1	LANL	USE	S
per0306042a	247250002	CWW	3/6/2010 20:47	955727	10-1877-1	1	LANL	USE	S
per0306043a	247256001	CWW	3/6/2010 20:56	955727	10-1879-1	1	LANL	USE	S
per0306044a	247256002	CWW	3/6/2010 21:05	955727	10-1879-1	1	LANL	USE	S
per0306045a	247322001	CWW	3/6/2010 21:14	955727	10-1893-1	1	LANL	USE	S
per0306046a	247322002	CWW	3/6/2010 21:23	955727	10-1893-1	1	LANL	USE	S
per0306047a	247335001	CWW	3/6/2010 21:32	955727	10-1906	1	LANL	USE	S
per0306048a	WCLCCV	CWW	3/6/2010 21:41			1		USE	C
per0306049a	IPB007	CWW	3/6/2010 21:50			1		USE	B
per0306050a	WCLCRI	CWW	3/6/2010 21:59			1		USE	C
per0306051a	247339001	CWW	3/6/2010 22:08	955727	10-1909-1	1	LANL	DUSE-RA	S
per0306052a	247339002	CWW	3/6/2010 22:18	955727	10-1909-1	1	LANL	DUSE-RA	S
per0306053a	247350001	CWW	3/6/2010 22:27	955727	10-1912-1	1	LANL	DUSE-RA	S
per0306054a	IPB008	CWW	3/6/2010 22:36			1		DUSE	B
per0306055a	1202049027	CWW	3/6/2010 22:45	955703	VARIOUS	1	LANL	DUSE-RA	S
per0306056a	1202049028	CWW	3/6/2010 22:54	955703	VARIOUS	1	LANL	DUSE-RA	S
per0306057a	1202049031	CWW	3/6/2010 23:03	955703	VARIOUS	1	LANL	DUSE-RA	S
per0306058a	247123001	CWW	3/6/2010 23:12	955703	10-1848	1	LANL	DUSE-RA	S
per0306059a	247123002	CWW	3/6/2010 23:21	955703	10-1848	1	LANL	DUSE-RA	S
per0306060a	247123003	CWW	3/6/2010 23:30	955703	10-1848	1	LANL	DUSE-RA	S
per0306061a	WCLCCV	CWW	3/6/2010 23:39			1		DUSE	C
per0306062a	IPB009	CWW	3/6/2010 23:48			1		DUSE	B
per0306063a	WCLCRI	CWW	3/6/2010 23:57			1		DUSE	C

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
 Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

Name: per0305119a

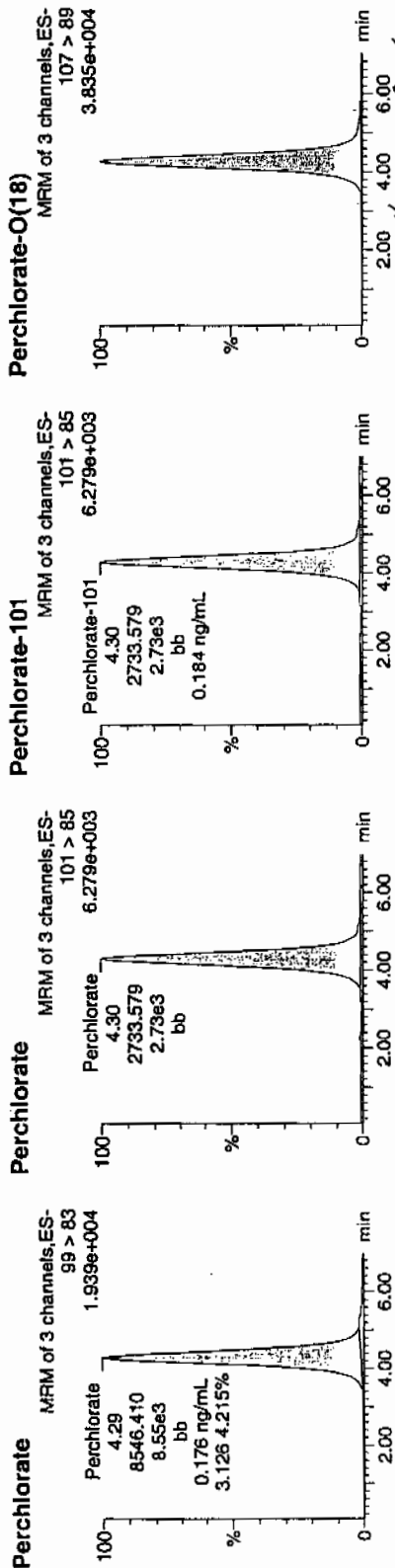
Date: 06-Mar-2010

Time: 08:32:26

ID: 1202049071

Vial: 3:2,A

1202049071 | 222 | MS | 11  
 03 do-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
1202049071	Perchlorate	99 > 83	4.29	8546.410	8546.410	bb			0.1763	88.13	-11.87	2108.0...	3.13
1202049071	Perchlorate-101	101 > 85	4.30	2733.579	2733.579	bb			0.1837	91.84	-8.16	366.816	
1202049071	Perchlorate-O(18)	107 > 89	4.28	17431.014	17431.014	bb			0.4144	82.89	-17.11	662.567	

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

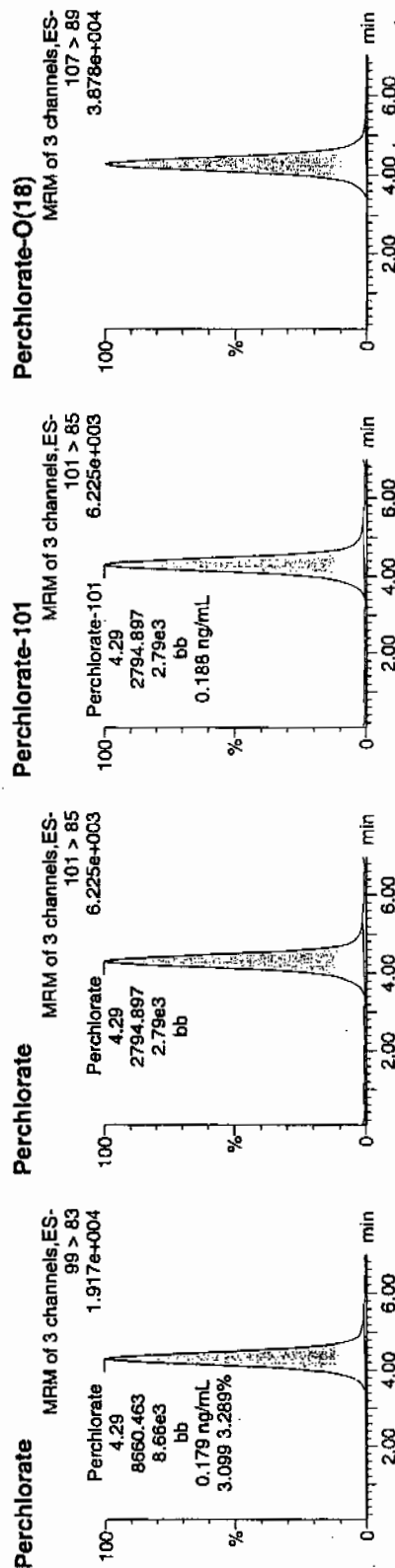
Dataset: C:\MassLynx\Perchlorate.PRO\per030510a.qld

Last Altered: Saturday, March 06, 2010 9:51:52 AM Eastern Standard Time  
Printed: Saturday, March 06, 2010 10:38:46 AM Eastern Standard Time

11 Name: per0305120a  
12 Date: 06-Mar-2010  
6 Time: 08:42:37  
ID: 1202049072  
Vial: 3:2,B

623  
08-06-10

1202049072 | 1202049072 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod	Date	Mod	Time	ng/ml	% Rec	% Dev	S/N	Or Ratio
1202049072	Perchlorate	99 > 83	4.29	8660.463	8660.463	bb					0.1786	89.30	-10.70	982.980	3.10
1202049072	Perchlorate-101	101 > 85	4.29	2794.897	2794.897	bb					0.1878	93.90	-6.10	161.762	
1202049072	Perchlorate-O(18)	107 > 89	4.28	17646.725	17646.725	bb					0.4196	83.91	-16.09	1070.4...	

## Isotope Ratio Criteria

### Isotope Ratio $^{35}\text{Cl}/^{37}\text{Cl}$

2.31-3.85

## Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

# LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS  
Los Alamos National Laboratory (LANL)  
SDG 10-1906-1**

**Method/Analysis Information**

**Procedure:** **Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**

**Analytical Method:** SW846 6850 Modified

**Prep Method:** SW846 6850 Modified

**Analytical Batch Number:** 955718

**Prep Batch Number:** 955717

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
247336001	RE15-10-8346
247336002	RE15-10-8347
247336003	RE15-10-8344
247336004	RE15-10-8345
247336005	RE15-10-8342
247336006	RE15-10-8343
247336007	RE15-10-8377
1202049058	Interference Check Sample (ICS)
1202049054	Method Blank (MB)
1202049055	Laboratory Control Sample (LCS)
1202049056	247338001(RE15-10-8208) Matrix Spike (MS)
1202049057	247338001(RE15-10-8208) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

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### **Preparation/Analytical Method Verification**

#### **SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

### **Calibration Information**

#### **Initial Calibration**

All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

#### **CCV Requirements**

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

#### **CCB Requirements**

All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

#### **CCV Requirements**

All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

#### **Low Level Standard (CRI) Requirements**

All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MB(s) analyzed with this SDG met the acceptance criteria.

#### **Interference Check Sample (ICS)**

The interference check sample (ICS) met all recovery acceptance criteria.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **QC Sample Designation**

Client sample 247338001 (RE15-10-8208) from SDG 10-1909 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

#### **Matrix Spike (MS) Recovery Statement**

The MS recoveries were within the established acceptance limits.

#### **Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries were within the established acceptance limits.

#### **MS/MSD Relative Percent Difference (RPD) Statement**

The RPD(s) between the MS and MSD met the acceptance limits.

#### **Retention Time Standard Area Acceptance**

The retention time standard areas were within the required acceptance criteria for all samples and QC.

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### **Retention Time**

During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

### **Technical Information**

#### **Holding Time Specifications**

All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

#### **Preparation/Analytical Method Verification**

All procedures were performed as stated in the SOP.

#### **Sample Dilutions**

The samples in this SDG did not require dilutions.

#### **Sample Re-extraction/Re-analysis**

Re-extractions or re-analyses were not required in this SDG except for dilutions.

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

#### **Manual Integrations**

Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

#### **Method Comments**

The samples in this SDG were not originally analyzed using EPA Method 314.0.

#### **Additional Comments**

The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.



### **Perchlorate Isotope Ratio**

The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

### **System Configuration**

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

### **Chromatographic Columns**

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

### **Review Validation:**

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heberth Mauer Date: 03/14/10

# SAMPLE DATA SUMMARY

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8346

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336001

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.559	2.24	0.598	ug/kg	J	1	09-MAR-10 22:23	per0309019a
	Perchlorate Isotope Ratio			2.8			1	09-MAR-10 22:23	per0309019a
14797-73-0	Perchlorate-101	.559	2.24	0.687	ug/kg	J	1	09-MAR-10 22:23	per0309019a
	Perchlorate-O(18)			5.46	ug/kg		1	09-MAR-10 22:23	per0309019a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-8347  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336002  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 97.3

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.514	2.06	0.514	ug/kg	U	1	09-MAR-10 22:31	per0309020a
	Perchlorate Isotope Ratio						1	09-MAR-10 22:31	per0309020a
14797-73-0	Perchlorate-101	.514	2.06	0.514	ug/kg	U	1	09-MAR-10 22:31	per0309020a
	Perchlorate-O(18)			5.01	ug/kg		1	09-MAR-10 22:31	per0309020a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8344  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336003  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 94.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	1.10	ug/kg	J	1	09-MAR-10 22:39	per0309021a
	Perchlorate Isotope Ratio			3.14			1	09-MAR-10 22:39	per0309021a
14797-73-0	Perchlorate-101	.529	2.11	1.12	ug/kg	J	1	09-MAR-10 22:39	per0309021a
	Perchlorate-O(18)			5.06	ug/kg		1	09-MAR-10 22:39	per0309021a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8345  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336004  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 93.7

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.533	2.13	1.36	ug/kg	J	1	09-MAR-10 23:11	per0309025a
	Perchlorate Isotope Ratio			3.04			1	09-MAR-10 23:11	per0309025a
14797-73-0	Perchlorate-101	.533	2.13	1.43	ug/kg	J	1	09-MAR-10 23:11	per0309025a
	Perchlorate-O(18)			5.10	ug/kg		1	09-MAR-10 23:11	per0309025a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8342

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336005

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	0.529	ug/kg	U	1	09-MAR-10 23:19	per0309026a
	Perchlorate Isotope Ratio						1	09-MAR-10 23:19	per0309026a
14797-73-0	Perchlorate-101	.529	2.11	0.529	ug/kg	U	1	09-MAR-10 23:19	per0309026a
	Perchlorate-O(18)			5.13	ug/kg		1	09-MAR-10 23:19	per0309026a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8343

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336006

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

% Solids: 95.9

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.645	ug/kg	J	1	09-MAR-10 23:28	per0309027a
	Perchlorate Isotope Ratio			3.16			1	09-MAR-10 23:28	per0309027a
14797-73-0	Perchlorate-101	.522	2.09	0.657	ug/kg	J	1	09-MAR-10 23:28	per0309027a
	Perchlorate-O(18)			4.61	ug/kg		1	09-MAR-10 23:28	per0309027a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids



## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8377

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336007

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.528	2.11	1.42	ug/kg	J	1	09-MAR-10 23:36	per0309028a
	Perchlorate Isotope Ratio			3.21			1	09-MAR-10 23:36	per0309028a
14797-73-0	Perchlorate-101	.528	2.11	1.42	ug/kg	J	1	09-MAR-10 23:36	per0309028a
	Perchlorate-O(18)			4.94	ug/kg		1	09-MAR-10 23:36	per0309028a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

# QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL GEL Job No. (SDG): 10-1906-1

Extract Batch Code: 955717 Date Filtered: 05-MAR-10

Matrix: SOIL Sample ID: 1202049055

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.02	ug/kg	101		70 - 130
Perchlorate Isotope Ratio		3.01				-
Perchlorate-101	2.00	2.16	ug/kg	108		70 - 130
Perchlorate-O(18)		4.81	ug/kg			-

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL GEL Job No. (SDG): 10-1906-1

Extract Batch Code: 955717 Date Filtered: 05-MAR-10

Matrix: SOIL Sample ID: 1202049058

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.22	ug/kg	111		70 - 130
Perchlorate Isotope Ratio		3.1				
Perchlorate-101	2.00	2.29	ug/kg	115		70 - 130
Perchlorate-O(18)		5.23	ug/kg			

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

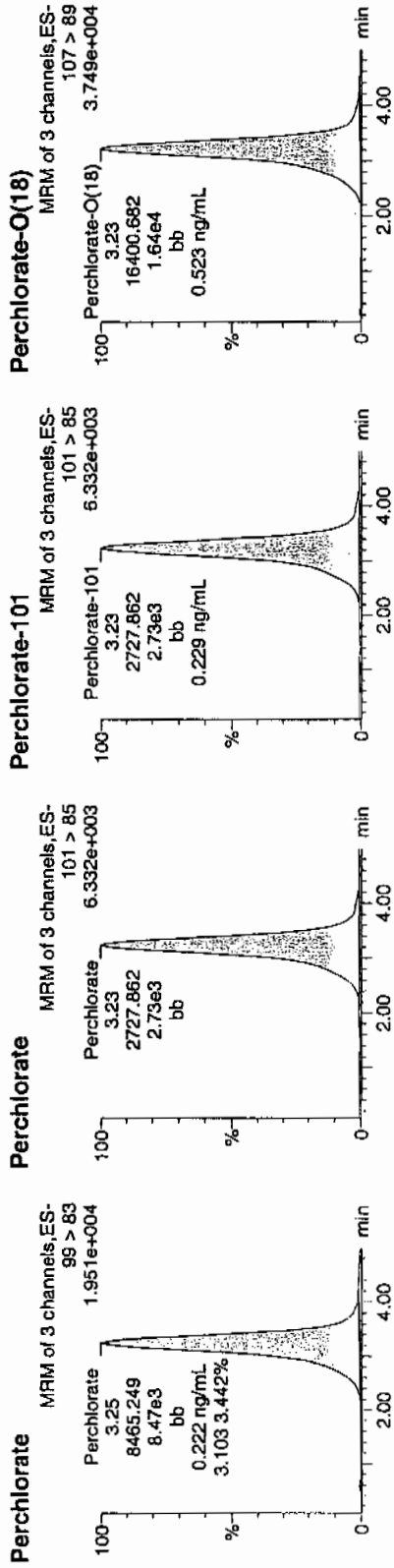
Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309018a  
Date: 09-Mar-2010  
Time: 22:15:24  
ID: 1202049058  
Vial: 1:4,C

LAN-955713 | 2020 | 7.5 | 1 |

32-13-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202049058	Perchlorate	99 > 83	3.25	8465.249	8465.249	bb			0.2215	110.75	10.75	1423.4...	3.10
1202049058	Perchlorate-101	101 > 85	3.23	2727.862	2727.862	bb			0.2294	114.71	14.71	227.505	
1202049058	Perchlorate-O(18)	107 > 89	3.23	16400.682	16400.682	bb			0.5229	104.58	4.58	2604.5...	

$$\frac{8465.249}{2727.862} = 3.1033$$

3/10/10

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1906-1

Extract Batch Code: 955717

Date Extracted: 05-MAR-10

GEL MS/PS ID: 1202049056

Client ID: RE15-10-8208

GEL MSD/PSD ID: 1202049057

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	2.06	0.487	ug/kg	2.41	93.1		2.55	99.9		5.68		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		2.96			3.21			0			-
Perchlorate-101	2.06	0.440	ug/kg	2.62	105		2.55	102		2.52		30	75 - 125
Perchlorate-O(18)	0	4.66	ug/kg	4.88			4.95			1.48			-

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

## Perchlorate Initial Calibration Blank

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: General Engineering LaboratoriesGEL Job No.(SDG): 10-1906-1Lab Code: GELReporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-MAR-10	per0309001a	IPB001
Perchlorate-101	0.00	0	NA	09-MAR-10	per0309001a	IPB001
Perchlorate	0.00	0	NA	09-MAR-10	per0309002a	IPB001
Perchlorate-101	0.00	0	NA	09-MAR-10	per0309002a	IPB001

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

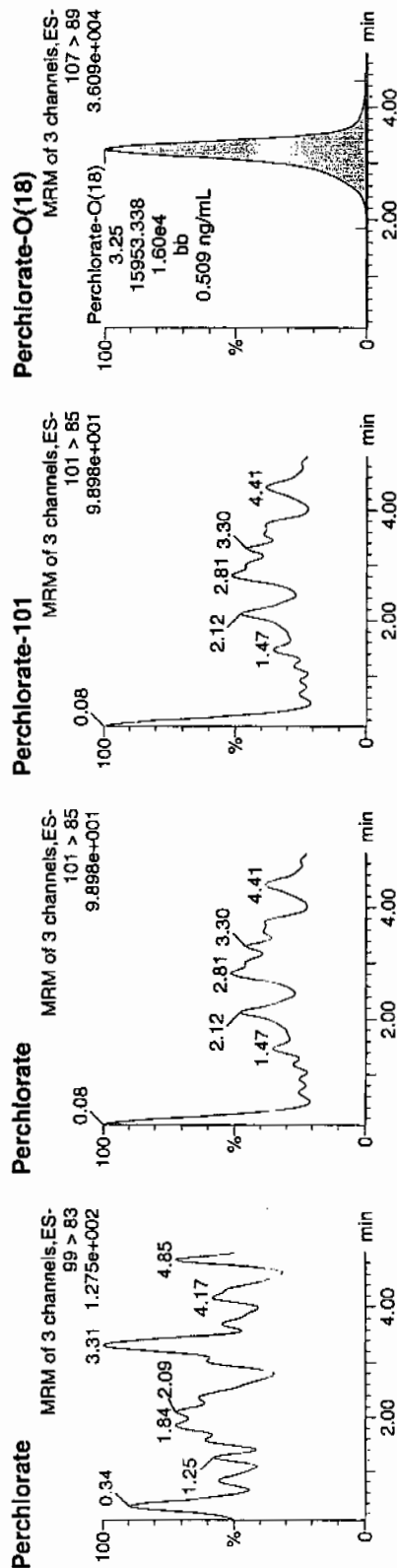
Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per030910a.mdb 10 Mar 2010 10:32:49  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per030910a.cdb 10 Mar 2010 11:59:23

Name: per03090001a  
Date: 09-Mar-2010  
Time: 19:57:46  
ID: IPB001  
Vial: 1:1,A

03-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	3.25	15953.338	15953.338	bb			0.5086	101.73	1.73	2297.6...	

4477  
3/10/10



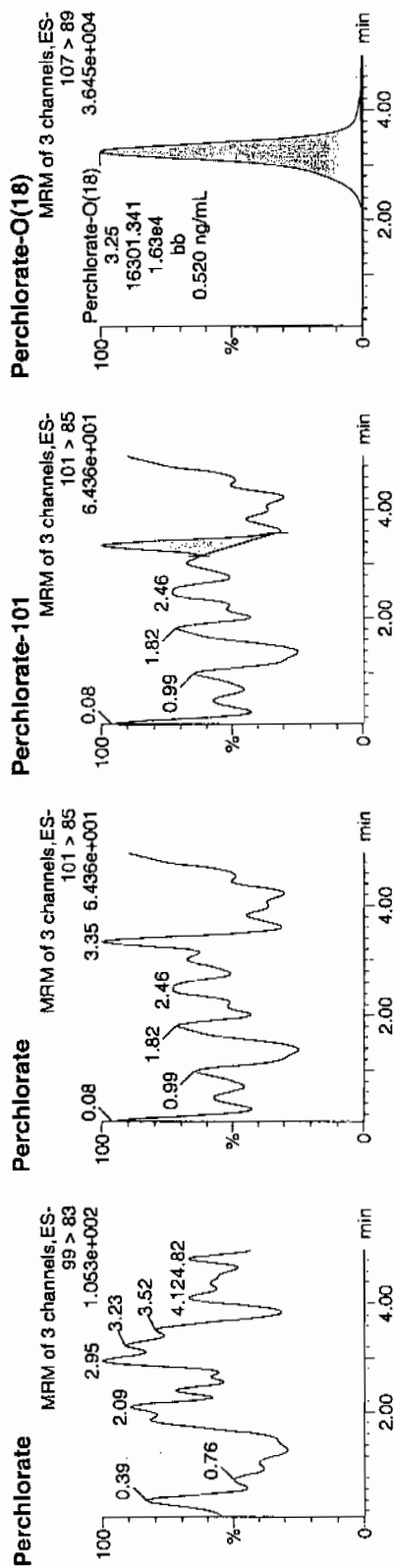
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309002a  
Date: 09-Mar-2010  
Time: 20:05:57  
ID: IPB001  
Vial: 1:1,A

3/10/10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											
IPB001	Perchlorate-101	101 > 85	3.35	6.714	6.714	bb			0.0006			8.589	
IPB001	Perchlorate-O(18)	107 > 89	3.25	16301.341	16301.341	bb			0.5197	103.95	3.95	3559.4...	

3/10/10

## Perchlorate Continuing Calibration Blank

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906-1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-MAR-10	per0309008a	IPB002
Perchlorate-101	0.00	0	NA	09-MAR-10	per0309008a	IPB002
Perchlorate	0.00	0	NA	09-MAR-10	per0309010a	IPB003
Perchlorate-101	0.00	0	NA	09-MAR-10	per0309010a	IPB003
Perchlorate	0.00	0	NA	09-MAR-10	per0309015a	IPB004
Perchlorate-101	0.00	0	NA	09-MAR-10	per0309015a	IPB004
Perchlorate	0.00	0	NA	09-MAR-10	per0309023a	IPB005
Perchlorate-101	0.00	0	NA	09-MAR-10	per0309023a	IPB005
Perchlorate	0.00	0	NA	10-MAR-10	per0309035a	IPB006
Perchlorate-101	0.00	0	NA	10-MAR-10	per0309035a	IPB006

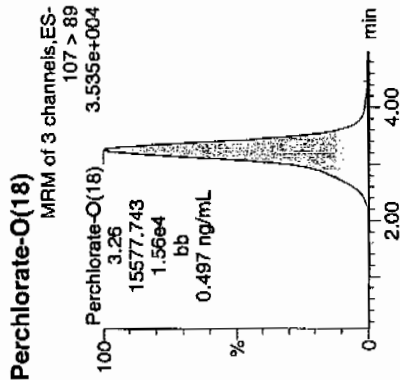
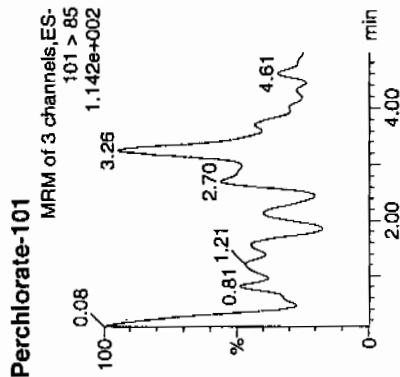
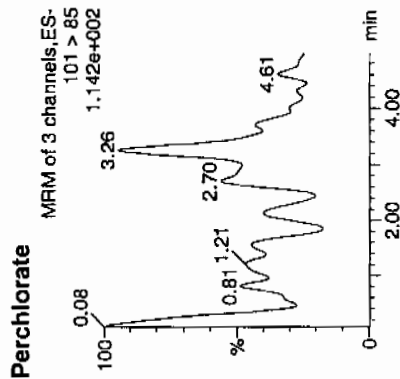
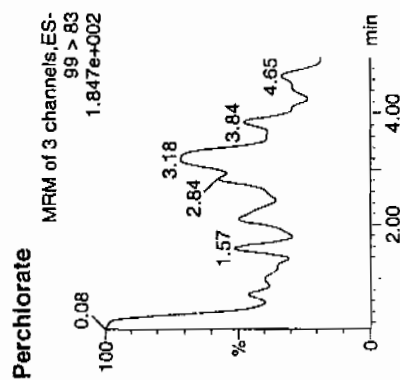
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309008a  
Date: 09-Mar-2010  
Time: 20:54:30  
ID: IPB002  
Vial: 1:1,A

03-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	3.26	15577.743	15577.743	bb			0.4967	99.33	-0.67	2018.8...	0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89											

15577.743  
3.26

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

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Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309010a

Date: 09-Mar-2010

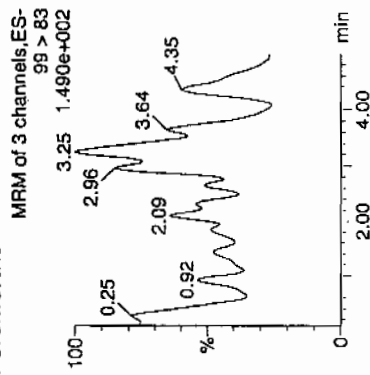
Time: 21:10:42

ID: IPB003

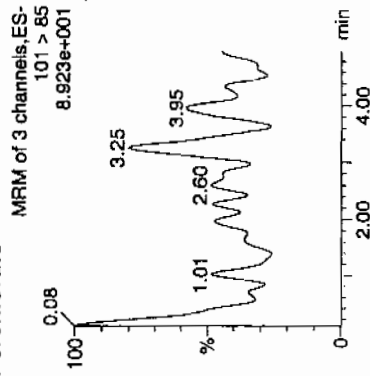
Vial: 1:1,A

03-10-10

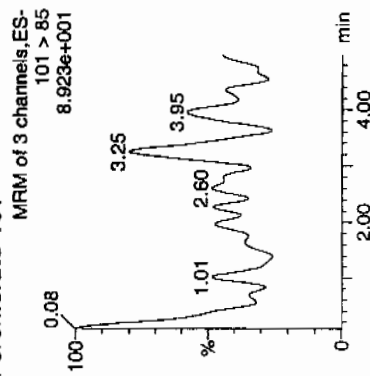
## Perchlorate



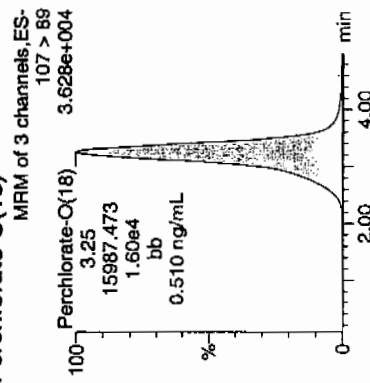
## Perchlorate



## Perchlorate-101



## Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	3.25	15987.473	15987.473	bb			0.5097	101.95	1.95	2614.1...	

3/10/10

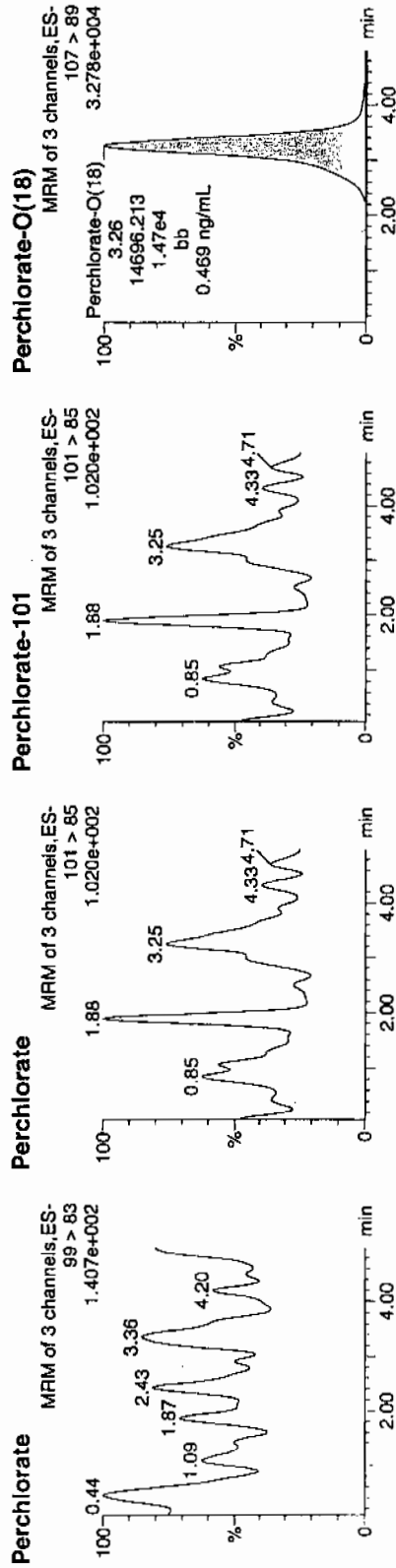
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qid

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309015a  
Date: 09-Mar-2010  
Time: 21:51:09  
ID: IPB004  
Vial: 1:1,A

03-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85	3.26	14696.213	14696.213	bb			0.4686	93.71	-6.29	1097.7	...
IPB004	Perchlorate-O(18)	107 > 89											

3/10/10

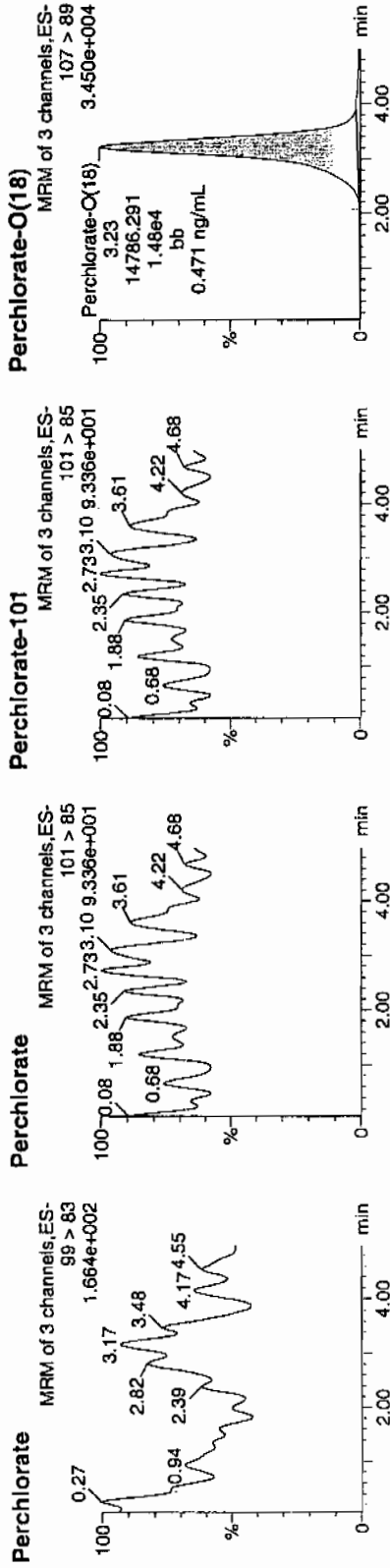
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309023a  
Date: 09-Mar-2010  
Time: 22:55:36  
ID: IPB005  
Vial: 1:1,A

33-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	3.23	14786.291	14786.291	bb			0.4714	94.29	-5.71	2576.3...	0.00

3/10/10

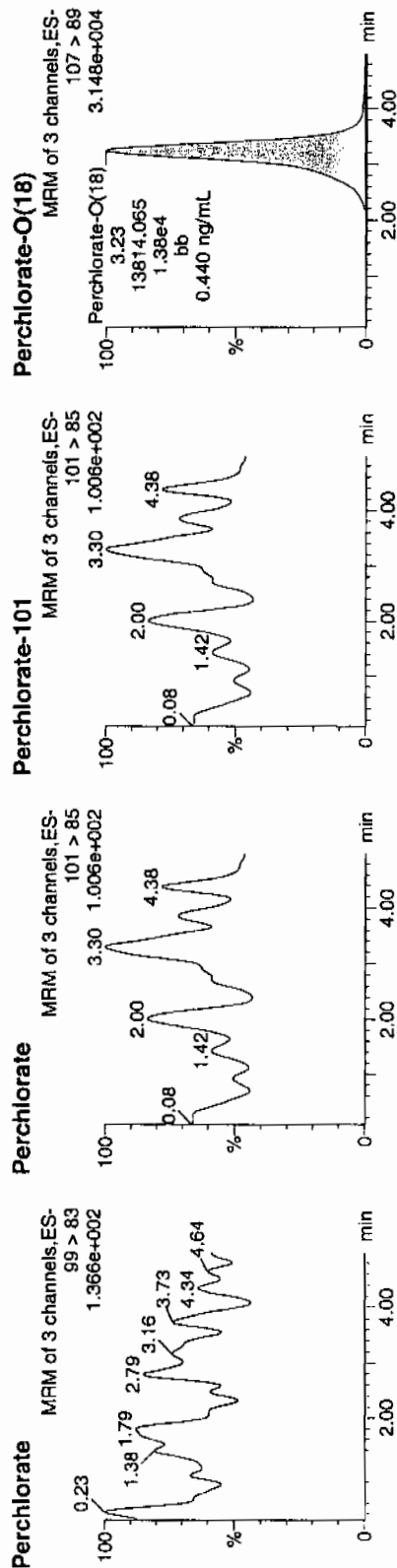
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qtd

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309035a  
Date: 10-Mar-2010  
Time: 00:32:42  
ID: IPB006  
Vial: 1:1,A

03-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod	Date	Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83												
IPB006	Perchlorate-101	101 > 85												
IPB006	Perchlorate-O(18)	107 > 89	3.23	13814.065	13814.065	bb				0.4404	88.09	-11.91	1765.2...	0.00

not  
3/10/10

Nairb.ref

;Positive ion monoisotopic and average masses from solution  
 ;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H<sub>2</sub>O.  
 ;Most useful general purpose calibrant for all low  
 ;MW applications, including MS/MS work.  
 ;At high resolution, readily covers from m/z 50-2000.  
 ;At reduced resolution, can be used to over m/z 3000.  
 ;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.  
 Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100



QUATRO ULTIMA: nairb 01.08.08.ca

Calibration Report - MS1 Static

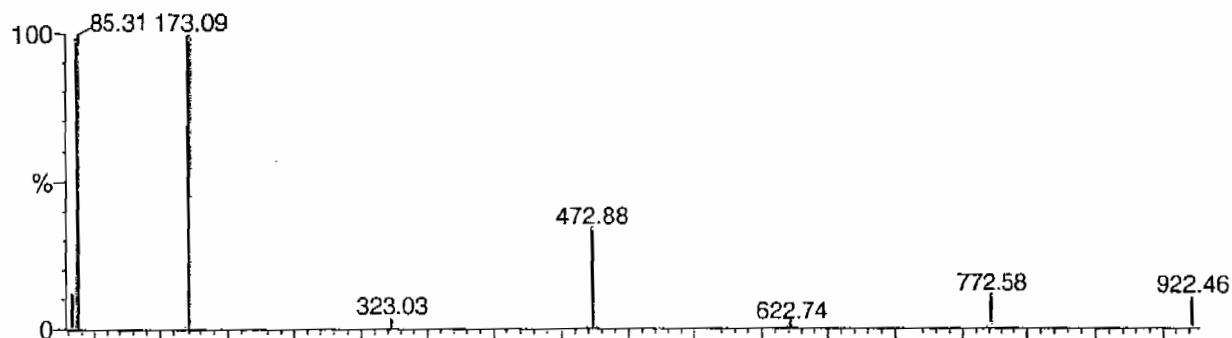
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

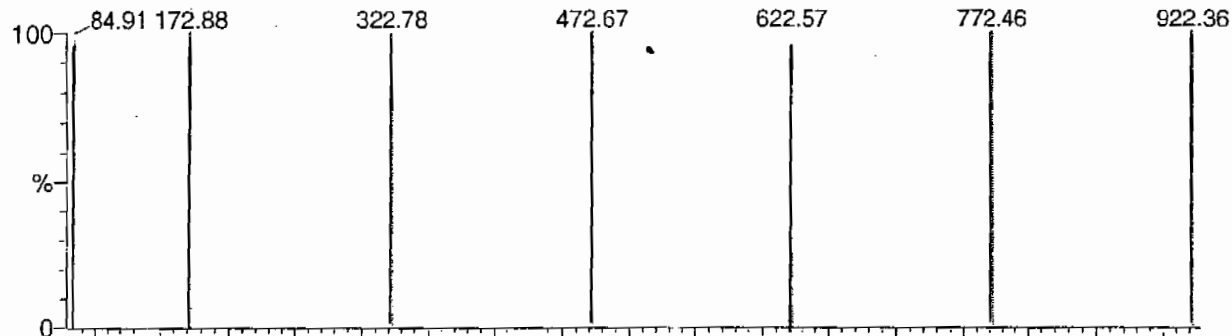
POINTS HIGHLIGHTED BY CURV 01-08-08

Data file: STATMS1 - Uncalibrated

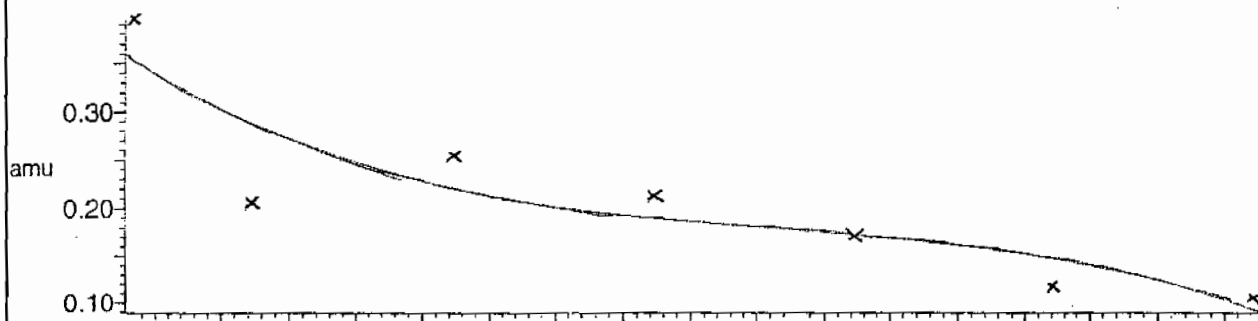
7 matches of 7 tested references



Reference file: Nairb

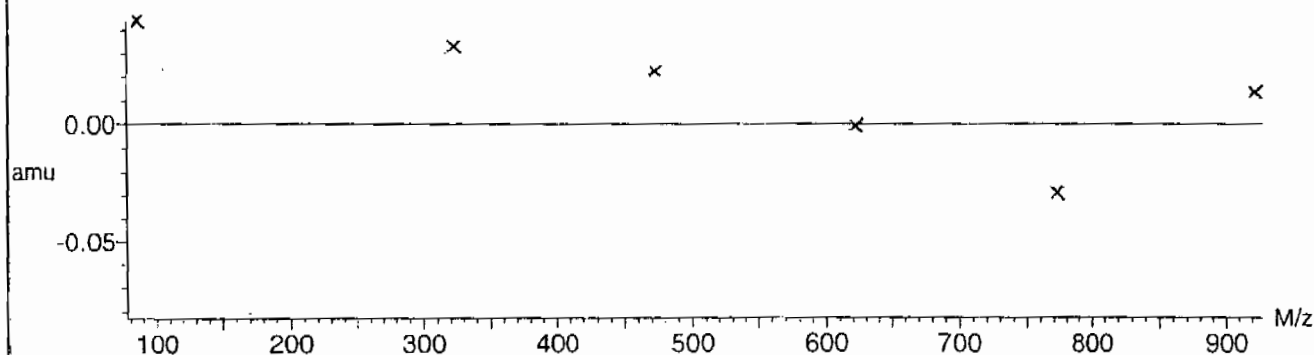


Mass difference (Raw - Ref mass)



Residuals

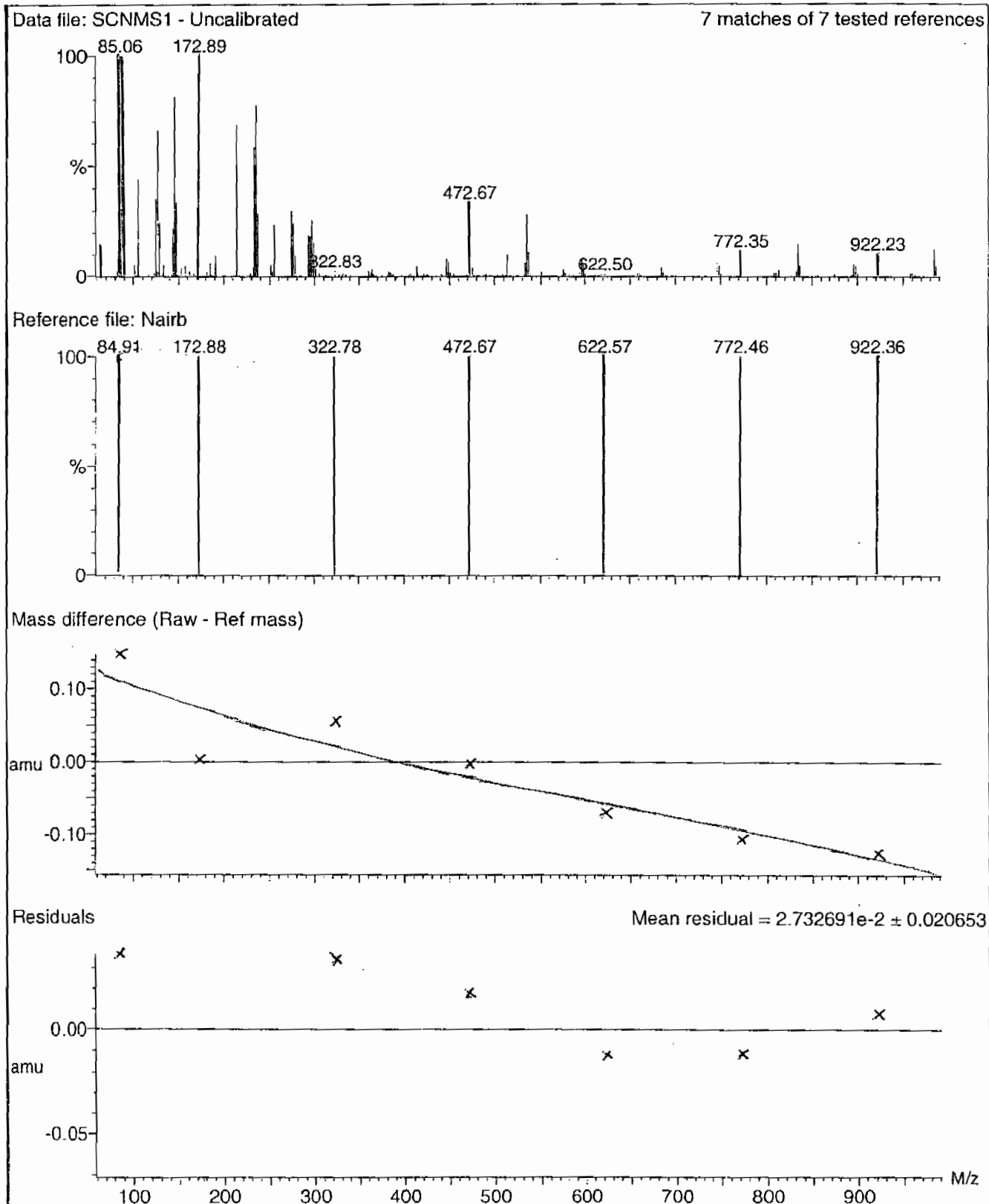
Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

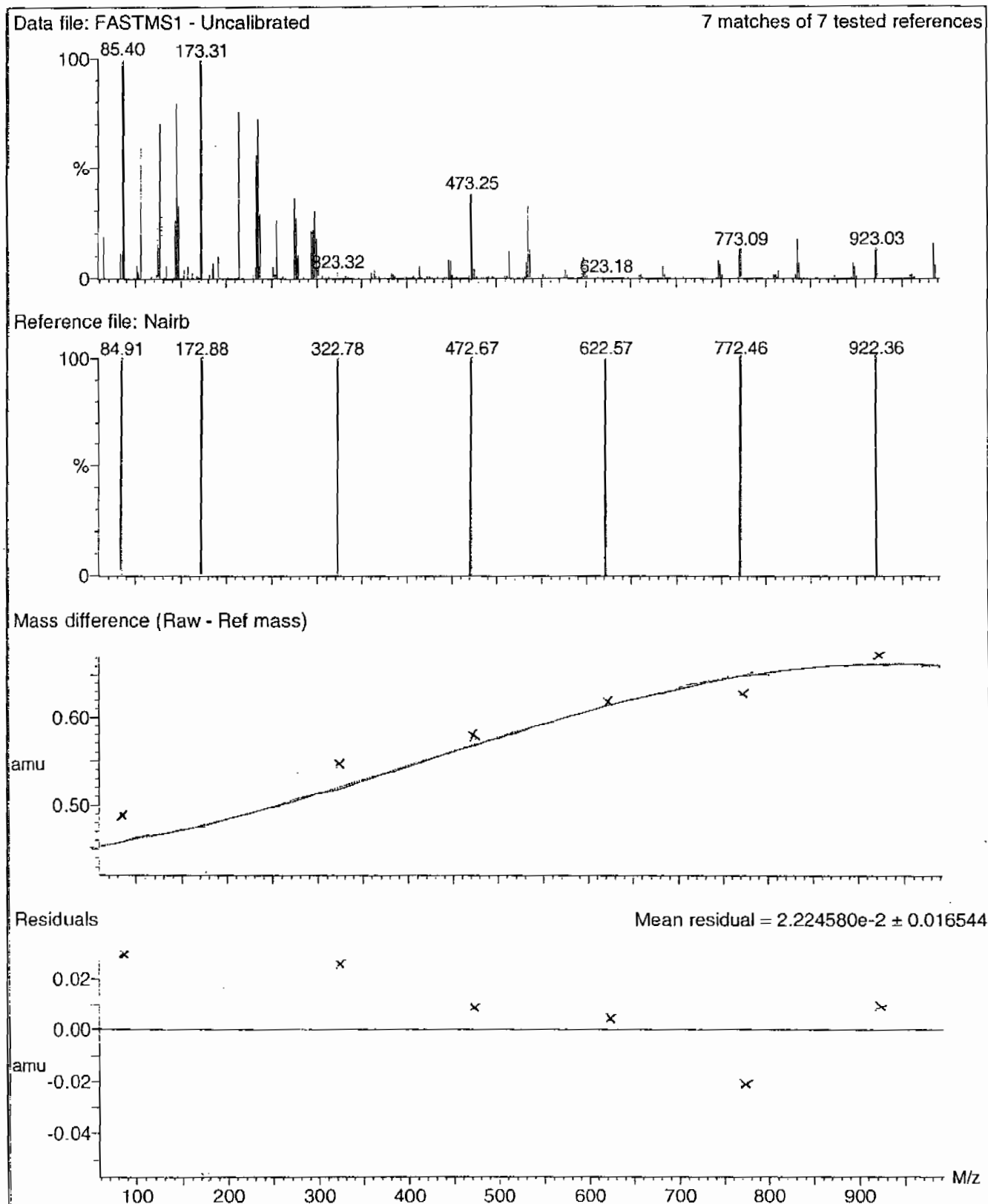
Printed: Tue Jan 08 12:20:09 2008



Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

Printed: Tue Jan 08 12:21:04 2008



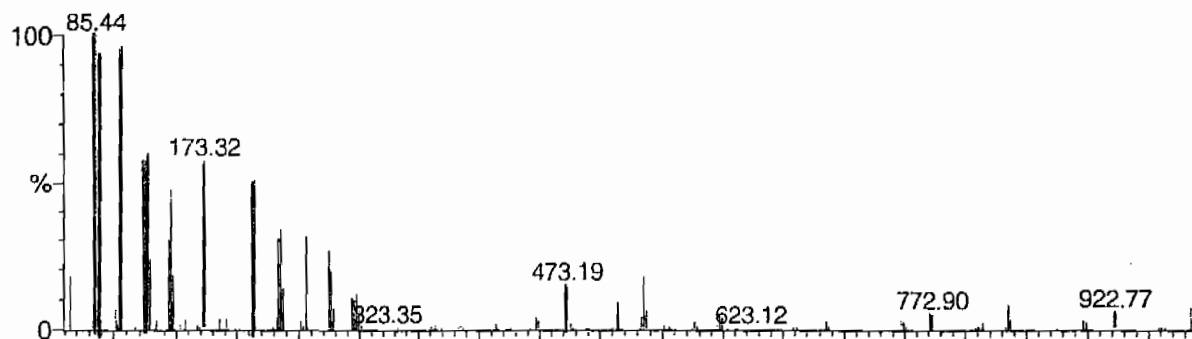
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

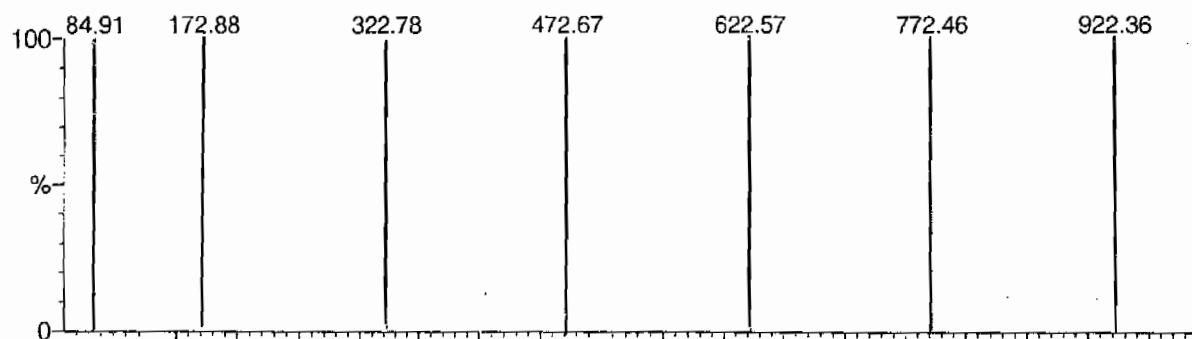
Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

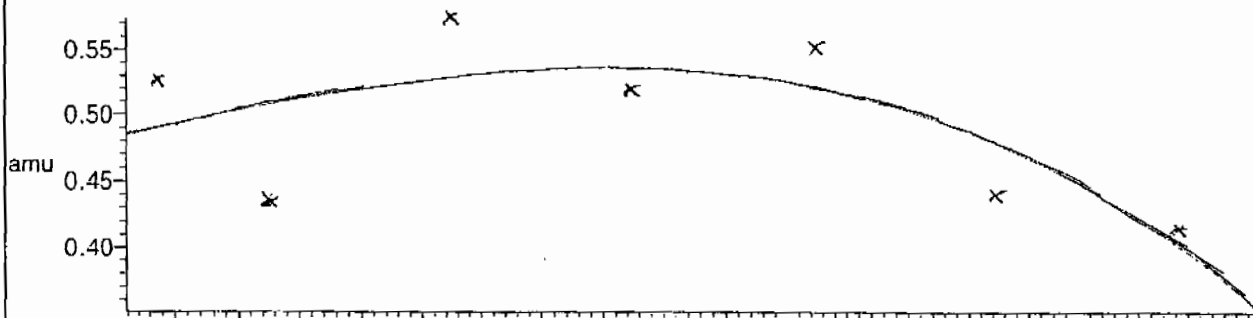
7 matches of 7 tested references



Reference file: Nairb

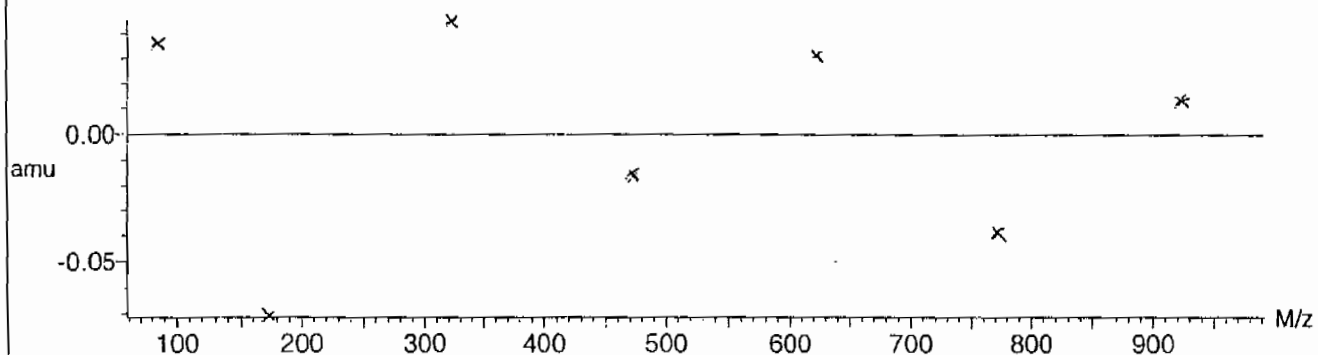


Mass difference (Raw - Ref mass)



Residuals

Mean residual =  $3.598289 \times 10^{-2} \pm 0.017899$

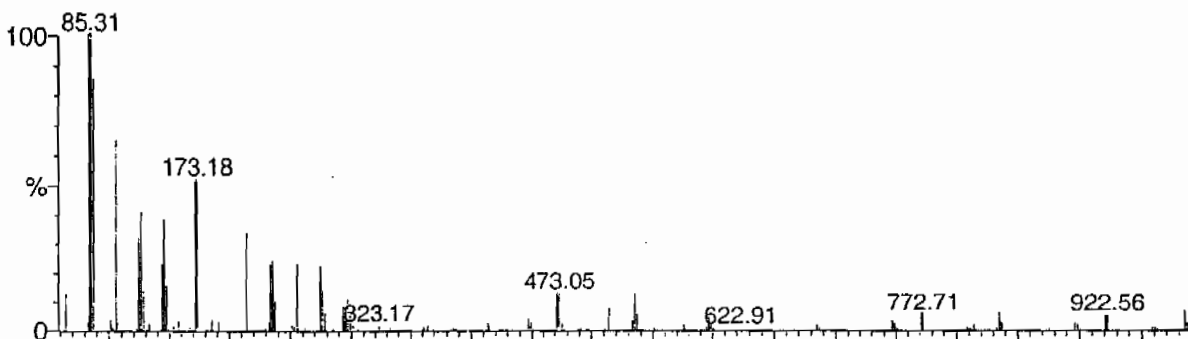


Calibration Report - MS2 Scanning

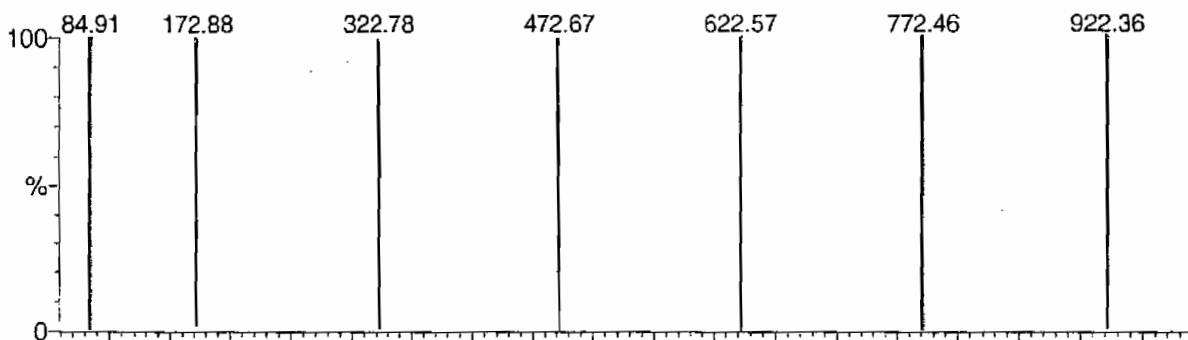
Page 1 of 1

Printed: Tue Jan 08 12:22:56 2008

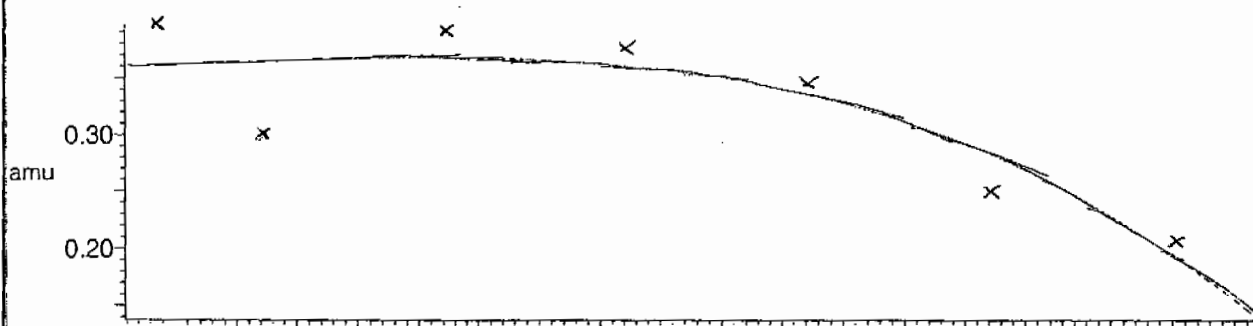
Data file: SCNMS2 - Uncalibrated 7 matches of 7 tested references



Reference file: Nairb

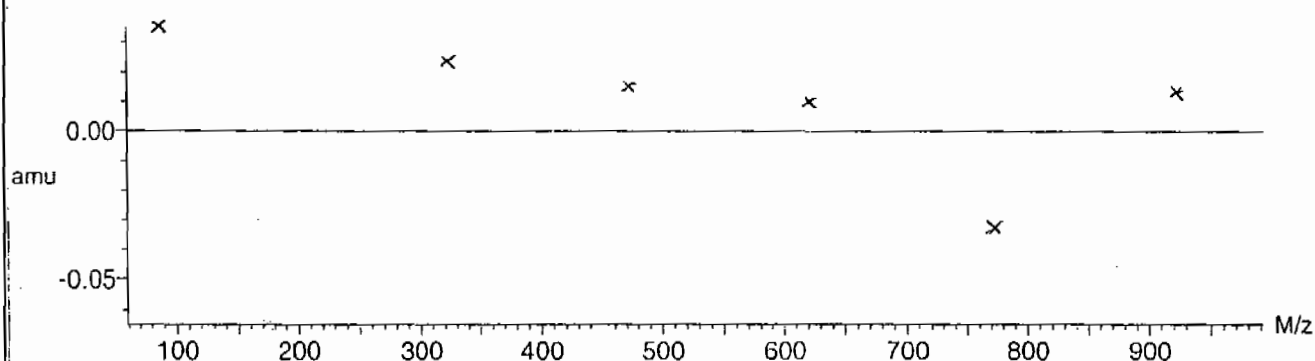


Mass difference (Raw - Ref mass)



Residuals

Mean residual =  $2.782494 \times 10^{-2} \pm 0.017442$



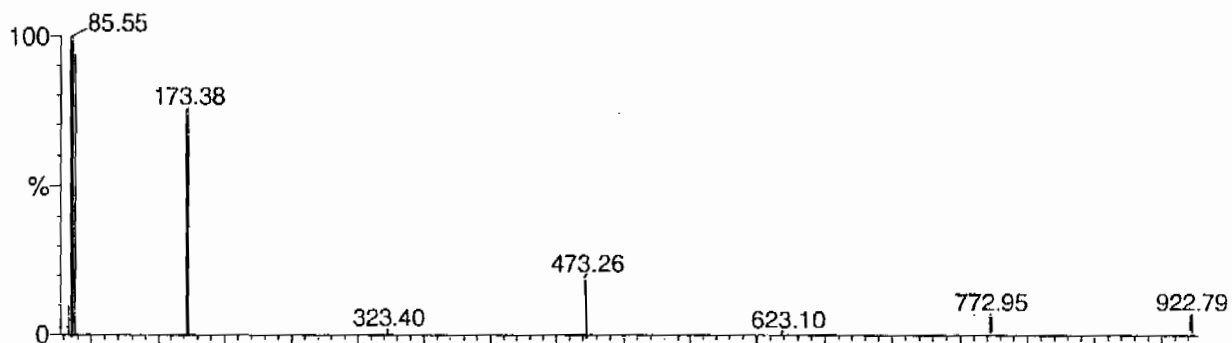
Calibration Report - MS2 Static

Page 1 of 1

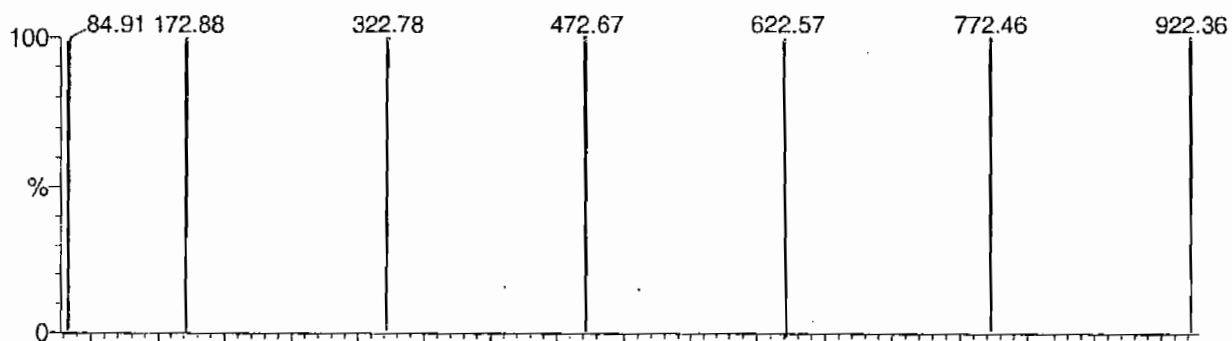
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

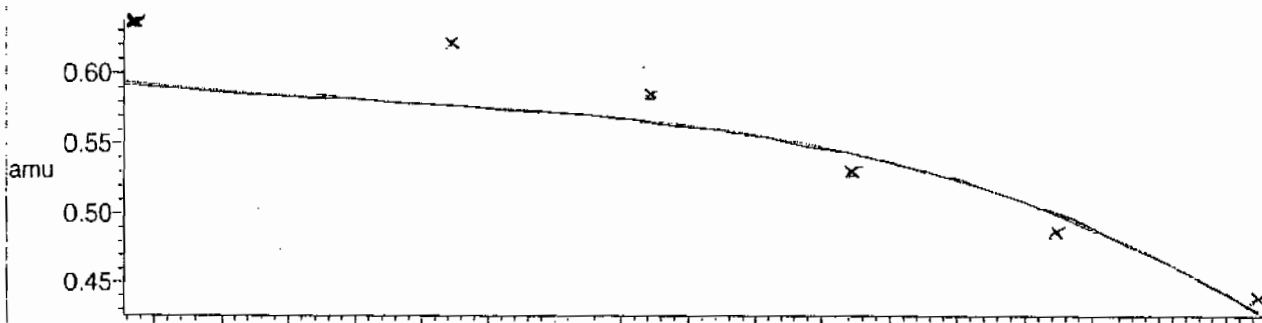
7 matches of 7 tested references



Reference file: Nairb

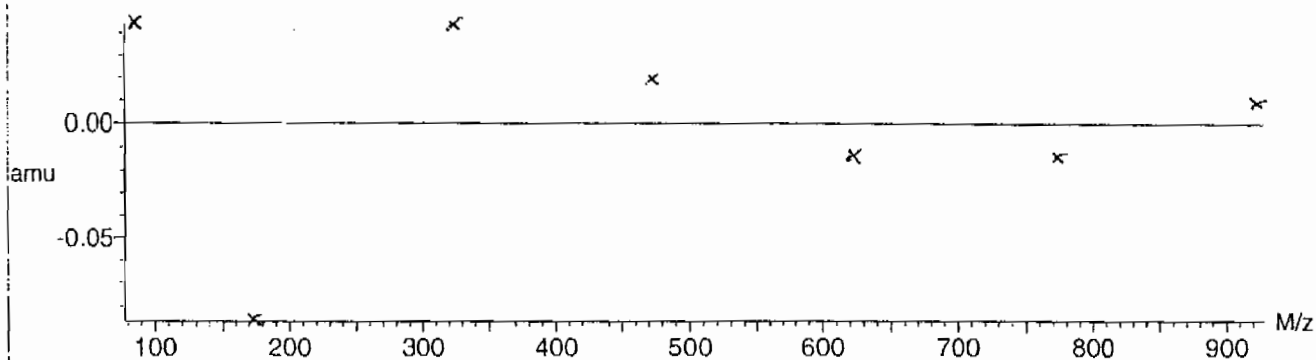


Mass difference (Raw - Ref mass)



Residuals

Mean residual =  $3.295980 \times 10^{-2} \pm 0.025603$



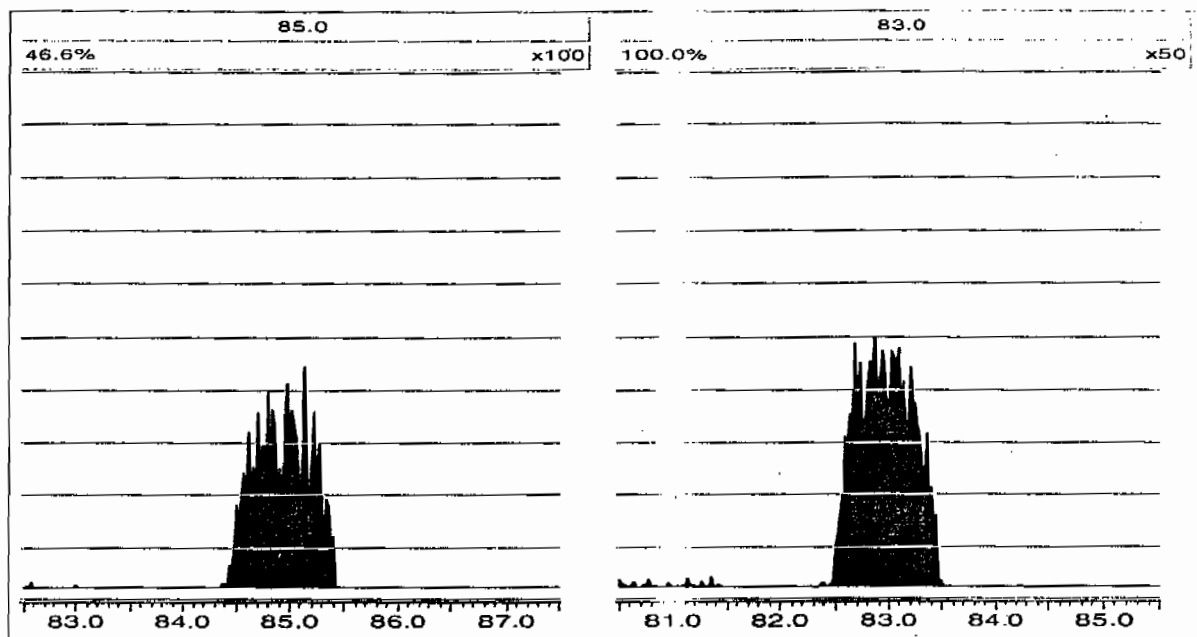
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, March 09, 2010 13:10:17 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories  
GEL Job No.(SDG): 10-1906-1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0309006a	09-MAR-10	15773.3				
Lower Area Limit			7886.65				
Upper Area Limit			31546.6				
1202049054	per0309016a	09-MAR-10 21:59	13149.5	3.25	3.25917	1.003	
1202049055	per0309017a	09-MAR-10 22:07	15093.2	3.25	3.27162	1.007	
1202049058	per0309018a	09-MAR-10 22:15	16400.7	3.23	3.24683	1.005	
247336001	per0309019a	09-MAR-10 22:23	15328.5	3.25	3.2716	1.007	
247336002	per0309020a	09-MAR-10 22:31	15280.8	3.25	3.25918	1.003	
247336003	per0309021a	09-MAR-10 22:39	15016.9	3.23	3.25913	1.009	
247336004	per0309025a	09-MAR-10 23:11	14980.1	3.23	3.23435	1.001	
247336005	per0309026a	09-MAR-10 23:19	15233.4	3.22	3.2468	1.008	



## Perchlorate RT And Area Summary

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906-1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0309006a	09-MAR-10	15773.3				
Lower Area Limit			7886.65				
Upper Area Limit			31546.6				
247336006	per0309027a	09-MAR-10 23:28	13849.5	3.22	3.24682	1.008	
247336007	per0309028a	09-MAR-10 23:36	14667.7	3.22	3.24682	1.008	

# SAMPLE DATA

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8346  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336001  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 89

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.559	2.24	0.598	ug/kg	J	1	09-MAR-10 22:23	per0309019a
	Perchlorate Isotope Ratio			2.8			1	09-MAR-10 22:23	per0309019a
14797-73-0	Perchlorate-101	.559	2.24	0.687	ug/kg	J	1	09-MAR-10 22:23	per0309019a
	Perchlorate-O(18)			5.46	ug/kg		1	09-MAR-10 22:23	per0309019a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309019a

Date: 09-Mar-2010

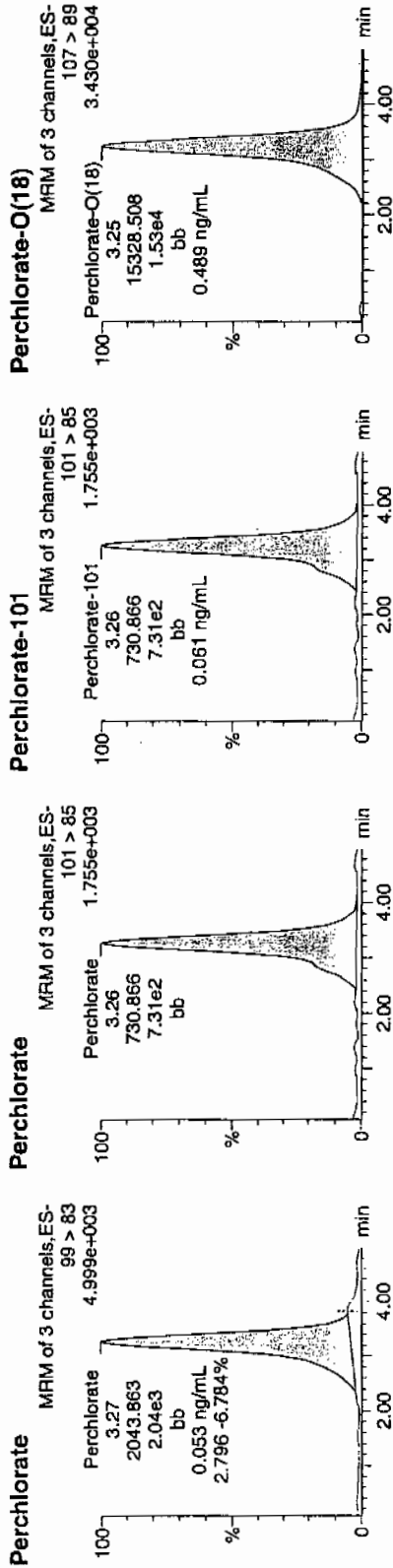
Time: 22:23:27

ID: 247336001

Vial: 1:4,D

03-10-10

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ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	pg/mL	%Rec	%Dev	S/N	Ion Ratio
247336001	Perchlorate	99 > 83	3.27	2043.863	2043.863	bb			0.0535			71.951	2.80
247336001	Perchlorate-101	101 > 85	3.26	730.866	730.866	bb			0.0615			148.388	
247336001	Perchlorate-O(18)	107 > 89	3.25	15328.508	15328.508	bb			0.4887	97.75	-2.25	3293.5...	

$$\frac{2043.863}{3827.2} = 0.0535$$

3/10/10

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 955717Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8347Date Received: 18-FEB-10GEL Job No (SDG): 10-1906-1GEL Sample ID: 247336002Date Filtered: 05-MAR-10Injection Volume (uL): 20%Solids: 97.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.514	2.06	0.514	ug/kg	U	1	09-MAR-10 22:31	per0309020a
	Perchlorate Isotope Ratio						1	09-MAR-10 22:31	per0309020a
14797-73-0	Perchlorate-101	.514	2.06	0.514	ug/kg	U	1	09-MAR-10 22:31	per0309020a
	Perchlorate-O(18)			5.01	ug/kg		1	09-MAR-10 22:31	per0309020a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

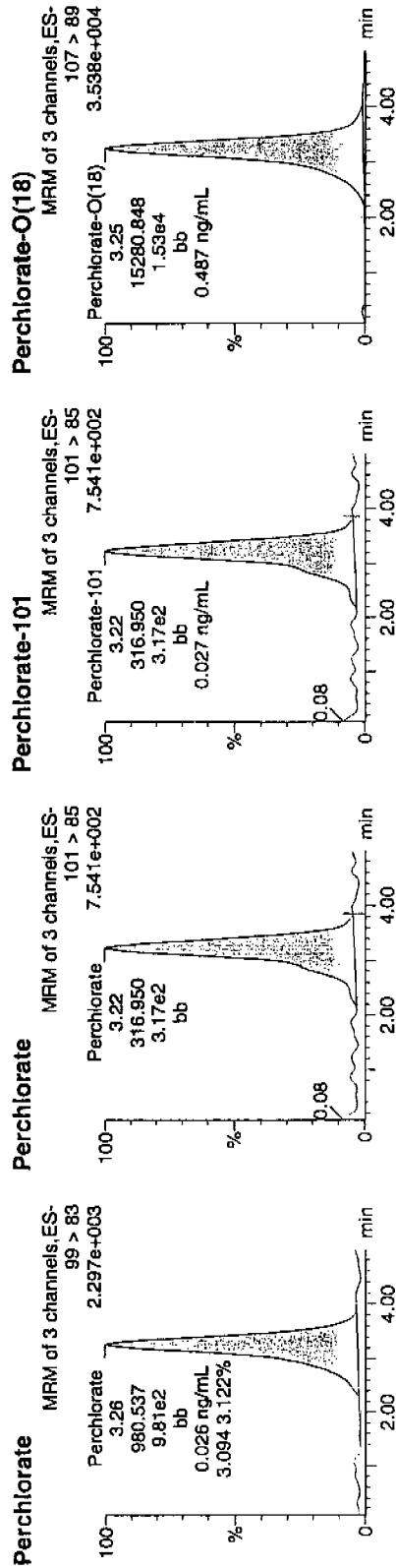
\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

**Quantify Sample Report** MassLynx 4.0 SP4  
 The GEL Group, LLC Analyst: Charlers W. Wilson  
 Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld  
 Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
 Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309020a  
 Date: 09-Mar-2010  
 Time: 22:31:29  
 ID: 247336002  
 Vial: 1:4,E

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 03-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247336002	Perchlorate	99 > 83	3.26	980.537	980.537	bb			0.0257			233.469	3.09
247336002	Perchlorate-101	101 > 85	3.22	316.950 ✓	316.950	bb			0.0267			78.524	
247336002	Perchlorate-O(18)	107 > 89	3.25	15280.848	15280.848	bb			0.4872	97.44	-2.56	1146.3...	

107  
3/11/10

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8344  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336003  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 24.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	1.10	ug/kg	J	1	09-MAR-10 22:39	per0309021a
	Perchlorate Isotope Ratio			3.14			1	09-MAR-10 22:39	per0309021a
14797-73-0	Perchlorate-101	.529	2.11	1.12	ug/kg	J	1	09-MAR-10 22:39	per0309021a
	Perchlorate-O(18)			5.06	ug/kg		1	09-MAR-10 22:39	per0309021a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309021a

Date: 09-Mar-2010

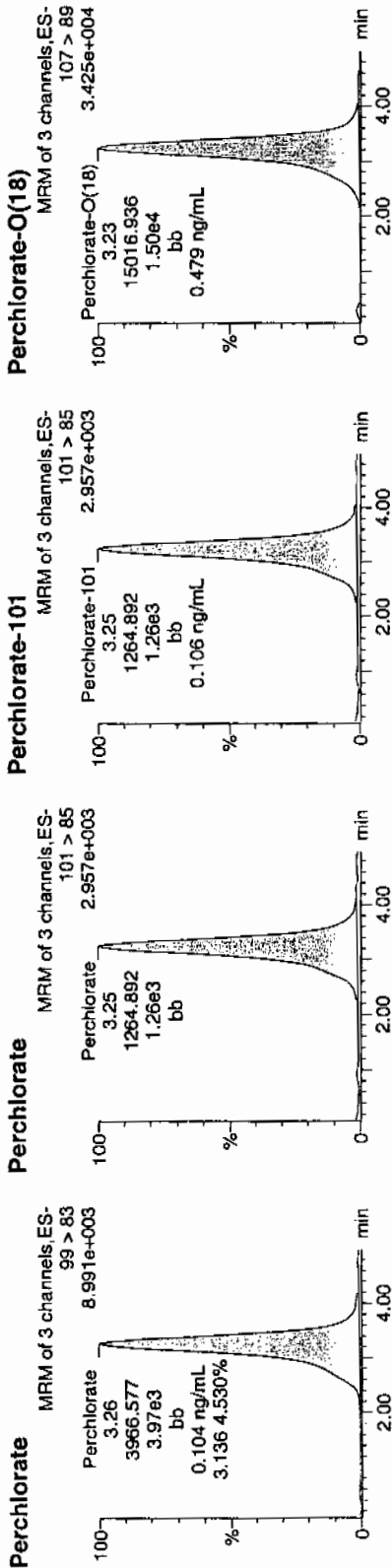
Time: 22:39:31

ID: 247336003

Vial: 1:4,F

03-10-10

155718 | 2020 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247336003	Perchlorate	99 > 83	3.26	3966.577	3966.577	bb			0.1038			291.958	3.14
247336003	Perchlorate-101	101 > 85	3.25	1264.892	1264.892	bb			0.1064			141.037	
247336003	Perchlorate-O(18)	107 > 89	3.23	15016.936	15016.936	bb			0.4788	95.76	-4.24	3381.4...	

3966.577 | 10 | 100  
38217.2

3/11/10



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8345

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336004

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 93.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.533	2.13	1.36	ug/kg	J	1	09-MAR-10 23:11	per0309025a
	Perchlorate Isotope Ratio			3.04			1	09-MAR-10 23:11	per0309025a
14797-73-0	Perchlorate-101	.533	2.13	1.43	ug/kg	J	1	09-MAR-10 23:11	per0309025a
	Perchlorate-O(18)			5.10	ug/kg		1	09-MAR-10 23:11	per0309025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

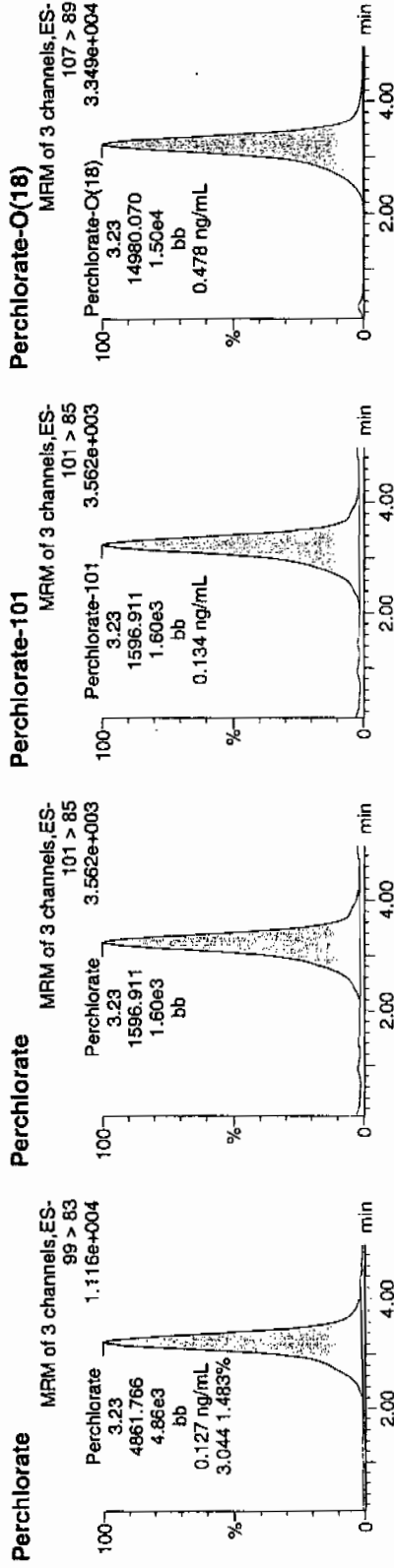
Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309025a  
Date: 09-Mar-2010  
Time: 23:11:48  
ID: 247336004  
Vial: 1:5,A

03-10-10

155713 | 3070 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247336004	Perchlorate	99 > 83	3.23	4861.766	4861.766	bb			0.1272			773.498	3.04
247336004	Perchlorate-101	101 > 85	3.23	1596.911	1596.911	bb			0.1343			46.717	
247336004	Perchlorate-O(18)	107 > 89	3.23	14980.070	14980.070	bb			0.4776	95.52	-4.48	1182.0...	

3/10/10

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8342

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336005

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.529	2.11	0.529	ug/kg	U	1	09-MAR-10 23:19	per0309026a
	Perchlorate Isotope Ratio						1	09-MAR-10 23:19	per0309026a
14797-73-0	Perchlorate-101	.529	2.11	0.529	ug/kg	U	1	09-MAR-10 23:19	per0309026a
	Perchlorate-O(18)			5.13	ug/kg		1	09-MAR-10 23:19	per0309026a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
 Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309026a

Date: 09-Mar-2010

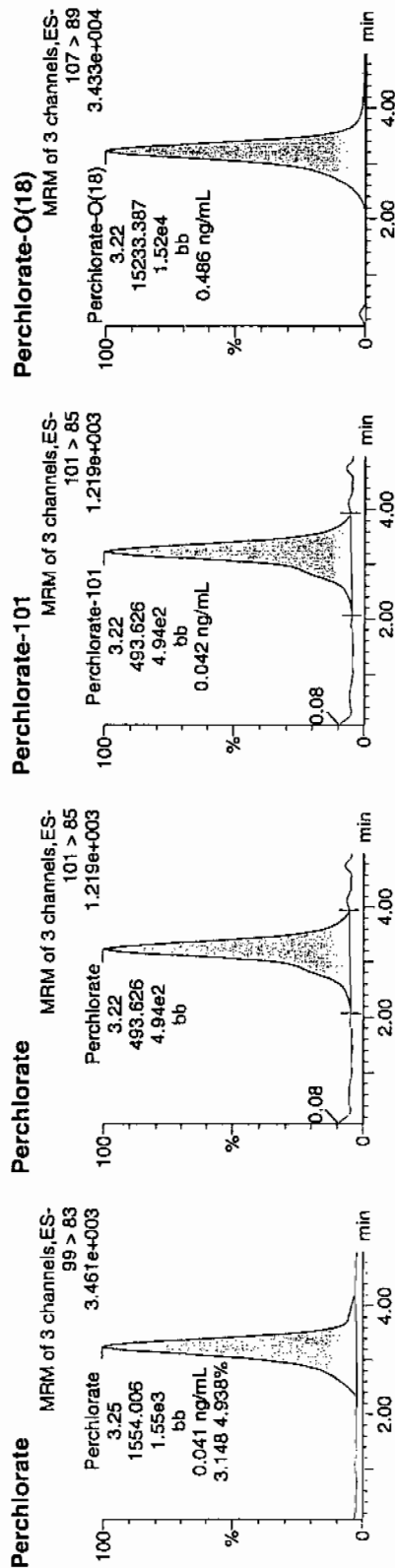
Time: 23:19:59

ID: 247336005

Vial: 1:5,B

623  
 03-10-10

623 | 955712 | 5070 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247336005	Perchlorate	99 > 83	3.25	1554.006	1554.006	bb			0.0407			436.261	3.15
247336005	Perchlorate-101	101 > 85	3.22	493.626	493.626	bb			0.0415			38.664	
247336005	Perchlorate-O(18)	107 > 89	3.22	15233.387	15233.387	bb			0.4857	97.14	-2.86	919.961	

3/10/10

## Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 955717  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-8343  
 Date Received: 18-FEB-10  
 GEL Job No (SDG): 10-1906-1  
 GEL Sample ID: 247336006  
 Date Filtered: 05-MAR-10  
 Injection Volume (uL): 20  
 %Solids: 95.9

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.645	ug/kg	J	1	09-MAR-10 23:28	per0309027a
	Perchlorate Isotope Ratio			3.16			1	09-MAR-10 23:28	per0309027a
14797-73-0	Perchlorate-101	.522	2.09	0.657	ug/kg	J	1	09-MAR-10 23:28	per0309027a
	Perchlorate-O(18)			4.61	ug/kg		1	09-MAR-10 23:28	per0309027a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309027a

Date: 09-Mar-2010

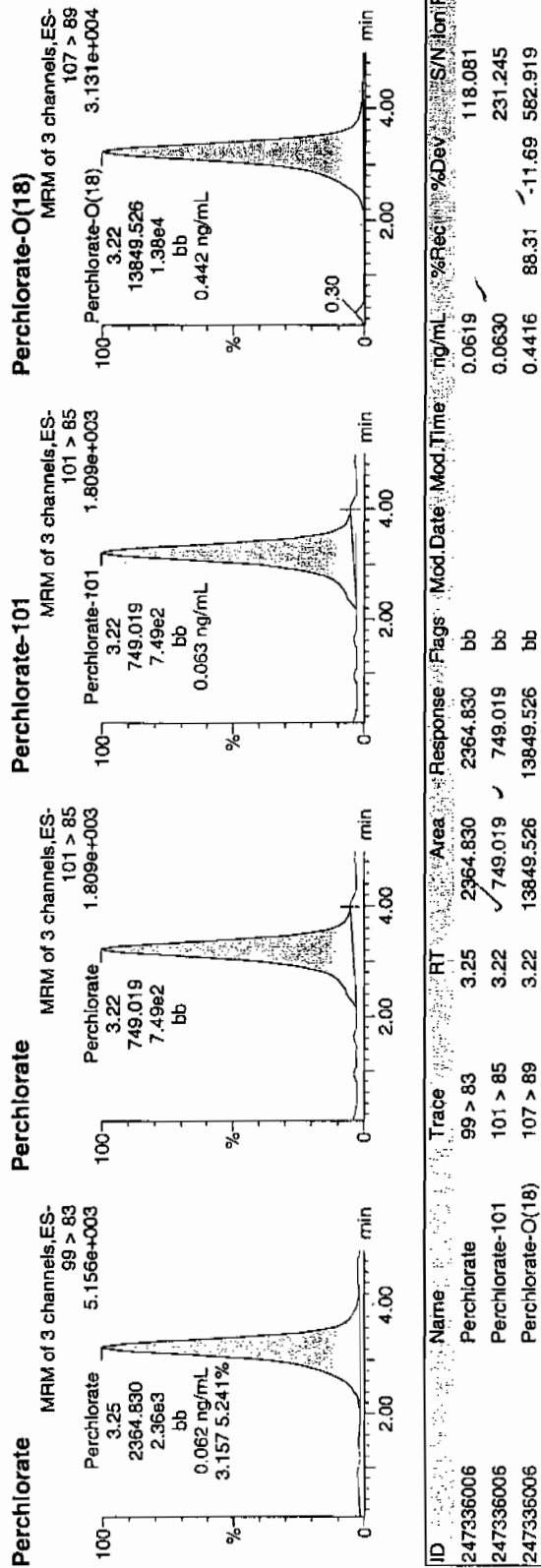
Time: 23:28:04

ID: 247336006

Vial: 1:5,C

33-10-12

LANC | 955712 | 5000 | 1 |



3/11/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-8377

Date Received: 18-FEB-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 247336007

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 94.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.528	2.11	1.42	ug/kg	J	1	09-MAR-10 23:36	per0309028a
	Perchlorate Isotope Ratio			3.21			1	09-MAR-10 23:36	per0309028a
14797-73-0	Perchlorate-101	.528	2.11	1.42	ug/kg	J	1	09-MAR-10 23:36	per0309028a
	Perchlorate-O(18)			4.94	ug/kg		1	09-MAR-10 23:36	per0309028a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qid

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309028a

Date: 09-Mar-2010

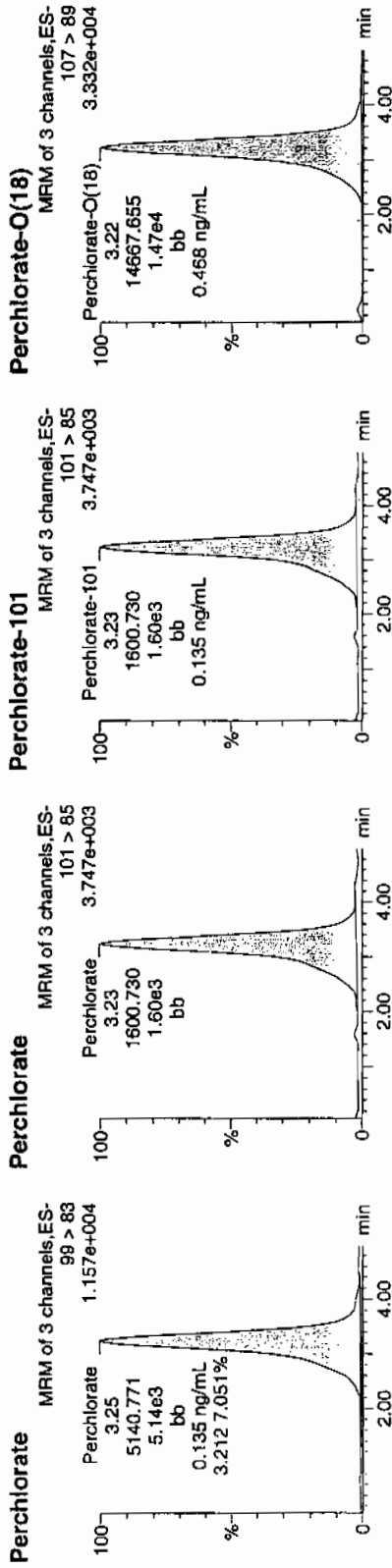
Time: 23:36:07

ID: 247336007

Vial: 1:5,D

03-10-10

LANV | 955712 | 5050 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
247336007	Perchlorate	99 > 83	3.25	5140.771	5140.771	bb			0.1345	✓	1526.4...	3.21	
247336007	Perchlorate-101	101 > 85	3.23	1600.730	1600.730	bb			0.1346	✓	253.483		
247336007	Perchlorate-O(18)	107 > 89	3.22	14667.655	14667.655	bb			0.4677	✓	-6.47	2415.0...	

$$\frac{5140.771}{3827.2} = 0.1345$$

auth  
3/11/10



# STANDARDS DATA

Perchlorate Initial Calibration

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

GEL Job No.(SDG): 10-1906-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 09-MAR-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 38217.18

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1906-1

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 09-MAR-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 11889.82

Response Type: External Standard

Curve Type: RF

# Quantify Calibration Report MassLynx 4.0 SP4

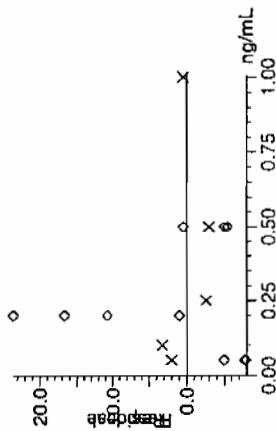
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

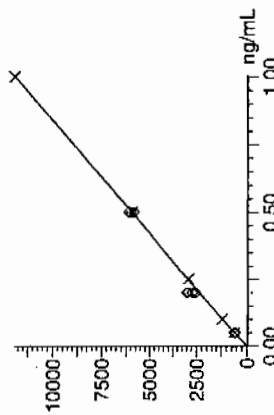
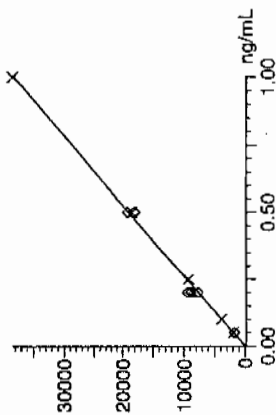
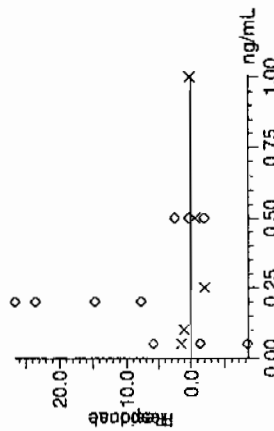
Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per030910a.mdb 10 Mar 2010 10:32:49  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per030910a.cdb 10 Mar 2010 11:59:23

Compound name: Perchlorate ✓  
Response Factor: 38217.2 ✓  
RRF SD: 1056.23, % Relative SD: 2.76376 ✓  
Response type: External Std, Area  
Curve type: RF ✓



Compound name: Perchlorate-101 ✓  
Response Factor: 11889.8 ✓  
RRF SD: 164.678, % Relative SD: 1.38503 ✓  
Response type: External Std, Area  
Curve type: RF ✓



03-10-11

3/10/10

Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charliers W. Wilson

Page 2 of 2

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time

Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

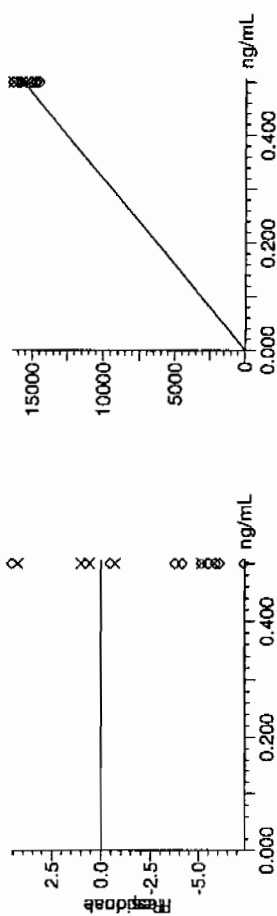
Compound name: Perchlorate-O(18) ✓

Response Factor: 31364.1

RRF SD: 1069.77, % Relative SD: 3.41081 -

Response type: External Std, Area

Curve type: RF ✓



Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906-1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.45	09-MAR-10 21:02	per0309009a
Perchlorate Isotope Ratio		3.15		09-MAR-10 21:02	per0309009a
Perchlorate-101	.5	.51	102.45	09-MAR-10 21:02	per0309009a

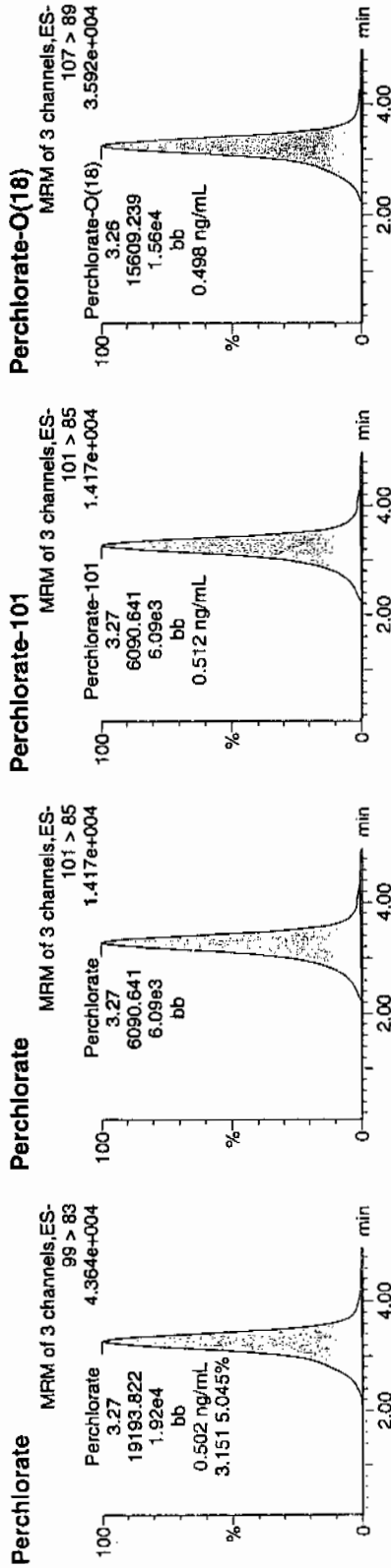
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309009a  
Date: 09-Mar-2010  
Time: 21:02:40  
ID: WCL100309-06ICV  
Vial: 1:2,A

Pure  
and  
03-13-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06ICV	Perchlorate	99 > 83	3.27	19193.822	19193.822	bb			0.5022	100.45	0.45	1399.0...	3.15
WCL100309-06ICV	Perchlorate-101	101 > 85	3.27	6090.641	6090.641	bb			0.5123	102.45	2.45	968.737	
WCL100309-06ICV	Perchlorate-O(18)	107 > 89	3.26	15609.239	15609.239	bb			0.4977	99.54	-0.46	1544.0...	

$$\frac{19193.822}{3847.2} = 0.5022$$

NOT  
3/10/10

Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1906-1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	94.54	09-MAR-10 22:47	per0309022a
Perchlorate Isotope Ratio		3.1		09-MAR-10 22:47	per0309022a
Perchlorate-101	.5	.49	98.04	09-MAR-10 22:47	per0309022a
Perchlorate	.5	.47	94.99	10-MAR-10 00:24	per0309034a
Perchlorate Isotope Ratio		3.05		10-MAR-10 00:24	per0309034a
Perchlorate-101	.5	.5	100.24	10-MAR-10 00:24	per0309034a



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309022a

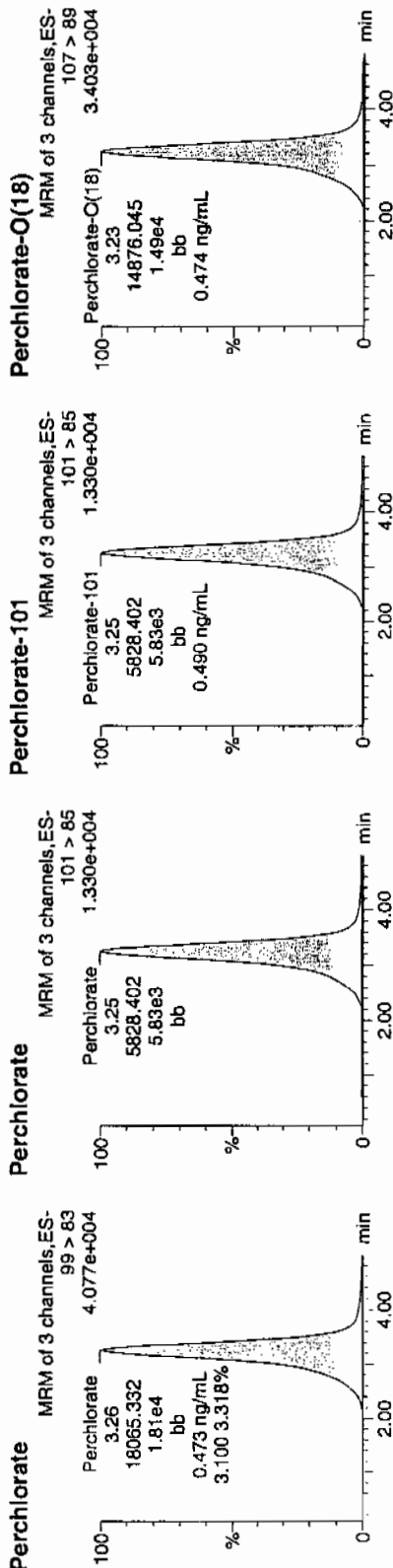
Date: 09-Mar-2010

Time: 22:47:32

ID: WCL100309-06CCV

Vial: 1:2,A

*Perchlorate  
and  
O(18)*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.26	18065.332	18065.332	bb			0.4727	94.54	-5.46	1181.0...	3.10
WCL100309-06CCV	Perchlorate-101	101 > 85	3.25	5828.402	5828.402	bb			0.4902	98.04	-1.96	639.525	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.23	14876.045	14876.045	bb			0.4743	94.86	-5.14	2176.2...	

*Not  
3/10/10*

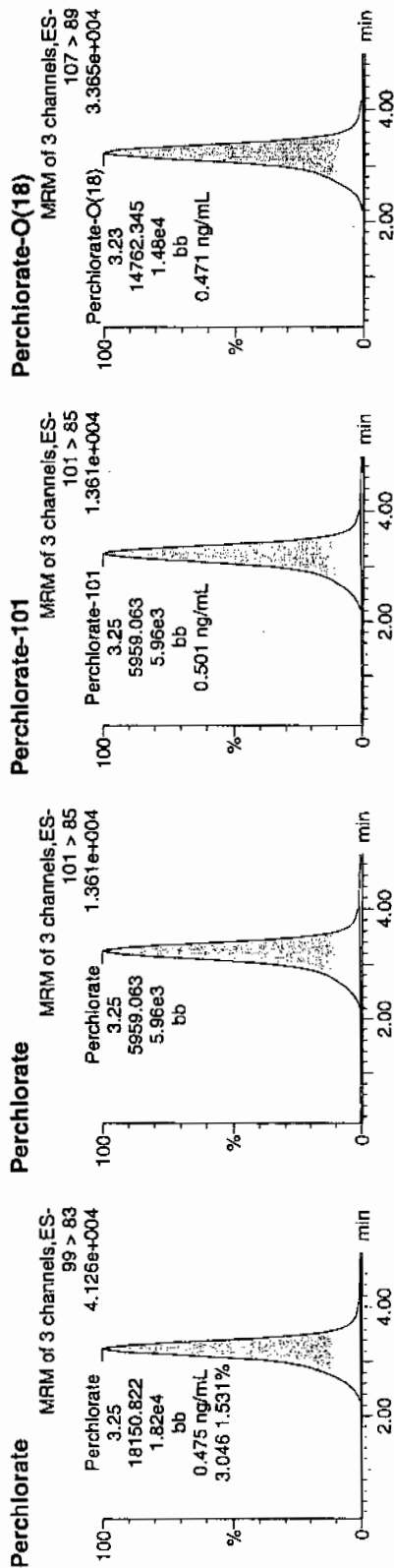
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309034a  
Date: 10-Mar-2010  
Time: 00:24:39  
ID: WCL100309-06CCV  
Vial: 1:2,A

*Qw*  
*WCL*  
*33-12-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100309-06CCV	Perchlorate	99 > 83	3.25	18150.822	18150.822	bb			0.4749	94.99	-5.01	750.792	3.05
WCL100309-06CCV	Perchlorate-101	101 > 85	3.25	5959.063	5959.063	bb			0.5012	100.24	0.24	519.041	
WCL100309-06CCV	Perchlorate-O(18)	107 > 89	3.23	14762.345	14762.345	bb			0.4707	94.14	-5.86	1218.5...	

*WCL*  
*3/10/10*

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1906-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	92.08	09-MAR-10 21:18	per0309011a
Perchlorate Isotope Ratio		3.23		09-MAR-10 21:18	per0309011a
Perchlorate-101	.05	.05	91.75	09-MAR-10 21:18	per0309011a
Perchlorate	.05	.05	92.31	09-MAR-10 23:03	per0309024a
Perchlorate Isotope Ratio		2.8		09-MAR-10 23:03	per0309024a
Perchlorate-101	.05	.05	105.85	09-MAR-10 23:03	per0309024a
Perchlorate	.05	.05	95.06	10-MAR-10 00:40	per0309036a
Perchlorate Isotope Ratio		3.1		10-MAR-10 00:40	per0309036a
Perchlorate-101	.05	.05	98.63	10-MAR-10 00:40	per0309036a

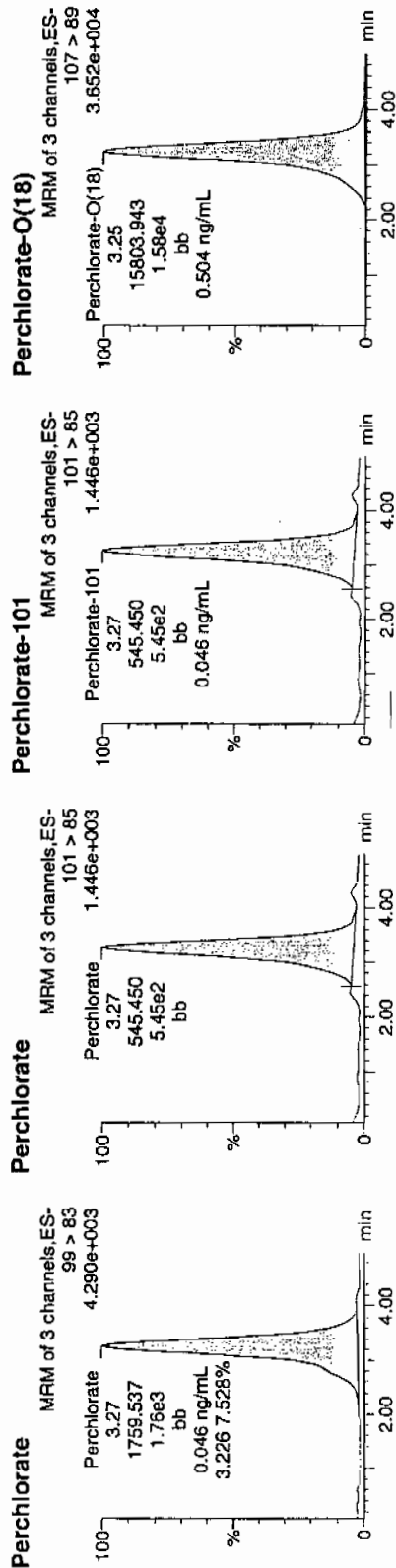
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309011a  
Date: 09-Mar-2010  
Time: 21:18:52  
ID: WCL100309-07CRI  
Vial: 1:2,B

Pure  
was  
340-D



ID	Name	Trace	RT	Area	Response	Flags	Mod. Date	Mod. Time	ng/mL	%Rec	%Dev	S/N	Ion	Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.27	1759.537	1759.537	bb			0.0460	92.08	-7.92	301.940	3.23	
WCL100309-07CRI	Perchlorate-101	101 > 85	3.27	545.450	545.450	bb			0.0459	91.75	-8.25	37.804		
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.25	15803.943	15803.943	bb			0.5039	100.78	0.78	3001.4...		

$$\frac{1759.537}{545.450} = 3.2253$$

3/10/10

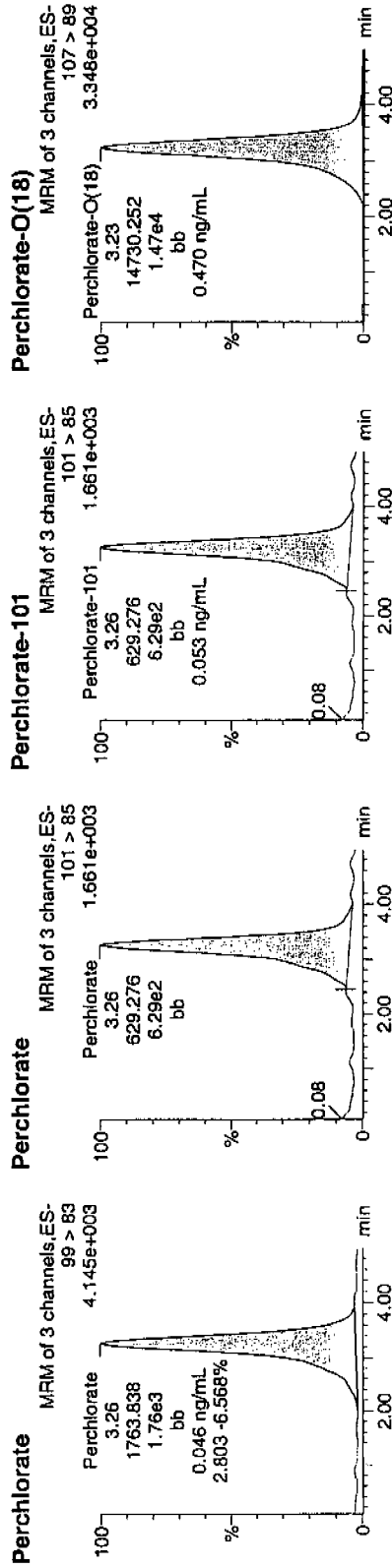
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309024a  
Date: 09-Mar-2010  
Time: 23:03:45  
ID: WCL100309-07CRI  
Vial: 1:2,B

*Pure  
0.470 ng/mL*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.26	1763.838	1763.838	bb			0.0462	92.31	-7.69	131.460	2.80
WCL100309-07CRI	Perchlorate-101	101 > 85	3.26	629.276	629.276	bb			0.0529	105.85	5.85	116.799	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.23	14730.252	14730.252	bb			0.4697	93.93	-6.07	1587.3...	

*WCL  
3/10/10*

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
 Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309036a

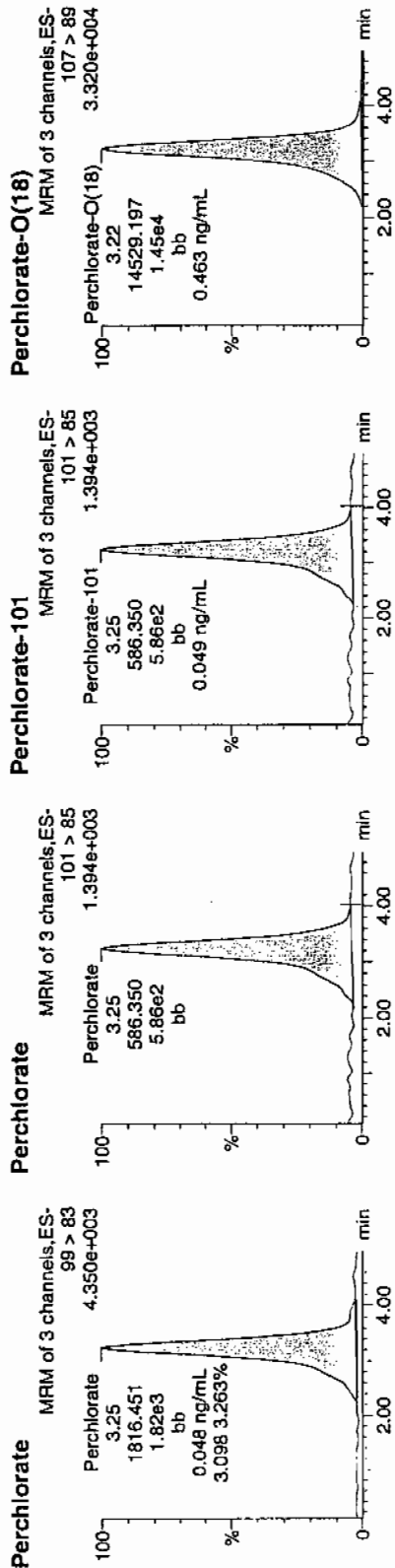
Date: 10-Mar-2010

Time: 00:40:53

ID: WCL100309-07CRI

Vial: 1:2,B

*Per*  
*03-10-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100309-07CRI	Perchlorate	99 > 83	3.25	1816.451	1816.451	bb			0.0475	95.06	-4.94	268.060	3.10
WCL100309-07CRI	Perchlorate-101	101 > 85	3.25	586.350	586.350	bb			0.0493	98.63	-1.37	106.111	
WCL100309-07CRI	Perchlorate-O(18)	107 > 89	3.22	14529.197	14529.197	bb			0.4632	92.65	-7.35	355.067	

*not*  
*3/10/10*

# QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 955717

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

MB

Date Received: 05-MAR-10

GEL Job No (SDG): 10-1906-1

GEL Sample ID: 1202049054

Date Filtered: 05-MAR-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	09-MAR-10 21:59	per0309016a
	Perchlorate Isotope Ratio						1	09-MAR-10 21:59	per0309016a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	09-MAR-10 21:59	per0309016a
	Perchlorate-O(18)			4.19	ug/kg		1	09-MAR-10 21:59	per0309016a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$



**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

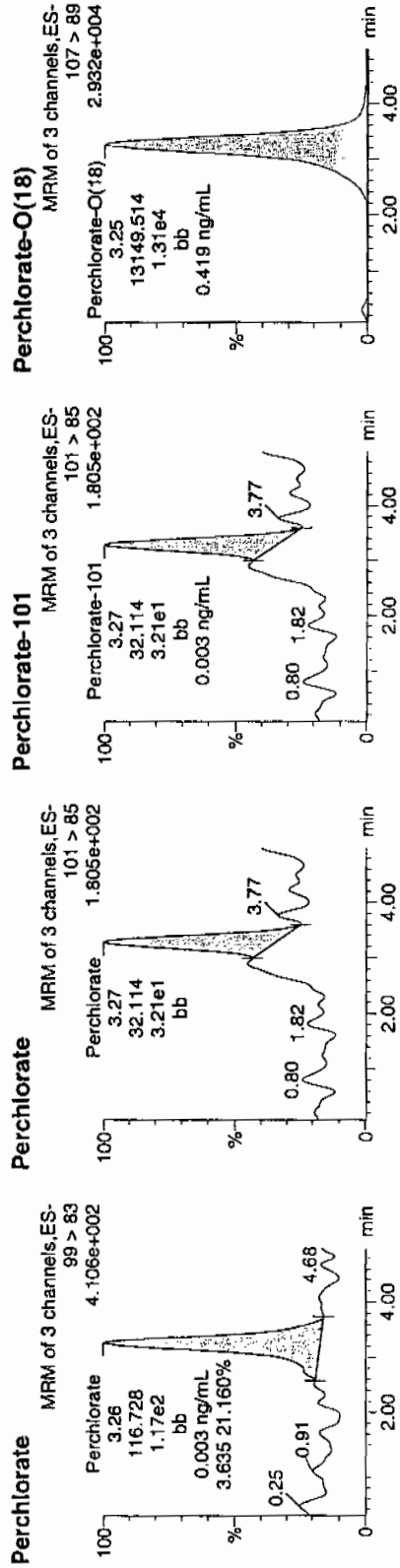
Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309016a  
Date: 09-Mar-2010  
Time: 21:59:19  
ID: 1202049054  
Vial: 1:4,A

03-10-10

14100 | 955713 | 5000 | MB | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202049054	Perchlorate	99 > 83	3.26	116.728	116.728	bb			0.0031			27.533	3.63
1202049054	Perchlorate-101	101 > 85	3.27	32.114	32.114	bb			0.0027			14.154	
1202049054	Perchlorate-O(18)	107 > 89	3.25	13149.514	13149.514	bb			0.4193	83.85	-16.15	2166.4...	

3/11/10

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: EPA 6850 ModifiedMatrix: SOILExtraction Batch ID: 955717Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

LCSDate Received: 05-MAR-10GEL Job No (SDG): 10-1906-1GEL Sample ID: 1202049055Date Filtered: 05-MAR-10Injection Volume (uL): 20%Solids: 100

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.02	ug/kg		1	09-MAR-10 22:07	per0309017a
	Perchlorate Isotope Ratio			3.01			1	09-MAR-10 22:07	per0309017a
14797-73-0	Perchlorate-101	.5	2	2.16	ug/kg		1	09-MAR-10 22:07	per0309017a
	Perchlorate-O(18)			4.81	ug/kg		1	09-MAR-10 22:07	per0309017a

<sup>^</sup> When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309017a

Date: 09-Mar-2010

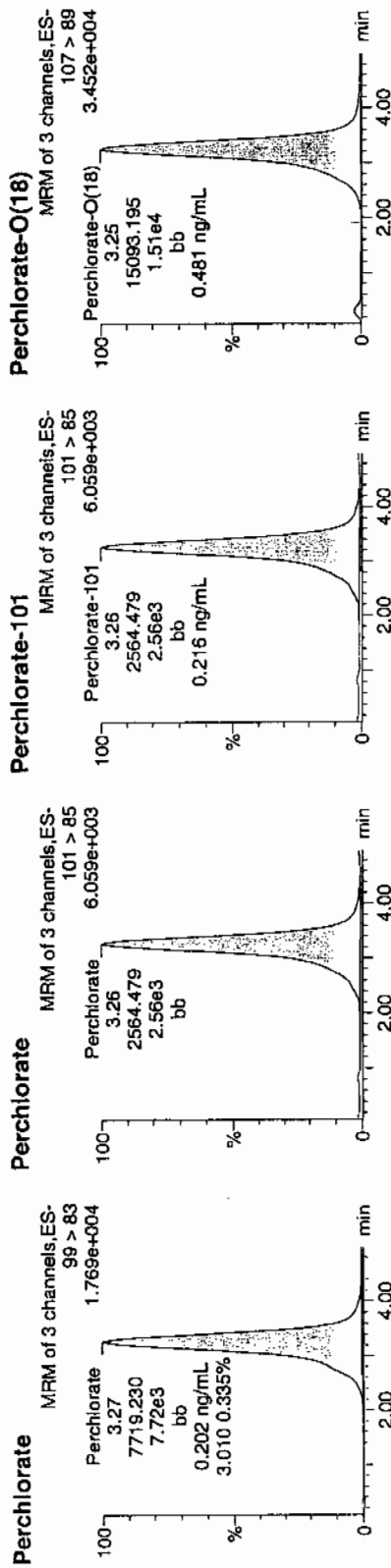
Time: 22:07:22

ID: 1202049055

Vial: 1:4,B

623  
23-10-10

1202049055 | 3000 | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202049055	Perchlorate	99 > 83	3.27	7719.230	7719.230	bb			0.2020	100.99	0.99	1096.0...	3.01
1202049055	Perchlorate-101	101 > 85	3.26	2564.479	2564.479	bb			0.2157	107.84	7.84	265.315	
1202049055	Perchlorate-O(18)	107 > 89	3.25	15093.195	15093.195	bb			0.4812	96.24	-3.76	1278.9...	

7719.230  
38247.2

not  
3/10/20

# MISCELLANEOUS DATA

# Prep Logbook

## Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 955717 Verified by: Lab SOP: GL-OA-E-067 REV# 6  
 Analyst: Kaylie Westmoreland Instrument: MicroMass Quattro Ultima  
 Method: SW846 6850 Modified

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)	Serial Number	Spike Amt	Units	Comments
1202049054 MB	05-MAR-2010 15:21:38	2	20	10				
1202049055 LCS	05-MAR-2010 15:21:38	2	20	10				
247336001	05-MAR-2010 15:21:38	2	20	10				
247336002	05-MAR-2010 15:21:38	2	20	10				
247336003	05-MAR-2010 15:21:38	2	20	10				
247336004	05-MAR-2010 15:21:38	2	20	10				
247336005	05-MAR-2010 15:21:38	2	20	10				
247336006	05-MAR-2010 15:21:38	2	20	10				
247336007	05-MAR-2010 15:21:38	2	20	10				
247338001	05-MAR-2010 15:21:38	2	20	10				
1202049056 MS (247338001)	05-MAR-2010 15:21:38	2	20	10				
1202049057 MSD (247338001)	05-MAR-2010 15:21:38	2	20	10				
247338002	05-MAR-2010 15:21:38	2	20	10				
247338003	05-MAR-2010 15:21:38	2	20	10				
247338004	05-MAR-2010 15:21:38	2	20	10				
247338005	05-MAR-2010 15:21:38	2	20	10				
247338006	05-MAR-2010 15:21:38	2	20	10				
247338007	05-MAR-2010 15:21:38	2	20	10				
247338008	05-MAR-2010 15:21:38	2	20	10				
247338009	05-MAR-2010 15:21:38	2	20	10				
247338010	05-MAR-2010 15:21:38	2	20	10				
247338011	05-MAR-2010 15:21:38	2	20	10				
1202049058 LCS	05-MAR-2010 15:21:38	2	20	10				
ICS 1202049058	10 ug/L ICS VCCV Second Source		UCL100226-01.1		4	mL		Desulting Cartridges used: B1000311609 & B10003K0402
LCS 1202049055	10 ug/L ICS VCCV Second Source		UCL100226-01.1		4	mL		
MS 1202049056	10 ug/L ICS VCCV Second Source		UCL100226-01.1		4	mL		
MSD 1202049057	10 ug/L ICS VCCV Second Source		UCL100226-01.1		4	mL		

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 03/09/10  
 Extr. Injection Volume: 20uL  
 Sequence Number: per030910a  
 Initial Calibration Date: 03/09/10

Method: EPA 6850-Modified  
 Int. Std.: UCL100126-01  
 Mobile Phase Lot#: 1278668, 1271949  
 Standard-Samp Reagent Lot#: 1271949

Reviewed BY: Arif  
 Date: 3/11/10  
 SOP: GL-OA-E-067 Rev.6  
 Alt Check Std. ID: WCL100309-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0309001a	IPB001	CWW	3/9/2010 19:57			1		USE	B
per0309002a	IPB001	CWW	3/9/2010 20:05			1		USE	B
per0309003a	WCLICAL-01	CWW	3/9/2010 20:14			1		USE	I
per0309004a	WCLICAL-02	CWW	3/9/2010 20:22			1		USE	I
per0309005a	WCLICAL-03	CWW	3/9/2010 20:30			1		USE	I
per0309006a	WCLICAL-04	CWW	3/9/2010 20:38			1		USE	I
per0309007a	WCLICAL-05	CWW	3/9/2010 20:46			1		USE	I
per0309008a	IPB002	CWW	3/9/2010 20:54			1		USE	B
per0309009a	WCLICV	CWW	3/9/2010 21:02			1		USE	C
per0309010a	IPB003	CWW	3/9/2010 21:10			1		USE	B
per0309011a	WCLCRI	CWW	3/9/2010 21:18			1		USE	C
per0309012a	246967004	CWW	3/9/2010 21:27	955724	10-1807	2	LANL	USE	S
per0309013a	247037001	CWW	3/9/2010 21:35	955724	10-1823	10	LANL	USE	S
per0309014a	247042002	CWW	3/9/2010 21:43	955724	10-1817	1	LANL	USE	S
per0309015a	IPB004	CWW	3/9/2010 21:51			1		USE	B
per0309016a	1202049054	CWW	3/9/2010 21:59	955718	VARIOUS	1	LANL	USE	S
per0309017a	1202049055	CWW	3/9/2010 22:07	955718	VARIOUS	1	LANL	USE	S
per0309018a	1202049058	CWW	3/9/2010 22:15	955718	VARIOUS	1	LANL	USE	S
per0309019a	247336001	CWW	3/9/2010 22:23	955718	10-1906-1	1	LANL	USE	S
per0309020a	247336002	CWW	3/9/2010 22:31	955718	10-1906-1	1	LANL	USE	S
per0309021a	247336003	CWW	3/9/2010 22:39	955718	10-1906-1	1	LANL	USE	S
per0309022a	WCLCCV	CWW	3/9/2010 22:47			1		USE	C
per0309023a	IPB005	CWW	3/9/2010 22:55			1		USE	B
per0309024a	WCLCRI	CWW	3/9/2010 23:03			1		USE	C
per0309025a	247336004	CWW	3/9/2010 23:11	955718	10-1906-1	1	LANL	USE	S
per0309026a	247336005	CWW	3/9/2010 23:19	955718	10-1906-1	1	LANL	USE	S
per0309027a	247336006	CWW	3/9/2010 23:28	955718	10-1906-1	1	LANL	USE	S
per0309028a	247336007	CWW	3/9/2010 23:36	955718	10-1906-1	1	LANL	USE	S
per0309029a	247338001	CWW	3/9/2010 23:44	955718	10-1909	1	LANL	USE	S

per0309030a	1202049056	CWW	3/9/2010 23:52	955718	10-1909	1	LANL	USE	S
per0309031a	1202049057	CWW	3/10/2010 0:00	955718	10-1909	1	LANL	USE	S
per0309032a	247338002	CWW	3/10/2010 0:08	955718	10-1909	1	LANL	USE	S
per0309033a	247338003	CWW	3/10/2010 0:16	955718	10-1909	1	LANL	USE	S
per0309034a	WCLCCV	CWW	3/10/2010 0:24			1		USE	C
per0309035a	IPB006	CWW	3/10/2010 0:32			1		USE	B
per0309036a	WCLCRI	CWW	3/10/2010 0:40			1		USE	C

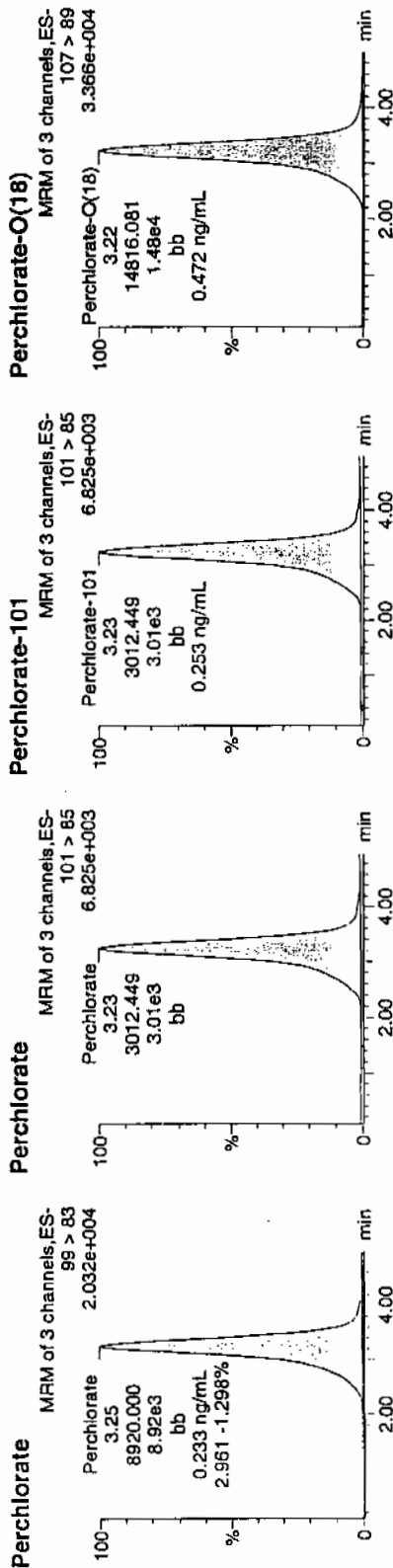
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309030a  
Date: 09-Mar-2010  
Time: 23:52:11  
ID: 1202049056  
Vial: 1:5,F

1202049056 | 955718 | 3000 | MS | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	IS/N	Ratio
1202049056	Perchlorate	99 > 83	3.25	8920.000	8920.000	bb			0.2334	116.70	16.70	929.015	2.96
1202049056	Perchlorate-101	101 > 85	3.23	3012.449	3012.449	bb			0.2534	126.68	26.68	1044.6...	
1202049056	Perchlorate-O(18)	107 > 89	3.22	14816.081	14816.081	bb			0.4724	94.48	-5.52	1275.8...	

$$\frac{8920.000}{3927.2} = 0.2334$$

3/11/10



Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

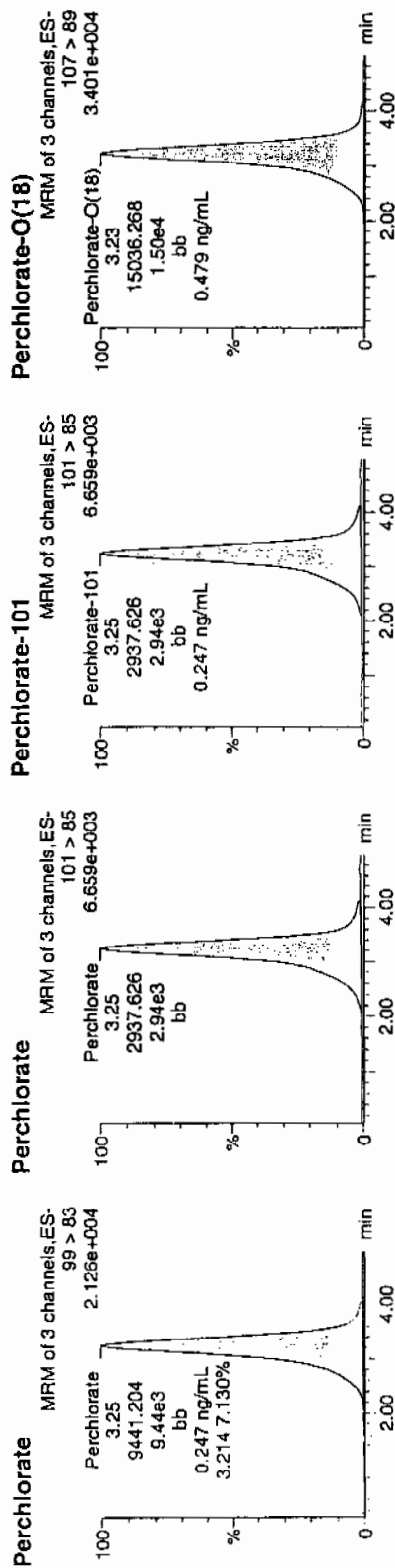
Dataset: C:\MassLynx\Perchlorate.PRO\per030910a.qld

Last Altered: Wednesday, March 10, 2010 11:59:23 AM Eastern Standard Time  
Printed: Wednesday, March 10, 2010 12:02:40 PM Eastern Standard Time

Name: per0309031a  
Date: 10-Mar-2010  
Time: 00:00:13  
ID: 1202049057  
Vial: 1:6,A

03-10-10

1202049057 | 1202049057 | 1202049057



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202049057	Perchlorate	99 > 83	3.25	9441.204	9441.204	bb			0.2470	123.52	23.52	392.876	3.21
1202049057	Perchlorate-101	101 > 85	3.25	2937.626	2937.626	bb			0.2471	123.54	23.54	363.464	
1202049057	Perchlorate-O(18)	107 > 89	3.23	15036.268	15036.268	bb			0.4794	95.88	-4.12	2337.0...	

$$\frac{9441.204}{2937.626} = 3.2139$$

3/10/10

### Isotope Ratio Criteria

#### Isotope Ratio $^{35}\text{Cl}/^{37}\text{Cl}$

2.31-3.85

### Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

# Metals Analysis

# Case Narrative

**Metals Fractional Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1906**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
247335001	RE15-10-8379
1202047699	Method Blank (MB) ICP
1202047700	Laboratory Control Sample (LCS)
1202047703	247350001(RE15-10-8270L) Serial Dilution (SD)
1202047701	247350001(RE15-10-8270D) Sample Duplicate (DUP)
1202047702	247350001(RE15-10-8270S) Matrix Spike (MS)
1202047704	Method Blank (MB) ICP-MS
1202075029	Method Blank (MB) ICP-MS
1202047705	Laboratory Control Sample (LCS)
1202075030	Laboratory Control Sample (LCS)
1202047708	247350001(RE15-10-8270L) Serial Dilution (SD)
1202075033	247350001(RE15-10-8270L) Serial Dilution (SD)
1202047706	247350001(RE15-10-8270D) Sample Duplicate (DUP)
1202075031	247350001(RE15-10-8270D) Sample Duplicate (DUP)
1202047707	247350001(RE15-10-8270S) Matrix Spike (MS)
1202075032	247350001(RE15-10-8270S) Matrix Spike (MS)
1202052034	Method Blank (MB) CVAA
1202052035	Laboratory Control Sample (LCS)
1202052041	247548001(RE46-10-13373L) Serial Dilution (SD)
1202052036	247548001(RE46-10-13373D) Sample Duplicate (DUP)

1202052037

247548001(RE46-10-13373S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

**Method/Analysis Information**

<b>Analytical Batch:</b>	955132, 955134, 966864 and 957034
<b>Prep Batch :</b>	955131, 955133, 966863 and 957032
<b>Standard Operating Procedures:</b>	GL-MA-E-013 REV# 20, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23
<b>Analytical Method:</b>	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
<b>Prep Method :</b>	SW846 3005A and SW846 7470A Prep

**Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

**System Configuration**

The Metals analysis-ICP was performed on a P E 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

### **Calibration Information**

#### **Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

#### **CRDL Requirements**

All CRDL standard(s) met the referenced advisory control limits with the exceptions of antimony and zinc, which recovered outside of the advisory limits of 70-130%.

#### **ICSA/ICSAB Statement**

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

#### **Continuing Calibration Blank (CCB) Requirements**

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria for all applicable analytes with the exception of thallium. The CCB failed high for thallium, however, the samples did not contain thallium above the client's RDL.

#### **Continuing Calibration Verification (CCV) Requirements**

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MBs analyzed with this SDG met the acceptance criteria.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **Quality Control (QC) Sample Statement**

The following samples were selected as the quality control (QC) samples for this SDG: 247350001 (RE15-10-8270) and 247548001 (RE46-10-13373).

#### **Matrix Spike (MS) Recovery Statement**

The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of thallium, as indicated by the "N" qualifier.

**Duplicate Relative Percent Difference (RPD) Statement**

The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

**Serial Dilution % Difference Statement**

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

**Technical Information****Holding Time Specifications**

GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

**Sample Dilutions**

Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

**Preparation Information**

The samples in this SDG were prepared exactly according to the cited SOP.

**Miscellaneous Information****Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: 806408. A copy is included in the Miscellaneous Data section of this package.



Additional comments were not required for this SDG.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: Kristen Larson 3/22/10 Date: \_\_\_\_\_

# Sample Data Summary

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247335001

BASIS: As Received

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8379

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: WATER

%SOLIDS: 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	RMJ	03/20/10 04:41	100319-6	966864
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7440-70-2	Calcium	66	ug/L	J	50	200	200	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-50-8	Copper	4.78	ug/L	J	3	10	10	1	P	HSC	03/16/10 15:43	031610B-1	955132
7439-89-6	Iron	31.4	ug/L	J	30	100	100	1	P	HSC	03/16/10 15:43	031610B-1	955132
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	03/16/10 15:43	031610B-1	955132
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	BAJ	03/16/10 05:32	100315-5	955134
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	02/25/10 13:06	022510W1-7	957034
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-09-7	Potassium	170	ug/L		50	150	150	1	P	HSC	03/16/10 15:43	031610B-1	955132
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-23-5	Sodium	194	ug/L	J	100	300	300	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	03/18/10 13:42	100318-4	955134
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	PRB	03/18/10 00:13	100317-3	955134
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	03/16/10 15:43	031610B-1	955132
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	03/16/10 15:43	031610B-1	955132

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955132	955131	SW846 3005A	50	mL	50	mL	02/24/10	FGA
955134	955133	SW846 3005A	50	mL	50	mL	02/24/10	FGA
957034	957032	SW846 7470A Prep	20	mL	20	mL	02/24/10	TXB3
966864	966863	SW846 3005A	25	mL	25	mL	03/19/10	AXG2

# **Quality Control Summary**

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,ICPMS5,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Mercury	5.12	ug/L	5	ug/L	102.5	90.0 - 110.0	AV	25-FEB-10 11:07	022510W1-7
	Beryllium	51	ug/L	50	ug/L	102	90.0 - 110.0	MS	16-MAR-10 04:25	100315-5
	Cadmium	51.9	ug/L	50	ug/L	103.9	90.0 - 110.0	MS	16-MAR-10 04:25	100315-5
	Lead	54.4	ug/L	50	ug/L	108.8	90.0 - 110.0	MS	16-MAR-10 04:25	100315-5
	Manganese	53.5	ug/L	50	ug/L	107.1	90.0 - 110.0	MS	16-MAR-10 04:25	100315-5
	Aluminum	4960	ug/L	5000	ug/L	99.2	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Arsenic	464	ug/L	500	ug/L	92.7	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Calcium	4940	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Chromium	478	ug/L	500	ug/L	95.6	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Cobalt	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Iron	5010	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Magnesium	5140	ug/L	5000	ug/L	102.8	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Nickel	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Potassium	2370	ug/L	2500	ug/L	94.8	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Selenium	2490	ug/L	2500	ug/L	99.5	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Silver	253	ug/L	250	ug/L	101.1	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Sodium	2410	ug/L	2500	ug/L	96.5	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Zinc	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	16-MAR-10 13:56	031610B-1
	Thallium	49.7	ug/L	50	ug/L	99.5	90.0 - 110.0	MS	17-MAR-10 20:27	100317-2
	Uranium	51.7	ug/L	50	ug/L	103.4	90.0 - 110.0	MS	17-MAR-10 23:18	100317-3
	Thallium	49.2	ug/L	50	ug/L	98.3	90.0 - 110.0	MS	18-MAR-10 13:26	100318-4
	Antimony	46.5	ug/L	50	ug/L	93	90.0 - 110.0	MS	20-MAR-10 03:46	100319-6
CCV01										
	Mercury	4.94	ug/L	5	ug/L	98.7	80.0 - 120.0	AV	25-FEB-10 11:13	022510W1-7
	Beryllium	51.4	ug/L	50	ug/L	102.8	90.0 - 110.0	MS	16-MAR-10 04:45	100315-5
	Cadmium	52.1	ug/L	50	ug/L	104.2	90.0 - 110.0	MS	16-MAR-10 04:45	100315-5
	Lead	55.2	ug/L	50	ug/L	110.4	90.0 - 110.0	MS	16-MAR-10 04:45	100315-5

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,ICPMS5,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	54.5	ug/L	50	ug/L	108.9	90.0 – 110.0	MS	16-MAR-10 04:45	100315-5
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Arsenic	525	ug/L	500	ug/L	105	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Barium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Calcium	5360	ug/L	5000	ug/L	107.1	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Chromium	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Cobalt	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Copper	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Iron	5310	ug/L	5000	ug/L	106.2	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Magnesium	5400	ug/L	5000	ug/L	107.9	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Nickel	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Potassium	5710	ug/L	5000	ug/L	114.1	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Selenium	538	ug/L	500	ug/L	107.6	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Silver	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Sodium	10700	ug/L	10000	ug/L	106.6	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Zinc	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Thallium	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	17-MAR-10 20:39	100317-2
	Uranium	52.6	ug/L	50	ug/L	105.2	90.0 – 110.0	MS	17-MAR-10 23:27	100317-3
	Thallium	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	18-MAR-10 13:38	100318-4
	Antimony	47.9	ug/L	50	ug/L	95.8	90.0 – 110.0	MS	20-MAR-10 04:03	100319-6
CCV02										
	Mercury	5.03	ug/L	5	ug/L	100.6	80.0 – 120.0	AV	25-FEB-10 11:37	022510W1-7
	Beryllium	51	ug/L	50	ug/L	102	90.0 – 110.0	MS	16-MAR-10 05:24	100315-5
	Cadmium	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	16-MAR-10 05:24	100315-5
	Lead	53.5	ug/L	50	ug/L	106.9	90.0 – 110.0	MS	16-MAR-10 05:24	100315-5
	Manganese	53.4	ug/L	50	ug/L	106.7	90.0 – 110.0	MS	16-MAR-10 05:24	100315-5
	Aluminum	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Arsenic	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Barium	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,ICPMS5,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Chromium	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Cobalt	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Copper	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Iron	4850	ug/L	5000	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Magnesium	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Nickel	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Potassium	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Selenium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Silver	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Sodium	9790	ug/L	10000	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Vanadium	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Zinc	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Thallium	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	17-MAR-10 21:10	100317-2
	Uranium	51.7	ug/L	50	ug/L	103.4	90.0 – 110.0	MS	17-MAR-10 23:42	100317-3
	Thallium	48.7	ug/L	50	ug/L	97.5	90.0 – 110.0	MS	18-MAR-10 13:59	100318-4
	Antimony	45.2	ug/L	50	ug/L	90.4	90.0 – 110.0	MS	20-MAR-10 04:16	100319-6
CCV03	Mercury	5.3	ug/L	5	ug/L	106.1	80.0 – 120.0	AV	25-FEB-10 12:00	022510W1-7
	Beryllium	50.7	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	16-MAR-10 06:00	100315-5
	Cadmium	51.3	ug/L	50	ug/L	102.5	90.0 – 110.0	MS	16-MAR-10 06:00	100315-5
	Lead	54.6	ug/L	50	ug/L	109.2	90.0 – 110.0	MS	16-MAR-10 06:00	100315-5
	Manganese	53.6	ug/L	50	ug/L	107.1	90.0 – 110.0	MS	16-MAR-10 06:00	100315-5
	Aluminum	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Arsenic	490	ug/L	500	ug/L	98	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Barium	492	ug/L	500	ug/L	98.3	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Chromium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Cobalt	490	ug/L	500	ug/L	98	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Copper	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,ICPMS5,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Magnesium	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Nickel	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Potassium	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Selenium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Silver	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Sodium	9740	ug/L	10000	ug/L	97.4	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Vanadium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Thallium	47.7	ug/L	50	ug/L	95.3	90.0 – 110.0	MS	17-MAR-10 21:37	100317-2
	Uranium	52	ug/L	50	ug/L	104	90.0 – 110.0	MS	17-MAR-10 23:53	100317-3
	Antimony	47.9	ug/L	50	ug/L	95.7	90.0 – 110.0	MS	20-MAR-10 04:48	100319-6
CCV04										
	Mercury	5.03	ug/L	5	ug/L	100.7	80.0 – 120.0	AV	25-FEB-10 12:24	022510W1-7
	Aluminum	4790	ug/L	5000	ug/L	95.8	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Arsenic	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Barium	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Calcium	4820	ug/L	5000	ug/L	96.4	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Chromium	480	ug/L	500	ug/L	96	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Copper	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Iron	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Magnesium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Nickel	479	ug/L	500	ug/L	95.9	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Potassium	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Selenium	489	ug/L	500	ug/L	97.7	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Silver	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Sodium	9820	ug/L	10000	ug/L	98.2	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Vanadium	485	ug/L	500	ug/L	97	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Zinc	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1



**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,ICPMS5,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV05	Uranium	50.1	ug/L	50	ug/L	100.2	90.0 – 110.0	MS	18-MAR-10 00:10	100317-3
	Antimony	47.1	ug/L	50	ug/L	94.1	90.0 – 110.0	MS	20-MAR-10 05:10	100319-6
	Mercury	5.08	ug/L	5	ug/L	101.7	80.0 – 120.0	AV	25-FEB-10 12:48	022510W1-7
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Arsenic	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Barium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Calcium	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Chromium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Cobalt	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Copper	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Magnesium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Nickel	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Potassium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Selenium	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Silver	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Sodium	10100	ug/L	10000	ug/L	101	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Vanadium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	16-MAR-10 15:54	031610B-1
	Uranium	50	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	18-MAR-10 00:25	100317-3
CCV06	Mercury	5.19	ug/L	5	ug/L	103.9	80.0 – 120.0	AV	25-FEB-10 13:12	022510W1-7
CCV07	Mercury	5.54	ug/L	5	ug/L	110.8	80.0 – 120.0	AV	25-FEB-10 13:35	022510W1-7

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,ICPMS5,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01										
	Mercury	.257	ug/L	.2	ug/L	128.7	70.0 – 130.0	AV	25-FEB-10 11:11	022510W1-7
	Lead	2.45	ug/L	2	ug/L	122.6	70.0 – 130.0	MS	16-MAR-10 04:33	100315-5
	Manganese	5.86	ug/L	5	ug/L	117.1	70.0 – 130.0	MS	16-MAR-10 04:33	100315-5
	Beryllium	.544	ug/L	.5	ug/L	108.8	70.0 – 130.0	MS	16-MAR-10 04:33	100315-5
	Cadmium	1.13	ug/L	1	ug/L	112.8	70.0 – 130.0	MS	16-MAR-10 04:33	100315-5
	Thallium	1.17	ug/L	1	ug/L	117	70.0 – 130.0	MS	17-MAR-10 20:31	100317-2
	Uranium	.224	ug/L	.2	ug/L	112	70.0 – 130.0	MS	17-MAR-10 23:22	100317-3
	Thallium	1.16	ug/L	1	ug/L	116	70.0 – 130.0	MS	18-MAR-10 13:31	100318-4
	Antimony	2.01	ug/L	3	ug/L	67	70.0 – 130.0	MS	20-MAR-10 03:53	100319-6
PQL01										
	Aluminum	207	ug/L	200	ug/L	103.3	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Iron	85.9	ug/L	100	ug/L	85.9	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Magnesium	323	ug/L	300	ug/L	107.8	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Nickel	4.97	ug/L	5	ug/L	99.4	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Potassium	136	ug/L	150	ug/L	90.6	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Silver	4.67	ug/L	5	ug/L	93.5	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Sodium	292	ug/L	300	ug/L	97.4	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Arsenic	30.6	ug/L	30	ug/L	102	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Barium	5.08	ug/L	5	ug/L	101.7	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Chromium	4.43	ug/L	5	ug/L	88.5	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Cobalt	4.31	ug/L	5	ug/L	86.3	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Copper	10.4	ug/L	10	ug/L	104	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Vanadium	4.72	ug/L	5	ug/L	94.5	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Zinc	6.89	ug/L	10	ug/L	68.9	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Calcium	205	ug/L	200	ug/L	102.6	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Selenium	29.6	ug/L	30	ug/L	98.6	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>ICB01</b>										
	Mercury	0.066	+/- .2	U	0.066	0.2	LIQ	AV	25-FEB-10 11:09	022510W1-7
	Beryllium	0.1	+/- .5	U	0.1	0.5	LIQ	MS	16-MAR-10 04:29	100315-5
	Cadmium	0.11	+/- 1	U	0.11	1.0	LIQ	MS	16-MAR-10 04:29	100315-5
	Lead	0.5	+/- 2	U	0.5	2.0	LIQ	MS	16-MAR-10 04:29	100315-5
	Manganese	1.0	+/- 5	U	1.0	5.0	LIQ	MS	16-MAR-10 04:29	100315-5
	Aluminum	68.0	+/- 200	U	68.0	200	LIQ	P	16-MAR-10 14:00	031610B-1
	Arsenic	5.0	+/- 30	U	5.0	30.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Barium	1.0	+/- 5	U	1.0	5.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Calcium	50.0	+/- 200	U	50.0	200	LIQ	P	16-MAR-10 14:00	031610B-1
	Chromium	1.0	+/- 5	U	1.0	5.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Cobalt	1.0	+/- 5	U	1.0	5.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Copper	3.0	+/- 10	U	3.0	10.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Iron	30.0	+/- 100	U	30.0	100	LIQ	P	16-MAR-10 14:00	031610B-1
	Magnesium	85.0	+/- 300	U	85.0	300	LIQ	P	16-MAR-10 14:00	031610B-1
	Nickel	1.5	+/- 5	U	1.5	5.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Potassium	50.0	+/- 150	U	50.0	150	LIQ	P	16-MAR-10 14:00	031610B-1
	Selenium	5.0	+/- 30	U	5.0	30.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Silver	1.0	+/- 5	U	1.0	5.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Sodium	100	+/- 300	U	100	300	LIQ	P	16-MAR-10 14:00	031610B-1
	Vanadium	1.0	+/- 5	U	1.0	5.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Zinc	-7.4	+/- 10	J	3.3	10.0	LIQ	P	16-MAR-10 14:00	031610B-1
	Thallium	0.3	+/- 1	U	0.3	1.0	LIQ	MS	17-MAR-10 20:29	100317-2
	Uranium	0.13	+/- .2	J	0.05	0.2	LIQ	MS	17-MAR-10 23:20	100317-3
	Thallium	0.346	+/- 1	J	0.3	1.0	LIQ	MS	18-MAR-10 13:28	100318-4
	Antimony	1.0	+/- 3	U	1.0	3.0	LIQ	MS	20-MAR-10 03:50	100319-6
<b>CCB01</b>										
	Mercury	0.066	+/- .2	U	0.066	0.2	LIQ	AV	25-FEB-10 11:15	022510W1-7
	Beryllium	0.1	+/- .5	U	0.1	0.5	LIQ	MS	16-MAR-10 04:49	100315-5
	Cadmium	0.11	+/- 1	U	0.11	1.0	LIQ	MS	16-MAR-10 04:49	100315-5
	Lead	0.5	+/- 2	U	0.5	2.0	LIQ	MS	16-MAR-10 04:49	100315-5
	Manganese	1.0	+/- 5	U	1.0	5.0	LIQ	MS	16-MAR-10 04:49	100315-5

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	16-MAR-10 14:22	031610B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	16-MAR-10 14:22	031610B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Copper	4.17	+/-10	J	3.0	10.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	16-MAR-10 14:22	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	16-MAR-10 14:22	031610B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Potassium	127.57	+/-150	J	50.0	150	LIQ	P	16-MAR-10 14:22	031610B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	16-MAR-10 14:22	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	16-MAR-10 14:22	031610B-1
	Thallium	0.385	+/-1	J	0.3	1.0	LIQ	MS	17-MAR-10 20:41	100317-2
	Uranium	0.055	+/-2	J	0.05	0.2	LIQ	MS	17-MAR-10 23:28	100317-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	18-MAR-10 13:40	100318-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	20-MAR-10 04:06	100319-6
CCB02	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	25-FEB-10 11:39	022510W1-7
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	16-MAR-10 05:28	100315-5
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	16-MAR-10 05:28	100315-5
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	16-MAR-10 05:28	100315-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	16-MAR-10 05:28	100315-5
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	16-MAR-10 14:39	031610B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	16-MAR-10 14:39	031610B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:39	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	16-MAR-10 14:39	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	16-MAR-10 14:39	031610B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	16-MAR-10 14:39	031610B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	16-MAR-10 14:39	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Zinc	-7.61	+/-10	J	3.3	10.0	LIQ	P	16-MAR-10 14:39	031610B-1
	Thallium	0.335	+/-1	J	0.3	1.0	LIQ	MS	17-MAR-10 21:12	100317-2
	Uranium	0.054	+/-2	J	0.05	0.2	LIQ	MS	17-MAR-10 23:44	100317-3
	Thallium	1.16	+/-1		0.3	1.0	LIQ	MS	18-MAR-10 14:01	100318-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	20-MAR-10 04:19	100319-6
<b>CCB03</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	25-FEB-10 12:02	022510W1-7
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	16-MAR-10 06:04	100315-5
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	16-MAR-10 06:04	100315-5
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	16-MAR-10 06:04	100315-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	16-MAR-10 06:04	100315-5
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	16-MAR-10 14:50	031610B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	16-MAR-10 14:50	031610B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	16-MAR-10 14:50	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	16-MAR-10 14:50	031610B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	16-MAR-10 14:50	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ng/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
CCB04	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	16-MAR-10 14:50	031610B-1
	Selenium	-7.96	+/-30	J	5.0	30.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	16-MAR-10 14:50	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Zinc	-7.64	+/-10	J	3.3	10.0	LIQ	P	16-MAR-10 14:50	031610B-1
	Thallium	0.41	+/-1	J	0.3	1.0	LIQ	MS	17-MAR-10 21:39	100317-2
	Uranium	0.054	+/-2	J	0.05	0.2	LIQ	MS	17-MAR-10 23:55	100317-3
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	20-MAR-10 04:51	100319-6
	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	25-FEB-10 12:26	022510W1-7
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	16-MAR-10 15:19	031610B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	16-MAR-10 15:19	031610B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	16-MAR-10 15:19	031610B-1
CCB05	Iron	30.0	+/-100	U	30.0	100	LIQ	P	16-MAR-10 15:19	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	16-MAR-10 15:19	031610B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	16-MAR-10 15:19	031610B-1
	Selenium	-7.07	+/-30	J	5.0	30.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	16-MAR-10 15:19	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Zinc	-7.87	+/-10	J	3.3	10.0	LIQ	P	16-MAR-10 15:19	031610B-1
	Uranium	0.114	+/-2	J	0.05	0.2	LIQ	MS	18-MAR-10 00:12	100317-3
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	20-MAR-10 05:14	100319-6
	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	25-FEB-10 12:50	022510W1-7

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	16-MAR-10 15:58	031610B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	16-MAR-10 15:58	031610B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	16-MAR-10 15:58	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	16-MAR-10 15:58	031610B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Potassium	-50.96	+/-150	J	50.0	150	LIQ	P	16-MAR-10 15:58	031610B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	16-MAR-10 15:58	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Zinc	-7.84	+/-10	J	3.3	10.0	LIQ	P	16-MAR-10 15:58	031610B-1
	Uranium	0.114	+/-2	J	0.05	0.2	LIQ	MS	18-MAR-10 00:27	100317-3
<b>CCB06</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	25-FEB-10 13:14	022510W1-7
<b>CCB07</b>	Mercury	-0.069	+/-2	J	0.066	0.2	LIQ	AV	25-FEB-10 13:37	022510W1-7

**METALS**  
**-3b-**  
**PREPARATION BLANK SUMMARY**

**SDG NO.** 10-1906  
**Contract:** LANL01004  
**Matrix:** WATER

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M</u>	<u>MDL</u>	<u>RDL</u>
1202047699	Aluminum	68	ug/L	+/-200	U	P	68	200
	Arsenic	5	ug/L	+/-30	U	P	5	30
	Barium	1	ug/L	+/-5	U	P	1	5
	Calcium	50	ug/L	+/-200	U	P	50	200
	Chromium	1	ug/L	+/-5	U	P	1	5
	Cobalt	1	ug/L	+/-5	U	P	1	5
	Copper	3	ug/L	+/-10	U	P	3	10
	Iron	30	ug/L	+/-100	U	P	30	100
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Nickel	1.5	ug/L	+/-5	U	P	1.5	5
	Potassium	50	ug/L	+/-150	U	P	50	150
	Selenium	5	ug/L	+/-30	U	P	5	30
	Silver	1	ug/L	+/-5	U	P	1	5
	Sodium	100	ug/L	+/-300	U	P	100	300
	Vanadium	1	ug/L	+/-5	U	P	1	5
	Zinc	-7.28	ug/L	+/-10	J	P	3.3	10
1202047704	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2	U	MS	0.5	2
	Manganese	1	ug/L	+/-5	U	MS	1	5
	Thallium	0.3	ug/L	+/-1	U	MS	0.3	1
	Uranium	0.05	ug/L	+/-0.2	U	MS	0.05	0.2
1202052034	Mercury	0.066	ug/L	+/-0.2	U	AV	0.066	0.2
1202075029	Antimony	1	ug/L	+/-3	U	MS	1	3



## METALS

-4-

## Interference Check Sample

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
<b>ICSA01</b>									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Arsenic	-39.9	ug/L					16-MAR-10 14:07	031610B-1
	Barium	7.2	ug/L					16-MAR-10 14:07	031610B-1
	Calcium	491000	ug/L	500000	ug/L	98.3	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Chromium	-2.06	ug/L					16-MAR-10 14:07	031610B-1
	Cobalt	3.0	ug/L					16-MAR-10 14:07	031610B-1
	Copper	1.49	ug/L					16-MAR-10 14:07	031610B-1
	Iron	190000	ug/L	200000	ug/L	94.9	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Magnesium	501000	ug/L	500000	ug/L	100	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Nickel	-1.37	ug/L					16-MAR-10 14:07	031610B-1
	Potassium	-117.0	ug/L					16-MAR-10 14:07	031610B-1
	Selenium	-20.1	ug/L					16-MAR-10 14:07	031610B-1
	Silver	0.397	ug/L					16-MAR-10 14:07	031610B-1
	Sodium	8.24	ug/L					16-MAR-10 14:07	031610B-1
	Vanadium	-5.16	ug/L					16-MAR-10 14:07	031610B-1
	Zinc	-5.14	ug/L					16-MAR-10 14:07	031610B-1
<b>ICSAB01</b>									
	Aluminum	527000	ug/L	500000	ug/L	105	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Arsenic	488	ug/L	500	ug/L	97.7	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Barium	507	ug/L	500	ug/L	101	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Calcium	495000	ug/L	500000	ug/L	99.1	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Chromium	491	ug/L	500	ug/L	98.1	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Cobalt	452	ug/L	500	ug/L	90.4	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Copper	563	ug/L	500	ug/L	113	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Iron	190000	ug/L	200000	ug/L	95	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Magnesium	504000	ug/L	500000	ug/L	101	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Nickel	451	ug/L	500	ug/L	90.1	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Potassium	5300	ug/L	5000	ug/L	106	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Selenium	2490	ug/L	2500	ug/L	99.5	80.0 – 120.0	16-MAR-10 14:10	031610B-1

## METALS

-4-

## Interference Check Sample

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Silver	268	ug/L	250	ug/L	107	80.0 - 120.0	16-MAR-10 14:10	031610B-1
	Sodium	5270	ug/L	5000	ug/L	105	80.0 - 120.0	16-MAR-10 14:10	031610B-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	16-MAR-10 14:10	031610B-1
	Zinc	477	ug/L	500	ug/L	95.5	80.0 - 120.0	16-MAR-10 14:10	031610B-1

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**METALS**  
**-4-**  
**Interference Check Sample**

**SDG No:** 10-1906

**Contract:** LANL01004

**Lab Code:** GEL

**ICS:** O2Si

**Instrument:** ICPMS3

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<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Thallium	0.052	ug/L					17-MAR-10 20:34	100317-2
ICSAB01	Thallium	21.0	ug/L	20	ug/L	105	80.0 – 120.0	17-MAR-10 20:36	100317-2

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Uranium	0.02	ug/L					17-MAR-10 23:23	100317-3
ICSAB01	Uranium	23.3	ug/L	20	ug/L	117	80.0 - 120.0	17-MAR-10 23:25	100317-3

METALS  
-4-  
Interference Check Sample

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS3

---

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Thallium	0.073	ug/L					18-MAR-10 13:33	100318-4
ICSAB01	Thallium	21.3	ug/L	20	ug/L	106	80.0 - 120.0	18-MAR-10 13:35	100318-4

METALS  
-4-  
Interference Check Sample

SDG No: 10-1906

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Beryllium	0.111	ug/L					16-MAR-10 04:37	100315-5
	Cadmium	0.58	ug/L					16-MAR-10 04:37	100315-5
	Lead	0.234	ug/L					16-MAR-10 04:37	100315-5
	Manganese	6.32	ug/L					16-MAR-10 04:37	100315-5
ICSAB01									
	Beryllium	19.5	ug/L	20	ug/L	97.5	80.0 - 120.0	16-MAR-10 04:41	100315-5
	Cadmium	20.6	ug/L	20.44	ug/L	101	80.0 - 120.0	16-MAR-10 04:41	100315-5
	Lead	22.4	ug/L	20.19	ug/L	111	80.0 - 120.0	16-MAR-10 04:41	100315-5
	Manganese	28.7	ug/L	25.8	ug/L	111	80.0 - 120.0	16-MAR-10 04:41	100315-5

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**METALS**  
**-4-**  
**Interference Check Sample**

**SDG No:** 10-1906

**Contract:** LANL01004

**Lab Code:** GEL

**ICS:** O2Si

**Instrument:** ICPMS6

---

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Antimony	0.003	ug/L					20-MAR-10 03:56	100319-6
ICSAB01	Antimony	21.6	ug/L	20	ug/L	108	80.0 - 120.0	20-MAR-10 03:59	100319-6

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1906

Client ID RE15-10-8270S

Contract: LANL01004

Level: Low

Matrix: WATER

% Solids:

Sample ID: 247350001

Spike ID: 1202047702

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75-125	4880		68	U	5000	97.6		P
Arsenic	ug/L	75-125	508		5	U	500	101		P
Barium	ug/L	75-125	510		1	U	500	102		P
Calcium	ug/L	75-125	4910		50	U	5000	97.6		P
Chromium	ug/L	75-125	511		1	U	500	102		P
Cobalt	ug/L	75-125	482		1	U	500	96.3		P
Copper	ug/L	75-125	522		3	U	500	104		P
Iron	ug/L	75-125	4950		30	U	5000	99		P
Magnesium	ug/L	75-125	4970		85	U	5000	99.3		P
Nickel	ug/L	75-125	498		1.5	U	500	99.6		P
Potassium	ug/L	75-125	5180		324		5000	97.1		P
Selenium	ug/L	75-125	495		5	U	500	99.1		P
Silver	ug/L	75-125	500		1	U	500	99.9		P
Sodium	ug/L	75-125	5200		234	J	5000	99.3		P
Vanadium	ug/L	75-125	516		1	U	500	103		P
Zinc	ug/L	75-125	494		3.3	U	500	98.7		P



## METALS

-5a-

## Matrix Spike Summary

**SDG NO.** 10-1906 **Client ID** RE15-10-8270S

**Contract:** LANL01004 **Level:** Low

**Matrix:** WATER **% Solids:**

**Sample ID:** 247350001 **Spike ID:** 1202047707

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Cadmium	ug/L	75-125	11		0.11	U	10	110		MS
Lead	ug/L	75-125	44.3		0.5	U	40	111		MS
Manganese	ug/L	75-125	50.8		1	U	50	101		MS
Thallium	ug/L	75-125	71.8		0.3	U	100	71.8	N	MS
Uranium	ug/L	75-125	49.1		0.05	U	50	98.2		MS
Beryllium	ug/L	75-125	48		0.1	U	50	95.9		MS

## METALS

-5a-

## Matrix Spike Summary

**SDG NO.** 10-1906 **Client ID** RE46-10-13373S**Contract:** LANL01004 **Level:** Low**Matrix:** WATER **% Solids:****Sample ID:** 247548001 **Spike ID:** 1202052037

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/L	75-125	2.25		0.066	U	2	113		AV

## METALS

-5a-

## Matrix Spike Summary

**SDG NO.** 10-1906 **Client ID** RE15-10-8270S**Contract:** LANL01004 **Level:** Low**Matrix:** WATER **% Solids:****Sample ID:** 247350001 **Spike ID:** 1202075032

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Antimony	ug/L	75-125	208		1	U	200	104		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-8270D

Sample ID: 247350001

Duplicate ID: 1202047701

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68 U		68 U				P
Arsenic	ug/L		5 U		5 U				P
Barium	ug/L		1 U		1 U				P
Calcium	ug/L		50 U		50 U				P
Chromium	ug/L		1 U		1 U				P
Cobalt	ug/L		1 U		1 U				P
Copper	ug/L		3 U		3 U				P
Iron	ug/L		30 U		30 U				P
Magnesium	ug/L		85 U		85 U				P
Nickel	ug/L		1.5 U		1.5 U				P
Potassium	ug/L	+/-150	324		354		9.07		P
Selenium	ug/L		5 U		5 U				P
Silver	ug/L		1 U		1 U				P
Sodium	ug/L	+/-300	234 J		212 J		9.56		P
Vanadium	ug/L		1 U		1 U				P
Zinc	ug/L		3.3 U		3.3 U				P

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-8270D

Sample ID: 247350001

Duplicate ID: 1202047706

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Beryllium	ug/L		0.1 U		0.1 U				MS
Cadmium	ug/L		0.11 U		0.11 U				MS
Lead	ug/L		0.5 U		0.5 U				MS
Manganese	ug/L		1 U		1 U				MS
Thallium	ug/L		0.3 U		0.3 U				MS
Uranium	ug/L		0.05 U		0.05 U				MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE46-10-13373D

Sample ID: 247548001

Duplicate ID: 1202052036

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066 U		0.066 U				AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-8270D

Sample ID: 247350001

Duplicate ID: 1202075031

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L			1 U		1 U			MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1906

Contract: LANL01004

Aqueous LCS Source:OS2I

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202047700								
	Aluminum	ug/L	5000	4870		97.5	80-120	P
	Arsenic	ug/L	500	501		100	80-120	P
	Barium	ug/L	500	502		100	80-120	P
	Calcium	ug/L	5000	4860		97.2	80-120	P
	Chromium	ug/L	500	501		100	80-120	P
	Cobalt	ug/L	500	468		93.6	80-120	P
	Copper	ug/L	500	511		102	80-120	P
	Iron	ug/L	5000	4900		98	80-120	P
	Magnesium	ug/L	5000	4900		98	80-120	P
	Nickel	ug/L	500	484		96.9	80-120	P
	Potassium	ug/L	5000	4820		96.5	80-120	P
	Selenium	ug/L	500	496		99.2	80-120	P
	Silver	ug/L	500	493		98.6	80-120	P
	Sodium	ug/L	5000	4960		99.1	80-120	P
	Vanadium	ug/L	500	506		101	80-120	P
	Zinc	ug/L	500	486		97.2	80-120	P



## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1906

Contract: LANL01004

Aqueous LCS Source: O2si

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202047705								
	Cadmium	ug/L	50	55.9		112	80-120	MS
	Lead	ug/L	50	59.1		118	80-120	MS
	Manganese	ug/L	50	57		114	80-120	MS
	Thallium	ug/L	50	50.2		100	80-120	MS
	Uranium	ug/L	50	53.7		107	80-120	MS
	Beryllium	ug/L	50	53.6		107	80-120	MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1906

Contract: LANL01004

Aqueous LCS Source: GEL

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202052035	Mercury	ug/L	2	2.34		117	80-120	AV

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1906

Contract: LANL01004

Aqueous LCS Source:O2si

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202075030	Antimony	ug/L	50	54.1		108	80-120	MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1906 Client ID RE15-10-8270L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 247350001 Serial Dilution ID: 1202047703

Analyte	Initial Value ng/L	C	Serial Value ng/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	50	U	250	U				P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	30	U	150	U				P
Magnesium	85	U	425	U				P
Nickel	1.5	U	7.5	U				P
Potassium	324		250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	234	J	500	U	100			P
Vanadium	1	U	5	U				P
Zinc	3.3	U	16.5	U				P

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1906 Client ID RE15-10-8270L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 247350001 Serial Dilution ID: 1202047708

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	15.9					MS
Uranium	.05	U	.37	J				MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1906 Client ID RE46-10-13373L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 247548001 Serial Dilution ID: 1202052041

Analyte	<u>Initial Value</u> ug/L	<u>C</u>	<u>Serial Value</u> ug/L	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Mercury	.066	U	.33	U				AV

## METALS

-9-

## Serial Dilution Sample Summary

**SDG NO.** 10-1906 **Client ID** RE15-10-8270L**Contract:** LANL01004**Matrix:** LIQUID **Level:** Low**Sample ID:** 247350001 **Serial Dilution ID:** 1202075033

<b>Analyte</b>	<b><u>Initial</u> <u>Value</u> <u>ug/L</u></b>	<b><u>C</u></b>	<b><u>Serial</u> <u>Value</u> <u>ug/L</u></b>	<b><u>C</u></b>	<b><u>%</u> <u>Difference</u></b>	<b><u>Qual</u></b>	<b><u>Acceptance</u> <u>Limit</u></b>	<b><u>M</u></b>
Antimony	1	U	5	U				MS

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1906

Method Type: P

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	955131						
1202047699	MB for batch 955131	MB	W	24-FEB-10	50mL	50mL	
1202047699	MB for batch 955131	MB	W	24-FEB-10	50mL	50mL	
1202047700	LCS for batch 955131	LCS	W	24-FEB-10	50mL	50mL	
1202047702	RE15-10-8270S	MS	W	24-FEB-10	50mL	50mL	
1202047702	RE15-10-8270S	MS	W	24-FEB-10	50mL	50mL	
1202047701	RE15-10-8270D	DUP	W	24-FEB-10	50mL	50mL	
247335001	RE15-10-8379	SAMPLE	W	24-FEB-10	50mL	50mL	
247339001	RE15-10-8236	SAMPLE	W	24-FEB-10	50mL	50mL	
247339002	RE15-10-8237	SAMPLE	W	24-FEB-10	50mL	50mL	

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SW846



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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1906

Method Type: MS

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
<b>Batch Number 955133</b>							
1202047704	MB for batch 955133	MB	W	24-FEB-10	50mL	50mL	
1202047705	LCS for batch 955133	LCS	W	24-FEB-10	50mL	50mL	
1202047707	RE15-10-8270S	MS	W	24-FEB-10	50mL	50mL	
1202047706	RE15-10-8270D	DUP	W	24-FEB-10	50mL	50mL	
247335001	RE15-10-8379	SAMPLE	W	24-FEB-10	50mL	50mL	
<b>Batch Number 966863</b>							
1202075029	MB for batch 966863	MB	W	19-MAR-10	25mL	25mL	
1202075030	LCS for batch 966863	LCS	W	19-MAR-10	25mL	25mL	
1202075032	RE15-10-8270S	MS	W	19-MAR-10	25mL	25mL	
1202075031	RE15-10-8270D	DUP	W	19-MAR-10	25mL	25mL	
247335001	RE15-10-8379	SAMPLE	W	19-MAR-10	25mL	25mL	

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SW846

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**METALS**  
**-13-**  
**SAMPLE PREPARATION SUMMARY**

SDG No: 10-1906

Method Type: AV

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
<b>Batch Number</b> 957032							
1202052034	MB for batch 957032	MB	W	24-FEB-10	20mL	20mL	
1202052035	LCS for batch 957032	LCS	W	24-FEB-10	20mL	20mL	
1202052037	RE46-10-13373S	MS	W	24-FEB-10	20mL	20mL	
1202052036	RE46-10-13373D	DUP	W	24-FEB-10	20mL	20mL	
247335001	RE15-10-8379	SAMPLE	W	24-FEB-10	20mL	20mL	

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SW846

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 16-MAR-10

End Date: 16-MAR-10

Client Sdg: 10-1906

Method MS

Data File: 100315-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	04:13					X	X						X	X											
S10	1	04:17					X	X						X	X											
S100	1	04:21					X	X						X	X											
ICV01	1	04:25					X	X						X	X											
ICB01	1	04:29					X	X						X	X											
CRDL01	1	04:33					X	X						X	X											
ICSA01	1	04:37					X	X						X	X											
ICSAB01	1	04:41					X	X						X	X											
CCV01	1	04:45					X	X						X	X											
CCB01	1	04:49					X	X						X	X											
1202047704	1	04:53					X	X						X	X											
1202047705	1	04:57					X	X						X	X											
ZZZZZZ	1	05:01																								
ZZZZZZ	1	05:05																								
ZZZZZZ	1	05:08																								
ZZZZZZ	1	05:12																								
ZZZZZZ	1	05:16																								
ZZZZZZ	1	05:20																								
CCV02	1	05:24					X	X						X	X											
CCB02	1	05:28					X	X						X	X											
247335001	1	05:32					X	X						X	X											
ZZZZZZ	1	05:36																								
ZZZZZZ	1	05:40																								
ZZZZZZ	1	05:44																								
1202047706	1	05:48					X	X						X	X											
1202047707	1	05:52					X	X						X	X											
1202047708	5	05:56					X	X						X	X											
CCV03	1	06:00					X	X						X	X											
CCB03	1	06:04					X	X						X	X											

**Metals**  
**-14-**  
**Analysis Run Log**

**Contract:** LANL01004**Lab Code:** GEL**Inst Name:** ICPMS6**Start Date:** 20-MAR-10**Client Sdg:** 10-1906**Method:** MS**Data File:** 100319-6**End Date:** 20-MAR-10

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	03:37		X																						
S10	1	03:40		X																						
S100	1	03:43		X																						
ICV01	1	03:46		X																						
ICB01	1	03:50		X																						
CRDL01	1	03:53		X																						
ICSA01	1	03:56		X																						
ICSAB01	1	03:59		X																						
CCV01	1	04:03		X																						
CCB01	1	04:06		X																						
1202075029	1	04:09		X																						
1202075030	1	04:12		X																						
CCV02	1	04:16		X																						
CCB02	1	04:19		X																						
ZZZZZZ	1	04:22																								
ZZZZZZ	1	04:25																								
ZZZZZZ	1	04:28																								
ZZZZZZ	1	04:32																								
ZZZZZZ	1	04:35																								
ZZZZZZ	1	04:38																								
247335001	1	04:41		X																						
ZZZZZZ	1	04:45																								
CCV03	1	04:48		X																						
CCB03	1	04:51		X																						
ZZZZZZ	1	04:54																								
ZZZZZZ	1	04:58																								
1202075031	1	05:01		X																						
1202075032	1	05:04		X																						
1202075033	5	05:07		X																						
CCV04	1	05:10		X																						
CCB04	1	05:14		X																						

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: MER536

Start Date: 25-FEB-10

End Date: 25-FEB-10

Client Sdg: 10-1906

Method: AV

Data File: 022510W1-7

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	10:55															X									
S0.2	1	10:57															X									
S0.5	1	10:59															X									
S2.0	1	11:01															X									
S5.0	1	11:03															X									
S10	1	11:05															X									
ICV01	1	11:07															X									
ICB01	1	11:09															X									
CRDL01	1	11:11															X									
CCV01	1	11:13															X									
CCB01	1	11:15															X									
ZZZZZZ	1	11:17																								
ZZZZZZ	1	11:19																								
ZZZZZZ	1	11:21																								
ZZZZZZ	1	11:23																								
ZZZZZZ	1	11:25																								
ZZZZZZ	5	11:27																								
ZZZZZZ	1	11:29																								
ZZZZZZ	1	11:31																								
ZZZZZZ	1	11:33																								
ZZZZZZ	1	11:35																								
CCV02	1	11:37															X									
CCB02	1	11:39															X									
ZZZZZZ	1	11:41																								
ZZZZZZ	1	11:43																								
ZZZZZZ	1	11:45																								
ZZZZZZ	1	11:46																								
ZZZZZZ	1	11:48																								
ZZZZZZ	1	11:50																								
ZZZZZZ	1	11:52																								
ZZZZZZ	1	11:54																								
ZZZZZZ	1	11:56																								
ZZZZZZ	1	11:58																								
CCV03	1	12:00															X									
CCB03	1	12:02															X									
ZZZZZZ	1	12:04																								
ZZZZZZ	1	12:06																								
ZZZZZZ	1	12:08																								
ZZZZZZ	1	12:10																								
ZZZZZZ	1	12:12																								

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time
ZZZZZZ	1	12:14
ZZZZZZ	1	12:16
ZZZZZZ	1	12:18
ZZZZZZ	1	12:20
ZZZZZZ	1	12:22
CCV04	1	12:24
CCB04	1	12:26
ZZZZZZ	1	12:28
ZZZZZZ	1	12:30
ZZZZZZ	1	12:32
ZZZZZZ	5	12:34
ZZZZZZ	1	12:36
ZZZZZZ	1	12:38
ZZZZZZ	1	12:40
I202052034	1	12:42
I202052035	1	12:44
ZZZZZZ	1	12:46
CCV05	1	12:48
CCB05	1	12:50
ZZZZZZ	1	12:52
ZZZZZZ	1	12:54
ZZZZZZ	1	12:56
ZZZZZZ	1	12:58
ZZZZZZ	1	13:00
ZZZZZZ	1	13:02
ZZZZZZ	1	13:04
247335001	1	13:06
ZZZZZZ	1	13:08
ZZZZZZ	1	13:10
CCV06	1	13:12
CCB06	1	13:14
ZZZZZZ	1	13:16
ZZZZZZ	1	13:18
ZZZZZZ	1	13:20
ZZZZZZ	1	13:22
ZZZZZZ	1	13:24
I202052036	1	13:26
I202052037	1	13:28
I202052041	5	13:29
ZZZZZZ	1	13:31

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
ZZZZZZ	1	13:33																								
CCV07	1	13:35															X									
CCB07	1	13:37															X									

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS3

Start Date: 17-MAR-10

End Date: 18-MAR-10

Client Sdg: 10-1906

Method MS

Data File: 100317-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Ti	U	V	Zn
S0.0	1	20:19																					X			
S10	1	20:22																					X			
S100	1	20:24																					X			
ICV01	1	20:27																					X			
ICB01	1	20:29																					X			
CRDL01	1	20:31																					X			
ICSA01	1	20:34																					X			
ICSAB01	1	20:36																					X			
CCV01	1	20:39																					X			
CCB01	1	20:41																					X			
ZZZZZZ	10	20:45																								
ZZZZZZ	50	20:48																								
ZZZZZZ	10	20:50																								
ZZZZZZ	50	20:53																								
ZZZZZZ	10	20:55																								
ZZZZZZ	10	20:58																								
ZZZZZZ	10	21:00																								
ZZZZZZ	10	21:03																								
ZZZZZZ	10	21:05																								
ZZZZZZ	10	21:08																								
CCV02	1	21:10																					X			
CCB02	1	21:12																					X			
1202047704	1	21:15																					X			
1202047705	1	21:17																					X			
ZZZZZZ	1	21:20																								
ZZZZZZ	1	21:22																								
ZZZZZZ	1	21:24																								
ZZZZZZ	1	21:27																								
ZZZZZZ	1	21:29																								
ZZZZZZ	1	21:32																								
ZZZZZZ	1	21:34																								
CCV03	1	21:37																					X			
CCB03	1	21:39																					X			



**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS3

Start Date: 17-MAR-10

End Date: 18-MAR-10

Client Sdg: 10-1906

Method MS

Data File: 100317-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	23:13																						X		
S10	1	23:15																						X		
S100	1	23:17																						X		
ICV01	1	23:18																						X		
ICB01	1	23:20																						X		
CRDL01	1	23:22																						X		
ICSA01	1	23:23																						X		
ICSAB01	1	23:25																						X		
CCV01	1	23:27																						X		
CCB01	1	23:28																						X		
ZZZZZZ	2	23:30																								
ZZZZZZ	40	23:32																								
ZZZZZZ	2	23:34																								
ZZZZZZ	2	23:35																								
ZZZZZZ	2	23:37																								
ZZZZZZ	2	23:39																								
ZZZZZZ	10	23:41																								
CCV02	1	23:42																						X		
CCB02	1	23:44																						X		
ZZZZZZ	2	23:46																								
ZZZZZZ	2	23:48																								
ZZZZZZ	2	23:49																								
ZZZZZZ	2	23:51																								
CCV03	1	23:53																						X		
CCB03	1	23:55																						X		
1202047704	1	23:56																						X		
1202047705	1	23:58																						X		
ZZZZZZ	1	00:00																								
ZZZZZZ	1	00:01																								
ZZZZZZ	1	00:03																								
ZZZZZZ	1	00:05																								
ZZZZZZ	1	00:06																								
ZZZZZZ	1	00:08																								
CCV04	1	00:10																						X		
CCB04	1	00:12																						X		
247335001	1	00:13																						X		
ZZZZZZ	1	00:15																								
ZZZZZZ	1	00:17																								
ZZZZZZ	1	00:18																								
1202047706	1	00:20																						X		

[illegible]

**Metals**  
**-14-**  
**Analysis Run Log**

**Contract:** LANL01004**Lab Code:** GEL**Inst Name:** ICPMS3**Start Date:** 18-MAR-10**End Date:** 18-MAR-10**Client Sdg:** 10-1906**Method:** MS**Data File:** 100318-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	13:19																					X			
S10	1	13:21																					X			
S100	1	13:24																					X			
ICV01	1	13:26																					X			
ICB01	1	13:28																					X			
CRDL01	1	13:31																					X			
ICSA01	1	13:33																					X			
ICSAB01	1	13:35																					X			
CCV01	1	13:38																					X			
CCB01	1	13:40																					X			
247335001	1	13:42																					X			
ZZZZZZ	1	13:45																								
ZZZZZZ	1	13:47																								
ZZZZZZ	1	13:50																								
1202047706	1	13:52																					X			
1202047707	1	13:54																					X			
1202047708	5	13:57																					X			
CCV02	1	13:59																					X			
CCB02	1	14:01																					X			

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 16-MAR-10

Client Sdg: 10-1906

Method P

Data File: 031610B-1

End Date: 16-MAR-10

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	13:41	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S0.1	1	13:44			X	X				X	X	X						X	X	X	X				X	X
S0.5	1	13:47	X		X	X			X	X	X	X			X			X	X	X	X				X	X
SCAL	1	13:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S10	1	13:54	X						X				X		X							X				
ICV01	1	13:56	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICB01	1	14:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
PQL01	1	14:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSA01	1	14:07	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSAB01	1	14:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR01	1	14:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR02	1	14:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV01	1	14:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB01	1	14:22	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV02	1	14:36	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB02	1	14:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR03	1	14:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV03	1	14:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB03	1	14:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202047699	1	14:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202047700	1	14:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	15:01																								
1202047701	1	15:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202047702	1	15:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202047703	5	15:11	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV04	1	15:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB04	1	15:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	15:22																								
ZZZZZZ	1	15:26																								
ZZZZZZ	1	15:29																								
ZZZZZZ	1	15:33																								
ZZZZZZ	1	15:36																								
ZZZZZZ	1	15:40																								
247335001	1	15:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	15:47																								
ZZZZZZ	1	15:50																								
CCV05	1	15:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB05	1	15:58	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X

# Standards

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.05	.2
	Vanadium		3.0	10
	Zinc		3.0	10

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METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

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		<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY	<u>Analyte</u>			
LIQUID	Mercury		0.066	.2

**METALS**  
**-10-**  
**Instrument Detection Limits**

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10



**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GELGEL Job No: **10-1906**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.05500	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.28800	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.04600	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1906

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	11.3250	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	-1.59900	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-21.2250	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.68400
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.19100	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	105.59
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.36300	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	-2.30400	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.61100

## METALS

-11-

## Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-1906

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	20.5430
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3320
Arsenic	188.979	-0.05800	0.00000	0.00000	0.00000	1.97700
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.13300	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-0.90500
Copper	324.752	-0.13900	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.03800	-2.87600	0.00000	0.00000	0.00000
Magnesium	279.077	1.07300	0.00000	0.00000	0.00000	-16.8110
Manganese	257.61	-0.13900	0.00000	0.04000	0.00000	0.00000
Molybdenum	202.031	-0.03800	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	-0.01300	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.81200	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.88200	0.00000	0.28200	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	-0.06300	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.03900	0.00000	0.00000	-4.11700	0.00000
Tin	189.927	-0.09200	0.00000	-0.19600	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.07900	0.00000	0.00000
Uranium	409.014	0.13900	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.05300	0.00000	0.00000	0.00000	-7.71400
Zinc	213.857	0.14460	0.00000	0.02030	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GELGEL Job No: **10-1906**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Nickel	Phosphorous	Selenium	Silicon	Silver
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.99900	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	4.41600	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GELGEL Job No: **10-1906**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Sulfur	Thallium	Tin	Titanium	Uranium
<b>Parmname</b>	<b>Wavelength</b>					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.38100	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	2.08700	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.04000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	-14.8110	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-8.68900	-1.22400
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	-1.03900
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

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**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1906

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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Parmname	Wavelength	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000
Antimony	206.836	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000
Barium	233.527	-1.80500	0.00000
Beryllium	313.107	0.00000	0.00000
Boron	249.677	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000
Chromium	267.716	-0.63000	0.00000
Cobalt	228.616	0.00000	0.00000
Copper	324.752	0.00000	0.00000
Iron	238.204	0.00000	0.00000
Lead	220.353	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000
Manganese	257.61	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000
Nickel	231.604	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000
Selenium	196.026	0.00000	0.00000
Silicon	251.611	0.00000	0.00000
Silver	328.068	-6.59800	0.00000
Sulfur	181.975	0.00000	0.00000
Thallium	190.801	0.00000	0.00000
Tin	189.927	0.00000	0.00000
Titanium	334.94	0.00000	0.00000
Uranium	409.014	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000
Zinc	213.857	0.00000	0.00000

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

Instrument IDICPMS5

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS6

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10



**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS3

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1906

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA1

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	20	500000	ug/L	01-FEB-10
Antimony	20	10000	ug/L	01-FEB-10
Arsenic	20	10000	ug/L	01-FEB-10
Barium	20	15000	ug/L	01-FEB-10
Beryllium	20	3000	ug/L	01-FEB-10
Cadmium	20	10000	ug/L	01-FEB-10
Calcium	20	500000	ug/L	01-FEB-10
Chromium	20	25000	ug/L	01-FEB-10
Cobalt	20	10000	ug/L	01-FEB-10
Copper	20	20000	ug/L	01-FEB-10
Iron	20	500000	ug/L	01-FEB-10
Lead	20	25000	ug/L	01-FEB-10
Magnesium	20	500000	ug/L	01-FEB-10
Manganese	20	10000	ug/L	01-FEB-10
Nickel	20	10000	ug/L	01-FEB-10
Potassium	20	300000	ug/L	01-FEB-10
Selenium	20	10000	ug/L	01-FEB-10
Silver	20	1000	ug/L	01-FEB-10
Sodium	20	500000	ug/L	01-FEB-10
Thallium	20	10000	ug/L	01-FEB-10
Uranium	20	15000	ug/L	01-FEB-10
Vanadium	20	10000	ug/L	01-FEB-10
Zinc	20	15000	ug/L	01-FEB-10

# Raw Data

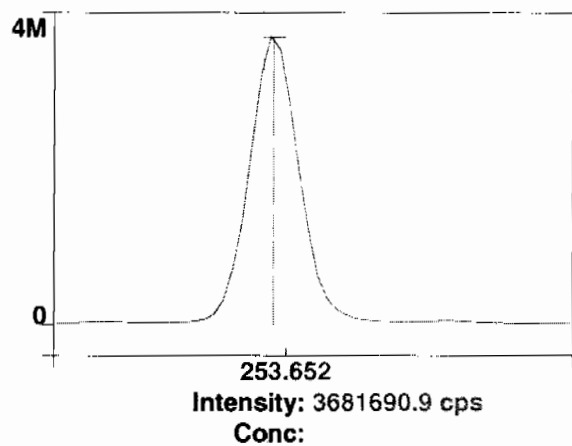
# Spectra

Method: Hg\_ReAlign  
Result: 032110A

Sample ID: Hg\_ReAlign

Hg 253.652

Rep: 1



1

=====  
Analysis Begun

Start Time: 3/16/2010 13:41:04

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\031610A.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb  
=====

## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 3/16/2010 10:34:08

IEC File: 011510.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 3/16/2010 13:41:07

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	96310.1	96310.1	99.5 %	13:41:44
1	Al 396.153Radial†	-113.6	-114.1	[0.00] µg/L	13:41:44
1	Ca 317.933Radial†	391.5	393.5	[0.00] µg/L	13:42:04
1	Fe 238.204 Radial†	11.9	12.0	[0.00] µg/L	13:42:04

1	K 766.490 Radial†	454.1	456.3	[0.00]	µg/L	13:41:44
1	Mg 279.077 IEC†	9.1	9.1	[0.00]	µg/L	13:42:04
1	Na 589.592 Radial†	168.2	169.0	[0.00]	µg/L	13:41:44
1	Sr 421.552†	145.4	146.2	[0.00]	µg/L	13:41:44
1	Sc 361.383	2092200.5	2092200.5	99.957	%	13:43:06
1	Y 371.029	1431573.2	1431573.2	99.909	%	13:43:06
1	Ag 328.068†	-464.1	-464.3	[0.00]	µg/L	13:43:12
1	As 188.979†	-7.3	-7.3	[0.00]	µg/L	13:43:32
1	B 249.677†	288.8	288.9	[0.00]	µg/L	13:43:12
1	Ba 233.527†	-11.7	-11.7	[0.00]	µg/L	13:43:32
1	Be 313.107†	-1126.7	-1127.2	[0.00]	µg/L	13:43:12
1	Cd 226.502†	-174.7	-174.8	[0.00]	µg/L	13:43:32
1	Co 228.616†	46.1	46.2	[0.00]	µg/L	13:43:32
1	Cr 267.716†	105.5	105.6	[0.00]	µg/L	13:43:12
1	Cu 324.752†	4384.9	4386.8	[0.00]	µg/L	13:43:12
1	Mn 257.610†	-689.4	-689.7	[0.00]	µg/L	13:43:32
1	Mo 202.031†	4.1	4.1	[0.00]	µg/L	13:43:32
1	Ni 231.604†	375.1	375.3	[0.00]	µg/L	13:43:32
1	P 214.914†	275.1	275.3	[0.00]	µg/L	13:43:32
1	Pb 220.353†	24.9	25.0	[0.00]	µg/L	13:43:32
1	S 181.975 Axial†	22.5	22.6	[0.00]	µg/L	13:43:32
1	Sb 206.836†	23.7	23.7	[0.00]	µg/L	13:43:32
1	Se 196.026†	28.4	28.4	[0.00]	µg/L	13:43:32
1	SiO2†	2772.9	2774.1	[0.00]	µg/L	13:43:12
1	Si 251.611†	421.5	421.7	[0.00]	µg/L	13:43:32
1	Sn 189.927†	-10.0	-10.0	[0.00]	µg/L	13:43:32
1	Ti 334.940†	-613.0	-613.3	[0.00]	µg/L	13:43:12
1	Tl 190.801†	-35.5	-35.5	[0.00]	µg/L	13:43:32
1	U 409.014†	3.8	3.8	[0.00]	µg/L	13:43:12
1	V 292.402†	86.7	86.7	[0.00]	µg/L	13:43:12
1	Zn 213.857†	1026.4	1026.9	[0.00]	µg/L	13:43:32
2	Sc RADIAL	96813.2	96813.2	100	%	13:42:10
2	Al 396.153Radial†	-133.0	-132.9	[0.00]	µg/L	13:42:10
2	Ca 317.933Radial†	378.8	378.7	[0.00]	µg/L	13:42:30
2	Fe 238.204 Radial†	12.4	12.4	[0.00]	µg/L	13:42:30
2	K 766.490 Radial†	490.3	490.2	[0.00]	µg/L	13:42:10
2	Mg 279.077 IEC†	8.0	8.0	[0.00]	µg/L	13:42:30
2	Na 589.592 Radial†	213.5	213.4	[0.00]	µg/L	13:42:10
2	Sr 421.552†	120.7	120.7	[0.00]	µg/L	13:42:10
2	Sc 361.383	2084241.1	2084241.1	99.576	%	13:43:38
2	Y 371.029	1427836.1	1427836.1	99.649	%	13:43:38
2	Ag 328.068†	-405.9	-407.7	[0.00]	µg/L	13:43:44
2	As 188.979†	-0.6	-0.6	[0.00]	µg/L	13:44:04
2	B 249.677†	309.9	311.2	[0.00]	µg/L	13:43:44
2	Ba 233.527†	-8.2	-8.2	[0.00]	µg/L	13:44:04
2	Be 313.107†	-1135.5	-1140.3	[0.00]	µg/L	13:43:44
2	Cd 226.502†	-167.9	-168.6	[0.00]	µg/L	13:44:04
2	Co 228.616†	47.5	47.7	[0.00]	µg/L	13:44:04
2	Cr 267.716†	80.4	80.7	[0.00]	µg/L	13:43:44
2	Cu 324.752†	4400.5	4419.2	[0.00]	µg/L	13:43:44
2	Mn 257.610†	-687.2	-690.2	[0.00]	µg/L	13:44:04
2	Mo 202.031†	11.2	11.3	[0.00]	µg/L	13:44:04
2	Ni 231.604†	375.1	376.7	[0.00]	µg/L	13:44:04
2	P 214.914†	273.4	274.6	[0.00]	µg/L	13:44:04
2	Pb 220.353†	35.0	35.2	[0.00]	µg/L	13:44:04
2	S 181.975 Axial†	24.5	24.6	[0.00]	µg/L	13:44:04
2	Sb 206.836†	23.8	23.9	[0.00]	µg/L	13:44:04
2	Se 196.026†	28.3	28.5	[0.00]	µg/L	13:44:04
2	SiO2†	2774.9	2786.7	[0.00]	µg/L	13:43:44
2	Si 251.611†	424.0	425.8	[0.00]	µg/L	13:44:04
2	Sn 189.927†	-8.3	-8.4	[0.00]	µg/L	13:44:04
2	Ti 334.940†	-620.9	-623.6	[0.00]	µg/L	13:43:44
2	Tl 190.801†	-34.2	-34.3	[0.00]	µg/L	13:44:04
2	U 409.014†	-6.4	-6.5	[0.00]	µg/L	13:43:44
2	V 292.402†	143.8	144.4	[0.00]	µg/L	13:43:44
2	Zn 213.857†	1021.1	1025.5	[0.00]	µg/L	13:44:04
3	Sc RADIAL	97241.5	97241.5	100	%	13:42:36
3	Al 396.153Radial†	-111.4	-110.8	[0.00]	µg/L	13:42:36
3	Ca 317.933Radial†	385.6	383.8	[0.00]	µg/L	13:42:56
3	Fe 238.204 Radial†	11.5	11.4	[0.00]	µg/L	13:42:56
3	K 766.490 Radial†	511.9	509.5	[0.00]	µg/L	13:42:36

3	Mg 279.077 IEC†	6.9	6.9	[0.00] µg/L	13:42:56
3	Na 589.592 Radial†	160.0	159.3	[0.00] µg/L	13:42:36
3	Sr 421.552†	152.1	151.4	[0.00] µg/L	13:42:36
3	Sc 361.383	2102883.6	2102883.6	100.47 %	13:44:10
3	Y 371.029	1439201.5	1439201.5	100.44 %	13:44:10
3	Ag 328.068†	-511.0	-508.7	[0.00] µg/L	13:44:16
3	As 188.979†	-1.9	-1.9	[0.00] µg/L	13:44:36
3	B 249.677†	299.4	298.0	[0.00] µg/L	13:44:16
3	Ba 233.527†	-5.3	-5.3	[0.00] µg/L	13:44:36
3	Be 313.107†	-1214.7	-1209.0	[0.00] µg/L	13:44:16
3	Cd 226.502†	-169.1	-168.3	[0.00] µg/L	13:44:36
3	Co 228.616†	50.5	50.3	[0.00] µg/L	13:44:36
3	Cr 267.716†	54.7	54.4	[0.00] µg/L	13:44:16
3	Cu 324.752†	4344.2	4324.0	[0.00] µg/L	13:44:16
3	Mn 257.610†	-684.2	-681.1	[0.00] µg/L	13:44:36
3	Mo 202.031†	-0.0	-0.0	[0.00] µg/L	13:44:36
3	Ni 231.604†	380.5	378.7	[0.00] µg/L	13:44:36
3	P 214.914†	268.6	267.4	[0.00] µg/L	13:44:36
3	Pb 220.353†	30.5	30.4	[0.00] µg/L	13:44:36
3	S 181.975 Axial†	20.6	20.5	[0.00] µg/L	13:44:36
3	Sb 206.836†	20.6	20.5	[0.00] µg/L	13:44:36
3	Se 196.026†	25.2	25.1	[0.00] µg/L	13:44:36
3	SiO2†	2791.5	2778.5	[0.00] µg/L	13:44:16
3	Si 251.611†	426.8	424.8	[0.00] µg/L	13:44:36
3	Sn 189.927†	-4.0	-4.0	[0.00] µg/L	13:44:36
3	Ti 334.940†	-497.2	-494.9	[0.00] µg/L	13:44:16
3	Tl 190.801†	-32.7	-32.6	[0.00] µg/L	13:44:36
3	U 409.014†	-14.9	-14.8	[0.00] µg/L	13:44:16
3	V 292.402†	106.3	105.8	[0.00] µg/L	13:44:16
3	Zn 213.857†	978.8	974.2	[0.00] µg/L	13:44:36

## Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	2093108.4	9354.33	0.45%	100.00 %	
Sc RADIAL	96788.3	466.20	0.48%	100 %	
Y 371.029	1432870.2	5792.65	0.40%	100.00 %	
Ag 328.068†	-460.2	50.62	11.00%	[0.00] µg/L	
Al 396.153Radial†	-119.3	11.92	9.99%	[0.00] µg/L	
As 188.979†	-3.3	3.57	109.72%	[0.00] µg/L	
B 249.677†	299.4	11.22	3.75%	[0.00] µg/L	
Ba 233.527†	-8.4	3.24	38.46%	[0.00] µg/L	
Be 313.107†	-1158.8	43.95	3.79%	[0.00] µg/L	
Ca 317.933Radial†	385.3	7.52	1.95%	[0.00] µg/L	
Cd 226.502†	-170.6	3.66	2.15%	[0.00] µg/L	
Co 228.616†	48.1	2.09	4.36%	[0.00] µg/L	
Cr 267.716†	80.2	25.59	31.89%	[0.00] µg/L	
Cu 324.752†	4376.7	48.39	1.11%	[0.00] µg/L	
Fe 238.204 Radial†	12.0	0.51	4.24%	[0.00] µg/L	
K 766.490 Radial†	485.3	26.93	5.55%	[0.00] µg/L	
Mg 279.077 IEC†	8.0	1.10	13.82%	[0.00] µg/L	
Mn 257.610†	-687.0	5.13	0.75%	[0.00] µg/L	
Mo 202.031†	5.1	5.73	111.70%	[0.00] µg/L	
Na 589.592 Radial†	180.6	28.84	15.97%	[0.00] µg/L	
Ni 231.604†	376.9	1.75	0.46%	[0.00] µg/L	
P 214.914†	272.4	4.38	1.61%	[0.00] µg/L	
Pb 220.353†	30.2	5.11	16.94%	[0.00] µg/L	
S 181.975 Axial†	22.5	2.05	9.11%	[0.00] µg/L	
Sb 206.836†	22.7	1.93	8.48%	[0.00] µg/L	
Se 196.026†	27.3	1.95	7.13%	[0.00] µg/L	
SiO2†	2779.7	6.41	0.23%	[0.00] µg/L	
Si 251.611†	424.1	2.16	0.51%	[0.00] µg/L	
Sn 189.927†	-7.4	3.11	41.86%	[0.00] µg/L	
Sr 421.552†	139.4	16.44	11.79%	[0.00] µg/L	
Ti 334.940†	-577.2	71.51	12.39%	[0.00] µg/L	
Tl 190.801†	-34.1	1.46	4.28%	[0.00] µg/L	
U 409.014†	-5.8	9.33	160.61%	[0.00] µg/L	
V 292.402†	112.3	29.35	26.13%	[0.00] µg/L	
Zn 213.857†	1008.9	29.99	2.97%	[0.00] µg/L	

Sequence No.: 2  
 Sample ID: S0.1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 2  
 Date Collected: 3/16/2010 13:44:45  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	98715.8	98715.8	102 %	13:45:17
1	K 766.490 Radial†	2592.4	2056.4	[1000] µg/L	13:45:17
1	Sr 421.552†	17263.6	16787.1	[100] µg/L	13:45:17
1	Sc 361.383	2094721.1	2094721.1	100.08 %	13:45:39
1	Y 371.029	1434102.7	1434102.7	100.09 %	13:45:39
1	Ag 328.068†	12293.9	12744.6	[100] µg/L	13:45:44
1	As 188.979†	70.0	73.2	[100] µg/L	13:46:05
1	B 249.677†	2506.5	2205.2	[100] µg/L	13:45:44
1	Ba 233.527†	4749.0	4753.7	[100] µg/L	13:46:05
1	Be 313.107†	175330.6	176354.4	[100] µg/L	13:45:39
1	Cd 226.502†	4244.7	4412.1	[100] µg/L	13:46:05
1	Co 228.616†	2472.2	2422.2	[100] µg/L	13:46:05
1	Cr 267.716†	4944.8	4860.7	[100] µg/L	13:45:44
1	Cu 324.752†	20439.1	16046.7	[100] µg/L	13:45:44
1	Mn 257.610†	34361.8	35022.3	[100] µg/L	13:45:44
1	Mo 202.031†	1112.9	1106.9	[100] µg/L	13:46:05
1	Ni 231.604†	2269.8	1891.1	[100] µg/L	13:46:05
1	P 214.914†	594.3	321.5	[500] µg/L	13:46:05
1	Pb 220.353†	447.5	417.0	[100] µg/L	13:46:05
1	S 181.975 Axial†	92.0	69.4	[200] µg/L	13:46:05
1	Sb 206.836†	145.3	122.4	[100] µg/L	13:46:05
1	Se 196.026†	137.0	109.6	[100] µg/L	13:46:05
1	SiO2†	9003.6	6216.9	[1069.5] µg/L	13:45:44
1	Si 251.611†	8093.8	7663.5	[500] µg/L	13:45:44
1	Sn 189.927†	275.6	282.9	[100] µg/L	13:46:05
1	Ti 334.940†	42939.4	43483.5	[100] µg/L	13:45:44
1	Tl 190.801†	72.6	106.7	[100] µg/L	13:46:05
1	U 409.014†	1155.3	1160.3	[100] µg/L	13:45:44
1	V 292.402†	8861.3	8742.1	[100] µg/L	13:45:44
1	Zn 213.857†	5580.6	4567.5	[100] µg/L	13:46:05
2	Sc RADIAL	98746.9	98746.9	102 %	13:45:23
2	K 766.490 Radial†	2620.5	2083.2	[1000] µg/L	13:45:23
2	Sr 421.552†	17298.0	16815.5	[100] µg/L	13:45:23
2	Sc 361.383	2100226.4	2100226.4	100.34 %	13:46:11
2	Y 371.029	1439792.5	1439792.5	100.48 %	13:46:11
2	Ag 328.068†	12345.5	12763.8	[100] µg/L	13:46:17
2	As 188.979†	67.3	70.3	[100] µg/L	13:46:37
2	B 249.677†	2557.3	2249.3	[100] µg/L	13:46:17
2	Ba 233.527†	4728.4	4720.8	[100] µg/L	13:46:37
2	Be 313.107†	175386.8	175951.2	[100] µg/L	13:46:11
2	Cd 226.502†	4247.0	4403.2	[100] µg/L	13:46:37
2	Co 228.616†	2478.6	2422.1	[100] µg/L	13:46:37
2	Cr 267.716†	4958.6	4861.5	[100] µg/L	13:46:17
2	Cu 324.752†	20540.7	16094.4	[100] µg/L	13:46:17
2	Mn 257.610†	34546.6	35116.5	[100] µg/L	13:46:17
2	Mo 202.031†	1110.1	1101.2	[100] µg/L	13:46:37
2	Ni 231.604†	2257.9	1873.3	[100] µg/L	13:46:37
2	P 214.914†	593.4	319.0	[500] µg/L	13:46:37
2	Pb 220.353†	453.6	421.9	[100] µg/L	13:46:37
2	S 181.975 Axial†	98.5	75.6	[200] µg/L	13:46:37
2	Sb 206.836†	142.4	119.2	[100] µg/L	13:46:37
2	Se 196.026†	136.6	108.9	[100] µg/L	13:46:37
2	SiO2†	8990.1	6179.9	[1069.5] µg/L	13:46:17
2	Si 251.611†	8054.1	7602.7	[500] µg/L	13:46:17
2	Sn 189.927†	279.4	285.9	[100] µg/L	13:46:37
2	Ti 334.940†	43205.6	43636.4	[100] µg/L	13:46:17
2	Tl 190.801†	71.0	104.9	[100] µg/L	13:46:37
2	U 409.014†	1121.8	1123.8	[100] µg/L	13:46:17
2	V 292.402†	8955.3	8812.6	[100] µg/L	13:46:17



2	Zn 213.857†	5596.7	4568.9	[100]	µg/L	13:46:37
3	Sc RADIAL	99227.6	99227.6	103	%	13:45:28
3	K 766.490 Radial†	2604.0	2054.7	[1000]	µg/L	13:45:28
3	Sr 421.552†	17310.0	16745.0	[100]	µg/L	13:45:28
3	Sc 361.383	2097900.5	2097900.5	100.23	%	13:46:44
3	Y 371.029	1438218.9	1438218.9	100.37	%	13:46:44
3	Ag 328.068†	12354.9	12786.9	[100]	µg/L	13:46:49
3	As 188.979†	72.1	75.2	[100]	µg/L	13:47:10
3	B 249.677†	2500.5	2195.5	[100]	µg/L	13:46:49
3	Ba 233.527†	4717.5	4715.1	[100]	µg/L	13:47:10
3	Be 313.107†	175589.1	176346.9	[100]	µg/L	13:46:44
3	Cd 226.502†	4212.4	4373.3	[100]	µg/L	13:47:10
3	Co 228.616†	2475.0	2421.3	[100]	µg/L	13:47:10
3	Cr 267.716†	4959.0	4867.4	[100]	µg/L	13:46:49
3	Cu 324.752†	20426.8	16003.5	[100]	µg/L	13:46:49
3	Mn 257.610†	34298.5	34907.1	[100]	µg/L	13:46:49
3	Mo 202.031†	1110.6	1103.0	[100]	µg/L	13:47:10
3	Ni 231.604†	2254.1	1872.1	[100]	µg/L	13:47:10
3	P 214.914†	602.9	329.1	[500]	µg/L	13:47:10
3	Pb 220.353†	435.3	404.2	[100]	µg/L	13:47:10
3	S 181.975 Axial†	83.4	60.6	[200]	µg/L	13:47:10
3	Sb 206.836†	141.8	118.8	[100]	µg/L	13:47:10
3	Se 196.026†	130.1	102.5	[100]	µg/L	13:47:10
3	SiO2†	8943.3	6143.1	[1069.5]	µg/L	13:46:49
3	Si 251.611†	8011.5	7569.1	[500]	µg/L	13:46:49
3	Sn 189.927†	278.7	285.5	[100]	µg/L	13:47:10
3	Ti 334.940†	42980.6	43459.6	[100]	µg/L	13:46:49
3	Tl 190.801†	69.6	103.6	[100]	µg/L	13:47:10
3	U 409.014†	1134.7	1137.9	[100]	µg/L	13:46:49
3	V 292.402†	8902.5	8769.9	[100]	µg/L	13:46:49
3	Zn 213.857†	5560.8	4539.2	[100]	µg/L	13:47:10

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Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2097616.0	2763.63	0.13%	100.22 %
Sc RADIAL	98896.7	286.93	0.29%	102 %
Y 371.029	1437371.4	2938.05	0.20%	100.31 %
Ag 328.068†	12765.1	21.16	0.17%	[100] µg/L
As 188.979†	72.9	2.47	3.39%	[100] µg/L
B 249.677†	2216.6	28.68	1.29%	[100] µg/L
Ba 233.527†	4729.9	20.84	0.44%	[100] µg/L
Be 313.107†	176217.5	230.67	0.13%	[100] µg/L
Cd 226.502†	4396.2	20.30	0.46%	[100] µg/L
Co 228.616†	2421.9	0.50	0.02%	[100] µg/L
Cr 267.716†	4863.2	3.65	0.08%	[100] µg/L
Cu 324.752†	16048.2	45.49	0.28%	[100] µg/L
K 766.490 Radial†	2064.8	15.99	0.77%	[1000] µg/L
Mn 257.610†	35015.3	104.84	0.30%	[100] µg/L
Mo 202.031†	1103.7	2.93	0.27%	[100] µg/L
Ni 231.604†	1878.8	10.66	0.57%	[100] µg/L
P 214.914†	323.2	5.29	1.64%	[500] µg/L
Pb 220.353†	414.4	9.14	2.21%	[100] µg/L
S 181.975 Axial†	68.5	7.51	10.96%	[200] µg/L
Sb 206.836†	120.1	2.01	1.68%	[100] µg/L
Se 196.026†	107.0	3.88	3.63%	[100] µg/L
SiO2†	6179.9	36.90	0.60%	[1069.5] µg/L
Si 251.611†	7611.8	47.81	0.63%	[500] µg/L
Sn 189.927†	284.7	1.65	0.58%	[100] µg/L
Sr 421.552†	16782.5	35.44	0.21%	[100] µg/L
Ti 334.940†	43526.5	95.91	0.22%	[100] µg/L
Tl 190.801†	105.0	1.56	1.48%	[100] µg/L
U 409.014†	1140.7	18.37	1.61%	[100] µg/L
V 292.402†	8774.9	35.49	0.40%	[100] µg/L
Zn 213.857†	4558.5	16.73	0.37%	[100] µg/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 3/16/2010 13:47:19

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	100074.7	100074.7	103 %	13:47:50
1	Al 396.153Radial†	10699.0	10467.0	[5000] µg/L	13:47:50
1	Ca 317.933Radial†	14852.2	13979.2	[5000] µg/L	13:47:50
1	K 766.490 Radial†	11694.6	10825.2	[5000] µg/L	13:47:50
1	Mg 279.077 IEC†	407.4	386.1	[5000] µg/L	13:48:10
1	Sr 421.552†	87389.5	84380.3	[500] µg/L	13:47:50
1	Sc 361.383	2086321.5	2086321.5	99.676 %	13:49:14
1	Y 371.029	1422836.0	1422836.0	99.300 %	13:49:14
1	Ag 328.068†	62741.3	63405.6	[500] µg/L	13:49:19
1	As 188.979†	358.5	363.0	[500] µg/L	13:49:40
1	B 249.677†	11575.1	11313.4	[500] µg/L	13:49:19
1	Ba 233.527†	23656.5	23741.9	[500] µg/L	13:49:19
1	Be 313.107†	878338.7	882354.8	[500] µg/L	13:49:14
1	Cd 226.502†	21751.7	21993.0	[500] µg/L	13:49:19
1	Co 228.616†	12217.5	12209.2	[500] µg/L	13:49:19
1	Cr 267.716†	24228.1	24226.7	[500] µg/L	13:49:19
1	Cu 324.752†	83409.3	79304.0	[500] µg/L	13:49:19
1	Mn 257.610†	173738.8	174991.0	[500] µg/L	13:49:14
1	Mo 202.031†	5418.2	5430.7	[500] µg/L	13:49:40
1	Ni 231.604†	9708.7	9363.4	[500] µg/L	13:49:19
1	P 214.914†	1882.2	1615.9	[2500] µg/L	13:49:40
1	Pb 220.353†	2060.0	2036.5	[500] µg/L	13:49:40
1	S 181.975 Axial†	351.4	330.0	[1000] µg/L	13:49:40
1	Sb 206.836†	613.4	592.6	[500] µg/L	13:49:40
1	Se 196.026†	600.7	575.3	[500] µg/L	13:49:40
1	SiO2†	33299.9	30628.5	[5347.5] µg/L	13:49:19
1	Si 251.611†	38386.1	38086.9	[2500] µg/L	13:49:19
1	Sn 189.927†	1373.2	1385.1	[500] µg/L	13:49:40
1	Ti 334.940†	218890.7	220180.0	[500] µg/L	13:49:14
1	Tl 190.801†	509.8	545.5	[500] µg/L	13:49:40
1	U 409.014†	5659.3	5683.5	[500] µg/L	13:49:19
1	V 292.402†	44006.7	44037.6	[500] µg/L	13:49:19
1	Zn 213.857†	23916.7	22985.7	[500] µg/L	13:49:19
2	Sc RADIAL	99306.2	99306.2	103 %	13:48:16
2	Al 396.153Radial†	10633.8	10483.5	[5000] µg/L	13:48:16
2	Ca 317.933Radial†	14719.7	13961.2	[5000] µg/L	13:48:16
2	K 766.490 Radial†	11489.6	10713.0	[5000] µg/L	13:48:16
2	Mg 279.077 IEC†	411.2	392.8	[5000] µg/L	13:48:36
2	Sr 421.552†	86575.3	84240.8	[500] µg/L	13:48:16
2	Sc 361.383	2088104.0	2088104.0	99.761 %	13:49:47
2	Y 371.029	1424214.4	1424214.4	99.396 %	13:49:47
2	Ag 328.068†	62542.8	63152.9	[500] µg/L	13:49:53
2	As 188.979†	350.4	354.5	[500] µg/L	13:50:13
2	B 249.677†	11540.6	11268.9	[500] µg/L	13:49:53
2	Ba 233.527†	23599.4	23664.4	[500] µg/L	13:49:53
2	Be 313.107†	878324.6	881588.5	[500] µg/L	13:49:47
2	Cd 226.502†	21731.5	21954.1	[500] µg/L	13:49:53
2	Co 228.616†	12180.9	12162.1	[500] µg/L	13:49:53
2	Cr 267.716†	24125.0	24102.6	[500] µg/L	13:49:53
2	Cu 324.752†	83124.2	78946.8	[500] µg/L	13:49:53
2	Mn 257.610†	174021.4	175125.4	[500] µg/L	13:49:47
2	Mo 202.031†	5328.5	5336.1	[500] µg/L	13:50:13
2	Ni 231.604†	9688.3	9334.6	[500] µg/L	13:49:53
2	P 214.914†	1853.7	1585.7	[2500] µg/L	13:50:13
2	Pb 220.353†	2027.1	2001.8	[500] µg/L	13:50:13
2	S 181.975 Axial†	346.2	324.4	[1000] µg/L	13:50:13
2	Sb 206.836†	596.8	575.5	[500] µg/L	13:50:13
2	Se 196.026†	588.3	562.4	[500] µg/L	13:50:13
2	SiO2†	33286.2	30586.2	[5347.5] µg/L	13:49:53

2	Si 251.611†	38283.7	37951.4	[2500]	µg/L	13:49:53
2	Sn 189.927†	1350.6	1361.3	[500]	µg/L	13:50:13
2	Ti 334.940†	219123.4	220225.8	[500]	µg/L	13:49:47
2	Tl 190.801†	494.4	529.7	[500]	µg/L	13:50:13
2	U 409.014†	5782.8	5802.5	[500]	µg/L	13:49:53
2	V 292.402†	43961.3	43954.3	[500]	µg/L	13:49:53
2	Zn 213.857†	23783.8	22831.9	[500]	µg/L	13:49:53
3	Sc RADIAL	100050.4	100050.4	103	%	13:48:42
3	Al 396.153Radial†	10642.3	10414.6	[5000]	µg/L	13:48:42
3	Ca 317.933Radial†	14755.5	13889.1	[5000]	µg/L	13:48:42
3	K 766.490 Radial†	11490.7	10630.7	[5000]	µg/L	13:48:42
3	Mg 279.077 IEC†	404.2	383.1	[5000]	µg/L	13:49:02
3	Sr 421.552†	87086.2	84107.4	[500]	µg/L	13:48:42
3	Sc 361.383	2071228.8	2071228.8	98.955	%	13:50:21
3	Y 371.029	1409380.7	1409380.7	98.361	%	13:50:21
3	Ag 328.068†	58350.1	59426.7	[500]	µg/L	13:50:26
3	As 188.979†	297.3	303.7	[500]	µg/L	13:50:47
3	B 249.677†	10705.3	10519.0	[500]	µg/L	13:50:26
3	Ba 233.527†	21400.9	21635.4	[500]	µg/L	13:50:26
3	Be 313.107†	804451.5	814108.2	[500]	µg/L	13:50:21
3	Cd 226.502†	19505.4	19882.1	[500]	µg/L	13:50:26
3	Co 228.616†	10876.1	10943.0	[500]	µg/L	13:50:26
3	Cr 267.716†	20805.6	20945.1	[500]	µg/L	13:50:26
3	Cu 324.752†	75185.9	71603.4	[500]	µg/L	13:50:26
3	Mn 257.610†	160217.0	162596.4	[500]	µg/L	13:50:21
3	Mo 202.031†	4437.6	4479.4	[500]	µg/L	13:50:47
3	Ni 231.604†	8697.8	8412.8	[500]	µg/L	13:50:26
3	P 214.914†	1618.8	1363.5	[2500]	µg/L	13:50:47
3	Pb 220.353†	1745.4	1733.6	[500]	µg/L	13:50:47
3	S 181.975 Axial†	306.0	286.7	[1000]	µg/L	13:50:47
3	Sb 206.836†	524.6	507.4	[500]	µg/L	13:50:47
3	Se 196.026†	508.3	486.3	[500]	µg/L	13:50:47
3	SiO2†	30775.8	28321.1	[5347.5]	µg/L	13:50:26
3	Si 251.611†	35188.6	35136.2	[2500]	µg/L	13:50:26
3	Sn 189.927†	1102.7	1121.7	[500]	µg/L	13:50:47
3	Ti 334.940†	199565.5	202250.8	[500]	µg/L	13:50:21
3	Tl 190.801†	449.2	488.1	[500]	µg/L	13:50:47
3	U 409.014†	5033.3	5092.2	[500]	µg/L	13:50:26
3	V 292.402†	38957.9	39257.2	[500]	µg/L	13:50:26
3	Zn 213.857†	21411.0	20628.3	[500]	µg/L	13:50:26

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Sc 361.383	2081884.7	9271.29	0.45%	99.464	%
Sc RADIAL	99810.4	436.87	0.44%	103	%
Y 371.029	1418810.4	8195.38	0.58%	99.019	%
Ag 328.068†	61995.1	2227.89	3.59%	[500]	µg/L
Al 396.153Radial†	10455.0	35.97	0.34%	[5000]	µg/L
As 188.979†	340.4	32.05	9.41%	[500]	µg/L
B 249.677†	11033.8	446.33	4.05%	[500]	µg/L
Ba 233.527†	23013.9	1194.42	5.19%	[500]	µg/L
Be 313.107†	859350.5	39182.84	4.56%	[500]	µg/L
Ca 317.933Radial†	13943.2	47.65	0.34%	[5000]	µg/L
Cd 226.502†	21276.4	1207.69	5.68%	[500]	µg/L
Co 228.616†	11771.4	717.85	6.10%	[500]	µg/L
Cr 267.716†	23091.4	1859.81	8.05%	[500]	µg/L
Cu 324.752†	76618.1	4346.48	5.67%	[500]	µg/L
K 766.490 Radial†	10723.0	97.65	0.91%	[5000]	µg/L
Mg 279.077 IEC†	387.3	4.96	1.28%	[5000]	µg/L
Mn 257.610†	170904.3	7195.12	4.21%	[500]	µg/L
Mo 202.031†	5082.1	524.08	10.31%	[500]	µg/L
Ni 231.604†	9036.9	540.71	5.98%	[500]	µg/L
P 214.914†	1521.7	137.85	9.06%	[2500]	µg/L
Pb 220.353†	1924.0	165.75	8.62%	[500]	µg/L
S 181.975 Axial†	313.7	23.60	7.52%	[1000]	µg/L
Sb 206.836†	558.5	45.06	8.07%	[500]	µg/L
Se 196.026†	541.3	48.09	8.88%	[500]	µg/L
SiO2†	29845.3	1320.12	4.42%	[5347.5]	µg/L
Si 251.611†	37058.1	1665.82	4.50%	[2500]	µg/L

Sn 189.927†	1289.4	145.66	11.30%	[500] µg/L
Sr 421.552†	84242.8	136.48	0.16%	[500] µg/L
Ti 334.940†	214218.9	10364.68	4.84%	[500] µg/L
Tl 190.801†	521.1	29.67	5.69%	[500] µg/L
U 409.014†	5526.1	380.40	6.88%	[500] µg/L
V 292.402†	42416.4	2736.26	6.45%	[500] µg/L
Zn 213.857†	22148.6	1318.91	5.95%	[500] µg/L

Sequence No.: 4

Sample ID: SCAL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 4

Date Collected: 3/16/2010 13:50:57

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	99005.9	99005.9	102 %		13:51:27
1	Al 396.153Radial†	21396.9	21036.9	[10000] µg/L		13:51:27
1	Ca 317.933Radial†	28774.4	27744.6	[10000] µg/L		13:51:27
1	Fe 238.204 Radial†	886.3	854.5	[10000] µg/L		13:51:48
1	K 766.490 Radial†	22406.6	21419.4	[10000] µg/L		13:51:27
1	Mg 279.077 IEC†	796.2	770.3	[10000] µg/L		13:51:48
1	Na 589.592 Radial†	20579.8	19938.3	[10000] µg/L		13:51:27
1	Sr 421.552†	171886.5	167897.0	[1000] µg/L		13:51:27
1	Sc 361.383	2084281.9	2084281.9	99.578 %		13:52:51
1	Y 371.029	1417699.3	1417699.3	98.941 %		13:52:51
1	Ag 328.068†	127625.8	128626.5	[1000] µg/L		13:52:57
1	As 188.979†	716.7	723.0	[1000] µg/L		13:53:18
1	B 249.677†	23034.3	22832.5	[1000] µg/L		13:52:57
1	Ba 233.527†	47400.5	47609.6	[1000] µg/L		13:52:57
1	Be 313.107†	1736563.9	1745076.7	[1000] µg/L		13:52:51
1	Cd 226.502†	43541.3	43896.3	[1000] µg/L		13:52:57
1	Co 228.616†	24264.4	24319.0	[1000] µg/L		13:52:57
1	Cr 267.716†	48452.1	48577.0	[1000] µg/L		13:52:57
1	Cu 324.752†	163712.1	160028.7	[1000] µg/L		13:52:57
1	Mn 257.610†	343886.1	346029.4	[1000] µg/L		13:52:57
1	Mo 202.031†	10846.8	10887.6	[1000] µg/L		13:53:18
1	Ni 231.604†	18887.7	18590.8	[1000] µg/L		13:52:57
1	P 214.914†	3477.5	3219.9	[5000] µg/L		13:53:18
1	Pb 220.353†	4063.4	4050.5	[1000] µg/L		13:53:18
1	S 181.975 Axial†	685.2	665.6	[2000] µg/L		13:53:18
1	Sb 206.836†	1217.9	1200.4	[1000] µg/L		13:53:18
1	Se 196.026†	1145.3	1122.8	[1000] µg/L		13:53:18
1	SiO2†	63781.6	61271.9	[10695] µg/L		13:52:57
1	Si 251.611†	76182.5	76081.1	[5000] µg/L		13:52:57
1	Sn 189.927†	2763.0	2782.1	[1000] µg/L		13:53:18
1	Ti 334.940†	438415.6	440849.5	[1000] µg/L		13:52:51
1	Tl 190.801†	1032.2	1070.7	[1000] µg/L		13:53:18
1	U 409.014†	11613.3	11668.3	[1000] µg/L		13:52:57
1	V 292.402†	88724.4	88987.8	[1000] µg/L		13:52:57
1	Zn 213.857†	46062.2	45248.4	[1000] µg/L		13:52:57
2	Sc RADIAL	98878.3	98878.3	102 %		13:51:53
2	Al 396.153Radial†	21291.7	20961.0	[10000] µg/L		13:51:53
2	Ca 317.933Radial†	28704.1	27712.1	[10000] µg/L		13:51:53
2	Fe 238.204 Radial†	882.4	851.7	[10000] µg/L		13:52:13
2	K 766.490 Radial†	22391.6	21432.9	[10000] µg/L		13:51:53
2	Mg 279.077 IEC†	797.4	772.6	[10000] µg/L		13:52:13
2	Na 589.592 Radial†	20571.2	19955.8	[10000] µg/L		13:51:53
2	Sr 421.552†	171860.0	168088.0	[1000] µg/L		13:51:53
2	Sc 361.383	2086112.0	2086112.0	99.666 %		13:53:24
2	Y 371.029	1420463.0	1420463.0	99.134 %		13:53:24
2	Ag 328.068†	126833.0	127718.5	[1000] µg/L		13:53:30
2	As 188.979†	701.1	706.7	[1000] µg/L		13:53:51
2	B 249.677†	22869.1	22646.4	[1000] µg/L		13:53:30
2	Ba 233.527†	47051.7	47217.9	[1000] µg/L		13:53:30
2	Be 313.107†	1742218.7	1749220.6	[1000] µg/L		13:53:24
2	Cd 226.502†	43183.6	43499.0	[1000] µg/L		13:53:30
2	Co 228.616†	24100.7	24133.5	[1000] µg/L		13:53:30
2	Cr 267.716†	48201.6	48283.0	[1000] µg/L		13:53:30
2	Cu 324.752†	163007.4	159177.4	[1000] µg/L		13:53:30
2	Mn 257.610†	341756.3	343589.5	[1000] µg/L		13:53:30
2	Mo 202.031†	10599.6	10630.0	[1000] µg/L		13:53:51
2	Ni 231.604†	18831.1	18517.4	[1000] µg/L		13:53:30
2	P 214.914†	3401.5	3140.5	[5000] µg/L		13:53:51
2	Pb 220.353†	3993.0	3976.2	[1000] µg/L		13:53:51

2	S 181.975 Axial†	672.9	652.6	[2000]	µg/L	13:53:51
2	Sb 206.836†	1190.1	1171.4	[1000]	µg/L	13:53:51
2	Se 196.026†	1125.5	1102.0	[1000]	µg/L	13:53:51
2	SiO2†	63502.5	60935.8	[10695]	µg/L	13:53:30
2	Si 251.611†	75835.9	75666.1	[5000]	µg/L	13:53:30
2	Sn 189.927†	2693.2	2709.7	[1000]	µg/L	13:53:51
2	Ti 334.940†	439551.1	441602.5	[1000]	µg/L	13:53:24
2	Tl 190.801†	1022.7	1060.2	[1000]	µg/L	13:53:51
2	U 409.014†	11401.7	11445.7	[1000]	µg/L	13:53:30
2	V 292.402†	88057.2	88240.2	[1000]	µg/L	13:53:30
2	Zn 213.857†	45789.6	44934.3	[1000]	µg/L	13:53:30
3	Sc RADIAL	98949.7	98949.7	102	%	13:52:19
3	Al 396.153Radial†	21345.9	20999.0	[10000]	µg/L	13:52:19
3	Ca 317.933Radial†	28773.8	27759.9	[10000]	µg/L	13:52:19
3	Fe 238.204 Radial†	884.5	853.3	[10000]	µg/L	13:52:39
3	K 766.490 Radial†	22416.2	21441.2	[10000]	µg/L	13:52:19
3	Mg 279.077 IEC†	802.2	776.7	[10000]	µg/L	13:52:39
3	Na 589.592 Radial†	20655.3	20023.5	[10000]	µg/L	13:52:19
3	Sr 421.552†	172362.1	168457.6	[1000]	µg/L	13:52:19
3	Sc 361.383	2098634.1	2098634.1	100.26	%	13:53:57
3	Y 371.029	1431664.8	1431664.8	99.916	%	13:53:57
3	Ag 328.068†	117444.6	117595.6	[1000]	µg/L	13:54:03
3	As 188.979†	593.3	595.0	[1000]	µg/L	13:54:24
3	B 249.677†	20953.8	20599.3	[1000]	µg/L	13:54:03
3	Ba 233.527†	42175.0	42072.3	[1000]	µg/L	13:54:03
3	Be 313.107†	1600289.8	1597235.1	[1000]	µg/L	13:53:57
3	Cd 226.502†	38322.8	38392.5	[1000]	µg/L	13:54:03
3	Co 228.616†	21253.1	21149.1	[1000]	µg/L	13:54:03
3	Cr 267.716†	41031.4	40843.1	[1000]	µg/L	13:54:03
3	Cu 324.752†	144535.2	139778.0	[1000]	µg/L	13:54:03
3	Mn 257.610†	301338.4	301232.0	[1000]	µg/L	13:54:03
3	Mo 202.031†	8756.9	8728.7	[1000]	µg/L	13:54:24
3	Ni 231.604†	16588.3	16167.7	[1000]	µg/L	13:54:03
3	P 214.914†	2923.2	2643.2	[5000]	µg/L	13:54:24
3	Pb 220.353†	3418.8	3379.6	[1000]	µg/L	13:54:24
3	S 181.975 Axial†	590.2	566.1	[2000]	µg/L	13:54:24
3	Sb 206.836†	1017.2	991.8	[1000]	µg/L	13:54:24
3	Se 196.026†	983.1	953.2	[1000]	µg/L	13:54:24
3	SiO2†	58031.5	55098.9	[10695]	µg/L	13:54:03
3	Si 251.611†	68995.1	68389.4	[5000]	µg/L	13:54:03
3	Sn 189.927†	2196.1	2197.8	[1000]	µg/L	13:54:24
3	Ti 334.940†	400140.2	399663.8	[1000]	µg/L	13:53:57
3	Tl 190.801†	896.8	928.5	[1000]	µg/L	13:54:24
3	U 409.014†	9905.6	9885.3	[1000]	µg/L	13:54:03
3	V 292.402†	76998.0	76683.0	[1000]	µg/L	13:54:03
3	Zn 213.857†	40519.9	39404.4	[1000]	µg/L	13:54:03

## Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2089676.0	7811.74	0.37%	99.836	%
Sc RADIAL	98944.6	63.99	0.06%	102	%
Y 371.029	1423275.7	7395.42	0.52%	99.330	%
Ag 328.068†	124646.9	6123.42	4.91%	[1000]	µg/L
Al 396.153Radial†	20998.9	37.98	0.18%	[10000]	µg/L
As 188.979†	674.9	69.69	10.33%	[1000]	µg/L
B 249.677†	22026.1	1239.12	5.63%	[1000]	µg/L
Ba 233.527†	45633.3	3090.08	6.77%	[1000]	µg/L
Be 313.107†	1697177.5	86577.45	5.10%	[1000]	µg/L
Ca 317.933Radial†	27738.9	24.43	0.09%	[10000]	µg/L
Cd 226.502†	41929.3	3069.39	7.32%	[1000]	µg/L
Co 228.616†	23200.5	1779.01	7.67%	[1000]	µg/L
Cr 267.716†	45901.0	4382.79	9.55%	[1000]	µg/L
Cu 324.752†	152994.7	11453.92	7.49%	[1000]	µg/L
Fe 238.204 Radial†	853.2	1.38	0.16%	[10000]	µg/L
K 766.490 Radial†	21431.2	10.99	0.05%	[10000]	µg/L
Mg 279.077 IEC†	773.2	3.23	0.42%	[10000]	µg/L
Mn 257.610†	330283.6	25189.03	7.63%	[1000]	µg/L
Mo 202.031†	10082.1	1179.12	11.70%	[1000]	µg/L
Na 589.592 Radial†	19972.5	45.03	0.23%	[10000]	µg/L

Ni 231.604†	17758.6	1378.29	7.76%	[1000]	µg/L
P 214.914†	3001.2	312.58	10.42%	[5000]	µg/L
Pb 220.353†	3802.1	367.77	9.67%	[1000]	µg/L
S 181.975 Axial†	628.1	54.07	8.61%	[2000]	µg/L
Sb 206.836†	1121.2	113.00	10.08%	[1000]	µg/L
Se 196.026†	1059.3	92.51	8.73%	[1000]	µg/L
SiO2†	59102.2	3471.01	5.87%	[10695]	µg/L
Si 251.611†	73378.9	4325.99	5.90%	[5000]	µg/L
Sn 189.927†	2563.2	318.50	12.43%	[1000]	µg/L
Sr 421.552†	168147.5	285.01	0.17%	[1000]	µg/L
Ti 334.940†	427371.9	23998.85	5.62%	[1000]	µg/L
Tl 190.801†	1019.8	79.22	7.77%	[1000]	µg/L
U 409.014†	10999.8	971.55	8.83%	[1000]	µg/L
V 292.402†	84637.0	6898.52	8.15%	[1000]	µg/L
Zn 213.857†	43195.7	3287.12	7.61%	[1000]	µg/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 3/16/2010 13:54:34

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	98789.2	98789.2	102 %	13:55:04
1	Al 396.153Radial†	107058.1	105009.0	[50000] µg/L	13:55:04
1	Ca 317.933Radial†	140672.7	137438.2	[50000] µg/L	13:55:04
1	Fe 238.204 Radial†	1738.5	1691.3	[20000] µg/L	13:55:24
1	Mg 279.077 IEC†	3867.4	3781.1	[50000] µg/L	13:55:24
1	Na 589.592 Radial†	41160.6	40146.4	[20000] µg/L	13:55:04
1	Sc 361.383	2092272.1	2092272.1	99.960 %	13:56:28
1	Y 371.029	1418049.8	1418049.8	98.966 %	13:56:28
2	Sc RADIAL	99260.5	99260.5	103 %	13:55:30
2	Al 396.153Radial†	107263.0	104710.8	[50000] µg/L	13:55:30
2	Ca 317.933Radial†	141368.5	137462.3	[50000] µg/L	13:55:30
2	Fe 238.204 Radial†	1735.4	1680.3	[20000] µg/L	13:55:50
2	Mg 279.077 IEC†	3879.3	3774.7	[50000] µg/L	13:55:50
2	Na 589.592 Radial†	41276.8	40068.2	[20000] µg/L	13:55:30
2	Sc 361.383	2104318.4	2104318.4	100.54 %	13:56:36
2	Y 371.029	1426757.5	1426757.5	99.573 %	13:56:36
3	Sc RADIAL	98790.7	98790.7	102 %	13:55:56
3	Al 396.153Radial†	106517.5	104477.8	[50000] µg/L	13:55:56
3	Ca 317.933Radial†	140287.9	137059.1	[50000] µg/L	13:55:56
3	Fe 238.204 Radial†	1736.9	1689.7	[20000] µg/L	13:56:16
3	Mg 279.077 IEC†	3898.1	3811.1	[50000] µg/L	13:56:16
3	Na 589.592 Radial†	41109.8	40096.0	[20000] µg/L	13:55:56
3	Sc 361.383	2096930.4	2096930.4	100.18 %	13:56:43
3	Y 371.029	1423055.3	1423055.3	99.315 %	13:56:43

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2097840.3	6074.46	0.29%	100.23 %
Sc RADIAL	98946.8	271.66	0.27%	102 %
Y 371.029	1422620.9	4370.07	0.31%	99.285 %
Al 396.153Radial†	104732.5	266.28	0.25%	[50000] µg/L
Ca 317.933Radial†	137319.9	226.12	0.16%	[50000] µg/L
Fe 238.204 Radial†	1687.1	5.98	0.35%	[20000] µg/L
Mg 279.077 IEC†	3788.9	19.42	0.51%	[50000] µg/L
Na 589.592 Radial†	40103.5	39.62	0.10%	[20000] µg/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	124.5	0.00000	0.999995	
Al 396.153Radial	3	Lin Thru 0	0.0	2.095	0.00000	1.000000	
As 188.979	3	Lin Thru 0	0.0	0.6765	0.00000	0.999970	
B 249.677	3	Lin Thru 0	0.0	22.04	0.00000	1.000000	
Ba 233.527	3	Lin Thru 0	0.0	45.72	0.00000	0.999989	
Be 313.107	3	Lin Thru 0	0.0	1702	0.00000	0.999982	
Ca 317.933Radial	3	Lin Thru 0	0.0	2.748	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	42.07	0.00000	0.999974	
Co 228.616	3	Lin Thru 0	0.0	23.28	0.00000	0.999976	
Cr 267.716	3	Lin Thru 0	0.0	45.98	0.00000	0.999984	
Cu 324.752	3	Lin Thru 0	0.0	153.1	0.00000	0.999991	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0845	0.00000	0.999990	
K 766.490 Radial	3	Lin Thru 0	0.0	2.143	0.00000	0.999995	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0759	0.00000	0.999990	
Mn 257.610	3	Lin Thru 0	0.0	332.7	0.00000	0.999894	
Mo 202.031	3	Lin Thru 0	0.0	10.11	0.00000	0.999961	
Na 589.592 Radia	2	Lin Thru 0	0.0	2.004	0.00000	0.999999	



Ni 231.604	3	Lin Thru 0	0.0	17.83	0.00000	0.999964
P 214.914	3	Lin Thru 0	0.0	0.6023	0.00000	0.999963
Pb 220.353	3	Lin Thru 0	0.0	3.814	0.00000	0.999959
S 181.975 Axial	3	Lin Thru 0	0.0	0.3142	0.00000	0.999967
Sb 206.836	3	Lin Thru 0	0.0	1.121	0.00000	0.999978
Se 196.026	3	Lin Thru 0	0.0	1.064	0.00000	0.999962
SiO2	3	Lin Thru 0	0.0	5.539	0.00000	0.999985
Si 251.611	3	Lin Thru 0	0.0	14.71	0.00000	0.999987
Sn 189.927	3	Lin Thru 0	0.0	2.569	0.00000	0.999950
Sr 421.552	3	Lin Thru 0	0.0	168.2	0.00000	1.000000
Ti 334.940	3	Lin Thru 0	0.0	427.6	0.00000	0.999998
Tl 190.801	3	Lin Thru 0	0.0	1.024	0.00000	0.999960
U 409.014	3	Lin Thru 0	0.0	11.01	0.00000	0.999993
V 292.402	3	Lin Thru 0	0.0	84.70	0.00000	0.999994
Zn 213.857	3	Lin Thru 0	0.0	43.43	0.00000	0.999939

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 3/16/2010 13:56:52

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99945.7	99945.7	103 %		13:57:23
1	Al 396.153Radial†	10634.7	10418.1	4961.7 µg/L	4961.7 ppb	13:57:23
1	Ca 317.933Radial†	14480.5	13637.8	4963.1 µg/L	4963.1 ppb	13:57:23
1	Fe 238.204 Radial†	451.0	424.8	5035.4 µg/L	5035.4 ppb	13:57:44
1	K 766.490 Radial†	5776.3	5108.5	2384.0 µg/L	2384.0 ppb	13:57:23
1	Mg 279.077 IEC†	410.2	389.2	5135.4 µg/L	5135.4 ppb	13:57:44
1	Na 589.592 Radial†	5193.0	4848.4	2419.9 µg/L	2419.9 ppb	13:57:23
1	Sr 421.552†	90141.5	87154.4	518.12 µg/L	518.12 ppb	13:57:23
1	Sc 361.383	2114320.9	2114320.9	101.01 %		13:58:48
1	Y 371.029	1441880.8	1441880.8	100.63 %		13:58:48
1	Ag 328.068†	31503.5	31647.7	257.94 µg/L	257.94 ppb	13:58:53
1	As 188.979†	333.9	333.8	491.09 µg/L	491.09 ppb	13:59:14
1	B 249.677†	11823.0	11405.0	515.75 µg/L	515.75 ppb	13:58:53
1	Ba 233.527†	23518.4	23290.9	510.31 µg/L	510.31 ppb	13:58:53
1	Be 313.107†	457938.9	454503.3	266.85 µg/L	266.85 ppb	13:58:48
1	Cd 226.502†	21241.4	21198.9	503.85 µg/L	503.85 ppb	13:58:53
1	Co 228.616†	12109.8	11940.2	512.43 µg/L	512.43 ppb	13:58:53
1	Cr 267.716†	23238.8	22925.4	498.94 µg/L	498.94 ppb	13:58:53
1	Cu 324.752†	83176.1	77964.9	510.18 µg/L	510.18 ppb	13:58:53
1	Mn 257.610†	177529.9	176435.7	530.22 µg/L	530.22 ppb	13:58:48
1	Mo 202.031†	5774.7	5711.7	565.37 µg/L	565.37 ppb	13:59:14
1	Ni 231.604†	9654.4	9180.7	514.37 µg/L	514.37 ppb	13:58:53
1	P 214.914†	1866.2	1575.1	2567.3 µg/L	2567.3 ppb	13:59:14
1	Pb 220.353†	2014.0	1963.6	515.56 µg/L	515.56 ppb	13:59:14
1	S 181.975 Axial†	841.6	810.7	2579.9 µg/L	2579.9 ppb	13:59:14
1	Sb 206.836†	616.5	587.6	527.70 µg/L	527.70 ppb	13:59:14
1	Se 196.026†	2837.8	2782.1	2626.3 µg/L	2626.3 ppb	13:59:14
1	SiO2†	61735.1	58336.0	10532 µg/L	10532 ppb	13:58:53
1	Si 251.611†	73401.3	72240.8	4911.2 µg/L	4911.2 ppb	13:58:53
1	Sn 189.927†	1479.9	1472.4	573.76 µg/L	573.76 ppb	13:59:14
1	Ti 334.940†	217908.1	216299.1	505.46 µg/L	505.46 ppb	13:58:48
1	Tl 190.801†	523.1	552.0	543.97 µg/L	543.97 ppb	13:59:14
1	U 409.014†	5561.7	5511.7	499.45 µg/L	499.45 ppb	13:58:53
1	V 292.402†	44746.7	44185.4	526.97 µg/L	526.97 ppb	13:58:53
1	Zn 213.857†	23850.3	22602.2	516.77 µg/L	516.77 ppb	13:58:53
2	Sc RADIAL	100715.7	100715.7	104 %		13:57:49
2	Al 396.153Radial†	10725.7	10426.7	4966.0 µg/L	4966.0 ppb	13:57:49
2	Ca 317.933Radial†	14488.3	13538.0	4926.8 µg/L	4926.8 ppb	13:57:49
2	Fe 238.204 Radial†	449.0	419.5	4972.5 µg/L	4972.5 ppb	13:58:10
2	K 766.490 Radial†	5822.1	5109.7	2384.6 µg/L	2384.6 ppb	13:57:49
2	Mg 279.077 IEC†	416.5	392.3	5175.6 µg/L	5175.6 ppb	13:58:10
2	Na 589.592 Radial†	5226.0	4841.6	2416.5 µg/L	2416.5 ppb	13:57:49
2	Sr 421.552†	90833.6	87152.1	518.11 µg/L	518.11 ppb	13:57:49
2	Sc 361.383	2122266.1	2122266.1	101.39 %		13:59:21
2	Y 371.029	1448400.7	1448400.7	101.08 %		13:59:21
2	Ag 328.068†	31661.8	31687.0	258.25 µg/L	258.25 ppb	13:59:27
2	As 188.979†	332.8	331.5	487.65 µg/L	487.65 ppb	13:59:47
2	B 249.677†	11881.3	11418.7	516.41 µg/L	516.41 ppb	13:59:27
2	Ba 233.527†	23693.3	23376.2	512.18 µg/L	512.18 ppb	13:59:27
2	Be 313.107†	459566.7	454411.5	266.80 µg/L	266.80 ppb	13:59:21
2	Cd 226.502†	21357.6	21234.8	504.71 µg/L	504.71 ppb	13:59:27
2	Co 228.616†	12210.4	11994.6	514.75 µg/L	514.75 ppb	13:59:27
2	Cr 267.716†	23436.5	23034.3	501.31 µg/L	501.31 ppb	13:59:27
2	Cu 324.752†	83758.0	78230.6	511.90 µg/L	511.90 ppb	13:59:27
2	Mn 257.610†	178049.4	176290.1	529.78 µg/L	529.78 ppb	13:59:21
2	Mo 202.031†	5680.3	5597.2	554.04 µg/L	554.04 ppb	13:59:47
2	Ni 231.604†	9693.7	9183.6	514.54 µg/L	514.54 ppb	13:59:27
2	P 214.914†	1830.4	1532.9	2496.8 µg/L	2496.8 ppb	13:59:47
2	Pb 220.353†	1974.9	1917.6	503.46 µg/L	503.46 ppb	13:59:47

2	S 181.975 Axial†	833.1	799.1	2543.2 µg/L	2543.2 ppb	13:59:47
2	Sb 206.836†	613.3	582.1	522.62 µg/L	522.62 ppb	13:59:47
2	Se 196.026†	2802.5	2736.6	2583.4 µg/L	2583.4 ppb	13:59:47
2	SiO2†	62170.4	58536.5	10568 µg/L	10568 ppb	13:59:27
2	Si 251.611†	74003.3	72562.5	4933.1 µg/L	4933.1 ppb	13:59:27
2	Sn 189.927†	1444.1	1431.7	557.90 µg/L	557.90 ppb	13:59:47
2	Ti 334.940†	218656.1	216229.2	505.30 µg/L	505.30 ppb	13:59:21
2	Tl 190.801†	522.5	549.4	541.49 µg/L	541.49 ppb	13:59:47
2	U 409.014†	5610.5	5539.2	501.96 µg/L	501.96 ppb	13:59:27
2	V 292.402†	44884.0	44155.0	526.53 µg/L	526.53 ppb	13:59:27
2	Zn 213.857†	23949.9	22612.0	516.99 µg/L	516.99 ppb	13:59:27
3	Sc RADIAL	100642.0	100642.0	104 %		13:58:16
3	Al 396.153Radial†	10698.5	10408.1	4959.0 µg/L	4959.0 ppb	13:58:16
3	Ca 317.933Radial†	14455.7	13516.9	4919.1 µg/L	4919.1 ppb	13:58:16
3	Fe 238.204 Radial†	451.9	422.6	5008.6 µg/L	5008.6 ppb	13:58:36
3	K 766.490 Radial†	5717.9	5013.6	2339.8 µg/L	2339.8 ppb	13:58:16
3	Mg 279.077 IEC†	411.4	387.7	5113.5 µg/L	5113.5 ppb	13:58:36
3	Na 589.592 Radial†	5192.1	4812.7	2402.0 µg/L	2402.0 ppb	13:58:16
3	Sr 421.552†	90503.1	86898.2	516.60 µg/L	516.60 ppb	13:58:16
3	Sc 361.383	2113439.8	2113439.8	100.97 %		13:59:54
3	Y 371.029	1442067.2	1442067.2	100.64 %		13:59:54
3	Ag 328.068†	29525.7	29701.9	241.91 µg/L	241.91 ppb	14:00:00
3	As 188.979†	279.5	280.1	411.91 µg/L	411.91 ppb	14:00:21
3	B 249.677†	11019.1	10613.8	479.75 µg/L	479.75 ppb	14:00:00
3	Ba 233.527†	21385.6	21188.3	464.22 µg/L	464.22 ppb	14:00:00
3	Be 313.107†	419133.8	416260.5	244.40 µg/L	244.40 ppb	13:59:54
3	Cd 226.502†	19161.1	19147.4	455.03 µg/L	455.03 ppb	14:00:00
3	Co 228.616†	10856.6	10704.1	459.32 µg/L	459.32 ppb	14:00:00
3	Cr 267.716†	20175.8	19901.5	433.13 µg/L	433.13 ppb	14:00:00
3	Cu 324.752†	75195.8	70095.7	458.78 µg/L	458.78 ppb	14:00:00
3	Mn 257.610†	162921.4	162041.0	486.96 µg/L	486.96 ppb	13:59:54
3	Mo 202.031†	4706.2	4655.8	460.89 µg/L	460.89 ppb	14:00:21
3	Ni 231.604†	8636.6	8176.6	458.12 µg/L	458.12 ppb	14:00:00
3	P 214.914†	1589.7	1302.0	2117.6 µg/L	2117.6 ppb	14:00:21
3	Pb 220.353†	1705.7	1659.1	435.58 µg/L	435.58 ppb	14:00:21
3	S 181.975 Axial†	735.0	705.3	2244.7 µg/L	2244.7 ppb	14:00:21
3	Sb 206.836†	518.9	491.2	440.70 µg/L	440.70 ppb	14:00:21
3	Se 196.026†	2434.0	2383.3	2251.5 µg/L	2251.5 ppb	14:00:21
3	SiO2†	57058.2	53729.6	9700.1 µg/L	9700.1 ppb	14:00:00
3	Si 251.611†	67611.4	66536.9	4523.4 µg/L	4523.4 ppb	14:00:00
3	Sn 189.927†	1175.9	1172.0	456.80 µg/L	456.80 ppb	14:00:21
3	Ti 334.940†	198210.0	196880.4	460.06 µg/L	460.06 ppb	13:59:54
3	Tl 190.801†	461.1	490.8	483.79 µg/L	483.79 ppb	14:00:21
3	U 409.014†	4826.7	4786.1	433.57 µg/L	433.57 ppb	14:00:00
3	V 292.402†	39492.8	39000.6	464.74 µg/L	464.74 ppb	14:00:00
3	Zn 213.857†	21512.4	20296.6	464.02 µg/L	464.02 ppb	14:00:00

## Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2116675.6	101.13 %	0.232			0.23%
Sc RADIAL	100434.5	104 %	0.4			0.42%
Y 371.029	1444116.3	100.78 %	0.259			0.26%
Ag 328.068†	31012.2	252.70 µg/L	9.345	252.70 ppb	9.345	3.70%
QC value within limits for Ag 328.068 Recovery = 101.08%						
Al 396.153Radial†	10417.6	4962.2 µg/L	3.52	4962.2 ppb	3.52	0.07%
QC value within limits for Al 396.153Radial Recovery = 99.24%						
As 188.979†	315.1	463.55 µg/L	44.757	463.55 ppb	44.757	9.66%
QC value within limits for As 188.979 Recovery = 92.71%						
B 249.677†	11145.9	503.97 µg/L	20.977	503.97 ppb	20.977	4.16%
QC value within limits for B 249.677 Recovery = 100.79%						
Ba 233.527†	22618.5	495.57 µg/L	27.168	495.57 ppb	27.168	5.48%
QC value within limits for Ba 233.527 Recovery = 99.11%						
Be 313.107†	441725.1	259.35 µg/L	12.947	259.35 ppb	12.947	4.99%
QC value within limits for Be 313.107 Recovery = 103.74%						
Ca 317.933Radial†	13564.2	4936.3 µg/L	23.49	4936.3 ppb	23.49	0.48%
QC value within limits for Ca 317.933Radial Recovery = 98.73%						
Cd 226.502†	20527.0	487.87 µg/L	28.437	487.87 ppb	28.437	5.83%
QC value within limits for Cd 226.502 Recovery = 97.57%						
Co 228.616†	11546.3	495.50 µg/L	31.354	495.50 ppb	31.354	6.33%

QC value within limits for Co	228.616	Recovery = 99.10%			
Cr 267.716†	21953.7	477.79 µg/L	38.695	477.79 ppb	38.695 8.10%
QC value within limits for Cr	267.716	Recovery = 95.56%			
Cu 324.752†	75430.4	493.62 µg/L	30.188	493.62 ppb	30.188 6.12%
QC value within limits for Cu	324.752	Recovery = 98.72%			
Fe 238.204 Radial†	422.3	5005.5 µg/L	31.56	5005.5 ppb	31.56 0.63%
QC value within limits for Fe	238.204 Radial	Recovery = 100.11%			
K 766.490 Radial†	5077.3	2369.5 µg/L	25.73	2369.5 ppb	25.73 1.09%
QC value within limits for K	766.490 Radial	Recovery = 94.78%			
Mg 279.077 IEC†	389.7	5141.5 µg/L	31.48	5141.5 ppb	31.48 0.61%
QC value within limits for Mg	279.077 IEC	Recovery = 102.83%			
Mn 257.610†	171589.0	515.65 µg/L	24.851	515.65 ppb	24.851 4.82%
QC value within limits for Mn	257.610	Recovery = 103.13%			
Mo 202.031†	5321.6	526.77 µg/L	57.328	526.77 ppb	57.328 10.88%
QC value within limits for Mo	202.031	Recovery = 105.35%			
Na 589.592 Radial†	4834.2	2412.8 µg/L	9.47	2412.8 ppb	9.47 0.39%
QC value within limits for Na	589.592 Radial	Recovery = 96.51%			
Ni 231.604†	8847.0	495.68 µg/L	32.524	495.68 ppb	32.524 6.56%
QC value within limits for Ni	231.604	Recovery = 99.14%			
P 214.914†	1470.0	2393.9 µg/L	241.87	2393.9 ppb	241.87 10.10%
QC value within limits for P	214.914	Recovery = 95.76%			
Pb 220.353†	1846.8	484.87 µg/L	43.115	484.87 ppb	43.115 8.89%
QC value within limits for Pb	220.353	Recovery = 96.97%			
S 181.975 Axial†	771.7	2456.0 µg/L	183.85	2456.0 ppb	183.85 7.49%
QC value within limits for S	181.975 Axial	Recovery = 98.24%			
Sb 206.836†	553.6	497.01 µg/L	48.831	497.01 ppb	48.831 9.82%
QC value within limits for Sb	206.836	Recovery = 99.40%			
Se 196.026†	2634.0	2487.1 µg/L	205.14	2487.1 ppb	205.14 8.25%
QC value within limits for Se	196.026	Recovery = 99.48%			
SiO2†	56867.4	10267 µg/L	490.9	10267 ppb	490.9 4.78%
QC value within limits for SiO2		Recovery = 95.99%			
Si 251.611†	70446.7	4789.2 µg/L	230.45	4789.2 ppb	230.45 4.81%
QC value within limits for Si	251.611	Recovery = 95.78%			
Sn 189.927†	1358.7	529.49 µg/L	63.445	529.49 ppb	63.445 11.98%
QC value within limits for Sn	189.927	Recovery = 105.90%			
Sr 421.552†	87068.2	517.61 µg/L	0.875	517.61 ppb	0.875 0.17%
QC value within limits for Sr	421.552	Recovery = 103.52%			
Ti 334.940†	209802.9	490.27 µg/L	26.168	490.27 ppb	26.168 5.34%
QC value within limits for Ti	334.940	Recovery = 98.05%			
Tl 190.801†	530.7	523.08 µg/L	34.051	523.08 ppb	34.051 6.51%
QC value within limits for Tl	190.801	Recovery = 104.62%			
U 409.014†	5279.0	478.33 µg/L	38.781	478.33 ppb	38.781 8.11%
QC value within limits for U	409.014	Recovery = 95.67%			
V 292.402†	42447.0	506.08 µg/L	35.801	506.08 ppb	35.801 7.07%
QC value within limits for V	292.402	Recovery = 101.22%			
Zn 213.857†	21836.9	499.26 µg/L	30.520	499.26 ppb	30.520 6.11%
QC value within limits for Zn	213.857	Recovery = 99.85%			

All analyte(s) passed QC.

Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 3/16/2010 14:00:31

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98878.3	98878.3	102 %		14:01:01
1	Al 396.153Radial†	-142.3	-20.0	-9.5824 µg/L	-9.5824 ppb	14:01:01
1	Ca 317.933Radial†	360.4	-32.5	-11.815 µg/L	-11.815 ppb	14:01:22
1	Fe 238.204 Radial†	14.8	2.6	30.450 µg/L	30.450 ppb	14:01:22
1	K 766.490 Radial†	418.0	-76.2	-35.567 µg/L	-35.567 ppb	14:01:01
1	Mg 279.077 IEC†	9.3	1.2	15.202 µg/L	15.202 ppb	14:01:22
1	Na 589.592 Radial†	185.1	0.6	0.3180 µg/L	0.3180 ppb	14:01:01
1	Sr 421.552†	119.7	-22.3	-0.1323 µg/L	-0.1323 ppb	14:01:01
1	Sc 361.383	2093188.4	2093188.4	100.00 %		14:02:23
1	Y 371.029	1429929.2	1429929.2	99.795 %		14:02:23
1	Ag 328.068†	-530.5	-70.3	-0.5637 µg/L	-0.5637 ppb	14:02:29
1	As 188.979†	-2.2	1.1	1.5852 µg/L	1.5852 ppb	14:02:49
1	B 249.677†	312.8	13.4	0.5924 µg/L	0.5924 ppb	14:02:29
1	Ba 233.527†	-4.3	4.1	0.0899 µg/L	0.0899 ppb	14:02:49
1	Be 313.107†	-1082.3	76.6	0.0449 µg/L	0.0449 ppb	14:02:29
1	Cd 226.502†	-168.9	1.6	0.0345 µg/L	0.0345 ppb	14:02:49
1	Co 228.616†	38.1	-10.0	-0.4293 µg/L	-0.4293 ppb	14:02:49
1	Cr 267.716†	48.0	-32.2	-0.7015 µg/L	-0.7015 ppb	14:02:29
1	Cu 324.752†	4412.7	35.9	0.2399 µg/L	0.2399 ppb	14:02:29
1	Mn 257.610†	-696.0	-9.0	-0.0262 µg/L	-0.0262 ppb	14:02:49
1	Mo 202.031†	17.2	12.1	1.1957 µg/L	1.1957 ppb	14:02:49
1	Ni 231.604†	356.5	-20.4	-1.1452 µg/L	-1.1452 ppb	14:02:49
1	P 214.914†	267.6	-4.8	-8.0633 µg/L	-8.0633 ppb	14:02:49
1	Pb 220.353†	33.6	3.4	0.9019 µg/L	0.9019 ppb	14:02:49
1	S 181.975 Axial†	23.4	0.9	2.7755 µg/L	2.7755 ppb	14:02:49
1	Sb 206.836†	25.0	2.2	2.0202 µg/L	2.0202 ppb	14:02:49
1	Se 196.026†	25.9	-1.5	-1.2774 µg/L	-1.2774 ppb	14:02:49
1	SiO2†	2754.4	-25.4	-4.5897 µg/L	-4.5897 ppb	14:02:29
1	Si 251.611†	426.2	2.1	0.1440 µg/L	0.1440 ppb	14:02:49
1	Sn 189.927†	-0.7	6.8	2.6268 µg/L	2.6268 ppb	14:02:49
1	Ti 334.940†	-488.2	89.0	0.2068 µg/L	0.2068 ppb	14:02:29
1	Tl 190.801†	-35.7	-1.6	-1.5349 µg/L	-1.5349 ppb	14:02:49
1	U 409.014†	-35.4	-29.5	-2.6859 µg/L	-2.6859 ppb	14:02:29
1	V 292.402†	92.2	-20.1	-0.2365 µg/L	-0.2365 ppb	14:02:29
1	Zn 213.857†	694.1	-314.7	-7.2440 µg/L	-7.2440 ppb	14:02:49
2	Sc RADIAL	97865.4	97865.4	101 %		14:01:27
2	Al 396.153Radial†	-126.8	-6.1	-2.9435 µg/L	-2.9435 ppb	14:01:27
2	Ca 317.933Radial†	362.1	-27.2	-9.8807 µg/L	-9.8807 ppb	14:01:47
2	Fe 238.204 Radial†	12.9	0.8	9.9891 µg/L	9.9891 ppb	14:01:47
2	K 766.490 Radial†	411.9	-78.0	-36.400 µg/L	-36.400 ppb	14:01:27
2	Mg 279.077 IEC†	11.2	3.1	40.653 µg/L	40.653 ppb	14:01:47
2	Na 589.592 Radial†	186.4	3.8	1.9010 µg/L	1.9010 ppb	14:01:27
2	Sr 421.552†	106.6	-34.0	-0.2022 µg/L	-0.2022 ppb	14:01:27
2	Sc 361.383	2104830.6	2104830.6	100.56 %		14:02:55
2	Y 371.029	1442517.7	1442517.7	100.67 %		14:02:55
2	Ag 328.068†	-488.0	-25.1	-0.2033 µg/L	-0.2033 ppb	14:03:01
2	As 188.979†	-4.3	-1.0	-1.4916 µg/L	-1.4916 ppb	14:03:22
2	B 249.677†	332.6	31.3	1.4168 µg/L	1.4168 ppb	14:03:01
2	Ba 233.527†	-1.9	6.5	0.1414 µg/L	0.1414 ppb	14:03:22
2	Be 313.107†	-1052.8	111.9	0.0657 µg/L	0.0657 ppb	14:03:01
2	Cd 226.502†	-168.8	2.7	0.0619 µg/L	0.0619 ppb	14:03:22
2	Co 228.616†	44.8	-3.5	-0.1498 µg/L	-0.1498 ppb	14:03:22
2	Cr 267.716†	69.2	-11.4	-0.2483 µg/L	-0.2483 ppb	14:03:01
2	Cu 324.752†	4345.3	-55.6	-0.3613 µg/L	-0.3613 ppb	14:03:01
2	Mn 257.610†	-711.9	-21.0	-0.0652 µg/L	-0.0652 ppb	14:03:22
2	Mo 202.031†	27.8	22.5	2.2254 µg/L	2.2254 ppb	14:03:22
2	Ni 231.604†	362.7	-16.2	-0.9109 µg/L	-0.9109 ppb	14:03:22
2	P 214.914†	268.4	-5.5	-9.1439 µg/L	-9.1439 ppb	14:03:22
2	Pb 220.353†	28.8	-1.5	-0.3967 µg/L	-0.3967 ppb	14:03:22

2	S 181.975 Axial†	21.2	-1.4	-4.5519 µg/L	-4.5519 ppb	14:03:22
2	Sb 206.836†	34.9	12.0	10.707 µg/L	10.707 ppb	14:03:22
2	Se 196.026†	17.8	-9.6	-9.0158 µg/L	-9.0158 ppb	14:03:22
2	SiO2†	2763.3	-31.9	-5.7561 µg/L	-5.7561 ppb	14:03:01
2	Si 251.611†	425.4	-1.0	-0.0708 µg/L	-0.0708 ppb	14:03:22
2	Sn 189.927†	-4.2	3.3	1.2784 µg/L	1.2784 ppb	14:03:22
2	Ti 334.940†	-463.0	116.9	0.2699 µg/L	0.2699 ppb	14:03:01
2	Tl 190.801†	-37.3	-3.0	-2.9282 µg/L	-2.9282 ppb	14:03:22
2	U 409.014†	-2.6	3.2	0.2885 µg/L	0.2885 ppb	14:03:01
2	V 292.402†	76.3	-36.4	-0.4141 µg/L	-0.4141 ppb	14:03:01
2	Zn 213.857†	695.2	-317.5	-7.3089 µg/L	-7.3089 ppb	14:03:22
3	Sc RADIAL	98474.2	98474.2	102 %		14:01:53
3	Al 396.153Radial†	-101.8	19.3	9.1663 µg/L	9.1663 ppb	14:01:53
3	Ca 317.933Radial†	363.5	-28.0	-10.188 µg/L	-10.188 ppb	14:02:13
3	Fe 238.204 Radial†	11.5	-0.7	-7.9882 µg/L	-7.9882 ppb	14:02:13
3	K 766.490 Radial†	504.8	10.9	5.0664 µg/L	5.0664 ppb	14:01:53
3	Mg 279.077 IEC†	8.6	0.4	5.8894 µg/L	5.8894 ppb	14:02:13
3	Na 589.592 Radial†	170.1	-13.4	-6.6870 µg/L	-6.6870 ppb	14:01:53
3	Sr 421.552†	121.2	-20.3	-0.1205 µg/L	-0.1205 ppb	14:01:53
3	Sc 361.383	2113179.1	2113179.1	100.96 %		14:03:28
3	Y 371.029	1448101.8	1448101.8	101.06 %		14:03:28
3	Ag 328.068†	-468.7	-4.1	-0.0340 µg/L	-0.0340 ppb	14:03:33
3	As 188.979†	-3.8	-0.5	-0.7547 µg/L	-0.7547 ppb	14:03:54
3	B 249.677†	302.2	0.0	0.0043 µg/L	0.0043 ppb	14:03:33
3	Ba 233.527†	-6.5	2.0	0.0434 µg/L	0.0434 ppb	14:03:54
3	Be 313.107†	-1083.7	85.5	0.0502 µg/L	0.0502 ppb	14:03:33
3	Cd 226.502†	-158.7	13.4	0.3186 µg/L	0.3186 ppb	14:03:54
3	Co 228.616†	36.5	-12.0	-0.5125 µg/L	-0.5125 ppb	14:03:54
3	Cr 267.716†	63.5	-17.3	-0.3764 µg/L	-0.3764 ppb	14:03:33
3	Cu 324.752†	4351.9	-66.1	-0.4333 µg/L	-0.4333 ppb	14:03:33
3	Mn 257.610†	-722.6	-28.8	-0.0874 µg/L	-0.0874 ppb	14:03:54
3	Mo 202.031†	21.2	15.8	1.5657 µg/L	1.5657 ppb	14:03:54
3	Ni 231.604†	370.2	-10.2	-0.5706 µg/L	-0.5706 ppb	14:03:54
3	P 214.914†	270.8	-4.2	-6.8446 µg/L	-6.8446 ppb	14:03:54
3	Pb 220.353†	41.8	11.2	2.9432 µg/L	2.9432 ppb	14:03:54
3	S 181.975 Axial†	17.7	-5.0	-15.964 µg/L	-15.964 ppb	14:03:54
3	Sb 206.836†	24.6	1.6	1.4824 µg/L	1.4824 ppb	14:03:54
3	Se 196.026†	23.1	-4.4	-4.2103 µg/L	-4.2103 ppb	14:03:54
3	SiO2†	2761.4	-44.6	-8.0543 µg/L	-8.0543 ppb	14:03:33
3	Si 251.611†	427.7	-0.5	-0.0318 µg/L	-0.0318 ppb	14:03:54
3	Sn 189.927†	-2.9	4.6	1.7858 µg/L	1.7858 ppb	14:03:54
3	Ti 334.940†	-517.8	64.3	0.1498 µg/L	0.1498 ppb	14:03:33
3	Tl 190.801†	-32.6	1.8	1.7516 µg/L	1.7516 ppb	14:03:54
3	U 409.014†	37.3	42.7	3.8804 µg/L	3.8804 ppb	14:03:33
3	V 292.402†	105.8	-7.5	-0.0725 µg/L	-0.0725 ppb	14:03:33
3	Zn 213.857†	682.6	-332.8	-7.6580 µg/L	-7.6580 ppb	14:03:54

## Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2103732.7	100.51 %		0.480			0.48%
Sc RADIAL	98406.0	102 %		0.5			0.52%
Y 371.029	1440182.9	100.51 %		0.650			0.65%
Ag 328.068†	-33.2	-0.2670 µg/L		0.27050	-0.2670 ppb	0.27050	101.31%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-2.3	-1.1199 µg/L		9.50643	-1.1199 ppb	9.50643	848.88%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	-0.1	-0.2203 µg/L		1.60649	-0.2203 ppb	1.60649	729.07%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	14.9	0.6712 µg/L		0.70954	0.6712 ppb	0.70954	105.72%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	4.2	0.0916 µg/L		0.04902	0.0916 ppb	0.04902	53.52%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	91.3	0.0536 µg/L		0.01078	0.0536 ppb	0.01078	20.12%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-29.2	-10.628 µg/L		1.0398	-10.628 ppb	1.0398	9.78%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	5.9	0.1383 µg/L		0.15671	0.1383 ppb	0.15671	113.31%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-8.5	-0.3639 µg/L		0.18997	-0.3639 ppb	0.18997	52.21%

QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	-20.3	-0.4421 µg/L	0.23363	-0.4421 ppb	0.23363 52.85%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	-28.6	-0.1849 µg/L	0.36967	-0.1849 ppb	0.36967 199.95%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	0.9	10.817 µg/L	19.2327	10.817 ppb	19.2327 177.80%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	-47.8	-22.300 µg/L	23.7038	-22.300 ppb	23.7038 106.29%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	1.6	20.581 µg/L	17.9950	20.581 ppb	17.9950 87.43%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	-19.6	-0.0596 µg/L	0.03099	-0.0596 ppb	0.03099 52.00%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	16.8	1.6623 µg/L	0.52156	1.6623 ppb	0.52156 31.38%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	-3.0	-1.4893 µg/L	4.57035	-1.4893 ppb	4.57035 306.88%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-15.6	-0.8756 µg/L	0.28889	-0.8756 ppb	0.28889 32.99%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	-4.9	-8.0173 µg/L	1.15037	-8.0173 ppb	1.15037 14.35%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	4.4	1.1495 µg/L	1.68366	1.1495 ppb	1.68366 146.47%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	-1.9	-5.9135 µg/L	9.44368	-5.9135 ppb	9.44368 159.70%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	5.3	4.7365 µg/L	5.17748	4.7365 ppb	5.17748 109.31%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-5.2	-4.8345 µg/L	3.90679	-4.8345 ppb	3.90679 80.81%
QC value within limits for Se 196.026 Recovery = Not calculated					
SiO2†	-34.0	-6.1334 µg/L	1.76283	-6.1334 ppb	1.76283 28.74%
QC value within limits for SiO2 Recovery = Not calculated					
Si 251.611†	0.2	0.0138 µg/L	0.11444	0.0138 ppb	0.11444 829.65%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	4.9	1.8970 µg/L	0.68105	1.8970 ppb	0.68105 35.90%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	-25.5	-0.1517 µg/L	0.04414	-0.1517 ppb	0.04414 29.10%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	90.1	0.2088 µg/L	0.06007	0.2088 ppb	0.06007 28.77%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	-0.9	-0.9038 µg/L	2.40286	-0.9038 ppb	2.40286 265.85%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	5.5	0.4943 µg/L	3.28796	0.4943 ppb	3.28796 665.14%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	-21.4	-0.2411 µg/L	0.17084	-0.2411 ppb	0.17084 70.87%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	-321.7	-7.4036 µg/L	0.22266	-7.4036 ppb	0.22266 3.01%
QC value within limits for Zn 213.857 Recovery = Not calculated					
All analyte(s) passed QC.					

Sequence No.: 8

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 101

Date Collected: 3/16/2010 14:04:03

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99135.6	99135.6	102 %			14:04:34
1	Al 396.153Radial†	319.8	431.5	205.75 µg/L		205.75 ppb	14:04:34
1	Ca 317.933Radial†	976.8	568.4	206.83 µg/L		206.83 ppb	14:04:54
1	Fe 238.204 Radial†	19.8	7.4	87.080 µg/L		87.080 ppb	14:04:54
1	K 766.490 Radial†	804.0	299.6	139.83 µg/L		139.83 ppb	14:04:34
1	Mg 279.077 IEC†	31.9	23.2	305.37 µg/L		305.37 ppb	14:04:54
1	Na 589.592 Radial†	798.4	598.9	298.91 µg/L		298.91 ppb	14:04:34
1	Sr 421.552†	1004.2	841.0	4.9998 µg/L		4.9998 ppb	14:04:34
1	Sc 361.383	2092379.1	2092379.1	99.965 %			14:05:56
1	Y 371.029	1432026.5	1432026.5	99.941 %			14:05:56
1	Ag 328.068†	171.0	631.3	5.1099 µg/L		5.1099 ppb	14:06:02
1	As 188.979†	18.0	21.2	31.333 µg/L		31.333 ppb	14:06:22
1	B 249.677†	1373.0	1074.1	48.707 µg/L		48.707 ppb	14:06:22
1	Ba 233.527†	246.0	254.5	5.5747 µg/L		5.5747 ppb	14:06:22
1	Be 313.107†	7555.8	8717.3	5.1199 µg/L		5.1199 ppb	14:06:02
1	Cd 226.502†	42.2	212.8	5.0548 µg/L		5.0548 ppb	14:06:22
1	Co 228.616†	156.2	108.2	4.6480 µg/L		4.6480 ppb	14:06:22
1	Cr 267.716†	299.8	219.6	4.7801 µg/L		4.7801 ppb	14:06:22
1	Cu 324.752†	5988.3	1613.7	10.556 µg/L		10.556 ppb	14:06:02
1	Mn 257.610†	2771.2	3459.2	10.381 µg/L		10.381 ppb	14:06:22
1	Mo 202.031†	122.7	117.6	11.643 µg/L		11.643 ppb	14:06:22
1	Ni 231.604†	475.7	98.9	5.5441 µg/L		5.5441 ppb	14:06:22
1	P 214.914†	373.9	101.6	167.74 µg/L		167.74 ppb	14:06:22
1	Pb 220.353†	69.3	39.2	10.246 µg/L		10.246 ppb	14:06:22
1	S 181.975 Axial†	58.8	36.3	115.39 µg/L		115.39 ppb	14:06:22
1	Sb 206.836†	40.6	17.9	16.105 µg/L		16.105 ppb	14:06:22
1	Se 196.026†	56.2	28.9	27.211 µg/L		27.211 ppb	14:06:22
1	SiO2†	3946.4	1168.0	210.87 µg/L		210.87 ppb	14:06:02
1	Si 251.611†	1875.8	1452.4	98.739 µg/L		98.739 ppb	14:06:22
1	Sn 189.927†	22.1	29.6	11.534 µg/L		11.534 ppb	14:06:22
1	Ti 334.940†	1641.2	2219.0	5.1680 µg/L		5.1680 ppb	14:06:02
1	Tl 190.801†	-6.3	27.8	27.294 µg/L		27.294 ppb	14:06:22
1	U 409.014†	616.5	622.5	56.498 µg/L		56.498 ppb	14:06:02
1	V 292.402†	554.5	442.4	5.3704 µg/L		5.3704 ppb	14:06:02
1	Zn 213.857†	1334.7	326.3	7.4505 µg/L		7.4505 ppb	14:06:22
2	Sc RADIAL	99015.1	99015.1	102 %			14:05:00
2	Al 396.153Radial†	335.2	447.0	213.16 µg/L		213.16 ppb	14:05:00
2	Ca 317.933Radial†	968.2	561.2	204.22 µg/L		204.22 ppb	14:05:20
2	Fe 238.204 Radial†	18.1	5.7	68.037 µg/L		68.037 ppb	14:05:20
2	K 766.490 Radial†	782.7	279.7	130.55 µg/L		130.55 ppb	14:05:00
2	Mg 279.077 IEC†	34.3	25.5	336.87 µg/L		336.87 ppb	14:05:20
2	Na 589.592 Radial†	766.7	568.9	283.93 µg/L		283.93 ppb	14:05:00
2	Sr 421.552†	1007.8	845.7	5.0274 µg/L		5.0274 ppb	14:05:00
2	Sc 361.383	2103084.1	2103084.1	100.48 %			14:06:28
2	Y 371.029	1439658.8	1439658.8	100.47 %			14:06:28
2	Ag 328.068†	79.0	538.9	4.3590 µg/L		4.3590 ppb	14:06:34
2	As 188.979†	16.8	20.0	29.449 µg/L		29.449 ppb	14:06:54
2	B 249.677†	1371.9	1066.1	48.352 µg/L		48.352 ppb	14:06:54
2	Ba 233.527†	235.0	242.3	5.3067 µg/L		5.3067 ppb	14:06:54
2	Be 313.107†	7484.7	8608.0	5.0557 µg/L		5.0557 ppb	14:06:34
2	Cd 226.502†	32.0	202.4	4.8093 µg/L		4.8093 ppb	14:06:54
2	Co 228.616†	160.3	111.5	4.7870 µg/L		4.7870 ppb	14:06:54
2	Cr 267.716†	295.9	214.3	4.6625 µg/L		4.6625 ppb	14:06:54
2	Cu 324.752†	6013.7	1608.5	10.519 µg/L		10.519 ppb	14:06:34
2	Mn 257.610†	2763.7	3437.6	10.313 µg/L		10.313 ppb	14:06:54
2	Mo 202.031†	111.4	105.7	10.466 µg/L		10.466 ppb	14:06:54
2	Ni 231.604†	470.8	91.6	5.1355 µg/L		5.1355 ppb	14:06:54
2	P 214.914†	357.6	83.5	137.69 µg/L		137.69 ppb	14:06:54
2	Pb 220.353†	71.7	41.2	10.788 µg/L		10.788 ppb	14:06:54



2	S 181.975 Axial†	55.5	32.7	104.16 µg/L	104.16 ppb	14:06:54
2	Sb 206.836†	34.7	11.8	10.612 µg/L	10.612 ppb	14:06:54
2	Se 196.026†	61.9	34.3	32.143 µg/L	32.143 ppb	14:06:54
2	SiO2†	3980.4	1181.7	213.35 µg/L	213.35 ppb	14:06:34
2	Si 251.611†	1861.7	1428.7	97.131 µg/L	97.131 ppb	14:06:54
2	Sn 189.927†	22.6	30.0	11.687 µg/L	11.687 ppb	14:06:54
2	Ti 334.940†	1635.6	2205.1	5.1330 µg/L	5.1330 ppb	14:06:34
2	Tl 190.801†	-12.4	21.8	21.380 µg/L	21.380 ppb	14:06:54
2	U 409.014†	568.8	571.9	51.905 µg/L	51.905 ppb	14:06:34
2	V 292.402†	458.4	343.9	4.1959 µg/L	4.1959 ppb	14:06:34
2	Zn 213.857†	1347.2	331.9	7.5805 µg/L	7.5805 ppb	14:06:54
3	Sc RADIAL	98662.9	98662.9	102 %		14:05:25
3	Al 396.153Radial†	307.8	421.3	200.90 µg/L	200.90 ppb	14:05:25
3	Ca 317.933Radial†	966.0	562.4	204.66 µg/L	204.66 ppb	14:05:46
3	Fe 238.204 Radial†	21.0	8.7	102.55 µg/L	102.55 ppb	14:05:46
3	K 766.490 Radial†	794.6	294.2	137.28 µg/L	137.28 ppb	14:05:25
3	Mg 279.077 IEC†	33.5	24.9	328.04 µg/L	328.04 ppb	14:05:46
3	Na 589.592 Radial†	784.5	589.0	293.98 µg/L	293.98 ppb	14:05:25
3	Sr 421.552†	965.0	807.2	4.7989 µg/L	4.7989 ppb	14:05:25
3	Sc 361.383	2083397.0	2083397.0	99.536 %		14:07:00
3	Y 371.029	1425472.4	1425472.4	99.484 %		14:07:00
3	Ag 328.068†	101.2	561.8	4.5487 µg/L	4.5487 ppb	14:07:06
3	As 188.979†	17.7	21.0	31.021 µg/L	31.021 ppb	14:07:26
3	B 249.677†	1265.5	972.1	44.067 µg/L	44.067 ppb	14:07:26
3	Ba 233.527†	190.0	199.3	4.3663 µg/L	4.3663 ppb	14:07:26
3	Be 313.107†	6871.8	8062.7	4.7355 µg/L	4.7355 ppb	14:07:06
3	Cd 226.502†	12.3	182.9	4.3402 µg/L	4.3402 ppb	14:07:26
3	Co 228.616†	129.0	81.6	3.5039 µg/L	3.5039 ppb	14:07:26
3	Cr 267.716†	255.4	176.4	3.8390 µg/L	3.8390 ppb	14:07:26
3	Cu 324.752†	5895.5	1546.3	10.119 µg/L	10.119 ppb	14:07:06
3	Mn 257.610†	2245.9	2943.3	8.8301 µg/L	8.8301 ppb	14:07:26
3	Mo 202.031†	103.5	98.8	9.7817 µg/L	9.7817 ppb	14:07:26
3	Ni 231.604†	450.3	75.5	4.2322 µg/L	4.2322 ppb	14:07:26
3	P 214.914†	353.7	83.0	136.85 µg/L	136.85 ppb	14:07:26
3	Pb 220.353†	65.1	35.2	9.2083 µg/L	9.2083 ppb	14:07:26
3	S 181.975 Axial†	53.0	30.7	97.569 µg/L	97.569 ppb	14:07:26
3	Sb 206.836†	30.2	7.6	6.8898 µg/L	6.8898 ppb	14:07:26
3	Se 196.026†	58.3	31.2	29.401 µg/L	29.401 ppb	14:07:26
3	SiO2†	3940.6	1179.3	212.90 µg/L	212.90 ppb	14:07:06
3	Si 251.611†	1695.4	1279.3	86.969 µg/L	86.969 ppb	14:07:26
3	Sn 189.927†	19.8	27.3	10.646 µg/L	10.646 ppb	14:07:26
3	Ti 334.940†	1430.7	2014.6	4.6882 µg/L	4.6882 ppb	14:07:06
3	Tl 190.801†	-12.1	21.9	21.490 µg/L	21.490 ppb	14:07:26
3	U 409.014†	522.0	530.3	48.122 µg/L	48.122 ppb	14:07:06
3	V 292.402†	489.6	379.6	4.6018 µg/L	4.6018 ppb	14:07:06
3	Zn 213.857†	1250.7	247.7	5.6441 µg/L	5.6441 ppb	14:07:26

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2092953.4	99.993 %	0.4709			0.47%
Sc RADIAL	98937.8	102 %	0.3			0.25%
Y 371.029	1432385.9	99.966 %	0.4955			0.50%
Ag 328.068†	577.3	4.6725 µg/L	0.39048	4.6725 ppb	0.39048	8.36%
QC value within limits for Ag 328.068 Recovery = 93.45%						
Al 396.153Radial†	433.3	206.61 µg/L	6.174	206.61 ppb	6.174	2.99%
QC value within limits for Al 396.153Radial Recovery = 103.30%						
As 188.979†	20.7	30.601 µg/L	1.0098	30.601 ppb	1.0098	3.30%
QC value within limits for As 188.979 Recovery = 102.00%						
B 249.677†	1037.4	47.042 µg/L	2.5830	47.042 ppb	2.5830	5.49%
QC value within limits for B 249.677 Recovery = 94.08%						
Ba 233.527†	232.0	5.0826 µg/L	0.63463	5.0826 ppb	0.63463	12.49%
QC value within limits for Ba 233.527 Recovery = 101.65%						
Be 313.107†	8462.7	4.9704 µg/L	0.20593	4.9704 ppb	0.20593	4.14%
QC value within limits for Be 313.107 Recovery = 99.41%						
Ca 317.933Radial†	564.0	205.24 µg/L	1.399	205.24 ppb	1.399	0.68%
QC value within limits for Ca 317.933Radial Recovery = 102.62%						
Cd 226.502†	199.4	4.7347 µg/L	0.36306	4.7347 ppb	0.36306	7.67%
QC value within limits for Cd 226.502 Recovery = 94.69%						
Co 228.616†	100.4	4.3130 µg/L	0.70411	4.3130 ppb	0.70411	16.33%

QC value within limits for Co 228.616 Recovery = 86.26%							
Cr 267.716†	203.4	4.4272 µg/L	0.51280	4.4272 ppb	0.51280	11.58%	
QC value within limits for Cr 267.716 Recovery = 88.54%							
Cu 324.752†	1589.5	10.398 µg/L	0.2423	10.398 ppb	0.2423	2.33%	
QC value within limits for Cu 324.752 Recovery = 103.98%							
Fe 238.204 Radial†	7.3	85.888 µg/L	17.2853	85.888 ppb	17.2853	20.13%	
QC value within limits for Fe 238.204 Radial Recovery = 85.89%							
K 766.490 Radial†	291.2	135.89 µg/L	4.794	135.89 ppb	4.794	3.53%	
QC value within limits for K 766.490 Radial Recovery = 90.59%							
Mg 279.077 IEC†	24.5	323.43 µg/L	16.250	323.43 ppb	16.250	5.02%	
QC value within limits for Mg 279.077 IEC Recovery = 107.81%							
Mn 257.610†	3280.0	9.8413 µg/L	0.87640	9.8413 ppb	0.87640	8.91%	
QC value within limits for Mn 257.610 Recovery = 98.41%							
Mo 202.031†	107.4	10.630 µg/L	0.9415	10.630 ppb	0.9415	8.86%	
QC value within limits for Mo 202.031 Recovery = 106.30%							
Na 589.592 Radial†	585.6	292.27 µg/L	7.636	292.27 ppb	7.636	2.61%	
QC value within limits for Na 589.592 Radial Recovery = 97.42%							
Ni 231.604†	88.7	4.9706 µg/L	0.67133	4.9706 ppb	0.67133	13.51%	
QC value within limits for Ni 231.604 Recovery = 99.41%							
P 214.914†	89.4	147.43 µg/L	17.599	147.43 ppb	17.599	11.94%	
QC value within limits for P 214.914 Recovery = 98.29%							
Pb 220.353†	38.5	10.081 µg/L	0.8026	10.081 ppb	0.8026	7.96%	
QC value within limits for Pb 220.353 Recovery = 100.81%							
S 181.975 Axial†	33.2	105.71 µg/L	9.013	105.71 ppb	9.013	8.53%	
QC value within limits for S 181.975 Axial Recovery = 105.71%							
Sb 206.836†	12.4	11.202 µg/L	4.6357	11.202 ppb	4.6357	41.38%	
QC value within limits for Sb 206.836 Recovery = 112.02%							
Se 196.026†	31.5	29.585 µg/L	2.4709	29.585 ppb	2.4709	8.35%	
QC value within limits for Se 196.026 Recovery = 98.62%							
SiO2†	1176.3	212.37 µg/L	1.320	212.37 ppb	1.320	0.62%	
QC value within limits for SiO2 Recovery = 99.70%							
Si 251.611†	1386.8	94.280 µg/L	6.3819	94.280 ppb	6.3819	6.77%	
QC value within limits for Si 251.611 Recovery = 94.28%							
Sn 189.927†	28.9	11.289 µg/L	0.5618	11.289 ppb	0.5618	4.98%	
QC value within limits for Sn 189.927 Recovery = 112.89%							
Sr 421.552†	831.3	4.9420 µg/L	0.12476	4.9420 ppb	0.12476	2.52%	
QC value within limits for Sr 421.552 Recovery = 98.84%							
Ti 334.940†	2146.2	4.9964 µg/L	0.26749	4.9964 ppb	0.26749	5.35%	
QC value within limits for Ti 334.940 Recovery = 99.93%							
Tl 190.801†	23.9	23.388 µg/L	3.3834	23.388 ppb	3.3834	14.47%	
QC value within limits for Tl 190.801 Recovery = 116.94%							
U 409.014†	574.9	52.175 µg/L	4.1942	52.175 ppb	4.1942	8.04%	
QC value within limits for U 409.014 Recovery = 104.35%							
V 292.402†	388.6	4.7227 µg/L	0.59653	4.7227 ppb	0.59653	12.63%	
QC value within limits for V 292.402 Recovery = 94.45%							
Zn 213.857†	302.0	6.8917 µg/L	1.08243	6.8917 ppb	1.08243	15.71%	
QC value less than the lower limit for Zn 213.857 Recovery = 68.92%							
QC Failed. Continue with analysis.							

Sequence No.: 9

Sample ID: ICSA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 103

Date Collected: 3/16/2010 14:07:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95101.3	95101.3	98.3 %		14:08:15
1	Al 396.153Radial†	1068948.1	1088029.1	519390 µg/L	519390 ppb	14:08:10
1	Ca 317.933Radial†	1322895.4	1345976.5	489830 µg/L	489830 ppb	14:08:10
1	Fe 238.204 Radial†	15758.7	16026.3	189550 µg/L	189550 ppb	14:08:15
1	K 766.490 Radial†	183.6	-298.5	-139.29 µg/L	-139.29 ppb	14:08:15
1	Mg 279.077 IEC†	37323.7	37977.8	500470 µg/L	500470 ppb	14:08:15
1	Na 589.592 Radial†	173.3	-4.2	-2.1132 µg/L	-2.1132 ppb	14:08:15
1	Sr 421.552†	723.2	596.6	3.5466 µg/L	3.5466 ppb	14:08:15
1	Sc 361.383	1962419.5	1962419.5	93.756 %		14:08:51
1	Y 371.029	1328103.7	1328103.7	92.688 %		14:08:51
1	Ag 328.068†	-2109.5	-1789.7	0.3332 µg/L	0.3332 ppb	14:09:12
1	As 188.979†	26.5	31.5	-36.469 µg/L	-36.469 ppb	14:09:12
1	B 249.677†	1192.3	972.4	-54.785 µg/L	-54.785 ppb	14:08:51
1	Ba 233.527†	311.3	340.4	7.4797 µg/L	7.4797 ppb	14:09:12
1	Be 313.107†	-1694.4	-648.4	-0.3927 µg/L	-0.3927 ppb	14:08:51
1	Cd 226.502†	836.0	1062.3	3.8277 µg/L	3.8277 ppb	14:09:12
1	Co 228.616†	117.7	77.5	3.2585 µg/L	3.2585 ppb	14:09:12
1	Cr 267.716†	-8.7	-89.5	-1.9348 µg/L	-1.9348 ppb	14:09:12
1	Cu 324.752†	-794.8	-5224.4	1.5123 µg/L	1.5123 ppb	14:09:12
1	Mn 257.610†	6547.1	7670.0	0.5282 µg/L	0.5282 ppb	14:08:51
1	Mo 202.031†	-76.6	-86.9	-1.3920 µg/L	-1.3920 ppb	14:09:12
1	Ni 231.604†	290.1	-67.5	-1.3258 µg/L	-1.3258 ppb	14:09:12
1	P 214.914†	300.2	47.8	78.143 µg/L	78.143 ppb	14:09:12
1	Pb 220.353†	-135.1	-174.3	-3.5676 µg/L	-3.5676 ppb	14:09:12
1	S 181.975 Axial†	-17.9	-41.7	-132.62 µg/L	-132.62 ppb	14:09:12
1	Sb 206.836†	23.5	2.4	-5.3575 µg/L	-5.3575 ppb	14:09:12
1	Se 196.026†	-173.4	-212.3	-12.241 µg/L	-12.241 ppb	14:09:12
1	SiO2†	2437.2	-180.3	-32.546 µg/L	-32.546 ppb	14:09:12
1	Si 251.611†	451.7	57.7	3.9218 µg/L	3.9218 ppb	14:09:12
1	Sn 189.927†	-90.6	-89.2	15.477 µg/L	15.477 ppb	14:09:12
1	Ti 334.940†	11734.0	13092.7	-1.1982 µg/L	-1.1982 ppb	14:08:51
1	Tl 190.801†	-5.5	28.3	-40.482 µg/L	-40.482 ppb	14:09:12
1	U 409.014†	-85.6	-85.5	-63.991 µg/L	-63.991 ppb	14:08:51
1	V 292.402†	1637.5	1634.2	-4.8417 µg/L	-4.8417 ppb	14:09:12
1	Zn 213.857†	2250.2	1391.2	-5.2885 µg/L	-5.2885 ppb	14:09:12
2	Sc RADIAL	94743.4	94743.4	97.9 %		14:08:27
2	Al 396.153Radial†	1071081.9	1094319.4	522390 µg/L	522390 ppb	14:08:21
2	Ca 317.933Radial†	1325360.9	1353582.1	492600 µg/L	492600 ppb	14:08:21
2	Fe 238.204 Radial†	15661.2	15987.3	189090 µg/L	189090 ppb	14:08:27
2	K 766.490 Radial†	156.2	-325.8	-152.03 µg/L	-152.03 ppb	14:08:27
2	Mg 279.077 IEC†	37248.3	38044.3	501350 µg/L	501350 ppb	14:08:27
2	Na 589.592 Radial†	229.2	53.5	26.712 µg/L	26.712 ppb	14:08:27
2	Sr 421.552†	690.4	565.9	3.3641 µg/L	3.3641 ppb	14:08:27
2	Sc 361.383	1958596.1	1958596.1	93.574 %		14:09:20
2	Y 371.029	1328310.8	1328310.8	92.703 %		14:09:20
2	Ag 328.068†	-2099.7	-1783.7	0.3431 µg/L	0.3431 ppb	14:09:41
2	As 188.979†	19.8	24.4	-47.282 µg/L	-47.282 ppb	14:09:41
2	B 249.677†	1155.4	935.4	-56.223 µg/L	-56.223 ppb	14:09:20
2	Ba 233.527†	296.3	325.0	7.1421 µg/L	7.1421 ppb	14:09:41
2	Be 313.107†	-1675.4	-631.6	-0.3827 µg/L	-0.3827 ppb	14:09:20
2	Cd 226.502†	836.2	1064.2	3.9252 µg/L	3.9252 ppb	14:09:41
2	Co 228.616†	119.8	79.9	3.3643 µg/L	3.3643 ppb	14:09:41
2	Cr 267.716†	-14.4	-95.6	-2.0676 µg/L	-2.0676 ppb	14:09:41
2	Cu 324.752†	-833.5	-5267.5	1.1444 µg/L	1.1444 ppb	14:09:41
2	Mn 257.610†	6564.5	7702.4	0.5389 µg/L	0.5389 ppb	14:09:20
2	Mo 202.031†	-59.6	-68.9	0.3706 µg/L	0.3706 ppb	14:09:41
2	Ni 231.604†	281.1	-76.5	-1.8354 µg/L	-1.8354 ppb	14:09:41
2	P 214.914†	298.1	46.2	76.648 µg/L	76.648 ppb	14:09:41
2	Pb 220.353†	-119.4	-157.8	0.9868 µg/L	0.9868 ppb	14:09:41

2	S 181.975 Axial†	-36.9	-61.9	-197.09 µg/L	-197.09 ppb	14:09:41
2	Sb 206.836†	14.8	-6.9	-13.630 µg/L	-13.630 ppb	14:09:41
2	Se 196.026†	-170.9	-209.9	-12.396 µg/L	-12.396 ppb	14:09:41
2	SiO2†	2462.8	-147.8	-26.690 µg/L	-26.690 ppb	14:09:41
2	Si 251.611†	450.0	56.8	3.8591 µg/L	3.8591 ppb	14:09:41
2	Sn 189.927†	-95.2	-94.3	13.772 µg/L	13.772 ppb	14:09:41
2	Ti 334.940†	11708.0	13089.3	-1.2316 µg/L	-1.2316 ppb	14:09:20
2	Tl 190.801†	-0.2	33.9	-35.621 µg/L	-35.621 ppb	14:09:41
2	U 409.014†	-71.1	-70.2	-62.706 µg/L	-62.706 ppb	14:09:20
2	V 292.402†	1595.5	1592.7	-5.2578 µg/L	-5.2578 ppb	14:09:41
2	Zn 213.857†	2260.4	1406.8	-4.9565 µg/L	-4.9565 ppb	14:09:41
3	Sc RADIAL	94615.8	94615.8	97.8 %		14:08:39
3	Al 396.153Radial†	1070126.8	1094818.2	522630 µg/L	522630 ppb	14:08:33
3	Ca 317.933Radial†	1321933.3	1351902.1	491990 µg/L	491990 ppb	14:08:33
3	Fe 238.204 Radial†	15752.5	16102.2	190450 µg/L	190450 ppb	14:08:39
3	K 766.490 Radial†	346.7	-130.6	-60.965 µg/L	-60.965 ppb	14:08:39
3	Mg 279.077 IEC†	37295.7	38144.1	502660 µg/L	502660 ppb	14:08:39
3	Na 589.592 Radial†	176.8	0.2	0.1120 µg/L	0.1120 ppb	14:08:39
3	Sr 421.552†	727.4	604.7	3.5948 µg/L	3.5948 ppb	14:08:39
3	Sc 361.383	1957230.1	1957230.1	93.508 %		14:09:49
3	Y 371.029	1328849.1	1328849.1	92.740 %		14:09:49
3	Ag 328.068†	-2090.5	-1775.4	0.5143 µg/L	0.5143 ppb	14:10:09
3	As 188.979†	27.1	32.2	-35.852 µg/L	-35.852 ppb	14:10:09
3	B 249.677†	1079.8	855.5	-60.559 µg/L	-60.559 ppb	14:09:49
3	Ba 233.527†	289.5	318.0	6.9890 µg/L	6.9890 ppb	14:10:09
3	Be 313.107†	-1694.6	-653.4	-0.3956 µg/L	-0.3956 ppb	14:09:49
3	Cd 226.502†	841.7	1070.7	3.9264 µg/L	3.9264 ppb	14:10:09
3	Co 228.616†	97.9	56.7	2.3643 µg/L	2.3643 ppb	14:10:09
3	Cr 267.716†	-18.6	-100.1	-2.1662 µg/L	-2.1662 ppb	14:10:09
3	Cu 324.752†	-774.4	-5204.9	1.8089 µg/L	1.8089 ppb	14:10:09
3	Mn 257.610†	6613.9	7760.1	0.7041 µg/L	0.7041 ppb	14:09:49
3	Mo 202.031†	-53.8	-62.6	1.0417 µg/L	1.0417 ppb	14:10:09
3	Ni 231.604†	295.6	-60.8	-0.9382 µg/L	-0.9382 ppb	14:10:09
3	P 214.914†	309.6	58.6	96.340 µg/L	96.340 ppb	14:10:09
3	Pb 220.353†	-120.4	-159.0	0.7035 µg/L	0.7035 ppb	14:10:09
3	S 181.975 Axial†	-31.1	-55.8	-177.44 µg/L	-177.44 ppb	14:10:09
3	Sb 206.836†	23.5	2.4	-5.3232 µg/L	-5.3232 ppb	14:10:09
3	Se 196.026†	-197.2	-238.2	-35.579 µg/L	-35.579 ppb	14:10:09
3	SiO2†	2453.8	-155.6	-28.094 µg/L	-28.094 ppb	14:10:09
3	Si 251.611†	446.0	52.8	3.5919 µg/L	3.5919 ppb	14:10:09
3	Sn 189.927†	-86.3	-84.9	17.393 µg/L	17.393 ppb	14:10:09
3	Ti 334.940†	11750.2	13143.2	-1.2193 µg/L	-1.2193 ppb	14:09:49
3	Tl 190.801†	-4.4	29.4	-39.609 µg/L	-39.609 ppb	14:10:09
3	U 409.014†	-10.1	-5.0	-56.935 µg/L	-56.935 ppb	14:09:49
3	V 292.402†	1598.6	1597.3	-5.3658 µg/L	-5.3658 ppb	14:10:09
3	Zn 213.857†	2255.7	1403.5	-5.1752 µg/L	-5.1752 ppb	14:10:09

## Mean Data: ICSCA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1959415.2	93.613 %	0.1285			0.14%
Sc RADIAL	94820.2	98.0 %	0.26			0.27%
Y 371.029	1328421.2	92.711 %	0.0269			0.03%
Ag 328.068†	-1783.0	0.3969 µg/L	0.10183	0.3969 ppb	0.10183	25.66%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	1092388.9	521470 µg/L	1806.3	521470 ppb	1806.3	0.35%
QC value within limits for Al 396.153Radial Recovery = 104.29%						
As 188.979†	29.4	-39.868 µg/L	6.4283	-39.868 ppb	6.4283	16.12%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	921.1	-57.189 µg/L	3.0060	-57.189 ppb	3.0060	5.26%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	327.8	7.2036 µg/L	0.25105	7.2036 ppb	0.25105	3.49%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-644.5	-0.3903 µg/L	0.00673	-0.3903 ppb	0.00673	1.72%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1350486.9	491470 µg/L	1454.0	491470 ppb	1454.0	0.30%
QC value within limits for Ca 317.933Radial Recovery = 98.29%						
Cd 226.502†	1065.7	3.8931 µg/L	0.05662	3.8931 ppb	0.05662	1.45%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	71.4	2.9957 µg/L	0.54934	2.9957 ppb	0.54934	18.34%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	-95.1 -2.0562 µg/L	0.11610 -2.0562 ppb	0.11610 5.65%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-5232.3 1.4885 µg/L	0.33291 1.4885 ppb	0.33291 22.37%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	16038.6 189700 µg/L	691.3 189700 ppb	691.3 0.36%
QC value within limits for Fe 238.204 Radial	Recovery = 94.85%		
K 766.490 Radial†	-251.6 -117.43 µg/L	49.312 -117.43 ppb	49.312 41.99%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	38055.4 501490 µg/L	1102.7 501490 ppb	1102.7 0.22%
QC value within limits for Mg 279.077 IEC	Recovery = 100.30%		
Mn 257.610†	7710.8 0.5904 µg/L	0.09865 0.5904 ppb	0.09865 16.71%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	-72.8 0.0068 µg/L	1.25699 0.0068 ppb	1.25699 >999.9%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	16.5 8.2368 µg/L	16.03833 8.2368 ppb	16.03833 194.71%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-68.3 -1.3665 µg/L	0.44997 -1.3665 ppb	0.44997 32.93%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	50.9 83.710 µg/L	10.9632 83.710 ppb	10.9632 13.10%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-163.7 -0.6258 µg/L	2.55166 -0.6258 ppb	2.55166 407.75%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	-53.1 -169.05 µg/L	33.044 -169.05 ppb	33.044 19.55%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	-0.7 -8.1034 µg/L	4.78578 -8.1034 ppb	4.78578 59.06%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-220.2 -20.072 µg/L	13.4298 -20.072 ppb	13.4298 66.91%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-161.2 -29.110 µg/L	3.0573 -29.110 ppb	3.0573 10.50%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	55.8 3.7909 µg/L	0.17521 3.7909 ppb	0.17521 4.62%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	-89.5 15.547 µg/L	1.8114 15.547 ppb	1.8114 11.65%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	589.0 3.5018 µg/L	0.12168 3.5018 ppb	0.12168 3.47%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	13108.4 -1.2163 µg/L	0.01687 -1.2163 ppb	0.01687 1.39%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	30.5 -38.571 µg/L	2.5916 -38.571 ppb	2.5916 6.72%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	-53.6 -61.211 µg/L	3.7580 -61.211 ppb	3.7580 6.14%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	1608.1 -5.1551 µg/L	0.27672 -5.1551 ppb	0.27672 5.37%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	1400.5 -5.1401 µg/L	0.16878 -5.1401 ppb	0.16878 3.28%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

Sequence No.: 10  
 Sample ID: ICSAB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 104  
 Date Collected: 3/16/2010 14:10:20  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94053.1	94053.1	97.2 %		14:10:57
1	Al 396.153Radial†	1067713.2	1098883.6	524560 µg/L	524560 ppb	14:10:52
1	Ca 317.933Radial†	1313723.3	1351543.5	491860 µg/L	491860 ppb	14:10:52
1	Fe 238.204 Radial†	15574.9	16015.9	189440 µg/L	189440 ppb	14:10:57
1	K 766.490 Radial†	11413.8	11260.4	5255.0 µg/L	5255.0 ppb	14:10:57
1	Mg 279.077 IEC†	37024.0	38092.7	501990 µg/L	501990 ppb	14:10:57
1	Na 589.592 Radial†	10371.5	10492.5	5236.9 µg/L	5236.9 ppb	14:10:57
1	Sr 421.552†	84533.3	86852.3	516.33 µg/L	516.33 ppb	14:10:52
1	Sc 361.383	1945677.3	1945677.3	92.956 %		14:11:35
1	Y 371.029	1321275.4	1321275.4	92.212 %		14:11:35
1	Ag 328.068†	28537.8	31160.5	268.35 µg/L	268.35 ppb	14:11:35
1	As 188.979†	352.2	382.2	480.63 µg/L	480.63 ppb	14:11:56
1	B 249.677†	11895.7	12497.7	469.11 µg/L	469.11 ppb	14:11:35
1	Ba 233.527†	21530.7	23170.5	507.72 µg/L	507.72 ppb	14:11:56
1	Be 313.107†	391033.5	421822.4	247.64 µg/L	247.64 ppb	14:11:35
1	Cd 226.502†	19152.1	20773.9	472.85 µg/L	472.85 ppb	14:11:56
1	Co 228.616†	9873.1	10573.1	453.56 µg/L	453.56 ppb	14:11:56
1	Cr 267.716†	21065.8	22581.8	491.48 µg/L	491.48 ppb	14:11:56
1	Cu 324.752†	79293.3	80925.0	564.18 µg/L	564.18 ppb	14:11:35
1	Mn 257.610†	159425.0	172192.2	494.88 µg/L	494.88 ppb	14:11:35
1	Mo 202.031†	4814.2	5173.9	519.16 µg/L	519.16 ppb	14:11:56
1	Ni 231.604†	7809.6	8024.5	451.99 µg/L	451.99 ppb	14:11:56
1	P 214.914†	1791.6	1655.0	2696.6 µg/L	2696.6 ppb	14:11:56
1	Pb 220.353†	1636.8	1730.7	496.31 µg/L	496.31 ppb	14:11:56
1	S 181.975 Axial†	767.2	802.8	2555.0 µg/L	2555.0 ppb	14:11:56
1	Sb 206.836†	588.4	610.2	539.79 µg/L	539.79 ppb	14:11:56
1	Se 196.026†	2310.6	2458.3	2495.9 µg/L	2495.9 ppb	14:11:56
1	SiO2†	60072.3	61844.4	11165 µg/L	11165 ppb	14:11:35
1	Si 251.611†	71989.3	77020.1	5236.1 µg/L	5236.1 ppb	14:11:35
1	Sn 189.927†	1167.8	1263.7	542.42 µg/L	542.42 ppb	14:11:56
1	Ti 334.940†	217593.7	234658.8	516.82 µg/L	516.82 ppb	14:11:35
1	Tl 190.801†	446.3	514.2	439.15 µg/L	439.15 ppb	14:11:56
1	U 409.014†	5107.8	5500.6	443.11 µg/L	443.11 ppb	14:11:35
1	V 292.402†	42830.7	45963.8	524.13 µg/L	524.13 ppb	14:11:35
1	Zn 213.857†	21890.3	22540.2	478.65 µg/L	478.65 ppb	14:11:56
2	Sc RADIAL	93638.4	93638.4	96.7 %		14:11:09
2	Al 396.153Radial†	1069334.2	1105424.8	527690 µg/L	527690 ppb	14:11:03
2	Ca 317.933Radial†	1320981.3	1365032.5	496760 µg/L	496760 ppb	14:11:03
2	Fe 238.204 Radial†	15571.4	16083.3	190240 µg/L	190240 ppb	14:11:09
2	K 766.490 Radial†	11415.1	11313.8	5279.9 µg/L	5279.9 ppb	14:11:09
2	Mg 279.077 IEC†	37110.4	38350.8	505400 µg/L	505400 ppb	14:11:09
2	Na 589.592 Radial†	10420.1	10590.0	5285.5 µg/L	5285.5 ppb	14:11:09
2	Sr 421.552†	84800.8	87514.0	520.26 µg/L	520.26 ppb	14:11:03
2	Sc 361.383	1955393.4	1955393.4	93.421 %		14:12:05
2	Y 371.029	1326796.4	1326796.4	92.597 %		14:12:05
2	Ag 328.068†	28696.1	31177.3	268.53 µg/L	268.53 ppb	14:12:05
2	As 188.979†	357.9	386.3	486.04 µg/L	486.04 ppb	14:12:25
2	B 249.677†	11881.3	12418.7	465.10 µg/L	465.10 ppb	14:12:05
2	Ba 233.527†	21506.4	23029.4	504.63 µg/L	504.63 ppb	14:12:25
2	Be 313.107†	391632.1	420372.9	246.78 µg/L	246.78 ppb	14:12:05
2	Cd 226.502†	19130.2	20648.1	469.76 µg/L	469.76 ppb	14:12:25
2	Co 228.616†	9843.2	10488.4	449.92 µg/L	449.92 ppb	14:12:25
2	Cr 267.716†	21078.3	22482.6	489.32 µg/L	489.32 ppb	14:12:25
2	Cu 324.752†	79499.1	80721.4	563.00 µg/L	563.00 ppb	14:12:05
2	Mn 257.610†	159830.4	171773.9	493.44 µg/L	493.44 ppb	14:12:05
2	Mo 202.031†	4791.9	5124.3	514.28 µg/L	514.28 ppb	14:12:25
2	Ni 231.604†	7776.7	7947.5	447.69 µg/L	447.69 ppb	14:12:25
2	P 214.914†	1776.3	1629.0	2653.8 µg/L	2653.8 ppb	14:12:25
2	Pb 220.353†	1629.1	1713.6	492.08 µg/L	492.08 ppb	14:12:25

2	S 181.975 Axial†	761.6	792.7	2522.6 µg/L	2522.6 ppb	14:12:25
2	Sb 206.836†	574.0	591.7	523.15 µg/L	523.15 ppb	14:12:25
2	Se 196.026†	2291.8	2425.9	2465.0 µg/L	2465.0 ppb	14:12:25
2	SiO2†	60171.1	61629.1	11126 µg/L	11126 ppb	14:12:05
2	Si 251.611†	72027.3	76676.0	5212.7 µg/L	5212.7 ppb	14:12:05
2	Sn 189.927†	1166.0	1255.6	539.76 µg/L	539.76 ppb	14:12:25
2	Ti 334.940†	217901.4	233825.1	514.68 µg/L	514.68 ppb	14:12:05
2	Tl 190.801†	449.6	515.4	439.36 µg/L	439.36 ppb	14:12:25
2	U 409.014†	5127.6	5494.6	442.15 µg/L	442.15 ppb	14:12:05
2	V 292.402†	42839.5	45744.3	521.40 µg/L	521.40 ppb	14:12:05
2	Zn 213.857†	21866.3	22397.4	475.15 µg/L	475.15 ppb	14:12:25
3	Sc RADIAL	93917.0	93917.0	97.0 %		14:11:21
3	Al 396.153Radial†	1073322.7	1106256.3	528080 µg/L	528080 ppb	14:11:15
3	Ca 317.933Radial†	1326453.9	1366621.8	497340 µg/L	497340 ppb	14:11:15
3	Fe 238.204 Radial†	15607.0	16072.2	190110 µg/L	190110 ppb	14:11:21
3	K 766.490 Radial†	11611.4	11481.1	5358.0 µg/L	5358.0 ppb	14:11:21
3	Mg 279.077 IEC†	37262.6	38393.8	505960 µg/L	505960 ppb	14:11:21
3	Na 589.592 Radial†	10431.2	10569.6	5275.3 µg/L	5275.3 ppb	14:11:21
3	Sr 421.552†	85202.7	87668.1	521.18 µg/L	521.18 ppb	14:11:15
3	Sc 361.383	1947287.0	1947287.0	93.033 %		14:12:35
3	Y 371.029	1322583.6	1322583.6	92.303 %		14:12:35
3	Ag 328.068†	28534.1	31131.1	268.15 µg/L	268.15 ppb	14:12:35
3	As 188.979†	364.0	394.5	498.14 µg/L	498.14 ppb	14:12:55
3	B 249.677†	11968.2	12565.0	471.81 µg/L	471.81 ppb	14:12:35
3	Ba 233.527†	21563.0	23186.1	508.06 µg/L	508.06 ppb	14:12:55
3	Be 313.107†	389686.7	420026.9	246.58 µg/L	246.58 ppb	14:12:35
3	Cd 226.502†	19155.5	20760.5	472.45 µg/L	472.45 ppb	14:12:55
3	Co 228.616†	9854.9	10544.8	452.35 µg/L	452.35 ppb	14:12:55
3	Cr 267.716†	21056.0	22552.5	490.84 µg/L	490.84 ppb	14:12:55
3	Cu 324.752†	79207.3	80762.0	563.24 µg/L	563.24 ppb	14:12:35
3	Mn 257.610†	158800.3	171378.9	492.21 µg/L	492.21 ppb	14:12:35
3	Mo 202.031†	4816.0	5171.5	518.95 µg/L	518.95 ppb	14:12:55
3	Ni 231.604†	7822.5	8031.4	452.39 µg/L	452.39 ppb	14:12:55
3	P 214.914†	1783.0	1644.1	2679.1 µg/L	2679.1 ppb	14:12:55
3	Pb 220.353†	1652.3	1745.8	500.58 µg/L	500.58 ppb	14:12:55
3	S 181.975 Axial†	786.5	822.9	2618.9 µg/L	2618.9 ppb	14:12:55
3	Sb 206.836†	583.5	604.5	534.62 µg/L	534.62 ppb	14:12:55
3	Se 196.026†	2320.8	2467.3	2503.0 µg/L	2503.0 ppb	14:12:55
3	SiO2†	59865.2	61568.4	11115 µg/L	11115 ppb	14:12:35
3	Si 251.611†	71749.0	76697.7	5214.2 µg/L	5214.2 ppb	14:12:35
3	Sn 189.927†	1160.6	1254.9	539.57 µg/L	539.57 ppb	14:12:55
3	Ti 334.940†	217063.3	233895.2	514.81 µg/L	514.81 ppb	14:12:35
3	Tl 190.801†	464.1	532.9	456.36 µg/L	456.36 ppb	14:12:55
3	U 409.014†	4969.9	5347.9	428.82 µg/L	428.82 ppb	14:12:35
3	V 292.402†	42719.6	45806.3	522.17 µg/L	522.17 ppb	14:12:35
3	Zn 213.857†	21894.2	22524.9	478.04 µg/L	478.04 ppb	14:12:55

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1949452.6	93.137 %	0.2488			0.27%
Sc RADIAL	93869.5	97.0 %	0.22			0.23%
Y 371.029	1323551.8	92.371 %	0.2013			0.22%
Ag 328.068†	31156.3	268.35 µg/L	0.188	268.35 ppb	0.188	0.07%
QC value within limits for Ag 328.068 Recovery = 107.34%						
Al 396.153Radial†	1103521.6	526780 µg/L	1927.7	526780 ppb	1927.7	0.37%
QC value within limits for Al 396.153Radial Recovery = 105.36%						
As 188.979†	387.7	488.27 µg/L	8.962	488.27 ppb	8.962	1.84%
QC value within limits for As 188.979 Recovery = 97.65%						
B 249.677†	12493.8	468.67 µg/L	3.376	468.67 ppb	3.376	0.72%
QC value within limits for B 249.677 Recovery = 93.73%						
Ba 233.527†	23128.7	506.80 µg/L	1.889	506.80 ppb	1.889	0.37%
QC value within limits for Ba 233.527 Recovery = 101.36%						
Be 313.107†	420740.7	247.00 µg/L	0.559	247.00 ppb	0.559	0.23%
QC value within limits for Be 313.107 Recovery = 98.80%						
Ca 317.933Radial†	1361065.9	495320 µg/L	3015.0	495320 ppb	3015.0	0.61%
QC value within limits for Ca 317.933Radial Recovery = 99.06%						
Cd 226.502†	20727.5	471.69 µg/L	1.679	471.69 ppb	1.679	0.36%
QC value within limits for Cd 226.502 Recovery = 94.34%						
Co 228.616†	10535.4	451.94 µg/L	1.855	451.94 ppb	1.855	0.41%

QC value within limits for Co 228.616 Recovery = 90.39%							
Cr 267.716†	22538.9	490.55 µg/L	1.109	490.55 ppb	1.109	0.23%	
QC value within limits for Cr 267.716 Recovery = 98.11%							
Cu 324.752†	80802.8	563.48 µg/L	0.623	563.48 ppb	0.623	0.11%	
QC value within limits for Cu 324.752 Recovery = 112.70%							
Fe 238.204 Radial†	16057.1	189930 µg/L	427.6	189930 ppb	427.6	0.23%	
QC value within limits for Fe 238.204 Radial Recovery = 94.96%							
K 766.490 Radial†	11351.7	5297.6 µg/L	53.73	5297.6 ppb	53.73	1.01%	
QC value within limits for K 766.490 Radial Recovery = 105.95%							
Mg 279.077 IEC†	38279.1	504450 µg/L	2146.3	504450 ppb	2146.3	0.43%	
QC value within limits for Mg 279.077 IEC Recovery = 100.89%							
Mn 257.610†	171781.7	493.51 µg/L	1.338	493.51 ppb	1.338	0.27%	
QC value within limits for Mn 257.610 Recovery = 98.70%							
Mo 202.031†	5156.5	517.46 µg/L	2.757	517.46 ppb	2.757	0.53%	
QC value within limits for Mo 202.031 Recovery = 103.49%							
Na 589.592 Radial†	10550.7	5265.9 µg/L	25.65	5265.9 ppb	25.65	0.49%	
QC value within limits for Na 589.592 Radial Recovery = 105.32%							
Ni 231.604†	8001.1	450.69 µg/L	2.606	450.69 ppb	2.606	0.58%	
QC value within limits for Ni 231.604 Recovery = 90.14%							
P 214.914†	1642.7	2676.5 µg/L	21.56	2676.5 ppb	21.56	0.81%	
QC value within limits for P 214.914 Recovery = 107.06%							
Pb 220.353†	1730.0	496.32 µg/L	4.247	496.32 ppb	4.247	0.86%	
QC value within limits for Pb 220.353 Recovery = 99.26%							
S 181.975 Axial†	806.1	2565.5 µg/L	48.98	2565.5 ppb	48.98	1.91%	
QC value within limits for S 181.975 Axial Recovery = 102.62%							
Sb 206.836†	602.2	532.52 µg/L	8.516	532.52 ppb	8.516	1.60%	
QC value within limits for Sb 206.836 Recovery = 106.50%							
Se 196.026†	2450.5	2488.0 µg/L	20.20	2488.0 ppb	20.20	0.81%	
QC value within limits for Se 196.026 Recovery = 99.52%							
SiO2†	61680.7	11136 µg/L	26.2	11136 ppb	26.2	0.24%	
QC value within limits for SiO2 Recovery = 104.12%							
Si 251.611†	76798.0	5221.0 µg/L	13.10	5221.0 ppb	13.10	0.25%	
QC value within limits for Si 251.611 Recovery = 104.42%							
Sn 189.927†	1258.1	540.58 µg/L	1.593	540.58 ppb	1.593	0.29%	
QC value within limits for Sn 189.927 Recovery = 108.12%							
Sr 421.552†	87344.8	519.25 µg/L	2.577	519.25 ppb	2.577	0.50%	
QC value within limits for Sr 421.552 Recovery = 103.85%							
Ti 334.940†	234126.3	515.44 µg/L	1.201	515.44 ppb	1.201	0.23%	
QC value within limits for Ti 334.940 Recovery = 103.09%							
Tl 190.801†	520.8	444.95 µg/L	9.875	444.95 ppb	9.875	2.22%	
QC value within limits for Tl 190.801 Recovery = 88.99%							
U 409.014†	5447.7	438.03 µg/L	7.992	438.03 ppb	7.992	1.82%	
QC value within limits for U 409.014 Recovery = 87.61%							
V 292.402†	45838.2	522.57 µg/L	1.410	522.57 ppb	1.410	0.27%	
QC value within limits for V 292.402 Recovery = 104.51%							
Zn 213.857†	22487.5	477.28 µg/L	1.868	477.28 ppb	1.868	0.39%	
QC value within limits for Zn 213.857 Recovery = 95.46%							

All analyte(s) passed QC.



Sequence No.: 11  
 Sample ID: LR1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 105  
 Date Collected: 3/16/2010 14:13:05  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94671.6	94671.6	97.8 %		14:13:43
1	Al 396.153Radial†	1052553.7	1076206.9	513750 µg/L	513750 ppb	14:13:37
1	Ca 317.933Radial†	1303993.2	1332763.8	485020 µg/L	485020 ppb	14:13:37
1	Fe 238.204 Radial†	36882.6	37695.2	445850 µg/L	445850 ppb	14:13:43
1	K 766.490 Radial†	172.0	-309.5	-144.42 µg/L	-144.42 ppb	14:13:43
1	Mg 279.077 IEC†	36592.3	37402.5	492610 µg/L	492610 ppb	14:13:43
1	Na 589.592 Radial†	974327.3	995931.5	497070 µg/L	497070 ppb	14:13:37
1	Sr 421.552†	2085.8	1993.0	11.848 µg/L	11.848 ppb	14:13:43
1	Sc 361.383	1930212.6	1930212.6	92.218 %		14:14:20
1	Y 371.029	1301817.0	1301817.0	90.854 %		14:14:20
1	Ag 328.068†	-3823.3	-3685.8	4.9184 µg/L	4.9184 ppb	14:14:20
1	As 188.979†	17.9	22.7	-80.580 µg/L	-80.580 ppb	14:14:40
1	B 249.677†	1804.8	1657.7	-157.40 µg/L	-157.40 ppb	14:14:20
1	Ba 233.527†	678.1	743.8	16.329 µg/L	16.329 ppb	14:14:40
1	Be 313.107†	-8849.1	-8437.1	-4.9718 µg/L	-4.9718 ppb	14:14:20
1	Cd 226.502†	2127.4	2477.5	8.5043 µg/L	8.5043 ppb	14:14:40
1	Co 228.616†	261.1	235.0	10.000 µg/L	10.000 ppb	14:14:40
1	Cr 267.716†	320.3	267.1	5.8303 µg/L	5.8303 ppb	14:14:40
1	Cu 324.752†	-6537.4	-11465.8	8.9291 µg/L	8.9291 ppb	14:14:40
1	Mn 257.610†	7529.5	8852.0	19.764 µg/L	19.764 ppb	14:14:20
1	Mo 202.031†	-172.5	-192.2	-2.0792 µg/L	-2.0792 ppb	14:14:40
1	Ni 231.604†	236.0	-120.9	-0.9993 µg/L	-0.9993 ppb	14:14:40
1	P 214.914†	484.7	253.2	213.82 µg/L	213.82 ppb	14:14:40
1	Pb 220.353†	-37.2	-70.5	11.668 µg/L	11.668 ppb	14:14:40
1	S 181.975 Axial†	-37.7	-63.4	-201.85 µg/L	-201.85 ppb	14:14:40
1	Sb 206.836†	25.3	4.7	-3.4783 µg/L	-3.4783 ppb	14:14:40
1	Se 196.026†	-396.6	-457.4	578.46 µg/L	578.46 ppb	14:14:40
1	SiO2†	2429.0	-145.8	-26.319 µg/L	-26.319 ppb	14:14:40
1	Si 251.611†	-163.3	-601.2	-40.870 µg/L	-40.870 ppb	14:14:40
1	Sn 189.927†	-66.1	-64.2	23.478 µg/L	23.478 ppb	14:14:40
1	Ti 334.940†	14501.8	16302.9	6.8316 µg/L	6.8316 ppb	14:14:20
1	Tl 190.801†	-15.4	17.4	4.7966 µg/L	4.7966 ppb	14:14:40
1	U 409.014†	155144.5	168243.4	15185 µg/L	15185 ppb	14:14:20
1	V 292.402†	2802.0	2926.2	-6.2992 µg/L	-6.2992 ppb	14:14:40
1	Zn 213.857†	3662.1	2962.3	19.218 µg/L	19.218 ppb	14:14:40
2	Sc RADIAL	93000.2	93000.2	96.1 %		14:13:55
2	Al 396.153Radial†	1058319.8	1101546.9	525840 µg/L	525840 ppb	14:13:49
2	Ca 317.933Radial†	1303650.5	1356365.9	493610 µg/L	493610 ppb	14:13:49
2	Fe 238.204 Radial†	36394.2	37864.7	447850 µg/L	447850 ppb	14:13:55
2	K 766.490 Radial†	137.2	-342.5	-159.84 µg/L	-159.84 ppb	14:13:55
2	Mg 279.077 IEC†	35947.3	37403.5	492620 µg/L	492620 ppb	14:13:55
2	Na 589.592 Radial†	976667.6	1016269.0	507220 µg/L	507220 ppb	14:13:49
2	Sr 421.552†	2073.2	2018.2	11.998 µg/L	11.998 ppb	14:13:55
2	Sc 361.383	1922376.9	1922376.9	91.843 %		14:14:49
2	Y 371.029	1299994.3	1299994.3	90.727 %		14:14:49
2	Ag 328.068†	-3842.1	-3723.1	4.7666 µg/L	4.7666 ppb	14:14:49
2	As 188.979†	13.6	18.1	-88.665 µg/L	-88.665 ppb	14:15:10
2	B 249.677†	1879.9	1747.5	-154.37 µg/L	-154.37 ppb	14:14:49
2	Ba 233.527†	658.6	725.6	15.929 µg/L	15.929 ppb	14:15:10
2	Be 313.107†	-8932.7	-8567.2	-5.0479 µg/L	-5.0479 ppb	14:14:49
2	Cd 226.502†	2128.6	2488.2	8.5322 µg/L	8.5322 ppb	14:15:10
2	Co 228.616†	267.7	243.4	10.360 µg/L	10.360 ppb	14:15:10
2	Cr 267.716†	313.8	261.5	5.7077 µg/L	5.7077 ppb	14:15:10
2	Cu 324.752†	-6590.9	-11552.9	8.7371 µg/L	8.7371 ppb	14:15:10
2	Mn 257.610†	7522.4	8877.5	19.959 µg/L	19.959 ppb	14:14:49
2	Mo 202.031†	-173.5	-194.0	-2.1781 µg/L	-2.1781 ppb	14:15:10
2	Ni 231.604†	243.2	-112.1	-0.4755 µg/L	-0.4755 ppb	14:15:10
2	P 214.914†	482.4	252.9	215.24 µg/L	215.24 ppb	14:15:10
2	Pb 220.353†	-66.4	-102.5	4.2527 µg/L	4.2527 ppb	14:15:10

2	S 181.975 Axial†	-39.5	-65.5	-208.49 µg/L	-208.49 ppb	14:15:10
2	Sb 206.836†	23.1	2.4	-5.6216 µg/L	-5.6216 ppb	14:15:10
2	Se 196.026†	-399.3	-462.0	579.58 µg/L	579.58 ppb	14:15:10
2	SiO2†	2411.3	-154.3	-27.852 µg/L	-27.852 ppb	14:15:10
2	Si 251.611†	-170.8	-610.1	-41.477 µg/L	-41.477 ppb	14:15:10
2	Sn 189.927†	-70.6	-69.5	22.257 µg/L	22.257 ppb	14:15:10
2	Ti 334.940†	14098.6	15928.0	6.0897 µg/L	6.0897 ppb	14:14:49
2	Tl 190.801†	-9.8	23.5	9.3441 µg/L	9.3441 ppb	14:15:10
2	U 409.014†	154229.8	167933.2	15156 µg/L	15156 ppb	14:14:49
2	V 292.402†	2718.0	2847.1	-7.5184 µg/L	-7.5184 ppb	14:15:10
2	Zn 213.857†	3679.4	2997.4	19.928 µg/L	19.928 ppb	14:15:10
3	Sc RADIAL	93668.6	93668.6	96.8 %		14:14:07
3	Al 396.153Radial†	1029545.6	1063955.3	507900 µg/L	507900 ppb	14:14:01
3	Ca 317.933Radial†	1263359.0	1305051.6	474940 µg/L	474940 ppb	14:14:01
3	Fe 238.204 Radial†	36666.1	37875.4	447980 µg/L	447980 ppb	14:14:07
3	K 766.490 Radial†	271.0	-205.4	-95.841 µg/L	-95.841 ppb	14:14:07
3	Mg 279.077 IEC†	36314.2	37515.7	494100 µg/L	494100 ppb	14:14:07
3	Na 589.592 Radial†	954659.7	986275.4	492250 µg/L	492250 ppb	14:14:01
3	Sr 421.552†	2056.0	1985.1	11.801 µg/L	11.801 ppb	14:14:07
3	Sc 361.383	1929969.6	1929969.6	92.206 %		14:15:18
3	Y 371.029	1302939.9	1302939.9	90.932 %		14:15:18
3	Ag 328.068†	-3867.6	-3734.3	4.6914 µg/L	4.6914 ppb	14:15:18
3	As 188.979†	21.9	27.0	-73.269 µg/L	-73.269 ppb	14:15:39
3	B 249.677†	1873.9	1732.9	-155.10 µg/L	-155.10 ppb	14:15:18
3	Ba 233.527†	642.9	705.7	15.495 µg/L	15.495 ppb	14:15:39
3	Be 313.107†	-8935.8	-8532.2	-5.0272 µg/L	-5.0272 ppb	14:15:18
3	Cd 226.502†	2136.7	2487.8	8.5107 µg/L	8.5107 ppb	14:15:39
3	Co 228.616†	258.3	232.1	9.8760 µg/L	9.8760 ppb	14:15:39
3	Cr 267.716†	324.6	271.8	5.9341 µg/L	5.9341 ppb	14:15:39
3	Cu 324.752†	-6600.1	-11534.7	8.8800 µg/L	8.8800 ppb	14:15:39
3	Mn 257.610†	7518.4	8840.9	19.756 µg/L	19.756 ppb	14:15:18
3	Mo 202.031†	-176.5	-196.5	-2.4240 µg/L	-2.4240 ppb	14:15:39
3	Ni 231.604†	264.9	-89.6	0.7884 µg/L	0.7884 ppb	14:15:39
3	P 214.914†	473.2	240.8	189.98 µg/L	189.98 ppb	14:15:39
3	Pb 220.353†	-47.6	-81.8	8.3479 µg/L	8.3479 ppb	14:15:39
3	S 181.975 Axial†	-44.0	-70.3	-223.71 µg/L	-223.71 ppb	14:15:39
3	Sb 206.836†	29.1	8.8	0.3352 µg/L	0.3352 ppb	14:15:39
3	Se 196.026†	-420.9	-483.8	560.34 µg/L	560.34 ppb	14:15:39
3	SiO2†	2418.3	-157.0	-28.351 µg/L	-28.351 ppb	14:15:39
3	Si 251.611†	-177.1	-616.1	-41.886 µg/L	-41.886 ppb	14:15:39
3	Sn 189.927†	-59.9	-57.5	25.124 µg/L	25.124 ppb	14:15:39
3	Ti 334.940†	14000.3	15761.0	5.2872 µg/L	5.2872 ppb	14:15:18
3	Tl 190.801†	-11.8	21.3	10.939 µg/L	10.939 ppb	14:15:39
3	U 409.014†	154639.4	167716.8	15137 µg/L	15137 ppb	14:15:18
3	V 292.402†	2785.0	2908.1	-6.8359 µg/L	-6.8359 ppb	14:15:39
3	Zn 213.857†	3676.3	2978.2	19.393 µg/L	19.393 ppb	14:15:39

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1927519.7	92.089 %		0.2129			0.23%
Sc RADIAL	93780.1	96.9 %		0.87			0.90%
Y 371.029	1301583.7	90.838 %		0.1037			0.11%
Ag 328.068†	-3714.4	4.7921 µg/L		0.11566	4.7921 ppb	0.11566	2.41%
Al 396.153Radial†	1080569.7	515830 µg/L		9152.0	515830 ppb	9152.0	1.77%
QC value within limits for Al 396.153Radial Recovery = 103.17%							
As 188.979†	22.6	-80.838 µg/L		7.7012	-80.838 ppb	7.7012	9.53%
B 249.677†	1712.7	-155.63 µg/L		1.582	-155.63 ppb	1.582	1.02%
Ba 233.527†	725.0	15.918 µg/L		0.4170	15.918 ppb	0.4170	2.62%
Be 313.107†	-8512.2	-5.0156 µg/L		0.03934	-5.0156 ppb	0.03934	0.78%
Ca 317.933Radial†	1331393.7	484520 µg/L		9347.2	484520 ppb	9347.2	1.93%
QC value within limits for Ca 317.933Radial Recovery = 96.90%							
Cd 226.502†	2484.5	8.5158 µg/L		0.01463	8.5158 ppb	0.01463	0.17%
Co 228.616†	236.8	10.079 µg/L		0.2515	10.079 ppb	0.2515	2.50%
Cr 267.716†	266.8	5.8240 µg/L		0.11337	5.8240 ppb	0.11337	1.95%
Cu 324.752†	-11517.8	8.8487 µg/L		0.09973	8.8487 ppb	0.09973	1.13%
Fe 238.204 Radial†	37811.8	447230 µg/L		1195.1	447230 ppb	1195.1	0.27%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 89.45%							
K 766.490 Radial†	-285.8	-133.37 µg/L		33.401	-133.37 ppb	33.401	25.04%
Mg 279.077 IEC†	37440.6	493110 µg/L		856.8	493110 ppb	856.8	0.17%

QC value within limits for Mg 279.077 IEC Recovery = 98.62%

Mn 257.610†	8856.8	19.826 µg/L	0.1146	19.826 ppb	0.1146	0.58%
Mo 202.031†	-194.3	-2.2271 µg/L	0.17753	-2.2271 ppb	0.17753	7.97%
Na 589.592 Radial†	999492.0	498850 µg/L	7641.5	498850 ppb	7641.5	1.53%

QC value within limits for Na 589.592 Radial Recovery = 99.77%

Ni 231.604†	-107.5	-0.2288 µg/L	0.91903	-0.2288 ppb	0.91903	401.61%
P 214.914†	249.0	206.35 µg/L	14.190	206.35 ppb	14.190	6.88%
Pb 220.353†	-84.9	8.0896 µg/L	3.71451	8.0896 ppb	3.71451	45.92%
S 181.975 Axial†	-66.4	-211.35 µg/L	11.205	-211.35 ppb	11.205	5.30%
Sb 206.836†	5.3	-2.9216 µg/L	3.01721	-2.9216 ppb	3.01721	103.27%
Se 196.026†	-467.8	572.79 µg/L	10.799	572.79 ppb	10.799	1.89%
SiO2†	-152.4	-27.508 µg/L	1.0586	-27.508 ppb	1.0586	3.85%
Si 251.611†	-609.1	-41.411 µg/L	0.5110	-41.411 ppb	0.5110	1.23%
Sn 189.927†	-63.7	23.619 µg/L	1.4387	23.619 ppb	1.4387	6.09%
Sr 421.552†	1998.8	11.882 µg/L	0.1030	11.882 ppb	0.1030	0.87%
Ti 334.940†	15997.3	6.0695 µg/L	0.77238	6.0695 ppb	0.77238	12.73%
Tl 190.801†	20.7	8.3600 µg/L	3.18740	8.3600 ppb	3.18740	38.13%
U 409.014†	167964.5	15159 µg/L	23.9	15159 ppb	23.9	0.16%

QC value within limits for U 409.014 Recovery = 101.06%

V 292.402†	2893.8	-6.8845 µg/L	0.61106	-6.8845 ppb	0.61106	8.88%
Zn 213.857†	2979.3	19.513 µg/L	0.3701	19.513 ppb	0.3701	1.90%

QC Failed. Continue with analysis.

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 3/16/2010 14:15:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98681.8	98681.8	102 %		14:16:27
1	Al 396.153Radial†	791.1	895.2	209.10 µg/L	209.10 ppb	14:16:27
1	Ca 317.933Radial†	535.8	140.2	51.021 µg/L	51.021 ppb	14:16:48
1	Fe 238.204 Radial†	13.8	1.5	230.85 µg/L	230.85 ppb	14:16:48
1	K 766.490 Radial†	672389.6	659002.6	307540 µg/L	307540 ppb	14:16:22
1	Mg 279.077 IEC†	1.2	-6.8	89.344 µg/L	89.344 ppb	14:16:48
1	Na 589.592 Radial†	1192.9	989.4	493.81 µg/L	493.81 ppb	14:16:27
1	Sr 421.552†	1723920.8	1690703.1	10051 µg/L	10051 ppb	14:16:22
1	Sc 361.383	2094408.5	2094408.5	100.06 %		14:18:17
1	Y 371.029	1416408.2	1416408.2	98.851 %		14:18:17
1	Ag 328.068†	-7353.2	-6888.4	14.447 µg/L	14.447 ppb	14:18:22
1	As 188.979†	6782.6	6781.6	10004 µg/L	10004 ppb	14:18:22
1	B 249.677†	114492.3	114121.9	5220.5 µg/L	5220.5 ppb	14:18:17
1	Ba 233.527†	703458.1	703029.8	15394 µg/L	15394 ppb	14:18:17
1	Be 313.107†	5088373.7	5086373.9	2984.7 µg/L	2984.7 ppb	14:18:17
1	Cd 226.502†	428448.1	428352.7	10192 µg/L	10192 ppb	14:18:17
1	Co 228.616†	233468.5	233275.6	10010 µg/L	10010 ppb	14:18:17
1	Cr 267.716†	1192875.4	1192054.7	25933 µg/L	25933 ppb	14:18:17
1	Cu 324.752†	3276740.2	3270329.5	21360 µg/L	21360 ppb	14:18:17
1	Mn 257.610†	3337256.3	3335871.6	10026 µg/L	10026 ppb	14:18:17
1	Mo 202.031†	107438.2	107366.4	10624 µg/L	10624 ppb	14:18:17
1	Ni 231.604†	184095.1	183603.9	10286 µg/L	10286 ppb	14:18:17
1	P 214.914†	11782.2	11502.5	17003 µg/L	17003 ppb	14:18:22
1	Pb 220.353†	100441.1	100348.6	26306 µg/L	26306 ppb	14:18:17
1	S 181.975 Axial†	16785.8	16752.9	53316 µg/L	53316 ppb	14:18:22
1	Sb 206.836†	11913.2	11883.1	10481 µg/L	10481 ppb	14:18:22
1	Se 196.026†	10987.9	10953.8	10295 µg/L	10295 ppb	14:18:22
1	SiO2†	568840.9	565708.1	102130 µg/L	102130 ppb	14:18:17
1	Si 251.611†	700803.3	699944.2	47585 µg/L	47585 ppb	14:18:17
1	Sn 189.927†	27684.3	27674.6	10774 µg/L	10774 ppb	14:18:22
1	Ti 334.940†	4321206.8	4319101.7	10100 µg/L	10100 ppb	14:18:17
1	Tl 190.801†	10260.1	10287.9	10137 µg/L	10137 ppb	14:18:22
1	U 409.014†	-2540.8	-2533.4	-230.03 µg/L	-230.03 ppb	14:18:17
1	V 292.402†	896151.0	895482.4	10709 µg/L	10709 ppb	14:18:17
1	Zn 213.857†	669754.7	668330.1	15308 µg/L	15308 ppb	14:18:17
2	Sc RADIAL	99227.5	99227.5	103 %		14:16:59
2	Al 396.153Radial†	807.9	907.3	220.62 µg/L	220.62 ppb	14:16:59
2	Ca 317.933Radial†	550.5	151.7	55.210 µg/L	55.210 ppb	14:17:20
2	Fe 238.204 Radial†	12.3	0.1	207.63 µg/L	207.63 ppb	14:17:20
2	K 766.490 Radial†	672362.4	655349.3	305840 µg/L	305840 ppb	14:16:54
2	Mg 279.077 IEC†	3.5	-4.6	112.96 µg/L	112.96 ppb	14:17:20
2	Na 589.592 Radial†	953.1	749.0	373.85 µg/L	373.85 ppb	14:16:59
2	Sr 421.552†	1725788.1	1683225.9	10007 µg/L	10007 ppb	14:16:54
2	Sc 361.383	2089385.6	2089385.6	99.822 %		14:18:39
2	Y 371.029	1413119.1	1413119.1	98.622 %		14:18:39
2	Ag 328.068†	-7199.9	-6752.5	13.635 µg/L	13.635 ppb	14:18:44
2	As 188.979†	6777.4	6792.7	10020 µg/L	10020 ppb	14:18:44
2	B 249.677†	111616.5	111516.0	5101.0 µg/L	5101.0 ppb	14:18:39
2	Ba 233.527†	684041.7	685268.9	15005 µg/L	15005 ppb	14:18:39
2	Be 313.107†	4943607.3	4953574.4	2906.8 µg/L	2906.8 ppb	14:18:39
2	Cd 226.502†	415843.7	416755.2	9916.5 µg/L	9916.5 ppb	14:18:39
2	Co 228.616†	226279.8	226634.9	9725.4 µg/L	9725.4 ppb	14:18:39
2	Cr 267.716†	1154499.0	1156475.8	25159 µg/L	25159 ppb	14:18:39
2	Cu 324.752†	3189838.7	3191145.5	20843 µg/L	20843 ppb	14:18:39
2	Mn 257.610†	3244580.4	3251048.3	9770.9 µg/L	9770.9 ppb	14:18:39
2	Mo 202.031†	104357.4	104538.2	10344 µg/L	10344 ppb	14:18:39
2	Ni 231.604†	178790.3	178732.0	10013 µg/L	10013 ppb	14:18:39
2	P 214.914†	11635.4	11383.7	16857 µg/L	16857 ppb	14:18:44
2	Pb 220.353†	97684.4	97828.2	25645 µg/L	25645 ppb	14:18:39

2	S 181.975 Axial†	16765.1	16772.5	53378 µg/L	53378 ppb	14:18:44
2	Sb 206.836†	11775.4	11773.7	10387 µg/L	10387 ppb	14:18:44
2	Se 196.026†	10902.5	10894.6	10239 µg/L	10239 ppb	14:18:44
2	SiO2†	556612.3	554824.3	100170 µg/L	100170 ppb	14:18:39
2	Si 251.611†	685339.5	686136.5	46646 µg/L	46646 ppb	14:18:39
2	Sn 189.927†	27024.0	27079.5	10543 µg/L	10543 ppb	14:18:44
2	Ti 334.940†	4200749.2	4208811.1	9841.8 µg/L	9841.8 ppb	14:18:39
2	Tl 190.801†	10259.2	10311.6	10158 µg/L	10158 ppb	14:18:44
2	U 409.014†	-2647.1	-2646.0	-240.25 µg/L	-240.25 ppb	14:18:39
2	V 292.402†	869628.3	871065.4	10417 µg/L	10417 ppb	14:18:39
2	Zn 213.857†	651634.3	651786.5	14929 µg/L	14929 ppb	14:18:39
3	Sc RADIAL	99146.3	99146.3	102 %		14:17:31
3	Al 396.153Radial†	797.8	898.1	232.76 µg/L	232.76 ppb	14:17:31
3	Ca 317.933Radial†	569.3	170.5	62.044 µg/L	62.044 ppb	14:17:52
3	Fe 238.204 Radial†	9.5	-2.7	157.97 µg/L	157.97 ppb	14:17:52
3	K 766.490 Radial†	679640.4	662991.4	309410 µg/L	309410 ppb	14:17:26
3	Mg 279.077 IEC†	3.3	-4.8	97.740 µg/L	97.740 ppb	14:17:52
3	Na 589.592 Radial†	823.9	623.8	311.32 µg/L	311.32 ppb	14:17:31
3	Sr 421.552†	1744621.8	1702990.6	10124 µg/L	10124 ppb	14:17:26
3	Sc 361.383	2074927.8	2074927.8	99.131 %		14:19:01
3	Y 371.029	1405489.5	1405489.5	98.089 %		14:19:01
3	Ag 328.068†	-6195.3	-5789.4	15.820 µg/L	15.820 ppb	14:19:06
3	As 188.979†	5965.2	6020.7	8880.9 µg/L	8880.9 ppb	14:19:06
3	B 249.677†	105435.4	106059.9	4849.4 µg/L	4849.4 ppb	14:19:01
3	Ba 233.527†	631768.9	637312.9	13955 µg/L	13955 ppb	14:19:01
3	Be 313.107†	4524269.0	4565069.7	2678.8 µg/L	2678.8 ppb	14:19:01
3	Cd 226.502†	382998.0	386524.4	9197.1 µg/L	9197.1 ppb	14:19:01
3	Co 228.616†	206754.1	208517.6	8948.0 µg/L	8948.0 ppb	14:19:01
3	Cr 267.716†	1033219.0	1042191.9	22673 µg/L	22673 ppb	14:19:01
3	Cu 324.752†	2919414.1	2940617.5	19207 µg/L	19207 ppb	14:19:01
3	Mn 257.610†	2964203.2	2990862.7	8988.9 µg/L	8988.9 ppb	14:19:01
3	Mo 202.031†	95577.7	96410.0	9539.9 µg/L	9539.9 ppb	14:19:01
3	Ni 231.604†	163249.9	164303.4	9204.7 µg/L	9204.7 ppb	14:19:01
3	P 214.914†	10085.8	9901.8	14546 µg/L	14546 ppb	14:19:06
3	Pb 220.353†	91212.7	91981.7	24113 µg/L	24113 ppb	14:19:01
3	S 181.975 Axial†	14772.3	14879.2	47353 µg/L	47353 ppb	14:19:06
3	Sb 206.836†	10303.5	10371.1	9150.9 µg/L	9150.9 ppb	14:19:06
3	Se 196.026†	9625.3	9682.3	9099.5 µg/L	9099.5 ppb	14:19:06
3	SiO2†	522275.8	524072.2	94614 µg/L	94614 ppb	14:19:01
3	Si 251.611†	642711.8	647919.2	44048 µg/L	44048 ppb	14:19:01
3	Sn 189.927†	22954.8	23163.3	9018.1 µg/L	9018.1 ppb	14:19:06
3	Ti 334.940†	3845959.1	3880234.9	9073.5 µg/L	9073.5 ppb	14:19:01
3	Tl 190.801†	9385.1	9501.4	9359.7 µg/L	9359.7 ppb	14:19:06
3	U 409.014†	-2244.4	-2258.2	-205.04 µg/L	-205.04 ppb	14:19:01
3	V 292.402†	793039.4	799875.7	9565.0 µg/L	9565.0 ppb	14:19:01
3	Zn 213.857†	598338.9	602572.7	13802 µg/L	13802 ppb	14:19:01

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2086240.6	99.672 %	0.4832			0.48%
Sc RADIAL	99018.5	102 %	0.3			0.30%
Y 371.029	1411672.3	98.521 %	0.3909			0.40%
Ag 328.068†	-6476.8	14.634 µg/L	1.1045	14.634 ppb	1.1045	7.55%
Al 396.153Radial†	900.2	220.83 µg/L	11.829	220.83 ppb	11.829	5.36%
As 188.979†	6531.7	9635.0 µg/L	653.12	9635.0 ppb	653.12	6.78%
QC value within limits for As 188.979 Recovery = 96.35%						
B 249.677†	110565.9	5057.0 µg/L	189.40	5057.0 ppb	189.40	3.75%
QC value within limits for B 249.677 Recovery = 101.14%						
Ba 233.527†	675203.9	14785 µg/L	744.5	14785 ppb	744.5	5.04%
QC value within limits for Ba 233.527 Recovery = 98.57%						
Be 313.107†	4868339.3	2856.7 µg/L	158.97	2856.7 ppb	158.97	5.56%
QC value within limits for Be 313.107 Recovery = 95.22%						
Ca 317.933Radial†	154.1	56.092 µg/L	5.5643	56.092 ppb	5.5643	9.92%
Cd 226.502†	410544.1	9768.6 µg/L	513.88	9768.6 ppb	513.88	5.26%
QC value within limits for Cd 226.502 Recovery = 97.69%						
Co 228.616†	222809.4	9561.3 µg/L	549.94	9561.3 ppb	549.94	5.75%
QC value within limits for Co 228.616 Recovery = 95.61%						
Cr 267.716†	1130240.8	24588 µg/L	1703.3	24588 ppb	1703.3	6.93%
QC value within limits for Cr 267.716 Recovery = 98.35%						

Cu 324.752†	3134030.8	20470 µg/L	1124.2	20470 ppb	1124.2	5.49%
QC value within limits for Cu 324.752 Recovery = 102.35%						
Fe 238.204 Radial†	-0.4	198.81 µg/L	37.228	198.81 ppb	37.228	18.73%
K 766.490 Radial†	659114.4	307600 µg/L	1783.8	307600 ppb	1783.8	0.58%
QC value within limits for K 766.490 Radial Recovery = 102.53%						
Mg 279.077 IEC†	-5.4	100.01 µg/L	11.971	100.01 ppb	11.971	11.97%
Mn 257.610†	3192594.2	9595.2 µg/L	540.32	9595.2 ppb	540.32	5.63%
QC value within limits for Mn 257.610 Recovery = 95.95%						
Mo 202.031†	102771.5	10169 µg/L	562.8	10169 ppb	562.8	5.53%
QC value within limits for Mo 202.031 Recovery = 101.69%						
Na 589.592 Radial†	787.4	392.99 µg/L	92.737	392.99 ppb	92.737	23.60%
Ni 231.604†	175546.4	9834.5 µg/L	562.28	9834.5 ppb	562.28	5.72%
QC value within limits for Ni 231.604 Recovery = 98.35%						
P 214.914†	10929.3	16135 µg/L	1378.0	16135 ppb	1378.0	8.54%
QC value within limits for P 214.914 Recovery = 107.57%						
Pb 220.353†	96719.5	25355 µg/L	1125.2	25355 ppb	1125.2	4.44%
QC value within limits for Pb 220.353 Recovery = 101.42%						
S 181.975 Axial†	16134.8	51349 µg/L	3460.9	51349 ppb	3460.9	6.74%
QC value within limits for S 181.975 Axial Recovery = 102.70%						
Sb 206.836†	11342.6	10006 µg/L	742.2	10006 ppb	742.2	7.42%
QC value within limits for Sb 206.836 Recovery = 100.06%						
Se 196.026†	10510.2	9877.7 µg/L	674.53	9877.7 ppb	674.53	6.83%
QC value within limits for Se 196.026 Recovery = 98.78%						
SiO2†	548201.5	98970 µg/L	3898.4	98970 ppb	3898.4	3.94%
QC value within limits for SiO2 Recovery = 92.50%						
Si 251.611†	678000.0	46093 µg/L	1832.2	46093 ppb	1832.2	3.97%
QC value within limits for Si 251.611 Recovery = 92.19%						
Sn 189.927†	25972.5	10112 µg/L	954.2	10112 ppb	954.2	9.44%
QC value within limits for Sn 189.927 Recovery = 101.12%						
Sr 421.552†	1692306.5	10061 µg/L	59.3	10061 ppb	59.3	0.59%
QC value within limits for Sr 421.552 Recovery = 100.61%						
Ti 334.940†	4136049.2	9671.7 µg/L	533.86	9671.7 ppb	533.86	5.52%
QC value within limits for Ti 334.940 Recovery = 96.72%						
Tl 190.801†	10033.6	9884.8 µg/L	454.85	9884.8 ppb	454.85	4.60%
QC value within limits for Tl 190.801 Recovery = 98.85%						
U 409.014†	-2479.2	-225.11 µg/L	18.114	-225.11 ppb	18.114	8.05%
V 292.402†	855474.5	10230 µg/L	594.4	10230 ppb	594.4	5.81%
QC value within limits for V 292.402 Recovery = 102.30%						
Zn 213.857†	640896.4	14679 µg/L	783.2	14679 ppb	783.2	5.34%
QC value within limits for Zn 213.857 Recovery = 97.86%						

All analyte(s) passed QC.

Sequence No.: 13

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 14:19:16

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96143.7	96143.7	99.3 %			14:19:49
1	Al 396.153Radial†	11038.5	11231.8	5349.9 µg/L		5349.9 ppb	14:19:49
1	Ca 317.933Radial†	15099.4	14815.4	5391.6 µg/L		5391.6 ppb	14:19:49
1	Fe 238.204 Radial†	455.2	446.3	5290.4 µg/L		5290.4 ppb	14:20:10
1	K 766.490 Radial†	12866.8	12467.7	5818.5 µg/L		5818.5 ppb	14:19:49
1	Mg 279.077 IEC†	419.1	414.0	5461.4 µg/L		5461.4 ppb	14:20:10
1	Na 589.592 Radial†	21569.8	21533.9	10748 µg/L		10748 ppb	14:19:49
1	Sr 421.552†	89244.2	89703.2	533.27 µg/L		533.27 ppb	14:19:49
1	Sc 361.383	2053030.7	2053030.7	98.085 %			14:21:14
1	Y 371.029	1399252.1	1399252.1	97.654 %			14:21:14
1	Ag 328.068†	64579.1	66300.0	536.34 µg/L		536.34 ppb	14:21:19
1	As 188.979†	371.5	382.0	562.27 µg/L		562.27 ppb	14:21:40
1	B 249.677†	11993.7	11928.5	539.45 µg/L		539.45 ppb	14:21:19
1	Ba 233.527†	24289.8	24772.4	542.75 µg/L		542.75 ppb	14:21:19
1	Be 313.107†	899098.1	917808.5	539.06 µg/L		539.06 ppb	14:21:14
1	Cd 226.502†	22186.8	22790.5	541.69 µg/L		541.69 ppb	14:21:19
1	Co 228.616†	12490.1	12685.9	544.39 µg/L		544.39 ppb	14:21:19
1	Cr 267.716†	24782.3	25185.8	548.11 µg/L		548.11 ppb	14:21:19
1	Cu 324.752†	86511.5	83823.7	548.49 µg/L		548.49 ppb	14:21:19
1	Mn 257.610†	178314.2	182482.0	548.39 µg/L		548.39 ppb	14:21:14
1	Mo 202.031†	5731.9	5838.7	577.95 µg/L		577.95 ppb	14:21:40
1	Ni 231.604†	9929.4	9746.3	546.07 µg/L		546.07 ppb	14:21:19
1	P 214.914†	1912.6	1677.6	2733.3 µg/L		2733.3 ppb	14:21:40
1	Pb 220.353†	2093.4	2104.1	552.35 µg/L		552.35 ppb	14:21:40
1	S 181.975 Axial†	364.4	349.0	1110.7 µg/L		1110.7 ppb	14:21:40
1	Sb 206.836†	665.8	656.1	588.43 µg/L		588.43 ppb	14:21:40
1	Se 196.026†	607.4	592.0	568.59 µg/L		568.59 ppb	14:21:40
1	SiO2†	34121.9	32008.2	5778.6 µg/L		5778.6 ppb	14:21:19
1	Si 251.611†	39350.6	39694.7	2698.6 µg/L		2698.6 ppb	14:21:19
1	Sn 189.927†	1425.4	1460.6	569.20 µg/L		569.20 ppb	14:21:40
1	Ti 334.940†	227703.2	232725.5	543.86 µg/L		543.86 ppb	14:21:14
1	Tl 190.801†	508.3	552.3	544.65 µg/L		544.65 ppb	14:21:40
1	U 409.014†	5907.2	6028.3	546.30 µg/L		546.30 ppb	14:21:19
1	V 292.402†	45127.9	45896.5	547.38 µg/L		547.38 ppb	14:21:19
1	Zn 213.857†	24156.1	23618.8	539.94 µg/L		539.94 ppb	14:21:19
2	Sc RADIAL	96569.8	96569.8	99.8 %			14:20:15
2	Al 396.153Radial†	11040.4	11184.6	5327.7 µg/L		5327.7 ppb	14:20:15
2	Ca 317.933Radial†	15064.2	14713.0	5354.4 µg/L		5354.4 ppb	14:20:15
2	Fe 238.204 Radial†	461.5	450.6	5340.9 µg/L		5340.9 ppb	14:20:36
2	K 766.490 Radial†	12643.2	12186.5	5687.2 µg/L		5687.2 ppb	14:20:15
2	Mg 279.077 IEC†	414.4	407.3	5373.6 µg/L		5373.6 ppb	14:20:36
2	Na 589.592 Radial†	21432.8	21300.7	10631 µg/L		10631 ppb	14:20:15
2	Sr 421.552†	89037.8	89099.8	529.69 µg/L		529.69 ppb	14:20:15
2	Sc 361.383	2051314.7	2051314.7	98.003 %			14:21:47
2	Y 371.029	1399692.0	1399692.0	97.684 %			14:21:47
2	Ag 328.068†	64493.4	66267.6	536.08 µg/L		536.08 ppb	14:21:53
2	As 188.979†	361.4	372.1	547.55 µg/L		547.55 ppb	14:22:13
2	B 249.677†	11992.2	11937.2	539.83 µg/L		539.83 ppb	14:21:53
2	Ba 233.527†	24241.5	24743.9	542.13 µg/L		542.13 ppb	14:21:53
2	Be 313.107†	895057.8	914452.7	537.09 µg/L		537.09 ppb	14:21:47
2	Cd 226.502†	22230.1	22853.6	543.18 µg/L		543.18 ppb	14:21:53
2	Co 228.616†	12463.4	12669.3	543.67 µg/L		543.67 ppb	14:21:53
2	Cr 267.716†	24819.4	25244.8	549.40 µg/L		549.40 ppb	14:21:53
2	Cu 324.752†	86217.7	83597.6	547.03 µg/L		547.03 ppb	14:21:53
2	Mn 257.610†	177397.5	181698.8	546.04 µg/L		546.04 ppb	14:21:47
2	Mo 202.031†	5571.8	5680.2	562.26 µg/L		562.26 ppb	14:22:13
2	Ni 231.604†	9903.7	9728.6	545.07 µg/L		545.07 ppb	14:21:53
2	P 214.914†	1880.5	1646.4	2681.4 µg/L		2681.4 ppb	14:22:13
2	Pb 220.353†	2075.2	2087.3	547.91 µg/L		547.91 ppb	14:22:13

2	S 181.975 Axial†	349.3	333.9	1062.7 µg/L	1062.7 ppb	14:22:13
2	Sb 206.836†	645.6	636.1	570.30 µg/L	570.30 ppb	14:22:13
2	Se 196.026†	594.6	579.4	557.00 µg/L	557.00 ppb	14:22:13
2	SiO2†	34063.4	31977.6	5773.1 µg/L	5773.1 ppb	14:21:53
2	Si 251.611†	39209.6	39584.4	2691.1 µg/L	2691.1 ppb	14:21:53
2	Sn 189.927†	1393.7	1429.5	557.09 µg/L	557.09 ppb	14:22:13
2	Ti 334.940†	226609.6	231803.8	541.71 µg/L	541.71 ppb	14:21:47
2	Tl 190.801†	504.5	548.9	541.22 µg/L	541.22 ppb	14:22:13
2	U 409.014†	5811.7	5935.9	537.90 µg/L	537.90 ppb	14:21:53
2	V 292.402†	45121.8	45928.8	547.63 µg/L	547.63 ppb	14:21:53
2	Zn 213.857†	24028.2	23508.9	537.42 µg/L	537.42 ppb	14:21:53
3	Sc RADIAL	97410.2	97410.2	101 %		14:20:41
3	Al 396.153Radial†	11042.1	11090.9	5284.9 µg/L	5284.9 ppb	14:20:41
3	Ca 317.933Radial†	15109.2	14627.4	5323.2 µg/L	5323.2 ppb	14:20:41
3	Fe 238.204 Radial†	462.5	447.6	5304.2 µg/L	5304.2 ppb	14:21:02
3	K 766.490 Radial†	12592.5	12026.8	5612.7 µg/L	5612.7 ppb	14:20:41
3	Mg 279.077 IEC†	416.8	406.2	5356.8 µg/L	5356.8 ppb	14:21:02
3	Na 589.592 Radial†	21538.2	21220.1	10591 µg/L	10591 ppb	14:20:41
3	Sr 421.552†	89376.9	88666.9	527.11 µg/L	527.11 ppb	14:20:41
3	Sc 361.383	2042567.9	2042567.9	97.585 %		14:22:20
3	Y 371.029	1393710.7	1393710.7	97.267 %		14:22:20
3	Ag 328.068†	59730.4	61668.6	498.70 µg/L	498.70 ppb	14:22:26
3	As 188.979†	305.3	316.1	465.05 µg/L	465.05 ppb	14:22:46
3	B 249.677†	10934.0	10905.2	492.88 µg/L	492.88 ppb	14:22:26
3	Ba 233.527†	21624.9	22168.4	485.68 µg/L	485.68 ppb	14:22:26
3	Be 313.107†	811235.9	832467.7	488.94 µg/L	488.94 ppb	14:22:20
3	Cd 226.502†	19667.4	20324.6	483.01 µg/L	483.01 ppb	14:22:26
3	Co 228.616†	10934.2	11156.7	478.71 µg/L	478.71 ppb	14:22:26
3	Cr 267.716†	21207.3	21651.8	471.21 µg/L	471.21 ppb	14:22:26
3	Cu 324.752†	76779.2	74302.3	486.31 µg/L	486.31 ppb	14:22:26
3	Mn 257.610†	161636.4	166322.8	499.83 µg/L	499.83 ppb	14:22:20
3	Mo 202.031†	4590.3	4698.7	465.15 µg/L	465.15 ppb	14:22:46
3	Ni 231.604†	8743.8	8583.2	480.91 µg/L	480.91 ppb	14:22:26
3	P 214.914†	1613.1	1380.7	2245.1 µg/L	2245.1 ppb	14:22:46
3	Pb 220.353†	1753.3	1766.6	463.71 µg/L	463.71 ppb	14:22:46
3	S 181.975 Axial†	317.3	302.6	962.92 µg/L	962.92 ppb	14:22:46
3	Sb 206.836†	550.8	541.7	485.43 µg/L	485.43 ppb	14:22:46
3	Se 196.026†	520.5	506.0	487.94 µg/L	487.94 ppb	14:22:46
3	SiO2†	31146.8	29137.8	5260.4 µg/L	5260.4 ppb	14:22:26
3	Si 251.611†	35648.0	36105.9	2454.6 µg/L	2454.6 ppb	14:22:26
3	Sn 189.927†	1126.5	1161.8	452.85 µg/L	452.85 ppb	14:22:46
3	Ti 334.940†	203810.2	209430.5	489.39 µg/L	489.39 ppb	14:22:20
3	Tl 190.801†	446.2	491.4	484.60 µg/L	484.60 ppb	14:22:46
3	U 409.014†	5034.2	5164.6	467.88 µg/L	467.88 ppb	14:22:26
3	V 292.402†	39193.5	40051.0	477.25 µg/L	477.25 ppb	14:22:26
3	Zn 213.857†	21239.8	20756.5	474.43 µg/L	474.43 ppb	14:22:26

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2048971.1	97.891 %	0.2681			0.27%
Sc RADIAL	96707.9	99.9 %	0.67			0.67%
Y 371.029	1397551.6	97.535 %	0.2327			0.24%
Ag 328.068†	64745.4	523.71 µg/L	21.660	523.71 ppb	21.660	4.14%
QC value within limits for Ag 328.068 Recovery = 104.74%						
Al 396.153Radial†	11169.1	5320.8 µg/L	33.00	5320.8 ppb	33.00	0.62%
QC value within limits for Al 396.153Radial Recovery = 106.42%						
As 188.979†	356.7	524.95 µg/L	52.399	524.95 ppb	52.399	9.98%
QC value within limits for As 188.979 Recovery = 104.99%						
B 249.677†	11590.3	524.05 µg/L	26.996	524.05 ppb	26.996	5.15%
QC value within limits for B 249.677 Recovery = 104.81%						
Ba 233.527†	23894.9	523.52 µg/L	32.774	523.52 ppb	32.774	6.26%
QC value within limits for Ba 233.527 Recovery = 104.70%						
Be 313.107†	888242.9	521.69 µg/L	28.386	521.69 ppb	28.386	5.44%
QC value within limits for Be 313.107 Recovery = 104.34%						
Ca 317.933Radial†	14718.6	5356.4 µg/L	34.25	5356.4 ppb	34.25	0.64%
QC value within limits for Ca 317.933Radial Recovery = 107.13%						
Cd 226.502†	21989.6	522.63 µg/L	34.319	522.63 ppb	34.319	6.57%
QC value within limits for Cd 226.502 Recovery = 104.53%						
Co 228.616†	12170.6	522.26 µg/L	37.716	522.26 ppb	37.716	7.22%



Cr	267.716†	24027.5	522.91 µg/L	44.777	522.91 ppb	44.777	8.56%
QC value within limits for Co 228.616 Recovery = 104.45%							
Cu	324.752†	80574.5	527.28 µg/L	35.488	527.28 ppb	35.488	6.73%
QC value within limits for Cu 324.752 Recovery = 105.46%							
Fe	238.204 Radial†	448.2	5311.8 µg/L	26.14	5311.8 ppb	26.14	0.49%
QC value within limits for Fe 238.204 Radial Recovery = 106.24%							
K	766.490 Radial†	12227.0	5706.1 µg/L	104.19	5706.1 ppb	104.19	1.83%
QC value greater than the upper limit for K 766.490 Radial Recovery = 114.12%							
Mg	279.077 IEC†	409.1	5397.2 µg/L	56.20	5397.2 ppb	56.20	1.04%
QC value within limits for Mg 279.077 IEC Recovery = 107.94%							
Mn	257.610†	176834.5	531.42 µg/L	27.383	531.42 ppb	27.383	5.15%
QC value within limits for Mn 257.610 Recovery = 106.28%							
Mo	202.031†	5405.9	535.12 µg/L	61.102	535.12 ppb	61.102	11.42%
QC value within limits for Mo 202.031 Recovery = 107.02%							
Na	589.592 Radial†	21351.5	10657 µg/L	81.3	10657 ppb	81.3	0.76%
QC value within limits for Na 589.592 Radial Recovery = 106.57%							
Ni	231.604†	9352.7	524.02 µg/L	37.336	524.02 ppb	37.336	7.12%
QC value within limits for Ni 231.604 Recovery = 104.80%							
P	214.914†	1568.2	2553.2 µg/L	268.15	2553.2 ppb	268.15	10.50%
QC value within limits for P 214.914 Recovery = 102.13%							
Pb	220.353†	1986.0	521.32 µg/L	49.949	521.32 ppb	49.949	9.58%
QC value within limits for Pb 220.353 Recovery = 104.26%							
S	181.975 Axial†	328.5	1045.4 µg/L	75.40	1045.4 ppb	75.40	7.21%
QC value within limits for S 181.975 Axial Recovery = 104.54%							
Sb	206.836†	611.3	548.05 µg/L	54.984	548.05 ppb	54.984	10.03%
QC value within limits for Sb 206.836 Recovery = 109.61%							
Se	196.026†	559.1	537.84 µg/L	43.605	537.84 ppb	43.605	8.11%
QC value within limits for Se 196.026 Recovery = 107.57%							
SiO2†		31041.2	5604.0 µg/L	297.61	5604.0 ppb	297.61	5.31%
QC value within limits for SiO2 Recovery = 104.80%							
Si	251.611†	38461.7	2614.8 µg/L	138.75	2614.8 ppb	138.75	5.31%
QC value within limits for Si 251.611 Recovery = 104.59%							
Sn	189.927†	1350.7	526.38 µg/L	63.967	526.38 ppb	63.967	12.15%
QC value within limits for Sn 189.927 Recovery = 105.28%							
Sr	421.552†	89156.6	530.02 µg/L	3.094	530.02 ppb	3.094	0.58%
QC value within limits for Sr 421.552 Recovery = 106.00%							
Ti	334.940†	224653.3	524.98 µg/L	30.844	524.98 ppb	30.844	5.88%
QC value within limits for Ti 334.940 Recovery = 105.00%							
Tl	190.801†	530.9	523.49 µg/L	33.721	523.49 ppb	33.721	6.44%
QC value within limits for Tl 190.801 Recovery = 104.70%							
U	409.014†	5709.6	517.36 µg/L	43.060	517.36 ppb	43.060	8.32%
QC value within limits for U 409.014 Recovery = 103.47%							
V	292.402†	43958.8	524.09 µg/L	40.562	524.09 ppb	40.562	7.74%
QC value within limits for V 292.402 Recovery = 104.82%							
Zn	213.857†	22628.1	517.26 µg/L	37.115	517.26 ppb	37.115	7.18%
QC value within limits for Zn 213.857 Recovery = 103.45%							

QC Failed. Continue with analysis.

Sequence No.: 14

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 14:22:56

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97273.1	97273.1	101 %		14:23:26
1	Al 396.153Radial†	-101.7	18.1	8.5498 µg/L	8.5498 ppb	14:23:26
1	Ca 317.933Radial†	432.4	44.9	16.346 µg/L	16.346 ppb	14:23:46
1	Fe 238.204 Radial†	11.5	-0.5	-5.6288 µg/L	-5.6288 ppb	14:23:46
1	K 766.490 Radial†	816.1	326.7	152.44 µg/L	152.44 ppb	14:23:26
1	Mg 279.077 IEC†	12.4	4.3	57.123 µg/L	57.123 ppb	14:23:46
1	Na 589.592 Radial†	313.3	131.1	65.452 µg/L	65.452 ppb	14:23:26
1	Sr 421.552†	162.5	22.3	0.1324 µg/L	0.1324 ppb	14:23:26
1	Sc 361.383	2069842.9	2069842.9	98.888 %		14:24:48
1	Y 371.029	1419836.3	1419836.3	99.090 %		14:24:48
1	Ag 328.068†	-462.4	-7.4	-0.0560 µg/L	-0.0560 ppb	14:24:54
1	As 188.979†	-0.2	3.1	4.5320 µg/L	4.5320 ppb	14:25:14
1	B 249.677†	367.1	71.8	3.2621 µg/L	3.2621 ppb	14:25:14
1	Ba 233.527†	4.6	13.1	0.2871 µg/L	0.2871 ppb	14:25:14
1	Be 313.107†	-978.6	169.3	0.0991 µg/L	0.0991 ppb	14:24:54
1	Cd 226.502†	-169.8	-1.1	-0.0254 µg/L	-0.0254 ppb	14:25:14
1	Co 228.616†	55.1	7.7	0.3318 µg/L	0.3318 ppb	14:25:14
1	Cr 267.716†	74.7	-4.7	-0.1022 µg/L	-0.1022 ppb	14:25:14
1	Cu 324.752†	5003.5	683.0	4.4603 µg/L	4.4603 ppb	14:24:54
1	Mn 257.610†	-619.9	60.1	0.1766 µg/L	0.1766 ppb	14:25:14
1	Mo 202.031†	46.8	42.2	4.1769 µg/L	4.1769 ppb	14:25:14
1	Ni 231.604†	374.3	1.6	0.0893 µg/L	0.0893 ppb	14:25:14
1	P 214.914†	275.9	6.7	10.632 µg/L	10.632 ppb	14:25:14
1	Pb 220.353†	39.3	9.5	2.5133 µg/L	2.5133 ppb	14:25:14
1	S 181.975 Axial†	29.8	7.6	24.165 µg/L	24.165 ppb	14:25:14
1	Sb 206.836†	30.3	8.0	7.1667 µg/L	7.1667 ppb	14:25:14
1	Se 196.026†	27.1	0.1	-0.0088 µg/L	-0.0088 ppb	14:25:14
1	SiO2†	2792.7	44.4	8.0127 µg/L	8.0127 ppb	14:25:14
1	Si 251.611†	510.6	92.3	6.2745 µg/L	6.2745 ppb	14:25:14
1	Sn 189.927†	1.9	9.4	3.6485 µg/L	3.6485 ppb	14:25:14
1	Ti 334.940†	-180.6	394.6	0.9185 µg/L	0.9185 ppb	14:24:54
1	Tl 190.801†	-36.9	-3.2	-3.1351 µg/L	-3.1351 ppb	14:25:14
1	U 409.014†	-56.9	-51.7	-4.6952 µg/L	-4.6952 ppb	14:24:54
1	V 292.402†	157.7	47.1	0.5842 µg/L	0.5842 ppb	14:24:54
1	Zn 213.857†	1062.1	65.2	1.4904 µg/L	1.4904 ppb	14:25:14
2	Sc RADIAL	97912.2	97912.2	101 %		14:23:52
2	Al 396.153Radial†	-81.2	39.0	18.545 µg/L	18.545 ppb	14:23:52
2	Ca 317.933Radial†	415.9	25.8	9.3918 µg/L	9.3918 ppb	14:24:12
2	Fe 238.204 Radial†	13.3	1.2	14.332 µg/L	14.332 ppb	14:24:12
2	K 766.490 Radial†	789.4	295.0	137.65 µg/L	137.65 ppb	14:23:52
2	Mg 279.077 IEC†	9.7	1.6	20.668 µg/L	20.668 ppb	14:24:12
2	Na 589.592 Radial†	331.3	146.9	73.326 µg/L	73.326 ppb	14:23:52
2	Sr 421.552†	155.8	14.6	0.0869 µg/L	0.0869 ppb	14:23:52
2	Sc 361.383	2090786.4	2090786.4	99.889 %		14:25:20
2	Y 371.029	1430220.1	1430220.1	99.815 %		14:25:20
2	Ag 328.068†	-437.2	22.5	0.1797 µg/L	0.1797 ppb	14:25:26
2	As 188.979†	0.5	3.7	5.5105 µg/L	5.5105 ppb	14:25:46
2	B 249.677†	371.6	72.6	3.2889 µg/L	3.2889 ppb	14:25:46
2	Ba 233.527†	11.2	19.7	0.4296 µg/L	0.4296 ppb	14:25:46
2	Be 313.107†	-971.7	186.1	0.1090 µg/L	0.1090 ppb	14:25:26
2	Cd 226.502†	-160.3	10.1	0.2390 µg/L	0.2390 ppb	14:25:46
2	Co 228.616†	45.3	-2.7	-0.1163 µg/L	-0.1163 ppb	14:25:46
2	Cr 267.716†	85.1	4.9	0.1065 µg/L	0.1065 ppb	14:25:46
2	Cu 324.752†	5008.9	637.8	4.1686 µg/L	4.1686 ppb	14:25:26
2	Mn 257.610†	-635.3	51.0	0.1526 µg/L	0.1526 ppb	14:25:46
2	Mo 202.031†	38.0	32.9	3.2610 µg/L	3.2610 ppb	14:25:46
2	Ni 231.604†	381.7	5.2	0.2911 µg/L	0.2911 ppb	14:25:46
2	P 214.914†	269.5	-2.6	-4.6575 µg/L	-4.6575 ppb	14:25:46
2	Pb 220.353†	32.6	2.5	0.6481 µg/L	0.6481 ppb	14:25:46

2	S 181.975 Axial†	17.3	-5.2	-16.519 µg/L	-16.519 ppb	14:25:46
2	Sb 206.836†	31.0	8.3	7.4915 µg/L	7.4915 ppb	14:25:46
2	Se 196.026†	21.9	-5.4	-5.0218 µg/L	-5.0218 ppb	14:25:46
2	SiO2†	2769.7	-6.9	-1.2541 µg/L	-1.2541 ppb	14:25:46
2	Si 251.611†	494.6	71.0	4.8282 µg/L	4.8282 ppb	14:25:46
2	Sn 189.927†	7.4	14.9	5.7926 µg/L	5.7926 ppb	14:25:46
2	Ti 334.940†	-231.1	345.9	0.8073 µg/L	0.8073 ppb	14:25:26
2	Tl 190.801†	-31.4	2.7	2.6514 µg/L	2.6514 ppb	14:25:46
2	U 409.014†	42.5	48.4	4.3917 µg/L	4.3917 ppb	14:25:26
2	V 292.402†	84.8	-27.4	-0.2952 µg/L	-0.2952 ppb	14:25:26
2	Zn 213.857†	1056.2	48.5	1.1062 µg/L	1.1062 ppb	14:25:46
3	Sc RADIAL	97435.2	97435.2	101 %		14:24:17
3	Al 396.153Radial†	-99.4	20.5	9.7343 µg/L	9.7343 ppb	14:24:17
3	Ca 317.933Radial†	401.3	13.3	4.8493 µg/L	4.8493 ppb	14:24:38
3	Fe 238.204 Radial†	13.0	1.0	11.319 µg/L	11.319 ppb	14:24:38
3	K 766.490 Radial†	688.4	198.5	92.631 µg/L	92.631 ppb	14:24:17
3	Mg 279.077 IEC†	11.9	3.8	50.715 µg/L	50.715 ppb	14:24:38
3	Na 589.592 Radial†	294.1	111.6	55.687 µg/L	55.687 ppb	14:24:17
3	Sr 421.552†	174.3	33.8	0.2007 µg/L	0.2007 ppb	14:24:17
3	Sc 361.383	2071400.8	2071400.8	98.963 %		14:25:52
3	Y 371.029	1416537.4	1416537.4	98.860 %		14:25:52
3	Ag 328.068†	-444.1	11.4	0.0932 µg/L	0.0932 ppb	14:25:58
3	As 188.979†	-2.4	0.8	1.1894 µg/L	1.1894 ppb	14:26:18
3	B 249.677†	365.9	70.4	3.1890 µg/L	3.1890 ppb	14:26:18
3	Ba 233.527†	2.1	10.6	0.2313 µg/L	0.2313 ppb	14:26:18
3	Be 313.107†	-1030.5	117.6	0.0687 µg/L	0.0687 ppb	14:25:58
3	Cd 226.502†	-157.9	11.0	0.2614 µg/L	0.2614 ppb	14:26:18
3	Co 228.616†	50.9	3.3	0.1439 µg/L	0.1439 ppb	14:26:18
3	Cr 267.716†	76.5	-3.0	-0.0650 µg/L	-0.0650 ppb	14:26:18
3	Cu 324.752†	4919.6	594.5	3.8852 µg/L	3.8852 ppb	14:25:58
3	Mn 257.610†	-644.3	35.9	0.1053 µg/L	0.1053 ppb	14:26:18
3	Mo 202.031†	37.4	32.7	3.2322 µg/L	3.2322 ppb	14:26:18
3	Ni 231.604†	386.9	14.1	0.7904 µg/L	0.7904 ppb	14:26:18
3	P 214.914†	277.9	8.5	13.623 µg/L	13.623 ppb	14:26:18
3	Pb 220.353†	33.0	3.2	0.8333 µg/L	0.8333 ppb	14:26:18
3	S 181.975 Axial†	26.5	4.2	13.428 µg/L	13.428 ppb	14:26:18
3	Sb 206.836†	32.7	10.3	9.2792 µg/L	9.2792 ppb	14:26:18
3	Se 196.026†	28.4	1.4	1.2992 µg/L	1.2992 ppb	14:26:18
3	SiO2†	2763.6	12.8	2.3082 µg/L	2.3082 ppb	14:26:18
3	Si 251.611†	513.6	94.9	6.4527 µg/L	6.4527 ppb	14:26:18
3	Sn 189.927†	-8.3	-0.9	-0.3688 µg/L	-0.3688 ppb	14:26:18
3	Ti 334.940†	-202.7	372.5	0.8670 µg/L	0.8670 ppb	14:25:58
3	Tl 190.801†	-36.0	-2.2	-2.1722 µg/L	-2.1722 ppb	14:26:18
3	U 409.014†	-32.6	-27.2	-2.4694 µg/L	-2.4694 ppb	14:25:58
3	V 292.402†	118.4	7.4	0.1078 µg/L	0.1078 ppb	14:25:58
3	Zn 213.857†	993.5	-4.9	-0.1263 µg/L	-0.1263 ppb	14:26:18

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2077343.3	99.247 %		0.5574			0.56%
Sc RADIAL	97540.2	101 %		0.3			0.34%
Y 371.029	1422197.9	99.255 %		0.4983			0.50%
Ag 328.068†	8.9	0.0723 µg/L		0.11925	0.0723 ppb	0.11925	164.95%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	25.9	12.276 µg/L		5.4612	12.276 ppb	5.4612	44.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	2.5	3.7439 µg/L		2.26578	3.7439 ppb	2.26578	60.52%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	71.6	3.2467 µg/L		0.05170	3.2467 ppb	0.05170	1.59%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	14.4	0.3160 µg/L		0.10224	0.3160 ppb	0.10224	32.36%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	157.6	0.0923 µg/L		0.02100	0.0923 ppb	0.02100	22.75%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	28.0	10.196 µg/L		5.7901	10.196 ppb	5.7901	56.79%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	6.7	0.1583 µg/L		0.15952	0.1583 ppb	0.15952	100.75%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	2.8	0.1198 µg/L		0.22502	0.1198 ppb	0.22502	187.84%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-0.9	-0.0202 µg/L	0.11133	-0.0202 ppb	0.11133	551.01%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	638.5	4.1714 µg/L	0.28755	4.1714 ppb	0.28755	6.89%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.6	6.6739 µg/L	10.76045	6.6739 ppb	10.76045	161.23%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	273.4	127.57 µg/L	31.154	127.57 ppb	31.154	24.42%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	3.2	42.835 µg/L	19.4630	42.835 ppb	19.4630	45.44%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	49.0	0.1448 µg/L	0.03630	0.1448 ppb	0.03630	25.06%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	35.9	3.5567 µg/L	0.53731	3.5567 ppb	0.53731	15.11%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	129.9	64.822 µg/L	8.8361	64.822 ppb	8.8361	13.63%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	7.0	0.3903 µg/L	0.36089	0.3903 ppb	0.36089	92.47%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	4.2	6.5325 µg/L	9.80561	6.5325 ppb	9.80561	150.10%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	5.1	1.3316 µg/L	1.02757	1.3316 ppb	1.02757	77.17%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	2.2	7.0248 µg/L	21.08394	7.0248 ppb	21.08394	300.14%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	8.9	7.9791 µg/L	1.13751	7.9791 ppb	1.13751	14.26%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-1.3	-1.2438 µg/L	3.33655	-1.2438 ppb	3.33655	268.25%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	16.7	3.0223 µg/L	4.67448	3.0223 ppb	4.67448	154.67%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	86.1	5.8518 µg/L	0.89093	5.8518 ppb	0.89093	15.22%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	7.8	3.0241 µg/L	3.12779	3.0241 ppb	3.12779	103.43%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	23.6	0.1400 µg/L	0.05727	0.1400 ppb	0.05727	40.91%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	371.0	0.8643 µg/L	0.05562	0.8643 ppb	0.05562	6.44%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.9	-0.8853 µg/L	3.10051	-0.8853 ppb	3.10051	350.23%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-10.2	-0.9243 µg/L	4.73639	-0.9243 ppb	4.73639	512.45%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	9.0	0.1323 µg/L	0.44020	0.1323 ppb	0.44020	332.82%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	36.2	0.8234 µg/L	0.84465	0.8234 ppb	0.84465	102.58%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

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Analysis Begun

Start Time: 3/16/2010 14:35:59

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\031610A.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optima1\Results\Results.mdb  
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## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 3/16/2010 13:44:38

IEC File: 011510.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/16/2010 14:36:01

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

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Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98836.5	98836.5	102 %		14:36:33
1	Al 396.153Radial†	10370.2	10274.6	4894.1 µg/L	4894.1 ppb	14:36:33
1	Ca 317.933Radial†	14110.2	13432.5	4888.4 µg/L	4888.4 ppb	14:36:33
1	Fe 238.204 Radial†	427.7	406.9	4822.9 µg/L	4822.9 ppb	14:36:53

1	K 766.490 Radial†	11236.5	10518.3	4908.7 µg/L	4908.7 ppb	14:36:33
1	Mg 279.077 IEC†	393.9	377.7	4983.6 µg/L	4983.6 ppb	14:36:53
1	Na 589.592 Radial†	20216.7	19617.1	9791.0 µg/L	9791.0 ppb	14:36:33
1	Sr 421.552†	84297.6	82411.2	489.92 µg/L	489.92 ppb	14:36:33
1	Sc 361.383	2089081.4	2089081.4	99.808 %		14:37:57
1	Y 371.029	1424616.3	1424616.3	99.424 %		14:37:57
1	Ag 328.068†	60837.8	61415.2	496.82 µg/L	496.82 ppb	14:38:02
1	As 188.979†	349.2	353.1	519.79 µg/L	519.79 ppb	14:38:23
1	B 249.677†	11212.2	10934.5	494.52 µg/L	494.52 ppb	14:38:02
1	Ba 233.527†	22850.3	22902.8	501.79 µg/L	501.79 ppb	14:38:02
1	Be 313.107†	843840.3	846625.8	497.25 µg/L	497.25 ppb	14:37:57
1	Cd 226.502†	20866.2	21077.0	500.97 µg/L	500.97 ppb	14:38:02
1	Co 228.616†	11722.0	11696.6	501.94 µg/L	501.94 ppb	14:38:02
1	Cr 267.716†	23307.4	23272.1	506.47 µg/L	506.47 ppb	14:38:02
1	Cu 324.752†	81383.5	77163.7	504.91 µg/L	504.91 ppb	14:38:02
1	Mn 257.610†	166969.2	167978.1	504.80 µg/L	504.80 ppb	14:37:57
1	Mo 202.031†	5238.2	5243.2	519.00 µg/L	519.00 ppb	14:38:23
1	Ni 231.604†	9339.5	8980.6	503.16 µg/L	503.16 ppb	14:38:02
1	P 214.914†	1812.2	1543.3	2514.4 µg/L	2514.4 ppb	14:38:23
1	Pb 220.353†	1972.9	1946.5	510.93 µg/L	510.93 ppb	14:38:23
1	S 181.975 Axial†	339.5	317.6	1010.8 µg/L	1010.8 ppb	14:38:23
1	Sb 206.836†	591.8	570.3	511.38 µg/L	511.38 ppb	14:38:23
1	Se 196.026†	566.6	540.4	519.03 µg/L	519.03 ppb	14:38:23
1	SiO2†	32389.2	29671.9	5356.8 µg/L	5356.8 ppb	14:38:02
1	Si 251.611†	37313.5	36961.3	2512.8 µg/L	2512.8 ppb	14:38:02
1	Sn 189.927†	1324.3	1334.3	519.96 µg/L	519.96 ppb	14:38:23
1	Ti 334.940†	211841.7	212827.3	497.36 µg/L	497.36 ppb	14:37:57
1	Tl 190.801†	479.9	514.9	507.66 µg/L	507.66 ppb	14:38:23
1	U 409.014†	5584.2	5600.8	507.57 µg/L	507.57 ppb	14:38:02
1	V 292.402†	42568.2	42538.0	507.21 µg/L	507.21 ppb	14:38:02
1	Zn 213.857†	23034.8	22070.4	504.60 µg/L	504.60 ppb	14:38:02
2	Sc RADIAL	99004.5	99004.5	102 %		14:36:59
2	Al 396.153Radial†	10332.8	10220.8	4868.7 µg/L	4868.7 ppb	14:36:59
2	Ca 317.933Radial†	14124.8	13423.3	4885.0 µg/L	4885.0 ppb	14:36:59
2	Fe 238.204 Radial†	430.9	409.3	4852.1 µg/L	4852.1 ppb	14:37:19
2	K 766.490 Radial†	11178.3	10442.7	4873.4 µg/L	4873.4 ppb	14:36:59
2	Mg 279.077 IEC†	392.8	376.0	4959.9 µg/L	4959.9 ppb	14:37:19
2	Na 589.592 Radial†	20214.1	19581.1	9773.0 µg/L	9773.0 ppb	14:36:59
2	Sr 421.552†	84106.4	82084.3	487.98 µg/L	487.98 ppb	14:36:59
2	Sc 361.383	2095270.2	2095270.2	100.10 %		14:38:30
2	Y 371.029	1432014.3	1432014.3	99.940 %		14:38:30
2	Ag 328.068†	61109.5	61506.7	497.56 µg/L	497.56 ppb	14:38:36
2	As 188.979†	335.1	338.0	497.39 µg/L	497.39 ppb	14:38:56
2	B 249.677†	11269.5	10958.5	495.60 µg/L	495.60 ppb	14:38:36
2	Ba 233.527†	22977.1	22961.8	503.08 µg/L	503.08 ppb	14:38:36
2	Be 313.107†	847681.5	847965.7	498.04 µg/L	498.04 ppb	14:38:30
2	Cd 226.502†	20932.4	21081.4	501.07 µg/L	501.07 ppb	14:38:36
2	Co 228.616†	11803.2	11743.0	503.92 µg/L	503.92 ppb	14:38:36
2	Cr 267.716†	23403.4	23299.0	507.05 µg/L	507.05 ppb	14:38:36
2	Cu 324.752†	81650.8	77189.9	505.08 µg/L	505.08 ppb	14:38:36
2	Mn 257.610†	167972.1	168485.8	506.33 µg/L	506.33 ppb	14:38:30
2	Mo 202.031†	5137.7	5127.2	507.53 µg/L	507.53 ppb	14:38:56
2	Ni 231.604†	9421.1	9034.5	506.18 µg/L	506.18 ppb	14:38:36
2	P 214.914†	1789.5	1515.2	2467.6 µg/L	2467.6 ppb	14:38:56
2	Pb 220.353†	1960.4	1928.2	506.10 µg/L	506.10 ppb	14:38:56
2	S 181.975 Axial†	335.1	312.2	993.60 µg/L	993.60 ppb	14:38:56
2	Sb 206.836†	580.8	557.5	499.79 µg/L	499.79 ppb	14:38:56
2	Se 196.026†	560.9	533.0	512.16 µg/L	512.16 ppb	14:38:56
2	SiO2†	32706.0	29892.5	5396.7 µg/L	5396.7 ppb	14:38:36
2	Si 251.611†	37567.7	37104.9	2522.5 µg/L	2522.5 ppb	14:38:36
2	Sn 189.927†	1297.9	1304.0	508.18 µg/L	508.18 ppb	14:38:56
2	Ti 334.940†	212305.2	212663.4	496.97 µg/L	496.97 ppb	14:38:30
2	Tl 190.801†	480.5	514.1	506.84 µg/L	506.84 ppb	14:38:56
2	U 409.014†	5618.0	5618.0	509.13 µg/L	509.13 ppb	14:38:36
2	V 292.402†	42740.8	42584.4	507.67 µg/L	507.67 ppb	14:38:36
2	Zn 213.857†	23124.0	22091.3	505.07 µg/L	505.07 ppb	14:38:36
3	Sc RADIAL	98781.4	98781.4	102 %		14:37:25
3	Al 396.153Radial†	10333.9	10244.7	4881.7 µg/L	4881.7 ppb	14:37:25
3	Ca 317.933Radial†	14028.2	13359.8	4861.9 µg/L	4861.9 ppb	14:37:25
3	Fe 238.204 Radial†	433.0	412.3	4885.9 µg/L	4885.9 ppb	14:37:45
3	K 766.490 Radial†	11220.3	10508.6	4904.2 µg/L	4904.2 ppb	14:37:25

3	Mg 279.077 IEC†	390.2	374.4	4937.4 µg/L	4937.4 ppb	14:37:45
3	Na 589.592 Radial†	20249.0	19659.9	9812.3 µg/L	9812.3 ppb	14:37:25
3	Sr 421.552†	84112.1	82275.6	489.12 µg/L	489.12 ppb	14:37:25
3	Sc 361.383	2077745.8	2077745.8	99.266 %		14:39:03
3	Y 371.029	1419580.7	1419580.7	99.073 %		14:39:03
3	Ag 328.068†	56985.6	57867.2	467.99 µg/L	467.99 ppb	14:39:09
3	As 188.979†	288.1	293.5	431.85 µg/L	431.85 ppb	14:39:29
3	B 249.677†	10392.6	10170.1	459.70 µg/L	459.70 ppb	14:39:09
3	Ba 233.527†	20740.1	20901.9	457.94 µg/L	457.94 ppb	14:39:09
3	Be 313.107†	778168.7	785081.3	461.11 µg/L	461.11 ppb	14:39:03
3	Cd 226.502†	18814.6	19124.3	454.50 µg/L	454.50 ppb	14:39:09
3	Co 228.616†	10524.0	10553.8	452.84 µg/L	452.84 ppb	14:39:09
3	Cr 267.716†	20281.8	20351.5	442.91 µg/L	442.91 ppb	14:39:09
3	Cu 324.752†	73645.8	69813.7	456.91 µg/L	456.91 ppb	14:39:09
3	Mn 257.610†	154366.9	156195.3	469.39 µg/L	469.39 ppb	14:39:03
3	Mo 202.031†	4283.5	4310.1	426.67 µg/L	426.67 ppb	14:39:29
3	Ni 231.604†	8432.9	8118.4	454.86 µg/L	454.86 ppb	14:39:09
3	P 214.914†	1562.5	1301.7	2116.8 µg/L	2116.8 ppb	14:39:29
3	Pb 220.353†	1694.8	1677.2	440.20 µg/L	440.20 ppb	14:39:29
3	S 181.975 Axial†	296.7	276.3	879.44 µg/L	879.44 ppb	14:39:29
3	Sb 206.836†	510.0	491.1	439.96 µg/L	439.96 ppb	14:39:29
3	Se 196.026†	487.8	464.1	447.58 µg/L	447.58 ppb	14:39:29
3	SiO2†	30169.0	27612.4	4985.0 µg/L	4985.0 ppb	14:39:09
3	Si 251.611†	34426.0	34256.4	2328.9 µg/L	2328.9 ppb	14:39:09
3	Sn 189.927†	1057.3	1072.5	418.05 µg/L	418.05 ppb	14:39:29
3	Ti 334.940†	193739.2	195748.9	457.42 µg/L	457.42 ppb	14:39:03
3	Tl 190.801†	433.9	471.3	464.66 µg/L	464.66 ppb	14:39:29
3	U 409.014†	4890.2	4932.2	446.86 µg/L	446.86 ppb	14:39:09
3	V 292.402†	37965.7	38134.1	454.30 µg/L	454.30 ppb	14:39:09
3	Zn 213.857†	20728.0	19872.4	454.28 µg/L	454.28 ppb	14:39:09

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2087365.8	99.726 %	0.4246			0.43%
Sc RADIAL	98874.1	102 %	0.1			0.12%
Y 371.029	1425403.8	99.479 %	0.4365			0.44%
Ag 328.068†	60263.0	487.46 µg/L	16.861	487.46 ppb	16.861	3.46%
QC value within limits for Ag 328.068 Recovery = 97.49%						
Al 396.153Radial†	10246.7	4881.5 µg/L	12.71	4881.5 ppb	12.71	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.63%						
As 188.979†	328.2	483.01 µg/L	45.702	483.01 ppb	45.702	9.46%
QC value within limits for As 188.979 Recovery = 96.60%						
B 249.677†	10687.7	483.27 µg/L	20.423	483.27 ppb	20.423	4.23%
QC value within limits for B 249.677 Recovery = 96.65%						
Ba 233.527†	22255.5	487.60 µg/L	25.699	487.60 ppb	25.699	5.27%
QC value within limits for Ba 233.527 Recovery = 97.52%						
Be 313.107†	826557.6	485.46 µg/L	21.100	485.46 ppb	21.100	4.35%
QC value within limits for Be 313.107 Recovery = 97.09%						
Ca 317.933Radial†	13405.2	4878.4 µg/L	14.40	4878.4 ppb	14.40	0.30%
QC value within limits for Ca 317.933Radial Recovery = 97.57%						
Cd 226.502†	20427.6	485.51 µg/L	26.861	485.51 ppb	26.861	5.53%
QC value within limits for Cd 226.502 Recovery = 97.10%						
Co 228.616†	11331.1	486.23 µg/L	28.936	486.23 ppb	28.936	5.95%
QC value within limits for Co 228.616 Recovery = 97.25%						
Cr 267.716†	22307.6	485.48 µg/L	36.863	485.48 ppb	36.863	7.59%
QC value within limits for Cr 267.716 Recovery = 97.10%						
Cu 324.752†	74722.4	488.97 µg/L	27.761	488.97 ppb	27.761	5.68%
QC value within limits for Cu 324.752 Recovery = 97.79%						
Fe 238.204 Radial†	409.5	4853.7 µg/L	31.53	4853.7 ppb	31.53	0.65%
QC value within limits for Fe 238.204 Radial Recovery = 97.07%						
K 766.490 Radial†	10489.9	4895.4 µg/L	19.18	4895.4 ppb	19.18	0.39%
QC value within limits for K 766.490 Radial Recovery = 97.91%						
Mg 279.077 IEC†	376.0	4960.3 µg/L	23.09	4960.3 ppb	23.09	0.47%
QC value within limits for Mg 279.077 IEC Recovery = 99.21%						
Mn 257.610†	164219.7	493.51 µg/L	20.897	493.51 ppb	20.897	4.23%
QC value within limits for Mn 257.610 Recovery = 98.70%						
Mo 202.031†	4893.5	484.40 µg/L	50.323	484.40 ppb	50.323	10.39%
QC value within limits for Mo 202.031 Recovery = 96.88%						
Na 589.592 Radial†	19619.4	9792.1 µg/L	19.70	9792.1 ppb	19.70	0.20%

QC value within limits for Na 589.592 Radial Recovery = 97.92%

Ni 231.604†	8711.1	488.07 µg/L	28.798	488.07 ppb	28.798	5.90%
QC value within limits for Ni 231.604 Recovery = 97.61%						
P 214.914†	1453.4	2366.3 µg/L	217.34	2366.3 ppb	217.34	9.19%
QC value within limits for P 214.914 Recovery = 94.65%						
Pb 220.353†	1850.6	485.74 µg/L	39.516	485.74 ppb	39.516	8.14%
QC value within limits for Pb 220.353 Recovery = 97.15%						
S 181.975 Axial†	302.0	961.26 µg/L	71.383	961.26 ppb	71.383	7.43%
QC value within limits for S 181.975 Axial Recovery = 96.13%						
Sb 206.836†	539.6	483.71 µg/L	38.331	483.71 ppb	38.331	7.92%
QC value within limits for Sb 206.836 Recovery = 96.74%						
Se 196.026†	512.5	492.92 µg/L	39.421	492.92 ppb	39.421	8.00%
QC value within limits for Se 196.026 Recovery = 98.58%						
SiO2†	29058.9	5246.2 µg/L	227.04	5246.2 ppb	227.04	4.33%
QC value within limits for SiO2 Recovery = 98.11%						
Si 251.611†	36107.5	2454.7 µg/L	109.10	2454.7 ppb	109.10	4.44%
QC value within limits for Si 251.611 Recovery = 98.19%						
Sn 189.927†	1236.9	482.06 µg/L	55.747	482.06 ppb	55.747	11.56%
QC value within limits for Sn 189.927 Recovery = 96.41%						
Sr 421.552†	82257.0	489.01 µg/L	0.977	489.01 ppb	0.977	0.20%
QC value within limits for Sr 421.552 Recovery = 97.80%						
Ti 334.940†	207079.9	483.92 µg/L	22.946	483.92 ppb	22.946	4.74%
QC value within limits for Ti 334.940 Recovery = 96.78%						
Tl 190.801†	500.1	493.05 µg/L	24.593	493.05 ppb	24.593	4.99%
QC value within limits for Tl 190.801 Recovery = 98.61%						
U 409.014†	5383.6	487.86 µg/L	35.510	487.86 ppb	35.510	7.28%
QC value within limits for U 409.014 Recovery = 97.57%						
V 292.402†	41085.5	489.72 µg/L	30.682	489.72 ppb	30.682	6.27%
QC value within limits for V 292.402 Recovery = 97.94%						
Zn 213.857†	21344.7	487.98 µg/L	29.186	487.98 ppb	29.186	5.98%
QC value within limits for Zn 213.857 Recovery = 97.60%						

All analyte(s) passed QC.



Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 14:39:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97923.2	97923.2	101 %		14:40:10
1	Al 396.153Radial†	-127.0	-6.2	-3.0132 µg/L	-3.0132 ppb	14:40:10
1	Ca 317.933Radial†	379.5	-10.1	-3.6906 µg/L	-3.6906 ppb	14:40:30
1	Fe 238.204 Radial†	13.1	1.0	11.304 µg/L	11.304 ppb	14:40:30
1	K 766.490 Radial†	514.7	23.4	10.898 µg/L	10.898 ppb	14:40:10
1	Mg 279.077 IEC†	8.1	0.0	0.6110 µg/L	0.6110 ppb	14:40:30
1	Na 589.592 Radial†	236.0	52.7	26.312 µg/L	26.312 ppb	14:40:10
1	Sr 421.552†	124.6	-16.2	-0.0965 µg/L	-0.0965 ppb	14:40:10
1	Sc 361.383	2069830.8	2069830.8	98.888 %		14:41:32
1	Y 371.029	1415716.5	1415716.5	98.803 %		14:41:32
1	Ag 328.068†	-548.9	-94.9	-0.7650 µg/L	-0.7650 ppb	14:41:38
1	As 188.979†	-2.5	0.8	1.1284 µg/L	1.1284 ppb	14:41:58
1	B 249.677†	335.6	40.0	1.8096 µg/L	1.8096 ppb	14:41:38
1	Ba 233.527†	-7.7	0.7	0.0133 µg/L	0.0133 ppb	14:41:58
1	Be 313.107†	-1007.1	140.4	0.0824 µg/L	0.0824 ppb	14:41:38
1	Cd 226.502†	-156.5	12.4	0.2920 µg/L	0.2920 ppb	14:41:58
1	Co 228.616†	39.8	-7.8	-0.3333 µg/L	-0.3333 ppb	14:41:58
1	Cr 267.716†	101.8	22.7	0.4934 µg/L	0.4934 ppb	14:41:38
1	Cu 324.752†	4549.2	223.7	1.4630 µg/L	1.4630 ppb	14:41:38
1	Mn 257.610†	-612.1	68.0	0.2049 µg/L	0.2049 ppb	14:41:58
1	Mo 202.031†	29.0	24.2	2.3924 µg/L	2.3924 ppb	14:41:58
1	Ni 231.604†	365.0	-7.8	-0.4362 µg/L	-0.4362 ppb	14:41:58
1	P 214.914†	270.2	0.8	1.1901 µg/L	1.1901 ppb	14:41:58
1	Pb 220.353†	29.1	-0.8	-0.1964 µg/L	-0.1964 ppb	14:41:58
1	S 181.975 Axial†	24.6	2.3	7.3601 µg/L	7.3601 ppb	14:41:58
1	Sb 206.836†	28.1	5.7	5.0982 µg/L	5.0982 ppb	14:41:58
1	Se 196.026†	27.2	0.2	0.2537 µg/L	0.2537 ppb	14:41:58
1	SiO2†	2772.4	23.8	4.2969 µg/L	4.2969 ppb	14:41:38
1	Si 251.611†	434.7	15.5	1.0525 µg/L	1.0525 ppb	14:41:58
1	Sn 189.927†	-2.4	5.1	1.9690 µg/L	1.9690 ppb	14:41:58
1	Ti 334.940†	-488.9	82.8	0.1936 µg/L	0.1936 ppb	14:41:38
1	Tl 190.801†	-32.9	0.8	0.8120 µg/L	0.8120 ppb	14:41:58
1	U 409.014†	2.0	7.8	0.7080 µg/L	0.7080 ppb	14:41:38
1	V 292.402†	58.8	-52.9	-0.6052 µg/L	-0.6052 ppb	14:41:38
1	Zn 213.857†	683.6	-317.5	-7.3122 µg/L	-7.3122 ppb	14:41:58
2	Sc RADIAL	97416.1	97416.1	101 %		14:40:36
2	Al 396.153Radial†	-106.0	14.0	6.6472 µg/L	6.6472 ppb	14:40:36
2	Ca 317.933Radial†	385.8	-2.0	-0.7354 µg/L	-0.7354 ppb	14:40:56
2	Fe 238.204 Radial†	13.2	1.1	13.143 µg/L	13.143 ppb	14:40:56
2	K 766.490 Radial†	484.3	-4.2	-1.9398 µg/L	-1.9398 ppb	14:40:36
2	Mg 279.077 IEC†	10.3	2.2	29.081 µg/L	29.081 ppb	14:40:56
2	Na 589.592 Radial†	221.0	39.0	19.447 µg/L	19.447 ppb	14:40:36
2	Sr 421.552†	148.5	8.2	0.0485 µg/L	0.0485 ppb	14:40:36
2	Sc 361.383	2086144.2	2086144.2	99.667 %		14:42:04
2	Y 371.029	1426251.6	1426251.6	99.538 %		14:42:04
2	Ag 328.068†	-589.9	-131.6	-1.0551 µg/L	-1.0551 ppb	14:42:10
2	As 188.979†	-0.7	2.6	3.7661 µg/L	3.7661 ppb	14:42:30
2	B 249.677†	317.1	18.8	0.8456 µg/L	0.8456 ppb	14:42:10
2	Ba 233.527†	4.0	12.4	0.2722 µg/L	0.2722 ppb	14:42:30
2	Be 313.107†	-987.6	168.0	0.0985 µg/L	0.0985 ppb	14:42:10
2	Cd 226.502†	-171.4	-1.3	-0.0335 µg/L	-0.0335 ppb	14:42:30
2	Co 228.616†	39.2	-8.7	-0.3740 µg/L	-0.3740 ppb	14:42:30
2	Cr 267.716†	66.2	-13.8	-0.3010 µg/L	-0.3010 ppb	14:42:10
2	Cu 324.752†	4518.2	156.6	1.0254 µg/L	1.0254 ppb	14:42:10
2	Mn 257.610†	-612.2	72.7	0.2173 µg/L	0.2173 ppb	14:42:30
2	Mo 202.031†	29.8	24.8	2.4526 µg/L	2.4526 ppb	14:42:30
2	Ni 231.604†	375.3	-0.3	-0.0180 µg/L	-0.0180 ppb	14:42:30
2	P 214.914†	266.0	-5.5	-9.1845 µg/L	-9.1845 ppb	14:42:30
2	Pb 220.353†	33.3	3.3	0.8585 µg/L	0.8585 ppb	14:42:30

2	S 181.975 Axial†	19.4	-3.1	-9.8857 µg/L	-9.8857 ppb	14:42:30
2	Sb 206.836†	33.4	10.8	9.6809 µg/L	9.6809 ppb	14:42:30
2	Se 196.026†	27.2	-0.0	0.0113 µg/L	0.0113 ppb	14:42:30
2	SiO2†	2745.6	-25.0	-4.5104 µg/L	-4.5104 ppb	14:42:10
2	Si 251.611†	444.0	21.4	1.4568 µg/L	1.4568 ppb	14:42:30
2	Sn 189.927†	4.6	12.1	4.7090 µg/L	4.7090 ppb	14:42:30
2	Ti 334.940†	-380.1	195.9	0.4557 µg/L	0.4557 ppb	14:42:10
2	Tl 190.801†	-32.4	1.6	1.6129 µg/L	1.6129 ppb	14:42:30
2	U 409.014†	12.1	17.9	1.6267 µg/L	1.6267 ppb	14:42:10
2	V 292.402†	120.3	8.3	0.1168 µg/L	0.1168 ppb	14:42:10
2	Zn 213.857†	677.0	-329.6	-7.5918 µg/L	-7.5918 ppb	14:42:30
3	Sc RADIAL	98240.0	98240.0	101 %		14:41:01
3	Al 396.153Radial†	-164.8	-43.1	-20.609 µg/L	-20.609 ppb	14:41:01
3	Ca 317.933Radial†	390.4	-0.7	-0.2496 µg/L	-0.2496 ppb	14:41:22
3	Fe 238.204 Radial†	12.5	0.4	4.3734 µg/L	4.3734 ppb	14:41:22
3	K 766.490 Radial†	536.7	43.4	20.244 µg/L	20.244 ppb	14:41:01
3	Mg 279.077 IEC†	13.6	5.4	71.694 µg/L	71.694 ppb	14:41:22
3	Na 589.592 Radial†	220.9	37.1	18.494 µg/L	18.494 ppb	14:41:01
3	Sr 421.552†	125.8	-15.5	-0.0922 µg/L	-0.0922 ppb	14:41:01
3	Sc 361.383	2101049.5	2101049.5	100.38 %		14:42:36
3	Y 371.029	1437937.2	1437937.2	100.35 %		14:42:36
3	Ag 328.068†	-490.1	-28.1	-0.2276 µg/L	-0.2276 ppb	14:42:42
3	As 188.979†	-5.7	-2.4	-3.6107 µg/L	-3.6107 ppb	14:43:02
3	B 249.677†	304.1	3.6	0.1626 µg/L	0.1626 ppb	14:42:42
3	Ba 233.527†	-2.5	5.9	0.1291 µg/L	0.1291 ppb	14:43:02
3	Be 313.107†	-941.4	221.0	0.1297 µg/L	0.1297 ppb	14:42:42
3	Cd 226.502†	-161.4	9.8	0.2310 µg/L	0.2310 ppb	14:43:02
3	Co 228.616†	41.6	-6.6	-0.2822 µg/L	-0.2822 ppb	14:43:02
3	Cr 267.716†	72.6	-7.9	-0.1720 µg/L	-0.1720 ppb	14:42:42
3	Cu 324.752†	4566.2	172.3	1.1262 µg/L	1.1262 ppb	14:42:42
3	Mn 257.610†	-622.5	66.8	0.1962 µg/L	0.1962 ppb	14:43:02
3	Mo 202.031†	32.4	27.1	2.6860 µg/L	2.6860 ppb	14:43:02
3	Ni 231.604†	364.6	-13.7	-0.7696 µg/L	-0.7696 ppb	14:43:02
3	P 214.914†	267.4	-6.0	-10.051 µg/L	-10.051 ppb	14:43:02
3	Pb 220.353†	39.5	9.2	2.4200 µg/L	2.4200 ppb	14:43:02
3	S 181.975 Axial†	25.9	3.2	10.281 µg/L	10.281 ppb	14:43:02
3	Sb 206.836†	29.8	7.0	6.2789 µg/L	6.2789 ppb	14:43:02
3	Se 196.026†	22.4	-5.0	-4.7585 µg/L	-4.7585 ppb	14:43:02
3	SiO2†	2754.3	-35.9	-6.4746 µg/L	-6.4746 ppb	14:42:42
3	Si 251.611†	439.8	14.1	0.9571 µg/L	0.9571 ppb	14:43:02
3	Sn 189.927†	-3.2	4.3	1.6676 µg/L	1.6676 ppb	14:43:02
3	Ti 334.940†	-455.0	123.9	0.2842 µg/L	0.2842 ppb	14:42:42
3	Tl 190.801†	-40.6	-6.4	-6.2256 µg/L	-6.2256 ppb	14:43:02
3	U 409.014†	-34.9	-28.9	-2.6292 µg/L	-2.6292 ppb	14:42:42
3	V 292.402†	81.7	-31.0	-0.3486 µg/L	-0.3486 ppb	14:42:42
3	Zn 213.857†	667.7	-343.7	-7.9163 µg/L	-7.9163 ppb	14:43:02

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2085674.9	99.645 %	0.7460			0.75%
Sc RADIAL	97859.8	101 %	0.4			0.42%
Y 371.029	1426635.1	99.565 %	0.7757			0.78%
Ag 328.068†	-84.9	-0.6826 µg/L	0.41989	-0.6826 ppb	0.41989	61.52%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-11.7	-5.6584 µg/L	13.81945	-5.6584 ppb	13.81945	244.23%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.3	0.4279 µg/L	3.73797	0.4279 ppb	3.73797	873.49%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	20.8	0.9392 µg/L	0.82745	0.9392 ppb	0.82745	88.10%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	6.3	0.1382 µg/L	0.12965	0.1382 ppb	0.12965	93.81%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	176.5	0.1036 µg/L	0.02406	0.1036 ppb	0.02406	23.23%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-4.3	-1.5585 µg/L	1.86230	-1.5585 ppb	1.86230	119.49%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.9	0.1631 µg/L	0.17303	0.1631 ppb	0.17303	106.06%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-7.7	-0.3298 µg/L	0.04598	-0.3298 ppb	0.04598	13.94%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	0.3	0.0068 µg/L	0.42635	0.0068 ppb	0.42635 >999.9%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	184.2	1.2049 µg/L	0.22917	1.2049 ppb	0.22917 19.02%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	0.8	9.6067 µg/L	4.62456	9.6067 ppb	4.62456 48.14%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	20.9	9.7340 µg/L	11.13749	9.7340 ppb	11.13749 114.42%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	2.6	33.795 µg/L	35.7751	33.795 ppb	35.7751 105.86%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	69.2	0.2061 µg/L	0.01063	0.2061 ppb	0.01063 5.15%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	25.4	2.5103 µg/L	0.15511	2.5103 ppb	0.15511 6.18%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	42.9	21.418 µg/L	4.2653	21.418 ppb	4.2653 19.91%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	-7.3	-0.4080 µg/L	0.37661	-0.4080 ppb	0.37661 92.32%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	-3.6	-6.0152 µg/L	6.25504	-6.0152 ppb	6.25504 103.99%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	3.9	1.0274 µg/L	1.31637	1.0274 ppb	1.31637 128.13%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	0.8	2.5852 µg/L	10.89844	2.5852 ppb	10.89844 421.57%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	7.8	7.0193 µg/L	2.37938	7.0193 ppb	2.37938 33.90%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-1.6	-1.4978 µg/L	2.82643	-1.4978 ppb	2.82643 188.70%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	-12.3	-2.2294 µg/L	5.73660	-2.2294 ppb	5.73660 257.32%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	17.0	1.1555 µg/L	0.26528	1.1555 ppb	0.26528 22.96%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	7.1	2.7819 µg/L	1.67575	2.7819 ppb	1.67575 60.24%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	-7.9	-0.0467 µg/L	0.08252	-0.0467 ppb	0.08252 176.63%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	134.2	0.3111 µg/L	0.13313	0.3111 ppb	0.13313 42.79%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	-1.3	-1.2669 µg/L	4.31300	-1.2669 ppb	4.31300 340.44%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-1.1	-0.0982 µg/L	2.23954	-0.0982 ppb	2.23954 >999.9%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-25.2	-0.2790 µg/L	0.36598	-0.2790 ppb	0.36598 131.17%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-330.3	-7.6068 µg/L	0.30234	-7.6068 ppb	0.30234 3.97%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: LR1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 113

Date Collected: 3/16/2010 14:43:13

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98821.0	98821.0	102 %		14:43:44
1	Al 396.153Radial†	-178.8	-55.9	-26.396 µg/L	-26.396 ppb	14:43:44
1	Ca 317.933Radial†	535.2	138.9	50.535 µg/L	50.535 ppb	14:44:05
1	Fe 238.204 Radial†	32349.8	31672.5	374610 µg/L	374610 ppb	14:43:44
1	K 766.490 Radial†	215.1	-274.7	-128.19 µg/L	-128.19 ppb	14:43:44
1	Mg 279.077 IEC†	9.1	0.9	-389.76 µg/L	-389.76 ppb	14:44:05
1	Na 589.592 Radial†	195.1	10.5	5.2457 µg/L	5.2457 ppb	14:43:44
1	Sr 421.552†	172.3	29.3	0.1742 µg/L	0.1742 ppb	14:43:44
1	Sc 361.383	2084224.1	2084224.1	99.576 %		14:45:07
1	Y 371.029	1417107.9	1417107.9	98.900 %		14:45:07
1	Ag 328.068†	-3119.9	-2673.0	7.5909 µg/L	7.5909 ppb	14:45:13
1	As 188.979†	-20.0	-16.8	-71.152 µg/L	-71.152 ppb	14:45:33
1	B 249.677†	1596.3	1303.8	-136.31 µg/L	-136.31 ppb	14:45:13
1	Ba 233.527†	526.6	537.3	11.817 µg/L	11.817 ppb	14:45:33
1	Be 313.107†	-1203.6	-49.9	-0.0293 µg/L	-0.0293 ppb	14:45:13
1	Cd 226.502†	1807.9	1986.2	4.8780 µg/L	4.8780 ppb	14:45:13
1	Co 228.616†	498.4	452.5	19.428 µg/L	19.428 ppb	14:45:33
1	Cr 267.716†	-156.8	-237.7	-5.1458 µg/L	-5.1458 ppb	14:45:33
1	Cu 324.752†	-2661.5	-7049.5	24.382 µg/L	24.382 ppb	14:45:13
1	Mn 257.610†	394.3	1082.9	25.431 µg/L	25.431 ppb	14:45:07
1	Mo 202.031†	-126.9	-132.6	1.1124 µg/L	1.1124 ppb	14:45:13
1	Ni 231.604†	290.6	-85.0	0.0781 µg/L	0.0781 ppb	14:45:33
1	P 214.914†	490.7	220.3	66.605 µg/L	66.605 ppb	14:45:33
1	Pb 220.353†	31.1	1.1	6.5378 µg/L	6.5378 ppb	14:45:33
1	S 181.975 Axial†	-11.0	-33.5	-106.76 µg/L	-106.76 ppb	14:45:33
1	Sb 206.836†	30.4	7.8	6.8064 µg/L	6.8064 ppb	14:45:33
1	Se 196.026†	-313.0	-341.6	870.20 µg/L	870.20 ppb	14:45:33
1	SiO2†	2521.1	-247.9	-44.756 µg/L	-44.756 ppb	14:45:13
1	Si 251.611†	-335.5	-761.0	-51.735 µg/L	-51.735 ppb	14:45:13
1	Sn 189.927†	6.7	14.2	3.7517 µg/L	3.7517 ppb	14:45:33
1	Ti 334.940†	-586.1	-11.4	-0.0268 µg/L	-0.0268 ppb	14:45:13
1	Tl 190.801†	-48.3	-14.4	38.883 µg/L	38.883 ppb	14:45:33
1	U 409.014†	842.3	851.7	25.258 µg/L	25.258 ppb	14:45:13
1	V 292.402†	3256.1	3157.6	-10.295 µg/L	-10.295 ppb	14:45:13
1	Zn 213.857†	2607.2	1609.5	19.356 µg/L	19.356 ppb	14:45:33
2	Sc RADIAL	99842.3	99842.3	103 %		14:44:10
2	Al 396.153Radial†	-178.8	-54.0	-25.554 µg/L	-25.554 ppb	14:44:10
2	Ca 317.933Radial†	539.3	137.5	50.047 µg/L	50.047 ppb	14:44:30
2	Fe 238.204 Radial†	33033.7	32011.3	378620 µg/L	378620 ppb	14:44:10
2	K 766.490 Radial†	304.8	-189.9	-88.622 µg/L	-88.622 ppb	14:44:10
2	Mg 279.077 IEC†	7.6	-0.6	-414.47 µg/L	-414.47 ppb	14:44:30
2	Na 589.592 Radial†	164.4	-21.2	-10.605 µg/L	-10.605 ppb	14:44:10
2	Sr 421.552†	162.0	17.6	0.1049 µg/L	0.1049 ppb	14:44:10
2	Sc 361.383	2091219.4	2091219.4	99.910 %		14:45:40
2	Y 371.029	1421954.5	1421954.5	99.238 %		14:45:40
2	Ag 328.068†	-3184.1	-2726.8	7.4846 µg/L	7.4846 ppb	14:45:45
2	As 188.979†	-17.9	-14.7	-68.458 µg/L	-68.458 ppb	14:46:06
2	B 249.677†	1789.5	1491.7	-129.87 µg/L	-129.87 ppb	14:45:45
2	Ba 233.527†	513.2	522.1	11.491 µg/L	11.491 ppb	14:46:06
2	Be 313.107†	-1359.3	-201.7	-0.1185 µg/L	-0.1185 ppb	14:45:45
2	Cd 226.502†	1831.6	2003.9	4.8452 µg/L	4.8452 ppb	14:45:45
2	Co 228.616†	493.2	445.6	19.134 µg/L	19.134 ppb	14:46:06
2	Cr 267.716†	-134.5	-214.8	-4.6475 µg/L	-4.6475 ppb	14:46:06
2	Cu 324.752†	-2689.9	-7069.0	25.009 µg/L	25.009 ppb	14:45:45
2	Mn 257.610†	393.8	1081.1	25.664 µg/L	25.664 ppb	14:45:40
2	Mo 202.031†	-109.5	-114.7	3.0356 µg/L	3.0356 ppb	14:45:45
2	Ni 231.604†	306.4	-70.2	0.9606 µg/L	0.9606 ppb	14:46:06
2	P 214.914†	483.1	211.1	48.045 µg/L	48.045 ppb	14:46:06
2	Pb 220.353†	29.8	-0.4	6.2257 µg/L	6.2257 ppb	14:46:06

2	S 181.975 Axial†	-10.1	-32.6	-103.86 µg/L	-103.86 ppb	14:46:06
2	Sb 206.836†	27.2	4.5	3.8854 µg/L	3.8854 ppb	14:46:06
2	Se 196.026†	-283.9	-311.5	911.29 µg/L	911.29 ppb	14:46:06
2	SiO2†	2523.9	-253.6	-45.778 µg/L	-45.778 ppb	14:45:45
2	Si 251.611†	-329.6	-754.0	-51.259 µg/L	-51.259 ppb	14:45:45
2	Sn 189.927†	6.1	13.5	3.4694 µg/L	3.4694 ppb	14:46:06
2	Ti 334.940†	-618.7	-42.0	-0.0969 µg/L	-0.0969 ppb	14:45:45
2	Tl 190.801†	-37.2	-3.1	50.423 µg/L	50.423 ppb	14:46:06
2	U 409.014†	812.9	819.4	21.773 µg/L	21.773 ppb	14:45:45
2	V 292.402†	3490.7	3381.5	-8.1489 µg/L	-8.1489 ppb	14:45:45
2	Zn 213.857†	2565.2	1558.6	17.993 µg/L	17.993 ppb	14:46:06
3	Sc RADIAL	99677.7	99677.7	103 %		14:44:36
3	Al 396.153Radial†	-155.3	-31.5	-14.776 µg/L	-14.776 ppb	14:44:36
3	Ca 317.933Radial†	528.9	128.2	46.672 µg/L	46.672 ppb	14:44:56
3	Fe 238.204 Radial†	32875.1	31910.2	377420 µg/L	377420 ppb	14:44:36
3	K 766.490 Radial†	294.8	-199.0	-92.893 µg/L	-92.893 ppb	14:44:36
3	Mg 279.077 IEC†	7.7	-0.5	-412.23 µg/L	-412.23 ppb	14:44:56
3	Na 589.592 Radial†	161.9	-23.4	-11.685 µg/L	-11.685 ppb	14:44:36
3	Sr 421.552†	176.2	31.7	0.1884 µg/L	0.1884 ppb	14:44:36
3	Sc 361.383	2105079.9	2105079.9	100.57 %		14:46:12
3	Y 371.029	1432585.5	1432585.5	99.980 %		14:46:12
3	Ag 328.068†	-2786.9	-2310.8	10.699 µg/L	10.699 ppb	14:46:18
3	As 188.979†	-17.2	-13.9	-67.117 µg/L	-67.117 ppb	14:46:38
3	B 249.677†	1598.6	1290.2	-138.40 µg/L	-138.40 ppb	14:46:18
3	Ba 233.527†	433.9	439.9	9.6824 µg/L	9.6824 ppb	14:46:38
3	Be 313.107†	-1273.7	-107.6	-0.0633 µg/L	-0.0633 ppb	14:46:18
3	Cd 226.502†	1605.4	1766.9	-0.6542 µg/L	-0.6542 ppb	14:46:18
3	Co 228.616†	416.2	365.8	15.702 µg/L	15.702 ppb	14:46:38
3	Cr 267.716†	-104.3	-183.9	-3.9778 µg/L	-3.9778 ppb	14:46:38
3	Cu 324.752†	-1793.0	-6159.5	30.724 µg/L	30.724 ppb	14:46:18
3	Mn 257.610†	355.9	1040.9	25.472 µg/L	25.472 ppb	14:46:12
3	Mo 202.031†	-121.5	-125.9	1.8831 µg/L	1.8831 ppb	14:46:18
3	Ni 231.604†	295.1	-83.4	0.2080 µg/L	0.2080 ppb	14:46:38
3	P 214.914†	452.0	177.0	-8.1559 µg/L	-8.1559 ppb	14:46:38
3	Pb 220.353†	20.5	-9.8	3.7501 µg/L	3.7501 ppb	14:46:38
3	S 181.975 Axial†	-14.7	-37.1	-118.10 µg/L	-118.10 ppb	14:46:38
3	Sb 206.836†	25.2	2.4	1.9419 µg/L	1.9419 ppb	14:46:38
3	Se 196.026†	-243.8	-269.8	946.68 µg/L	946.68 ppb	14:46:38
3	SiO2†	2566.6	-227.8	-41.125 µg/L	-41.125 ppb	14:46:18
3	Si 251.611†	-232.9	-655.6	-44.573 µg/L	-44.573 ppb	14:46:18
3	Sn 189.927†	16.4	23.7	7.4439 µg/L	7.4439 ppb	14:46:38
3	Ti 334.940†	-491.8	88.3	0.2077 µg/L	0.2077 ppb	14:46:18
3	Tl 190.801†	-49.7	-15.3	38.380 µg/L	38.380 ppb	14:46:38
3	U 409.014†	646.8	648.9	6.4562 µg/L	6.4562 ppb	14:46:18
3	V 292.402†	3078.4	2948.6	-13.131 µg/L	-13.131 ppb	14:46:18
3	Zn 213.857†	2219.2	1197.7	9.7345 µg/L	9.7345 ppb	14:46:38

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2093507.8	100.02 %	0.507			0.51%
Sc RADIAL	99447.0	103 %	0.6			0.55%
Y 371.029	1423882.6	99.373 %	0.5525			0.56%
Ag 328.068†	-2570.2	8.5913 µg/L	1.82565	8.5913 ppb	1.82565	21.25%
Al 396.153Radial†	-47.1	-22.242 µg/L	6.4792	-22.242 ppb	6.4792	29.13%
As 188.979†	-15.1	-68.909 µg/L	2.0548	-68.909 ppb	2.0548	2.98%
B 249.677†	1361.9	-134.86 µg/L	4.443	-134.86 ppb	4.443	3.29%
Ba 233.527†	499.7	10.997 µg/L	1.1498	10.997 ppb	1.1498	10.46%
Be 313.107†	-119.7	-0.0704 µg/L	0.04500	-0.0704 ppb	0.04500	63.96%
Ca 317.933Radial†	134.9	49.085 µg/L	2.1034	49.085 ppb	2.1034	4.29%
Cd 226.502†	1919.0	3.0230 µg/L	3.18456	3.0230 ppb	3.18456	105.34%
Co 228.616†	421.3	18.088 µg/L	2.0714	18.088 ppb	2.0714	11.45%
Cr 267.716†	-212.1	-4.5904 µg/L	0.58607	-4.5904 ppb	0.58607	12.77%
Cu 324.752†	-6759.3	26.705 µg/L	3.4949	26.705 ppb	3.4949	13.09%
Fe 238.204 Radial†	31864.6	376880 µg/L	2057.4	376880 ppb	2057.4	0.55%
K 766.490 Radial†	-221.2	-103.24 µg/L	21.719	-103.24 ppb	21.719	21.04%
Mg 279.077 IEC†	-0.1	-405.49 µg/L	13.665	-405.49 ppb	13.665	3.37%
Mn 257.610†	1068.3	25.522 µg/L	0.1245	25.522 ppb	0.1245	0.49%
Mo 202.031†	-124.4	2.0104 µg/L	0.96787	2.0104 ppb	0.96787	48.14%
Na 589.592 Radial†	-11.4	-5.6815 µg/L	9.47860	-5.6815 ppb	9.47860	166.83%

Ni 231.604†	-79.6	0.4156 µg/L	0.47650	0.4156 ppb	0.47650	114.66%
P 214.914†	202.8	35.498 µg/L	38.9276	35.498 ppb	38.9276	109.66%
Pb 220.353†	-3.0	5.5045 µg/L	1.52739	5.5045 ppb	1.52739	27.75%
S 181.975 Axial†	-34.4	-109.57 µg/L	7.528	-109.57 ppb	7.528	6.87%
Sb 206.836†	4.9	4.2112 µg/L	2.44856	4.2112 ppb	2.44856	58.14%
Se 196.026†	-307.6	909.39 µg/L	38.277	909.39 ppb	38.277	4.21%
SiO2†	-243.1	-43.886 µg/L	2.4454	-43.886 ppb	2.4454	5.57%
Si 251.611†	-723.5	-49.189 µg/L	4.0046	-49.189 ppb	4.0046	8.14%
Sn 189.927†	17.2	4.8883 µg/L	2.21766	4.8883 ppb	2.21766	45.37%
Sr 421.552†	26.2	0.1558 µg/L	0.04465	0.1558 ppb	0.04465	28.65%
Ti 334.940†	11.6	0.0280 µg/L	0.15950	0.0280 ppb	0.15950	569.88%
Tl 190.801†	-10.9	42.562 µg/L	6.8126	42.562 ppb	6.8126	16.01%
U 409.014†	773.4	17.829 µg/L	10.0021	17.829 ppb	10.0021	56.10%
V 292.402†	3162.6	-10.525 µg/L	2.4992	-10.525 ppb	2.4992	23.74%
Zn 213.857†	1455.3	15.695 µg/L	5.2065	15.695 ppb	5.2065	33.17%

Sequence No.: 4

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 14:46:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	100002.2	100002.2	103 %		14:47:20
1	Al 396.153Radial†	10332.5	10119.8	4820.0 µg/L	4820.0 ppb	14:47:20
1	Ca 317.933Radial†	14133.6	13294.1	4838.0 µg/L	4838.0 ppb	14:47:20
1	Fe 238.204 Radial†	442.3	416.2	4933.0 µg/L	4933.0 ppb	14:47:40
1	K 766.490 Radial†	11169.4	10325.1	4818.5 µg/L	4818.5 ppb	14:47:20
1	Mg 279.077 IEC†	391.4	370.8	4892.3 µg/L	4892.3 ppb	14:47:40
1	Na 589.592 Radial†	20261.8	19430.0	9697.6 µg/L	9697.6 ppb	14:47:20
1	Sr 421.552†	84170.7	81326.2	483.47 µg/L	483.47 ppb	14:47:20
1	Sc 361.383	2066641.5	2066641.5	98.736 %		14:48:44
1	Y 371.029	1412477.4	1412477.4	98.577 %		14:48:44
1	Ag 328.068†	61390.7	62637.1	506.69 µg/L	506.69 ppb	14:48:49
1	As 188.979†	349.1	356.8	525.22 µg/L	525.22 ppb	14:49:10
1	B 249.677†	11270.0	11115.0	502.67 µg/L	502.67 ppb	14:48:49
1	Ba 233.527†	23001.0	23304.0	510.58 µg/L	510.58 ppb	14:48:49
1	Be 313.107†	843291.4	855250.1	502.32 µg/L	502.32 ppb	14:48:44
1	Cd 226.502†	21022.1	21461.9	510.11 µg/L	510.11 ppb	14:48:49
1	Co 228.616†	11785.4	11888.3	510.17 µg/L	510.17 ppb	14:48:49
1	Cr 267.716†	23536.2	23757.4	517.03 µg/L	517.03 ppb	14:48:49
1	Cu 324.752†	81807.9	78478.9	513.52 µg/L	513.52 ppb	14:48:49
1	Mn 257.610†	167086.9	169913.7	510.63 µg/L	510.63 ppb	14:48:44
1	Mo 202.031†	5263.5	5325.8	527.18 µg/L	527.18 ppb	14:49:10
1	Ni 231.604†	9383.0	9126.2	511.32 µg/L	511.32 ppb	14:48:49
1	P 214.914†	1823.7	1574.6	2565.5 µg/L	2565.5 ppb	14:49:10
1	Pb 220.353†	1974.7	1969.8	517.04 µg/L	517.04 ppb	14:49:10
1	S 181.975 Axial†	336.2	318.0	1012.0 µg/L	1012.0 ppb	14:49:10
1	Sb 206.836†	588.1	572.9	513.78 µg/L	513.78 ppb	14:49:10
1	Se 196.026†	567.9	547.9	526.47 µg/L	526.47 ppb	14:49:10
1	SiO2†	32606.5	30244.3	5460.2 µg/L	5460.2 ppb	14:48:49
1	Si 251.611†	37492.2	37548.2	2552.7 µg/L	2552.7 ppb	14:48:49
1	Sn 189.927†	1323.2	1347.6	525.15 µg/L	525.15 ppb	14:49:10
1	Ti 334.940†	210964.0	214243.0	500.67 µg/L	500.67 ppb	14:48:44
1	Tl 190.801†	487.8	528.2	520.65 µg/L	520.65 ppb	14:49:10
1	U 409.014†	5653.2	5731.4	519.43 µg/L	519.43 ppb	14:48:49
1	V 292.402†	42793.6	43229.3	515.45 µg/L	515.45 ppb	14:48:49
1	Zn 213.857†	23185.4	22473.4	513.83 µg/L	513.83 ppb	14:48:49
2	Sc RADIAL	99966.1	99966.1	103 %		14:47:46
2	Al 396.153Radial†	10273.1	10065.8	4794.5 µg/L	4794.5 ppb	14:47:46
2	Ca 317.933Radial†	14142.8	13307.9	4843.0 µg/L	4843.0 ppb	14:47:46
2	Fe 238.204 Radial†	441.1	415.1	4920.8 µg/L	4920.8 ppb	14:48:06
2	K 766.490 Radial†	11149.8	10310.1	4811.5 µg/L	4811.5 ppb	14:47:46
2	Mg 279.077 IEC†	390.5	370.1	4882.2 µg/L	4882.2 ppb	14:48:06
2	Na 589.592 Radial†	20227.3	19403.8	9684.5 µg/L	9684.5 ppb	14:47:46
2	Sr 421.552†	84211.8	81395.4	483.89 µg/L	483.89 ppb	14:47:46
2	Sc 361.383	2071164.5	2071164.5	98.952 %		14:49:17
2	Y 371.029	1413074.0	1413074.0	98.618 %		14:49:17
2	Ag 328.068†	61209.6	62318.3	504.13 µg/L	504.13 ppb	14:49:23
2	As 188.979†	344.6	351.5	517.31 µg/L	517.31 ppb	14:49:43
2	B 249.677†	11263.6	11083.6	501.25 µg/L	501.25 ppb	14:49:23
2	Ba 233.527†	23001.4	23253.5	509.47 µg/L	509.47 ppb	14:49:23
2	Be 313.107†	843189.8	853282.2	501.16 µg/L	501.16 ppb	14:49:17
2	Cd 226.502†	21025.2	21418.5	509.08 µg/L	509.08 ppb	14:49:23
2	Co 228.616†	11793.6	11870.5	509.40 µg/L	509.40 ppb	14:49:23
2	Cr 267.716†	23441.7	23609.9	513.82 µg/L	513.82 ppb	14:49:23
2	Cu 324.752†	81544.7	78032.0	510.60 µg/L	510.60 ppb	14:49:23
2	Mn 257.610†	167292.2	169751.6	510.14 µg/L	510.14 ppb	14:49:17
2	Mo 202.031†	5156.4	5205.9	515.32 µg/L	515.32 ppb	14:49:43
2	Ni 231.604†	9416.1	9139.0	512.04 µg/L	512.04 ppb	14:49:23
2	P 214.914†	1805.9	1552.6	2529.1 µg/L	2529.1 ppb	14:49:43
2	Pb 220.353†	1972.7	1963.4	515.34 µg/L	515.34 ppb	14:49:43

2	S 181.975 Axial†	340.3	321.4	1022.7 µg/L	1022.7 ppb	14:49:43
2	Sb 206.836†	583.1	566.6	507.97 µg/L	507.97 ppb	14:49:43
2	Se 196.026†	561.1	539.7	518.78 µg/L	518.78 ppb	14:49:43
2	SiO2†	32606.6	30172.4	5447.2 µg/L	5447.2 ppb	14:49:23
2	Si 251.611†	37482.7	37455.7	2546.4 µg/L	2546.4 ppb	14:49:23
2	Sn 189.927†	1293.5	1314.7	512.31 µg/L	512.31 ppb	14:49:43
2	Ti 334.940†	211443.1	214260.5	500.71 µg/L	500.71 ppb	14:49:17
2	Tl 190.801†	482.8	522.0	514.64 µg/L	514.64 ppb	14:49:43
2	U 409.014†	5557.8	5622.5	509.53 µg/L	509.53 ppb	14:49:23
2	V 292.402†	42859.4	43201.1	515.02 µg/L	515.02 ppb	14:49:23
2	Zn 213.857†	23126.3	22362.5	511.28 µg/L	511.28 ppb	14:49:23
3	Sc RADIAL	99184.3	99184.3	102 %		14:48:12
3	Al 396.153Radial†	10349.2	10218.5	4869.3 µg/L	4869.3 ppb	14:48:12
3	Ca 317.933Radial†	14209.2	13480.7	4905.9 µg/L	4905.9 ppb	14:48:12
3	Fe 238.204 Radial†	440.6	418.0	4953.1 µg/L	4953.1 ppb	14:48:32
3	K 766.490 Radial†	11166.9	10411.8	4859.0 µg/L	4859.0 ppb	14:48:12
3	Mg 279.077 IEC†	390.8	373.4	4924.6 µg/L	4924.6 ppb	14:48:32
3	Na 589.592 Radial†	20383.4	19710.4	9837.5 µg/L	9837.5 ppb	14:48:12
3	Sr 421.552†	84696.1	82510.7	490.52 µg/L	490.52 ppb	14:48:12
3	Sc 361.383	2085274.6	2085274.6	99.626 %		14:49:50
3	Y 371.029	1422624.2	1422624.2	99.285 %		14:49:50
3	Ag 328.068†	56927.7	57601.8	465.85 µg/L	465.85 ppb	14:49:56
3	As 188.979†	286.7	291.0	428.11 µg/L	428.11 ppb	14:50:16
3	B 249.677†	10409.3	10149.1	458.70 µg/L	458.70 ppb	14:49:56
3	Ba 233.527†	20676.0	20762.1	454.87 µg/L	454.87 ppb	14:49:56
3	Be 313.107†	785177.0	789285.5	463.57 µg/L	463.57 ppb	14:49:50
3	Cd 226.502†	18801.8	19043.0	452.55 µg/L	452.55 ppb	14:49:56
3	Co 228.616†	10512.7	10504.1	450.70 µg/L	450.70 ppb	14:49:56
3	Cr 267.716†	20227.8	20223.6	440.13 µg/L	440.13 ppb	14:49:56
3	Cu 324.752†	73452.9	69352.1	453.91 µg/L	453.91 ppb	14:49:56
3	Mn 257.610†	156317.2	157591.4	473.60 µg/L	473.60 ppb	14:49:50
3	Mo 202.031†	4267.5	4278.4	423.54 µg/L	423.54 ppb	14:50:16
3	Ni 231.604†	8361.0	8015.5	449.09 µg/L	449.09 ppb	14:49:56
3	P 214.914†	1551.1	1284.5	2088.5 µg/L	2088.5 ppb	14:50:16
3	Pb 220.353†	1682.8	1658.9	435.40 µg/L	435.40 ppb	14:50:16
3	S 181.975 Axial†	290.8	269.4	857.37 µg/L	857.37 ppb	14:50:16
3	Sb 206.836†	500.3	479.5	429.59 µg/L	429.59 ppb	14:50:16
3	Se 196.026†	490.7	465.3	448.89 µg/L	448.89 ppb	14:50:16
3	SiO2†	29961.9	27294.8	4927.7 µg/L	4927.7 ppb	14:49:56
3	Si 251.611†	34218.1	33922.6	2306.2 µg/L	2306.2 ppb	14:49:56
3	Sn 189.927†	1056.3	1067.7	416.19 µg/L	416.19 ppb	14:50:16
3	Ti 334.940†	195556.5	196868.4	460.04 µg/L	460.04 ppb	14:49:50
3	Tl 190.801†	430.9	466.6	460.20 µg/L	460.20 ppb	14:50:16
3	U 409.014†	4887.2	4911.4	444.96 µg/L	444.96 ppb	14:49:56
3	V 292.402†	37901.0	37931.1	451.86 µg/L	451.86 ppb	14:49:56
3	Zn 213.857†	20722.2	19791.2	452.44 µg/L	452.44 ppb	14:49:56

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Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2074360.2	99.104 %	0.4643			0.47%
Sc RADIAL	99717.5	103 %	0.5			0.46%
Y 371.029	1416058.5	98.827 %	0.3974			0.40%
Ag 328.068†	60852.4	492.22 µg/L	22.876	492.22 ppb	22.876	4.65%
QC value within limits for Ag 328.068 Recovery = 98.44%						
Al 396.153Radial†	10134.7	4828.0 µg/L	38.01	4828.0 ppb	38.01	0.79%
QC value within limits for Al 396.153Radial Recovery = 96.56%						
As 188.979†	333.1	490.22 µg/L	53.930	490.22 ppb	53.930	11.00%
QC value within limits for As 188.979 Recovery = 98.04%						
B 249.677†	10782.6	487.54 µg/L	24.986	487.54 ppb	24.986	5.12%
QC value within limits for B 249.677 Recovery = 97.51%						
Ba 233.527†	22439.8	491.64 µg/L	31.846	491.64 ppb	31.846	6.48%
QC value within limits for Ba 233.527 Recovery = 98.33%						
Be 313.107†	832605.9	489.02 µg/L	22.042	489.02 ppb	22.042	4.51%
QC value within limits for Be 313.107 Recovery = 97.80%						
Ca 317.933Radial†	13360.9	4862.3 µg/L	37.84	4862.3 ppb	37.84	0.78%
QC value within limits for Ca 317.933Radial Recovery = 97.25%						
Cd 226.502†	20641.1	490.58 µg/L	32.941	490.58 ppb	32.941	6.71%
QC value within limits for Cd 226.502 Recovery = 98.12%						
Co 228.616†	11420.9	490.09 µg/L	34.117	490.09 ppb	34.117	6.96%



Cr	267.716†	22530.3	490.32 µg/L	43.500	490.32 ppb	43.500	8.87%
QC value within limits for Cr 267.716 Recovery = 98.06%							
Cu	324.752†	75287.7	492.67 µg/L	33.603	492.67 ppb	33.603	6.82%
QC value within limits for Cu 324.752 Recovery = 98.53%							
Fe	238.204 Radial†	416.4	4935.6 µg/L	16.29	4935.6 ppb	16.29	0.33%
QC value within limits for Fe 238.204 Radial Recovery = 98.71%							
K	766.490 Radial†	10349.0	4829.7 µg/L	25.64	4829.7 ppb	25.64	0.53%
QC value within limits for K 766.490 Radial Recovery = 96.59%							
Mg	279.077 IEC†	371.4	4899.7 µg/L	22.15	4899.7 ppb	22.15	0.45%
QC value within limits for Mg 279.077 IEC Recovery = 97.99%							
Mn	257.610†	165752.2	498.12 µg/L	21.243	498.12 ppb	21.243	4.26%
QC value within limits for Mn 257.610 Recovery = 99.62%							
Mo	202.031†	4936.7	488.68 µg/L	56.724	488.68 ppb	56.724	11.61%
QC value within limits for Mo 202.031 Recovery = 97.74%							
Na	589.592 Radial†	19514.7	9739.9 µg/L	84.83	9739.9 ppb	84.83	0.87%
QC value within limits for Na 589.592 Radial Recovery = 97.40%							
Ni	231.604†	8760.2	490.82 µg/L	36.136	490.82 ppb	36.136	7.36%
QC value within limits for Ni 231.604 Recovery = 98.16%							
P	214.914†	1470.6	2394.4 µg/L	265.52	2394.4 ppb	265.52	11.09%
QC value within limits for P 214.914 Recovery = 95.77%							
Pb	220.353†	1864.1	489.26 µg/L	46.652	489.26 ppb	46.652	9.54%
QC value within limits for Pb 220.353 Recovery = 97.85%							
S	181.975 Axial†	302.9	964.03 µg/L	92.529	964.03 ppb	92.529	9.60%
QC value within limits for S 181.975 Axial Recovery = 96.40%							
Sb	206.836†	539.7	483.78 µg/L	47.023	483.78 ppb	47.023	9.72%
QC value within limits for Sb 206.836 Recovery = 96.76%							
Se	196.026†	517.6	498.05 µg/L	42.745	498.05 ppb	42.745	8.58%
QC value within limits for Se 196.026 Recovery = 99.61%							
SiO2†		29237.1	5278.3 µg/L	303.76	5278.3 ppb	303.76	5.75%
QC value within limits for SiO2 Recovery = 98.71%							
Si	251.611†	36308.8	2468.4 µg/L	140.53	2468.4 ppb	140.53	5.69%
QC value within limits for Si 251.611 Recovery = 98.74%							
Sn	189.927†	1243.3	484.55 µg/L	59.551	484.55 ppb	59.551	12.29%
QC value within limits for Sn 189.927 Recovery = 96.91%							
Sr	421.552†	81744.1	485.96 µg/L	3.952	485.96 ppb	3.952	0.81%
QC value within limits for Sr 421.552 Recovery = 97.19%							
Ti	334.940†	208457.3	487.14 µg/L	23.470	487.14 ppb	23.470	4.82%
QC value within limits for Ti 334.940 Recovery = 97.43%							
Tl	190.801†	505.6	498.50 µg/L	33.301	498.50 ppb	33.301	6.68%
QC value within limits for Tl 190.801 Recovery = 99.70%							
U	409.014†	5421.8	491.31 µg/L	40.441	491.31 ppb	40.441	8.23%
QC value within limits for U 409.014 Recovery = 98.26%							
V	292.402†	41453.8	494.11 µg/L	36.590	494.11 ppb	36.590	7.41%
QC value within limits for V 292.402 Recovery = 98.82%							
Zn	213.857†	21542.4	492.51 µg/L	34.729	492.51 ppb	34.729	7.05%
QC value within limits for Zn 213.857 Recovery = 98.50%							

All analyte(s) passed QC.

Sequence No.: 5

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 14:50:26

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97547.7	97547.7	101 %		14:50:56
1	Al 396.153Radial†	-149.7	-29.2	-13.973 µg/L	-13.973 ppb	14:50:56
1	Ca 317.933Radial†	369.7	-18.5	-6.7321 µg/L	-6.7321 ppb	14:51:16
1	Fe 238.204 Radial†	13.5	1.4	16.924 µg/L	16.924 ppb	14:51:16
1	K 766.490 Radial†	498.1	8.9	4.1566 µg/L	4.1566 ppb	14:50:56
1	Mg 279.077 IEC†	11.8	3.8	49.563 µg/L	49.563 ppb	14:51:16
1	Na 589.592 Radial†	188.5	6.5	3.2264 µg/L	3.2264 ppb	14:50:56
1	Sr 421.552†	104.6	-35.7	-0.2120 µg/L	-0.2120 ppb	14:50:56
1	Sc 361.383	2086857.2	2086857.2	99.701 %		14:52:18
1	Y 371.029	1429226.5	1429226.5	99.746 %		14:52:18
1	Ag 328.068†	-536.8	-78.2	-0.6312 µg/L	-0.6312 ppb	14:52:24
1	As 188.979†	-1.4	1.9	2.7720 µg/L	2.7720 ppb	14:52:44
1	B 249.677†	300.3	1.8	0.0731 µg/L	0.0731 ppb	14:52:24
1	Ba 233.527†	1.3	9.8	0.2124 µg/L	0.2124 ppb	14:52:44
1	Be 313.107†	-1115.7	39.8	0.0233 µg/L	0.0233 ppb	14:52:24
1	Cd 226.502†	-174.2	-4.1	-0.1005 µg/L	-0.1005 ppb	14:52:44
1	Co 228.616†	51.4	3.5	0.1514 µg/L	0.1514 ppb	14:52:44
1	Cr 267.716†	70.7	-9.3	-0.2028 µg/L	-0.2028 ppb	14:52:24
1	Cu 324.752†	4402.6	39.1	0.2586 µg/L	0.2586 ppb	14:52:24
1	Mn 257.610†	-624.9	60.2	0.1786 µg/L	0.1786 ppb	14:52:44
1	Mo 202.031†	16.2	11.1	1.1017 µg/L	1.1017 ppb	14:52:44
1	Ni 231.604†	366.1	-9.7	-0.5435 µg/L	-0.5435 ppb	14:52:44
1	P 214.914†	267.2	-4.4	-7.3949 µg/L	-7.3949 ppb	14:52:44
1	Pb 220.353†	36.5	6.4	1.6946 µg/L	1.6946 ppb	14:52:44
1	S 181.975 Axial†	19.7	-2.8	-8.8508 µg/L	-8.8508 ppb	14:52:44
1	Sb 206.836†	27.9	5.2	4.6824 µg/L	4.6824 ppb	14:52:44
1	Se 196.026†	15.0	-12.3	-11.517 µg/L	-11.517 ppb	14:52:44
1	SiO2†	2691.1	-80.6	-14.546 µg/L	-14.546 ppb	14:52:24
1	Si 251.611†	417.6	-5.2	-0.3539 µg/L	-0.3539 ppb	14:52:44
1	Sn 189.927†	-2.8	4.6	1.8062 µg/L	1.8062 ppb	14:52:44
1	Ti 334.940†	-499.9	75.8	0.1733 µg/L	0.1733 ppb	14:52:24
1	Tl 190.801†	-29.6	4.4	4.2914 µg/L	4.2914 ppb	14:52:44
1	U 409.014†	-56.5	-50.9	-4.6213 µg/L	-4.6213 ppb	14:52:24
1	V 292.402†	51.2	-60.9	-0.7183 µg/L	-0.7183 ppb	14:52:24
1	Zn 213.857†	667.6	-339.3	-7.8125 µg/L	-7.8125 ppb	14:52:44
2	Sc RADIAL	97055.0	97055.0	100 %		14:51:22
2	Al 396.153Radial†	-121.6	-1.9	-0.9577 µg/L	-0.9577 ppb	14:51:22
2	Ca 317.933Radial†	380.0	-6.3	-2.2941 µg/L	-2.2941 ppb	14:51:42
2	Fe 238.204 Radial†	12.2	0.2	2.8206 µg/L	2.8206 ppb	14:51:42
2	K 766.490 Radial†	479.4	-7.3	-3.3854 µg/L	-3.3854 ppb	14:51:22
2	Mg 279.077 IEC†	4.7	-3.3	-43.939 µg/L	-43.939 ppb	14:51:42
2	Na 589.592 Radial†	181.4	0.3	0.1724 µg/L	0.1724 ppb	14:51:22
2	Sr 421.552†	140.8	1.0	0.0062 µg/L	0.0062 ppb	14:51:22
2	Sc 361.383	2077661.3	2077661.3	99.262 %		14:52:50
2	Y 371.029	1420720.2	1420720.2	99.152 %		14:52:50
2	Ag 328.068†	-539.7	-83.5	-0.6702 µg/L	-0.6702 ppb	14:52:56
2	As 188.979†	-4.4	-1.1	-1.6927 µg/L	-1.6927 ppb	14:53:16
2	B 249.677†	318.7	21.8	0.9863 µg/L	0.9863 ppb	14:52:56
2	Ba 233.527†	-0.8	7.6	0.1664 µg/L	0.1664 ppb	14:53:16
2	Be 313.107†	-1103.5	47.1	0.0276 µg/L	0.0276 ppb	14:52:56
2	Cd 226.502†	-174.3	-5.0	-0.1205 µg/L	-0.1205 ppb	14:53:16
2	Co 228.616†	39.5	-8.3	-0.3556 µg/L	-0.3556 ppb	14:53:16
2	Cr 267.716†	99.2	19.7	0.4278 µg/L	0.4278 ppb	14:52:56
2	Cu 324.752†	4429.3	85.6	0.5595 µg/L	0.5595 ppb	14:52:56
2	Mn 257.610†	-618.9	63.5	0.1939 µg/L	0.1939 ppb	14:53:16
2	Mo 202.031†	18.9	13.9	1.3776 µg/L	1.3776 ppb	14:53:16
2	Ni 231.604†	360.3	-14.0	-0.7820 µg/L	-0.7820 ppb	14:53:16
2	P 214.914†	269.9	-0.5	-0.8297 µg/L	-0.8297 ppb	14:53:16
2	Pb 220.353†	30.7	0.7	0.1922 µg/L	0.1922 ppb	14:53:16

2	S 181.975 Axial†	26.1	3.7	11.792 µg/L	11.792 ppb	14:53:16
2	Sb 206.836†	27.8	5.2	4.6869 µg/L	4.6869 ppb	14:53:16
2	Se 196.026†	19.4	-7.7	-7.2315 µg/L	-7.2315 ppb	14:53:16
2	SiO2†	2751.8	-7.5	-1.3548 µg/L	-1.3548 ppb	14:52:56
2	Si 251.611†	424.1	3.2	0.2163 µg/L	0.2163 ppb	14:53:16
2	Sn 189.927†	-8.0	-0.6	-0.2455 µg/L	-0.2455 ppb	14:53:16
2	Ti 334.940†	-505.5	68.0	0.1624 µg/L	0.1624 ppb	14:52:56
2	Tl 190.801†	-34.6	-0.7	-0.6733 µg/L	-0.6733 ppb	14:53:16
2	U 409.014†	49.2	55.3	5.0241 µg/L	5.0241 ppb	14:52:56
2	V 292.402†	116.8	5.3	0.0793 µg/L	0.0793 ppb	14:52:56
2	Zn 213.857†	675.8	-328.0	-7.5467 µg/L	-7.5467 ppb	14:53:16
3	Sc RADIAL	96786.0	96786.0	100.0 %		14:51:48
3	Al 396.153Radial†	-137.9	-18.6	-8.9198 µg/L	-8.9198 ppb	14:51:48
3	Ca 317.933Radial†	363.6	-21.7	-7.8937 µg/L	-7.8937 ppb	14:52:08
3	Fe 238.204 Radial†	12.5	0.5	6.4442 µg/L	6.4442 ppb	14:52:08
3	K 766.490 Radial†	483.8	-1.5	-0.7189 µg/L	-0.7189 ppb	14:51:48
3	Mg 279.077 IEC†	8.8	0.8	11.225 µg/L	11.225 ppb	14:52:08
3	Na 589.592 Radial†	196.1	15.5	7.7391 µg/L	7.7391 ppb	14:51:48
3	Sr 421.552†	118.2	-21.2	-0.1259 µg/L	-0.1259 ppb	14:51:48
3	Sc 361.383	2080927.0	2080927.0	99.418 %		14:53:22
3	Y 371.029	1422051.9	1422051.9	99.245 %		14:53:22
3	Ag 328.068†	-437.6	20.0	0.1568 µg/L	0.1568 ppb	14:53:28
3	As 188.979†	-1.2	2.1	3.0511 µg/L	3.0511 ppb	14:53:48
3	B 249.677†	334.6	37.2	1.6845 µg/L	1.6845 ppb	14:53:28
3	Ba 233.527†	-9.0	-0.6	-0.0141 µg/L	-0.0141 ppb	14:53:48
3	Be 313.107†	-996.4	156.6	0.0919 µg/L	0.0919 ppb	14:53:28
3	Cd 226.502†	-168.1	1.5	0.0357 µg/L	0.0357 ppb	14:53:48
3	Co 228.616†	44.1	-3.7	-0.1573 µg/L	-0.1573 ppb	14:53:48
3	Cr 267.716†	73.6	-6.2	-0.1347 µg/L	-0.1347 ppb	14:53:28
3	Cu 324.752†	4500.5	150.2	0.9823 µg/L	0.9823 ppb	14:53:28
3	Mn 257.610†	-632.9	50.3	0.1509 µg/L	0.1509 ppb	14:53:48
3	Mo 202.031†	21.3	16.3	1.6166 µg/L	1.6166 ppb	14:53:48
3	Ni 231.604†	368.0	-6.7	-0.3775 µg/L	-0.3775 ppb	14:53:48
3	P 214.914†	264.9	-5.9	-9.9023 µg/L	-9.9023 ppb	14:53:48
3	Pb 220.353†	40.1	10.2	2.6764 µg/L	2.6764 ppb	14:53:48
3	S 181.975 Axial†	23.2	0.8	2.5857 µg/L	2.5857 ppb	14:53:48
3	Sb 206.836†	27.2	4.6	4.1501 µg/L	4.1501 ppb	14:53:48
3	Se 196.026†	21.7	-5.5	-5.1181 µg/L	-5.1181 ppb	14:53:48
3	SiO2†	2703.6	-60.3	-10.883 µg/L	-10.883 ppb	14:53:28
3	Si 251.611†	427.3	5.7	0.3860 µg/L	0.3860 ppb	14:53:48
3	Sn 189.927†	-5.8	1.6	0.6373 µg/L	0.6373 ppb	14:53:48
3	Ti 334.940†	-460.4	114.2	0.2660 µg/L	0.2660 ppb	14:53:28
3	Tl 190.801†	-31.5	2.5	2.4208 µg/L	2.4208 ppb	14:53:48
3	U 409.014†	-18.3	-12.5	-1.1396 µg/L	-1.1396 ppb	14:53:28
3	V 292.402†	56.0	-56.0	-0.6512 µg/L	-0.6512 ppb	14:53:28
3	Zn 213.857†	676.9	-328.0	-7.5523 µg/L	-7.5523 ppb	14:53:48

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2081815.1	99.460 %	0.2227			0.22%
Sc RADIAL	97129.6	100 %	0.4			0.40%
Y 371.029	1423999.5	99.381 %	0.3193			0.32%
Ag 328.068†	-47.2	-0.3815 µg/L	0.46662	-0.3815 ppb	0.46662	122.31%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-16.6	-7.9500 µg/L	6.56148	-7.9500 ppb	6.56148	82.53%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.9	1.3768 µg/L	2.66191	1.3768 ppb	2.66191	193.35%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	20.3	0.9146 µg/L	0.80808	0.9146 ppb	0.80808	88.35%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.6	0.1216 µg/L	0.11974	0.1216 ppb	0.11974	98.48%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	81.2	0.0476 µg/L	0.03843	0.0476 ppb	0.03843	80.70%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-15.5	-5.6400 µg/L	2.95526	-5.6400 ppb	2.95526	52.40%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-2.5	-0.0618 µg/L	0.08498	-0.0618 ppb	0.08498	137.58%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.8	-0.1205 µg/L	0.25553	-0.1205 ppb	0.25553	212.04%

Cr	267.716†	1.4	0.0301 µg/L	0.34613	0.0301 ppb	0.34613	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	91.6	0.6002 µg/L	0.36356	0.6002 ppb	0.36356	60.58%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	0.7	8.7296 µg/L	7.32427	8.7296 ppb	7.32427	83.90%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	0.0	0.0174 µg/L	3.82453	0.0174 ppb	3.82453	>999.9%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	0.4	5.6161 µg/L	47.00261	5.6161 ppb	47.00261	836.93%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	58.0	0.1745 µg/L	0.02178	0.1745 ppb	0.02178	12.48%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	13.8	1.3653 µg/L	0.25767	1.3653 ppb	0.25767	18.87%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	7.4	3.7126 µg/L	3.80675	3.7126 ppb	3.80675	102.53%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-10.1	-0.5677 µg/L	0.20335	-0.5677 ppb	0.20335	35.82%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	-3.6	-6.0423 µg/L	4.68511	-6.0423 ppb	4.68511	77.54%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	5.8	1.5211 µg/L	1.25115	1.5211 ppb	1.25115	82.25%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	0.6	1.8421 µg/L	10.34123	1.8421 ppb	10.34123	561.37%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	5.0	4.5065 µg/L	0.30863	4.5065 ppb	0.30863	6.85%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-8.5	-7.9556 µg/L	3.26035	-7.9556 ppb	3.26035	40.98%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-49.5	-8.9278 µg/L	6.80936	-8.9278 ppb	6.80936	76.27%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	1.2	0.0828 µg/L	0.38757	0.0828 ppb	0.38757	468.24%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	1.9	0.7327 µg/L	1.02917	0.7327 ppb	1.02917	140.47%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-18.6	-0.1106 µg/L	0.10987	-0.1106 ppb	0.10987	99.38%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	86.0	0.2006 µg/L	0.05693	0.2006 ppb	0.05693	28.38%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	2.1	2.0129 µg/L	2.50739	2.0129 ppb	2.50739	124.56%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-2.7	-0.2456 µg/L	4.88446	-0.2456 ppb	4.88446	>999.9%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-37.2	-0.4301 µg/L	0.44240	-0.4301 ppb	0.44240	102.87%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-331.7	-7.6372 µg/L	0.15187	-7.6372 ppb	0.15187	1.99%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 6

Sample ID: 1202047699|955132|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 301

Date Collected: 3/16/2010 14:53:58

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047699|955132|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98540.4	98540.4	102 %		14:54:31
1	Al 396.153Radial†	-134.0	-12.3	-5.8858 µg/L	-5.8858 ppb	14:54:31
1	Ca 317.933Radial†	375.6	-16.3	-5.9446 µg/L	-5.9446 ppb	14:54:51
1	Fe 238.204 Radial†	13.3	1.1	12.749 µg/L	12.749 ppb	14:54:51
1	K 766.490 Radial†	510.8	16.4	7.6351 µg/L	7.6351 ppb	14:54:31
1	Mg 279.077 IEC†	10.3	2.2	28.472 µg/L	28.472 ppb	14:54:51
1	Na 589.592 Radial†	186.1	2.2	1.0839 µg/L	1.0839 ppb	14:54:31
1	Sr 421.552†	132.3	-9.4	-0.0561 µg/L	-0.0561 ppb	14:54:31
1	Sc 361.383	2085522.1	2085522.1	99.638 %		14:55:53
1	Y 371.029	1424456.3	1424456.3	99.413 %		14:55:53
1	Ag 328.068†	-572.0	-113.9	-0.9147 µg/L	-0.9147 ppb	14:55:59
1	As 188.979†	-1.7	1.6	2.3290 µg/L	2.3290 ppb	14:56:19
1	B 249.677†	327.2	29.1	1.3139 µg/L	1.3139 ppb	14:55:59
1	Ba 233.527†	-0.2	8.2	0.1795 µg/L	0.1795 ppb	14:56:19
1	Be 313.107†	-1092.5	62.4	0.0366 µg/L	0.0366 ppb	14:55:59
1	Cd 226.502†	-178.4	-8.4	-0.2020 µg/L	-0.2020 ppb	14:56:19
1	Co 228.616†	46.7	-1.2	-0.0524 µg/L	-0.0524 ppb	14:56:19
1	Cr 267.716†	99.4	19.5	0.4249 µg/L	0.4249 ppb	14:55:59
1	Cu 324.752†	4382.0	21.3	0.1416 µg/L	0.1416 ppb	14:55:59
1	Mn 257.610†	-668.5	16.0	0.0469 µg/L	0.0469 ppb	14:56:19
1	Mo 202.031†	12.6	7.5	0.7403 µg/L	0.7403 ppb	14:56:19
1	Ni 231.604†	372.3	-3.3	-0.1848 µg/L	-0.1848 ppb	14:56:19
1	P 214.914†	283.9	12.5	20.799 µg/L	20.799 ppb	14:56:19
1	Pb 220.353†	33.6	3.6	0.9365 µg/L	0.9365 ppb	14:56:19
1	S 181.975 Axial†	19.3	-3.2	-10.201 µg/L	-10.201 ppb	14:56:19
1	Sb 206.836†	34.3	11.7	10.471 µg/L	10.471 ppb	14:56:19
1	Se 196.026†	31.1	3.9	3.6436 µg/L	3.6436 ppb	14:56:19
1	SiO2†	2919.7	150.6	27.180 µg/L	27.180 ppb	14:55:59
1	Si 251.611†	570.3	148.3	10.080 µg/L	10.080 ppb	14:56:19
1	Sn 189.927†	-6.9	0.5	0.1839 µg/L	0.1839 ppb	14:56:19
1	Ti 334.940†	-544.6	30.7	0.0694 µg/L	0.0694 ppb	14:55:59
1	Tl 190.801†	-26.5	7.5	7.3486 µg/L	7.3486 ppb	14:56:19
1	U 409.014†	-36.2	-30.6	-2.7759 µg/L	-2.7759 ppb	14:55:59
1	V 292.402†	95.7	-16.2	-0.1895 µg/L	-0.1895 ppb	14:55:59
1	Zn 213.857†	686.4	-320.0	-7.3686 µg/L	-7.3686 ppb	14:56:19
2	Sc RADIAL	98254.6	98254.6	102 %		14:54:57
2	Al 396.153Radial†	-98.8	21.9	10.453 µg/L	10.453 ppb	14:54:57
2	Ca 317.933Radial†	374.8	-16.1	-5.8442 µg/L	-5.8442 ppb	14:55:17
2	Fe 238.204 Radial†	12.7	0.6	6.8367 µg/L	6.8367 ppb	14:55:17
2	K 766.490 Radial†	408.3	-83.1	-38.790 µg/L	-38.790 ppb	14:54:57
2	Mg 279.077 IEC†	6.1	-2.0	-26.336 µg/L	-26.336 ppb	14:55:17
2	Na 589.592 Radial†	162.7	-20.3	-10.132 µg/L	-10.132 ppb	14:54:57
2	Sr 421.552†	157.0	15.2	0.0904 µg/L	0.0904 ppb	14:54:57
2	Sc 361.383	2089779.8	2089779.8	99.841 %		14:56:25
2	Y 371.029	1425083.3	1425083.3	99.457 %		14:56:25
2	Ag 328.068†	-527.2	-67.8	-0.5460 µg/L	-0.5460 ppb	14:56:31
2	As 188.979†	-2.4	0.8	1.2108 µg/L	1.2108 ppb	14:56:51
2	B 249.677†	348.4	49.6	2.2480 µg/L	2.2480 ppb	14:56:31
2	Ba 233.527†	-7.5	0.9	0.0190 µg/L	0.0190 ppb	14:56:51
2	Be 313.107†	-1089.6	67.5	0.0396 µg/L	0.0396 ppb	14:56:31
2	Cd 226.502†	-166.0	4.3	0.1005 µg/L	0.1005 ppb	14:56:51
2	Co 228.616†	41.5	-6.5	-0.2788 µg/L	-0.2788 ppb	14:56:51
2	Cr 267.716†	90.4	10.3	0.2230 µg/L	0.2230 ppb	14:56:31
2	Cu 324.752†	4343.4	-26.3	-0.1707 µg/L	-0.1707 ppb	14:56:31
2	Mn 257.610†	-663.3	22.6	0.0701 µg/L	0.0701 ppb	14:56:51
2	Mo 202.031†	16.5	11.4	1.1330 µg/L	1.1330 ppb	14:56:51
2	Ni 231.604†	368.3	-8.0	-0.4505 µg/L	-0.4505 ppb	14:56:51
2	P 214.914†	273.5	1.6	2.6240 µg/L	2.6240 ppb	14:56:51
2	Pb 220.353†	31.9	1.8	0.4651 µg/L	0.4651 ppb	14:56:51

2	S 181.975 Axial†	22.7	0.2	0.5568 µg/L	0.5568 ppb	14:56:51
2	Sb 206.836†	24.4	1.7	1.5227 µg/L	1.5227 ppb	14:56:51
2	Se 196.026†	22.9	-4.3	-4.0412 µg/L	-4.0412 ppb	14:56:51
2	SiO2†	2862.0	86.9	15.681 µg/L	15.681 ppb	14:56:31
2	Si 251.611†	583.6	160.4	10.905 µg/L	10.905 ppb	14:56:51
2	Sn 189.927†	-4.1	3.3	1.3033 µg/L	1.3033 ppb	14:56:51
2	Ti 334.940†	-563.9	12.5	0.0312 µg/L	0.0312 ppb	14:56:31
2	Tl 190.801†	-38.0	-4.0	-3.8659 µg/L	-3.8659 ppb	14:56:51
2	U 409.014†	-12.1	-6.3	-0.5748 µg/L	-0.5748 ppb	14:56:31
2	V 292.402†	87.3	-24.8	-0.2856 µg/L	-0.2856 ppb	14:56:31
2	Zn 213.857†	695.6	-312.2	-7.1842 µg/L	-7.1842 ppb	14:56:51
3	Sc RADIAL	97902.5	97902.5	101 %		14:55:22
3	Al 396.153Radial†	-123.7	-3.0	-1.4355 µg/L	-1.4355 ppb	14:55:22
3	Ca 317.933Radial†	378.0	-11.6	-4.2120 µg/L	-4.2120 ppb	14:55:43
3	Fe 238.204 Radial†	13.7	1.6	19.199 µg/L	19.199 ppb	14:55:43
3	K 766.490 Radial†	480.3	-10.5	-4.8869 µg/L	-4.8869 ppb	14:55:22
3	Mg 279.077 IEC†	10.1	2.0	25.795 µg/L	25.795 ppb	14:55:43
3	Na 589.592 Radial†	203.6	20.7	10.308 µg/L	10.308 ppb	14:55:22
3	Sr 421.552†	97.0	-43.6	-0.2590 µg/L	-0.2590 ppb	14:55:22
3	Sc 361.383	2094407.8	2094407.8	100.06 %		14:56:57
3	Y 371.029	1427929.7	1427929.7	99.655 %		14:56:57
3	Ag 328.068†	-595.3	-134.7	-1.0795 µg/L	-1.0795 ppb	14:57:03
3	As 188.979†	-2.0	1.3	1.9043 µg/L	1.9043 ppb	14:57:24
3	B 249.677†	317.4	17.9	0.8017 µg/L	0.8017 ppb	14:57:03
3	Ba 233.527†	-11.3	-2.9	-0.0633 µg/L	-0.0633 ppb	14:57:24
3	Be 313.107†	-1079.8	79.7	0.0468 µg/L	0.0468 ppb	14:57:03
3	Cd 226.502†	-180.0	-9.3	-0.2226 µg/L	-0.2226 ppb	14:57:24
3	Co 228.616†	39.7	-8.4	-0.3617 µg/L	-0.3617 ppb	14:57:24
3	Cr 267.716†	88.7	8.4	0.1835 µg/L	0.1835 ppb	14:57:03
3	Cu 324.752†	4408.8	29.3	0.1952 µg/L	0.1952 ppb	14:57:03
3	Mn 257.610†	-674.5	12.9	0.0381 µg/L	0.0381 ppb	14:57:24
3	Mo 202.031†	16.5	11.4	1.1272 µg/L	1.1272 ppb	14:57:24
3	Ni 231.604†	379.8	2.6	0.1486 µg/L	0.1486 ppb	14:57:24
3	P 214.914†	283.1	10.5	17.401 µg/L	17.401 ppb	14:57:24
3	Pb 220.353†	21.4	-8.8	-2.3088 µg/L	-2.3088 ppb	14:57:24
3	S 181.975 Axial†	19.8	-2.7	-8.6031 µg/L	-8.6031 ppb	14:57:24
3	Sb 206.836†	24.8	2.1	1.8935 µg/L	1.8935 ppb	14:57:24
3	Se 196.026†	18.9	-8.4	-7.8819 µg/L	-7.8819 ppb	14:57:24
3	SiO2†	2875.9	94.4	17.037 µg/L	17.037 ppb	14:57:03
3	Si 251.611†	588.7	164.2	11.166 µg/L	11.166 ppb	14:57:24
3	Sn 189.927†	-9.2	-1.7	-0.6736 µg/L	-0.6736 ppb	14:57:24
3	Ti 334.940†	-476.6	100.9	0.2339 µg/L	0.2339 ppb	14:57:03
3	Tl 190.801†	-40.2	-6.1	-5.9269 µg/L	-5.9269 ppb	14:57:24
3	U 409.014†	30.4	36.2	3.2838 µg/L	3.2838 ppb	14:57:03
3	V 292.402†	119.2	6.8	0.0907 µg/L	0.0907 ppb	14:57:03
3	Zn 213.857†	692.9	-316.4	-7.2889 µg/L	-7.2889 ppb	14:57:24

Mean Data: 1202047699|955132|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2089903.2	99.847 %	0.2123			0.21%
Sc RADIAL	98232.5	101 %	0.3			0.33%
Y 371.029	1425823.1	99.508 %	0.1292			0.13%
Ag 328.068†	-105.5	-0.8467 µg/L	0.27320	-0.8467 ppb	0.27320	32.26%
Al 396.153Radial†	2.2	1.0437 µg/L	8.44665	1.0437 ppb	8.44665	809.28%
As 188.979†	1.2	1.8147 µg/L	0.56445	1.8147 ppb	0.56445	31.10%
B 249.677†	32.2	1.4545 µg/L	0.73336	1.4545 ppb	0.73336	50.42%
Ba 233.527†	2.1	0.0451 µg/L	0.12347	0.0451 ppb	0.12347	273.98%
Be 313.107†	69.9	0.0410 µg/L	0.00520	0.0410 ppb	0.00520	12.69%
Ca 317.933Radial†	-14.7	-5.3336 µg/L	0.97263	-5.3336 ppb	0.97263	18.24%
Cd 226.502†	-4.5	-0.1080 µg/L	0.18089	-0.1080 ppb	0.18089	167.43%
Co 228.616†	-5.4	-0.2310 µg/L	0.16011	-0.2310 ppb	0.16011	69.31%
Cr 267.716†	12.7	0.2771 µg/L	0.12951	0.2771 ppb	0.12951	46.73%
Cu 324.752†	8.1	0.0554 µg/L	0.19760	0.0554 ppb	0.19760	356.82%
Fe 238.204 Radial†	1.1	12.928 µg/L	6.1830	12.928 ppb	6.1830	47.83%
K 766.490 Radial†	-25.7	-12.014 µg/L	24.0194	-12.014 ppb	24.0194	199.93%
Mg 279.077 IEC†	0.7	9.3105 µg/L	30.89945	9.3105 ppb	30.89945	331.88%
Mn 257.610†	17.2	0.0517 µg/L	0.01657	0.0517 ppb	0.01657	32.05%
Mo 202.031†	10.1	1.0002 µg/L	0.22507	1.0002 ppb	0.22507	22.50%
Na 589.592 Radial†	0.8	0.4202 µg/L	10.23597	0.4202 ppb	10.23597	>999.9%

Ni 231.604†	-2.9	-0.1622 µg/L	0.30021	-0.1622 ppb	0.30021	185.05%
P 214.914†	8.2	13.608 µg/L	9.6628	13.608 ppb	9.6628	71.01%
Pb 220.353†	-1.2	-0.3024 µg/L	1.75347	-0.3024 ppb	1.75347	579.84%
S 181.975 Axial†	-1.9	-6.0825 µg/L	5.80506	-6.0825 ppb	5.80506	95.44%
Sb 206.836†	5.2	4.6291 µg/L	5.06271	4.6291 ppb	5.06271	109.37%
Se 196.026†	-3.0	-2.7598 µg/L	5.86866	-2.7598 ppb	5.86866	212.64%
SiO2†	110.6	19.966 µg/L	6.2842	19.966 ppb	6.2842	31.47%
Si 251.611†	157.6	10.717 µg/L	0.5669	10.717 ppb	0.5669	5.29%
Sn 189.927†	0.7	0.2712 µg/L	0.99129	0.2712 ppb	0.99129	365.51%
Sr 421.552†	-12.6	-0.0749 µg/L	0.17546	-0.0749 ppb	0.17546	234.25%
Ti 334.940†	48.0	0.1115 µg/L	0.10772	0.1115 ppb	0.10772	96.65%
Tl 190.801†	-0.8	-0.8147 µg/L	7.14434	-0.8147 ppb	7.14434	876.88%
U 409.014†	-0.2	-0.0223 µg/L	3.06744	-0.0223 ppb	3.06744	>999.9%
V 292.402†	-11.4	-0.1281 µg/L	0.19550	-0.1281 ppb	0.19550	152.58%
Zn 213.857†	-316.2	-7.2805 µg/L	0.09243	-7.2805 ppb	0.09243	1.27%

Sequence No.: 7

Sample ID: 1202047700|955132|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 302

Date Collected: 3/16/2010 14:57:33

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047700|955132|1

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99181.9	99181.9	102 %		14:58:04
1	Al 396.153Radial†	10358.7	10228.0	4871.9 µg/L	4871.9 ppb	14:58:04
1	Ca 317.933Radial†	14058.0	13333.5	4852.3 µg/L	4852.3 ppb	14:58:04
1	Fe 238.204 Radial†	437.2	414.7	4915.0 µg/L	4915.0 ppb	14:58:24
1	K 766.490 Radial†	11085.8	10332.9	4822.2 µg/L	4822.2 ppb	14:58:04
1	Mg 279.077 IEC†	393.6	376.1	4962.3 µg/L	4962.3 ppb	14:58:24
1	Na 589.592 Radial†	10301.6	9872.4	4927.4 µg/L	4927.4 ppb	14:58:04
1	Sr 421.552†	84985.4	82795.0	492.21 µg/L	492.21 ppb	14:58:04
1	Sc 361.383	2108552.6	2108552.6	100.74 %		14:59:27
1	Y 371.029	1437371.9	1437371.9	100.31 %		14:59:27
1	Ag 328.068†	61217.2	61229.0	495.37 µg/L	495.37 ppb	14:59:33
1	As 188.979†	351.0	351.7	517.62 µg/L	517.62 ppb	14:59:53
1	B 249.677†	11253.5	10871.7	491.63 µg/L	491.63 ppb	14:59:33
1	Ba 233.527†	23265.5	23103.5	506.19 µg/L	506.19 ppb	14:59:33
1	Be 313.107†	851405.0	846327.7	497.08 µg/L	497.08 ppb	14:59:27
1	Cd 226.502†	20844.8	20862.7	495.86 µg/L	495.86 ppb	14:59:33
1	Co 228.616†	11412.4	11280.7	484.08 µg/L	484.08 ppb	14:59:53
1	Cr 267.716†	23662.2	23408.7	509.44 µg/L	509.44 ppb	14:59:33
1	Cu 324.752†	84005.6	79013.6	517.01 µg/L	517.01 ppb	14:59:33
1	Mn 257.610†	167147.5	166610.2	500.70 µg/L	500.70 ppb	14:59:33
1	Mo 202.031†	5259.6	5215.9	516.31 µg/L	516.31 ppb	14:59:53
1	Ni 231.604†	9382.4	8936.8	500.73 µg/L	500.73 ppb	14:59:53
1	P 214.914†	640.2	363.1	553.61 µg/L	553.61 ppb	14:59:53
1	Pb 220.353†	2005.9	1961.1	514.69 µg/L	514.69 ppb	14:59:53
1	S 181.975 Axial†	1651.4	1616.8	5145.3 µg/L	5145.3 ppb	14:59:53
1	Sb 206.836†	614.7	587.5	526.67 µg/L	526.67 ppb	14:59:53
1	Se 196.026†	556.2	524.8	504.69 µg/L	504.69 ppb	14:59:53
1	SiO2†	61084.2	57857.1	10445 µg/L	10445 ppb	14:59:33
1	Si 251.611†	72613.9	71657.9	4871.6 µg/L	4871.6 ppb	14:59:33
1	Sn 189.927†	1364.0	1361.4	530.51 µg/L	530.51 ppb	14:59:53
1	Ti 334.940†	210591.8	209626.6	489.87 µg/L	489.87 ppb	14:59:33
1	Tl 190.801†	489.1	519.6	512.25 µg/L	512.25 ppb	14:59:53
1	U 409.014†	5965.6	5927.7	537.25 µg/L	537.25 ppb	14:59:33
1	V 292.402†	43424.7	42994.4	512.60 µg/L	512.60 ppb	14:59:33
1	Zn 213.857†	22668.4	21493.5	491.30 µg/L	491.30 ppb	14:59:33
2	Sc RADIAL	99630.1	99630.1	103 %		14:58:30
2	Al 396.153Radial†	10415.3	10237.5	4876.7 µg/L	4876.7 ppb	14:58:30
2	Ca 317.933Radial†	14157.1	13368.0	4864.9 µg/L	4864.9 ppb	14:58:30
2	Fe 238.204 Radial†	442.3	417.8	4951.3 µg/L	4951.3 ppb	14:58:50
2	K 766.490 Radial†	11176.0	10371.9	4840.4 µg/L	4840.4 ppb	14:58:30
2	Mg 279.077 IEC†	386.1	367.1	4842.7 µg/L	4842.7 ppb	14:58:50
2	Na 589.592 Radial†	10434.2	9956.0	4969.1 µg/L	4969.1 ppb	14:58:30
2	Sr 421.552†	85578.5	82998.1	493.41 µg/L	493.41 ppb	14:58:30
2	Sc 361.383	2106521.7	2106521.7	100.64 %		15:00:00
2	Y 371.029	1434940.7	1434940.7	100.14 %		15:00:00
2	Ag 328.068†	61148.3	61219.2	495.30 µg/L	495.30 ppb	15:00:06
2	As 188.979†	340.2	341.3	502.31 µg/L	502.31 ppb	15:00:26
2	B 249.677†	11251.3	10880.3	492.00 µg/L	492.00 ppb	15:00:06
2	Ba 233.527†	23306.6	23166.6	507.57 µg/L	507.57 ppb	15:00:06
2	Be 313.107†	846994.8	842760.4	494.98 µg/L	494.98 ppb	15:00:00
2	Cd 226.502†	20817.1	20855.1	495.67 µg/L	495.67 ppb	15:00:06
2	Co 228.616†	11182.4	11063.1	474.72 µg/L	474.72 ppb	15:00:26
2	Cr 267.716†	23644.2	23413.4	509.54 µg/L	509.54 ppb	15:00:06
2	Cu 324.752†	83889.1	78978.2	516.78 µg/L	516.78 ppb	15:00:06
2	Mn 257.610†	167278.8	166900.6	501.58 µg/L	501.58 ppb	15:00:06
2	Mo 202.031†	5151.6	5113.7	506.20 µg/L	506.20 ppb	15:00:26
2	Ni 231.604†	9214.5	8778.9	491.89 µg/L	491.89 ppb	15:00:26
2	P 214.914†	633.1	356.7	542.76 µg/L	542.76 ppb	15:00:26
2	Pb 220.353†	1954.7	1912.0	501.81 µg/L	501.81 ppb	15:00:26



2	S 181.975 Axial†	1626.9	1594.0	5072.8 µg/L	5072.8 ppb	15:00:26
2	Sb 206.836†	609.8	583.2	522.69 µg/L	522.69 ppb	15:00:26
2	Se 196.026†	547.5	516.7	497.27 µg/L	497.27 ppb	15:00:26
2	SiO2†	61113.8	57944.9	10461 µg/L	10461 ppb	15:00:06
2	Si 251.611†	72702.3	71815.2	4882.3 µg/L	4882.3 ppb	15:00:06
2	Sn 189.927†	1321.8	1320.9	514.73 µg/L	514.73 ppb	15:00:26
2	Ti 334.940†	210522.6	209759.4	490.19 µg/L	490.19 ppb	15:00:06
2	Tl 190.801†	474.9	505.9	498.97 µg/L	498.97 ppb	15:00:26
2	U 409.014†	5929.4	5897.4	534.49 µg/L	534.49 ppb	15:00:06
2	V 292.402†	43542.3	43152.8	514.39 µg/L	514.39 ppb	15:00:06
2	Zn 213.857†	22663.9	21510.7	491.75 µg/L	491.75 ppb	15:00:06
3	Sc RADIAL	100280.8	100280.8	104 %		14:58:56
3	Al 396.153Radial†	10474.6	10229.1	4873.3 µg/L	4873.3 ppb	14:58:56
3	Ca 317.933Radial†	14262.5	13380.5	4869.5 µg/L	4869.5 ppb	14:58:56
3	Fe 238.204 Radial†	435.3	408.2	4837.7 µg/L	4837.7 ppb	14:59:16
3	K 766.490 Radial†	11186.0	10311.1	4812.0 µg/L	4812.0 ppb	14:58:56
3	Mg 279.077 IEC†	392.7	371.0	4893.7 µg/L	4893.7 ppb	14:59:16
3	Na 589.592 Radial†	10516.5	9969.7	4975.9 µg/L	4975.9 ppb	14:58:56
3	Sr 421.552†	86164.4	83024.1	493.57 µg/L	493.57 ppb	14:58:56
3	Sc 361.383	2116759.1	2116759.1	101.13 %		15:00:33
3	Y 371.029	1445540.4	1445540.4	100.88 %		15:00:33
3	Ag 328.068†	60507.2	60291.3	487.70 µg/L	487.70 ppb	15:00:39
3	As 188.979†	328.4	328.0	482.65 µg/L	482.65 ppb	15:00:59
3	B 249.677†	11070.3	10647.3	481.45 µg/L	481.45 ppb	15:00:39
3	Ba 233.527†	22651.0	22406.4	490.91 µg/L	490.91 ppb	15:00:39
3	Be 313.107†	829716.6	821605.0	482.56 µg/L	482.56 ppb	15:00:33
3	Cd 226.502†	20374.3	20317.3	482.86 µg/L	482.86 ppb	15:00:39
3	Co 228.616†	10540.0	10374.2	445.14 µg/L	445.14 ppb	15:00:59
3	Cr 267.716†	22583.9	22251.4	484.26 µg/L	484.26 ppb	15:00:39
3	Cu 324.752†	81391.2	76105.1	498.00 µg/L	498.00 ppb	15:00:39
3	Mn 257.610†	162065.1	160941.3	483.66 µg/L	483.66 ppb	15:00:39
3	Mo 202.031†	4858.7	4799.3	475.08 µg/L	475.08 ppb	15:00:59
3	Ni 231.604†	8695.0	8221.0	460.62 µg/L	460.62 ppb	15:00:59
3	P 214.914†	611.9	332.7	504.40 µg/L	504.40 ppb	15:00:59
3	Pb 220.353†	1879.2	1828.0	479.75 µg/L	479.75 ppb	15:00:59
3	S 181.975 Axial†	1564.6	1524.6	4852.0 µg/L	4852.0 ppb	15:00:59
3	Sb 206.836†	572.4	543.3	486.83 µg/L	486.83 ppb	15:00:59
3	Se 196.026†	538.6	505.3	486.13 µg/L	486.13 ppb	15:00:59
3	SiO2†	60055.5	56604.7	10219 µg/L	10219 ppb	15:00:39
3	Si 251.611†	71336.0	70114.9	4766.7 µg/L	4766.7 ppb	15:00:39
3	Sn 189.927†	1233.7	1227.3	478.32 µg/L	478.32 ppb	15:00:59
3	Ti 334.940†	202669.4	200982.2	469.66 µg/L	469.66 ppb	15:00:39
3	Tl 190.801†	459.4	488.4	481.64 µg/L	481.64 ppb	15:00:59
3	U 409.014†	5709.8	5651.8	512.21 µg/L	512.21 ppb	15:00:39
3	V 292.402†	41892.1	41311.7	492.35 µg/L	492.35 ppb	15:00:39
3	Zn 213.857†	22018.4	20763.5	474.71 µg/L	474.71 ppb	15:00:39

Mean Data: 1202047700|955132|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity				Conc. Units		
Sc 361.383	2110611.2	100.84 %		0.259			0.26%
Sc RADIAL	99697.6	103 %		0.6			0.55%
Y 371.029	1439284.3	100.45 %		0.388			0.39%
Ag 328.068†	60913.2	492.79 µg/L		4.408	492.79 ppb	4.408	0.89%
Al 396.153Radial†	10231.5	4873.9 µg/L		2.44	4873.9 ppb	2.44	0.05%
As 188.979†	340.3	500.86 µg/L		17.529	500.86 ppb	17.529	3.50%
B 249.677†	10799.8	488.36 µg/L		5.990	488.36 ppb	5.990	1.23%
Ba 233.527†	22892.2	501.56 µg/L		9.249	501.56 ppb	9.249	1.84%
Be 313.107†	836897.7	491.54 µg/L		7.847	491.54 ppb	7.847	1.60%
Ca 317.933Radial†	13360.7	4862.2 µg/L		8.87	4862.2 ppb	8.87	0.18%
Cd 226.502†	20678.4	491.46 µg/L		7.449	491.46 ppb	7.449	1.52%
Co 228.616†	10906.0	467.98 µg/L		20.327	467.98 ppb	20.327	4.34%
Cr 267.716†	23024.5	501.08 µg/L		14.570	501.08 ppb	14.570	2.91%
Cu 324.752†	78032.3	510.59 µg/L		10.912	510.59 ppb	10.912	2.14%
Fe 238.204 Radial†	413.6	4901.3 µg/L		58.02	4901.3 ppb	58.02	1.18%
K 766.490 Radial†	10338.6	4824.8 µg/L		14.37	4824.8 ppb	14.37	0.30%
Mg 279.077 IEC†	371.4	4899.6 µg/L		60.04	4899.6 ppb	60.04	1.23%
Mn 257.610†	164817.4	495.31 µg/L		10.101	495.31 ppb	10.101	2.04%
Mo 202.031†	5043.0	499.20 µg/L		21.486	499.20 ppb	21.486	4.30%
Na 589.592 Radial†	9932.7	4957.4 µg/L		26.27	4957.4 ppb	26.27	0.53%

Ni 231.604†	8645.6	484.41 µg/L	21.070	484.41 ppb	21.070	4.35%
P 214.914†	350.8	533.59 µg/L	25.855	533.59 ppb	25.855	4.85%
Pb 220.353†	1900.4	498.75 µg/L	17.670	498.75 ppb	17.670	3.54%
S 181.975 Axial†	1578.4	5023.4 µg/L	152.76	5023.4 ppb	152.76	3.04%
Sb 206.836†	571.3	512.07 µg/L	21.945	512.07 ppb	21.945	4.29%
Se 196.026†	515.6	496.03 µg/L	9.341	496.03 ppb	9.341	1.88%
SiO2†	57468.9	10375 µg/L	135.3	10375 ppb	135.3	1.30%
Si 251.611†	71196.0	4840.2 µg/L	63.88	4840.2 ppb	63.88	1.32%
Sn 189.927†	1303.2	507.86 µg/L	26.765	507.86 ppb	26.765	5.27%
Sr 421.552†	82939.1	493.06 µg/L	0.746	493.06 ppb	0.746	0.15%
Ti 334.940†	206789.4	483.24 µg/L	11.761	483.24 ppb	11.761	2.43%
Tl 190.801†	504.6	497.62 µg/L	15.349	497.62 ppb	15.349	3.08%
U 409.014†	5825.6	527.98 µg/L	13.730	527.98 ppb	13.730	2.60%
V 292.402†	42486.3	506.45 µg/L	12.241	506.45 ppb	12.241	2.42%
Zn 213.857†	21255.9	485.92 µg/L	9.709	485.92 ppb	9.709	2.00%

Sequence No.: 9

Sample ID: 1202047701|955132|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 304

Date Collected: 3/16/2010 15:04:41

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047701|955132|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98833.0	98833.0	102 %		15:05:12
1	Al 396.153Radial†	-160.1	-37.4	-17.897 µg/L	-17.897 ppb	15:05:12
1	Ca 317.933Radial†	488.8	93.4	33.998 µg/L	33.998 ppb	15:05:32
1	Fe 238.204 Radial†	14.8	2.5	29.474 µg/L	29.474 ppb	15:05:32
1	K 766.490 Radial†	1260.6	749.2	349.63 µg/L	349.63 ppb	15:05:12
1	Mg 279.077 IEC†	9.8	1.6	20.575 µg/L	20.575 ppb	15:05:32
1	Na 589.592 Radial†	652.1	458.1	228.62 µg/L	228.62 ppb	15:05:12
1	Sr 421.552†	170.6	27.7	0.1646 µg/L	0.1646 ppb	15:05:12
1	Sc 361.383	2105622.8	2105622.8	100.60 %		15:06:34
1	Y 371.029	1437478.1	1437478.1	100.32 %		15:06:34
1	Ag 328.068†	-562.0	-98.5	-0.7882 µg/L	-0.7882 ppb	15:06:40
1	As 188.979†	0.2	3.5	5.1149 µg/L	5.1149 ppb	15:07:00
1	B 249.677†	785.4	481.4	21.830 µg/L	21.830 ppb	15:06:40
1	Ba 233.527†	-3.1	5.3	0.1167 µg/L	0.1167 ppb	15:07:00
1	Be 313.107†	-1088.3	77.0	0.0452 µg/L	0.0452 ppb	15:06:40
1	Cd 226.502†	-186.2	-14.5	-0.3487 µg/L	-0.3487 ppb	15:07:00
1	Co 228.616†	45.4	-3.0	-0.1264 µg/L	-0.1264 ppb	15:07:00
1	Cr 267.716†	52.6	-27.9	-0.6074 µg/L	-0.6074 ppb	15:06:40
1	Cu 324.752†	4512.9	109.4	0.7199 µg/L	0.7199 ppb	15:06:40
1	Mn 257.610†	-618.7	72.0	0.2166 µg/L	0.2166 ppb	15:07:00
1	Mo 202.031†	15.5	10.3	1.0225 µg/L	1.0225 ppb	15:07:00
1	Ni 231.604†	374.6	-4.6	-0.2561 µg/L	-0.2561 ppb	15:07:00
1	P 214.914†	270.6	-3.4	-5.7517 µg/L	-5.7517 ppb	15:07:00
1	Pb 220.353†	36.6	6.2	1.6231 µg/L	1.6231 ppb	15:07:00
1	S 181.975 Axial†	31.0	8.3	26.298 µg/L	26.298 ppb	15:07:00
1	Sb 206.836†	22.1	-0.7	-0.6064 µg/L	-0.6064 ppb	15:07:00
1	Se 196.026†	22.0	-5.4	-5.0311 µg/L	-5.0311 ppb	15:07:00
1	SiO2†	22098.5	19187.4	3464.0 µg/L	3464.0 ppb	15:06:40
1	Si 251.611†	24394.1	23825.1	1619.7 µg/L	1619.7 ppb	15:06:40
1	Sn 189.927†	-8.2	-0.7	-0.2761 µg/L	-0.2761 ppb	15:07:00
1	Ti 334.940†	-537.6	42.9	0.0991 µg/L	0.0991 ppb	15:06:40
1	Tl 190.801†	-34.0	0.3	0.3401 µg/L	0.3401 ppb	15:07:00
1	U 409.014†	14.9	20.6	1.8663 µg/L	1.8663 ppb	15:06:40
1	V 292.402†	113.6	0.6	0.0121 µg/L	0.0121 ppb	15:06:40
1	Zn 213.857†	714.3	-298.8	-6.8828 µg/L	-6.8828 ppb	15:07:00
2	Sc RADIAL	99544.0	99544.0	103 %		15:05:38
2	Al 396.153Radial†	-126.4	-3.6	-1.7220 µg/L	-1.7220 ppb	15:05:38
2	Ca 317.933Radial†	494.9	95.9	34.910 µg/L	34.910 ppb	15:05:58
2	Fe 238.204 Radial†	12.1	-0.2	-2.2443 µg/L	-2.2443 ppb	15:05:58
2	K 766.490 Radial†	1310.1	788.5	367.98 µg/L	367.98 ppb	15:05:38
2	Mg 279.077 IEC†	6.2	-2.0	-26.040 µg/L	-26.040 ppb	15:05:58
2	Na 589.592 Radial†	597.5	400.3	199.81 µg/L	199.81 ppb	15:05:38
2	Sr 421.552†	143.4	-0.0	0.0000 µg/L	0.0000 ppb	15:05:38
2	Sc 361.383	2106525.1	2106525.1	100.64 %		15:07:06
2	Y 371.029	1438280.1	1438280.1	100.38 %		15:07:06
2	Ag 328.068†	-541.2	-77.5	-0.6282 µg/L	-0.6282 ppb	15:07:12
2	As 188.979†	-6.3	-3.0	-4.4931 µg/L	-4.4931 ppb	15:07:32
2	B 249.677†	770.5	466.2	21.160 µg/L	21.160 ppb	15:07:12
2	Ba 233.527†	13.2	21.5	0.4690 µg/L	0.4690 ppb	15:07:32
2	Be 313.107†	-1067.5	98.1	0.0576 µg/L	0.0576 ppb	15:07:12
2	Cd 226.502†	-178.8	-7.1	-0.1686 µg/L	-0.1686 ppb	15:07:32
2	Co 228.616†	45.4	-3.0	-0.1266 µg/L	-0.1266 ppb	15:07:32
2	Cr 267.716†	115.0	34.0	0.7393 µg/L	0.7393 ppb	15:07:12
2	Cu 324.752†	4545.9	140.3	0.9160 µg/L	0.9160 ppb	15:07:12
2	Mn 257.610†	-635.8	55.2	0.1675 µg/L	0.1675 ppb	15:07:32
2	Mo 202.031†	13.7	8.5	0.8367 µg/L	0.8367 ppb	15:07:32
2	Ni 231.604†	373.3	-6.0	-0.3360 µg/L	-0.3360 ppb	15:07:32
2	P 214.914†	284.1	9.9	16.407 µg/L	16.407 ppb	15:07:32
2	Pb 220.353†	33.8	3.4	0.8848 µg/L	0.8848 ppb	15:07:32

2	S 181.975 Axial†	32.1	9.4	29.759 µg/L	29.759 ppb	15:07:32
2	Sb 206.836†	27.9	5.0	4.4271 µg/L	4.4271 ppb	15:07:32
2	Se 196.026†	19.4	-8.0	-7.5332 µg/L	-7.5332 ppb	15:07:32
2	SiO2†	22317.9	19396.0	3501.7 µg/L	3501.7 ppb	15:07:12
2	Si 251.611†	24643.1	24062.1	1635.8 µg/L	1635.8 ppb	15:07:12
2	Sn 189.927†	-2.9	4.5	1.7621 µg/L	1.7621 ppb	15:07:32
2	Ti 334.940†	-537.4	43.3	0.1038 µg/L	0.1038 ppb	15:07:12
2	Tl 190.801†	-39.7	-5.3	-5.1991 µg/L	-5.1991 ppb	15:07:32
2	U 409.014†	-23.0	-17.0	-1.5491 µg/L	-1.5491 ppb	15:07:12
2	V 292.402†	38.9	-73.7	-0.8633 µg/L	-0.8633 ppb	15:07:12
2	Zn 213.857†	709.2	-304.2	-7.0025 µg/L	-7.0025 ppb	15:07:32
3	Sc RADIAL	98889.5	98889.5	102 %		15:06:03
3	Al 396.153Radial†	-131.1	-9.0	-4.3356 µg/L	-4.3356 ppb	15:06:03
3	Ca 317.933Radial†	481.6	86.0	31.314 µg/L	31.314 ppb	15:06:24
3	Fe 238.204 Radial†	14.6	2.3	27.205 µg/L	27.205 ppb	15:06:24
3	K 766.490 Radial†	1252.7	740.8	345.71 µg/L	345.71 ppb	15:06:03
3	Mg 279.077 IEC†	8.7	0.5	6.7878 µg/L	6.7878 ppb	15:06:24
3	Na 589.592 Radial†	611.4	417.8	208.53 µg/L	208.53 ppb	15:06:03
3	Sr 421.552†	183.1	39.8	0.2367 µg/L	0.2367 ppb	15:06:03
3	Sc 361.383	2094554.0	2094554.0	100.07 %		15:07:38
3	Y 371.029	1430421.5	1430421.5	99.829 %		15:07:38
3	Ag 328.068†	-516.3	-55.7	-0.4459 µg/L	-0.4459 ppb	15:07:44
3	As 188.979†	0.7	4.0	5.8670 µg/L	5.8670 ppb	15:08:04
3	B 249.677†	774.8	474.9	21.540 µg/L	21.540 ppb	15:07:44
3	Ba 233.527†	-1.0	7.4	0.1626 µg/L	0.1626 ppb	15:08:04
3	Be 313.107†	-1071.9	87.6	0.0514 µg/L	0.0514 ppb	15:07:44
3	Cd 226.502†	-176.0	-5.3	-0.1288 µg/L	-0.1288 ppb	15:08:04
3	Co 228.616†	47.9	-0.2	-0.0083 µg/L	-0.0083 ppb	15:08:04
3	Cr 267.716†	90.8	10.5	0.2284 µg/L	0.2284 ppb	15:07:44
3	Cu 324.752†	4530.9	151.1	0.9921 µg/L	0.9921 ppb	15:07:44
3	Mn 257.610†	-610.4	77.0	0.2325 µg/L	0.2325 ppb	15:08:04
3	Mo 202.031†	15.7	10.6	1.0488 µg/L	1.0488 ppb	15:08:04
3	Ni 231.604†	361.2	-16.0	-0.8968 µg/L	-0.8968 ppb	15:08:04
3	P 214.914†	283.2	10.6	17.419 µg/L	17.419 ppb	15:08:04
3	Pb 220.353†	41.0	10.8	2.8465 µg/L	2.8465 ppb	15:08:04
3	S 181.975 Axial†	35.6	13.0	41.407 µg/L	41.407 ppb	15:08:04
3	Sb 206.836†	25.2	2.5	2.2244 µg/L	2.2244 ppb	15:08:04
3	Se 196.026†	24.1	-3.3	-2.9966 µg/L	-2.9966 ppb	15:08:04
3	SiO2†	21806.6	19011.8	3432.3 µg/L	3432.3 ppb	15:07:44
3	Si 251.611†	23964.8	23524.2	1599.3 µg/L	1599.3 ppb	15:07:44
3	Sn 189.927†	-5.3	2.2	0.8483 µg/L	0.8483 ppb	15:08:04
3	Ti 334.940†	-465.5	112.1	0.2620 µg/L	0.2620 ppb	15:07:44
3	Tl 190.801†	-36.6	-2.5	-2.4352 µg/L	-2.4352 ppb	15:08:04
3	U 409.014†	-11.9	-6.0	-0.5536 µg/L	-0.5536 ppb	15:07:44
3	V 292.402†	105.1	-7.3	-0.0817 µg/L	-0.0817 ppb	15:07:44
3	Zn 213.857†	706.1	-303.2	-6.9805 µg/L	-6.9805 ppb	15:08:04

Mean Data: 1202047701|955132|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2102234.0	100.44 %	0.318			0.32%
Sc RADIAL	99088.8	102 %	0.4			0.40%
Y 371.029	1435393.2	100.18 %	0.302			0.30%
Ag 328.068†	-77.2	-0.6208 µg/L	0.17129	-0.6208 ppb	0.17129	27.59%
Al 396.153Radial†	-16.7	-7.9849 µg/L	8.68311	-7.9849 ppb	8.68311	108.74%
As 188.979†	1.5	2.1629 µg/L	5.77657	2.1629 ppb	5.77657	267.07%
B 249.677†	474.2	21.510 µg/L	0.3361	21.510 ppb	0.3361	1.56%
Ba 233.527†	11.4	0.2494 µg/L	0.19150	0.2494 ppb	0.19150	76.77%
Be 313.107†	87.6	0.0514 µg/L	0.00620	0.0514 ppb	0.00620	12.05%
Ca 317.933Radial†	91.8	33.407 µg/L	1.8689	33.407 ppb	1.8689	5.59%
Cd 226.502†	-9.0	-0.2154 µg/L	0.11713	-0.2154 ppb	0.11713	54.39%
Co 228.616†	-2.0	-0.0871 µg/L	0.06825	-0.0871 ppb	0.06825	78.36%
Cr 267.716†	5.5	0.1201 µg/L	0.67988	0.1201 ppb	0.67988	566.07%
Cu 324.752†	133.6	0.8760 µg/L	0.14046	0.8760 ppb	0.14046	16.03%
Fe 238.204 Radial†	1.5	18.145 µg/L	17.6938	18.145 ppb	17.6938	97.52%
K 766.490 Radial†	759.5	354.44 µg/L	11.888	354.44 ppb	11.888	3.35%
Mg 279.077 IEC†	0.0	0.4409 µg/L	23.94651	0.4409 ppb	23.94651	>999.9%
Mn 257.610†	68.0	0.2055 µg/L	0.03386	0.2055 ppb	0.03386	16.48%
Mo 202.031†	9.8	0.9693 µg/L	0.11558	0.9693 ppb	0.11558	11.92%
Na 589.592 Radial†	425.4	212.32 µg/L	14.774	212.32 ppb	14.774	6.96%

Ni 231.604†	-8.9	-0.4963 µg/L	0.34913	-0.4963 ppb	0.34913	70.35%
P 214.914†	5.7	9.3581 µg/L	13.09528	9.3581 ppb	13.09528	139.93%
Pb 220.353†	6.8	1.7848 µg/L	0.99082	1.7848 ppb	0.99082	55.51%
S 181.975 Axial†	10.2	32.488 µg/L	7.9152	32.488 ppb	7.9152	24.36%
Sb 206.836†	2.2	2.0151 µg/L	2.52327	2.0151 ppb	2.52327	125.22%
Se 196.026†	-5.6	-5.1870 µg/L	2.27233	-5.1870 ppb	2.27233	43.81%
SiO2†	19198.4	3466.0 µg/L	34.73	3466.0 ppb	34.73	1.00%
Si 251.611†	23803.8	1618.3 µg/L	18.33	1618.3 ppb	18.33	1.13%
Sn 189.927†	2.0	0.7781 µg/L	1.02088	0.7781 ppb	1.02088	131.20%
Sr 421.552†	22.5	0.1338 µg/L	0.12135	0.1338 ppb	0.12135	90.73%
Ti 334.940†	66.1	0.1550 µg/L	0.09272	0.1550 ppb	0.09272	59.82%
Tl 190.801†	-2.5	-2.4314 µg/L	2.76958	-2.4314 ppb	2.76958	113.91%
U 409.014†	-0.8	-0.0788 µg/L	1.75653	-0.0788 ppb	1.75653	>999.9%
V 292.402†	-26.8	-0.3110 µg/L	0.48065	-0.3110 ppb	0.48065	154.57%
Zn 213.857†	-302.1	-6.9552 µg/L	0.06375	-6.9552 ppb	0.06375	0.92%

Sequence No.: 10

Sample ID: 1202047702|955132|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 305

Date Collected: 3/16/2010 15:08:14

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047702|955132|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	101320.2	101320.2	105 %		15:08:45
1	Al 396.153Radial†	10570.1	10216.6	4866.2 µg/L	4866.2 ppb	15:08:45
1	Ca 317.933Radial†	14514.8	13480.3	4905.8 µg/L	4905.8 ppb	15:08:45
1	Fe 238.204 Radial†	446.8	414.9	4917.3 µg/L	4917.3 ppb	15:09:05
1	K 766.490 Radial†	12145.2	11116.6	5187.9 µg/L	5187.9 ppb	15:08:45
1	Mg 279.077 IEC†	397.5	371.8	4904.8 µg/L	4904.8 ppb	15:09:05
1	Na 589.592 Radial†	11079.3	10403.2	5192.3 µg/L	5192.3 ppb	15:08:45
1	Sr 421.552†	87261.2	83218.7	494.72 µg/L	494.72 ppb	15:08:45
1	Sc 361.383	2084932.0	2084932.0	99.609 %		15:10:08
1	Y 371.029	1417461.7	1417461.7	98.925 %		15:10:08
1	Ag 328.068†	61682.4	62384.6	504.73 µg/L	504.73 ppb	15:10:14
1	As 188.979†	352.0	356.6	524.87 µg/L	524.87 ppb	15:10:35
1	B 249.677†	11886.9	11634.1	526.25 µg/L	526.25 ppb	15:10:14
1	Ba 233.527†	23534.3	23635.0	517.84 µg/L	517.84 ppb	15:10:14
1	Be 313.107†	853189.9	857694.6	503.75 µg/L	503.75 ppb	15:10:08
1	Cd 226.502†	20955.9	21208.7	504.10 µg/L	504.10 ppb	15:10:14
1	Co 228.616†	11582.4	11579.7	496.92 µg/L	496.92 ppb	15:10:35
1	Cr 267.716†	23925.2	23938.8	520.98 µg/L	520.98 ppb	15:10:14
1	Cu 324.752†	85048.9	81005.8	530.02 µg/L	530.02 ppb	15:10:14
1	Mn 257.610†	169629.3	170981.5	513.84 µg/L	513.84 ppb	15:10:14
1	Mo 202.031†	5341.1	5356.9	530.26 µg/L	530.26 ppb	15:10:35
1	Ni 231.604†	9524.2	9184.6	514.61 µg/L	514.61 ppb	15:10:35
1	P 214.914†	638.2	368.3	561.10 µg/L	561.10 ppb	15:10:35
1	Pb 220.353†	2029.5	2007.3	526.82 µg/L	526.82 ppb	15:10:35
1	S 181.975 Axial†	1664.0	1648.0	5244.6 µg/L	5244.6 ppb	15:10:35
1	Sb 206.836†	617.5	597.2	535.43 µg/L	535.43 ppb	15:10:35
1	Se 196.026†	546.2	521.1	501.23 µg/L	501.23 ppb	15:10:35
1	SiO2†	81577.2	79117.4	14284 µg/L	14284 ppb	15:10:14
1	Si 251.611†	98038.0	97998.3	6662.3 µg/L	6662.3 ppb	15:10:14
1	Sn 189.927†	1384.7	1397.6	544.61 µg/L	544.61 ppb	15:10:35
1	Ti 334.940†	212981.7	214394.2	501.03 µg/L	501.03 ppb	15:10:14
1	Tl 190.801†	494.9	531.0	523.46 µg/L	523.46 ppb	15:10:35
1	U 409.014†	5962.1	5991.3	543.02 µg/L	543.02 ppb	15:10:14
1	V 292.402†	43967.0	44027.1	524.93 µg/L	524.93 ppb	15:10:14
1	Zn 213.857†	22831.7	21912.4	500.87 µg/L	500.87 ppb	15:10:14
2	Sc RADIAL	100853.9	100853.9	104 %		15:09:11
2	Al 396.153Radial†	10601.2	10293.2	4902.9 µg/L	4902.9 ppb	15:09:11
2	Ca 317.933Radial†	14541.6	13570.2	4938.5 µg/L	4938.5 ppb	15:09:11
2	Fe 238.204 Radial†	448.7	418.6	4961.6 µg/L	4961.6 ppb	15:09:31
2	K 766.490 Radial†	12077.0	11104.8	5182.4 µg/L	5182.4 ppb	15:09:11
2	Mg 279.077 IEC†	402.0	377.8	4983.9 µg/L	4983.9 ppb	15:09:31
2	Na 589.592 Radial†	11039.6	10414.0	5197.6 µg/L	5197.6 ppb	15:09:11
2	Sr 421.552†	87120.1	83468.7	496.21 µg/L	496.21 ppb	15:09:11
2	Sc 361.383	2105301.5	2105301.5	100.58 %		15:10:41
2	Y 371.029	1432924.3	1432924.3	100.00 %		15:10:41
2	Ag 328.068†	62070.9	62171.7	503.01 µg/L	503.01 ppb	15:10:47
2	As 188.979†	350.3	351.6	517.43 µg/L	517.43 ppb	15:11:08
2	B 249.677†	11947.9	11579.3	523.73 µg/L	523.73 ppb	15:10:47
2	Ba 233.527†	23665.4	23536.7	515.68 µg/L	515.68 ppb	15:10:47
2	Be 313.107†	857893.2	854083.5	501.63 µg/L	501.63 ppb	15:10:41
2	Cd 226.502†	21161.7	21209.7	504.11 µg/L	504.11 ppb	15:10:47
2	Co 228.616†	11534.4	11419.5	490.03 µg/L	490.03 ppb	15:11:08
2	Cr 267.716†	24090.4	23870.7	519.50 µg/L	519.50 ppb	15:10:47
2	Cu 324.752†	85618.2	80745.7	528.33 µg/L	528.33 ppb	15:10:47
2	Mn 257.610†	171209.9	170905.2	513.61 µg/L	513.61 ppb	15:10:47
2	Mo 202.031†	5299.8	5264.0	521.07 µg/L	521.07 ppb	15:11:08
2	Ni 231.604†	9483.3	9051.4	507.15 µg/L	507.15 ppb	15:11:08
2	P 214.914†	640.7	364.6	554.99 µg/L	554.99 ppb	15:11:08
2	Pb 220.353†	2027.5	1985.6	521.11 µg/L	521.11 ppb	15:11:08

2	S 181.975 Axial†	1674.0	1641.8	5225.0 µg/L	5225.0 ppb	15:11:08
2	Sb 206.836†	616.7	590.4	529.23 µg/L	529.23 ppb	15:11:08
2	Se 196.026†	557.4	526.9	506.75 µg/L	506.75 ppb	15:11:08
2	SiO2†	82290.7	79034.4	14269 µg/L	14269 ppb	15:10:47
2	Si 251.611†	98844.6	97848.1	6652.1 µg/L	6652.1 ppb	15:10:47
2	Sn 189.927†	1376.5	1375.9	536.17 µg/L	536.17 ppb	15:11:08
2	Ti 334.940†	214494.6	213829.6	499.70 µg/L	499.70 ppb	15:10:47
2	Tl 190.801†	491.6	522.9	515.60 µg/L	515.60 ppb	15:11:08
2	U 409.014†	5997.7	5968.7	540.96 µg/L	540.96 ppb	15:10:47
2	V 292.402†	44326.6	43957.5	524.03 µg/L	524.03 ppb	15:10:47
2	Zn 213.857†	23023.1	21880.9	500.17 µg/L	500.17 ppb	15:10:47
3	Sc RADIAL	100605.1	100605.1	104 %		15:09:37
3	Al 396.153Radial†	10510.2	10230.8	4873.8 µg/L	4873.8 ppb	15:09:37
3	Ca 317.933Radial†	14397.3	13465.8	4900.5 µg/L	4900.5 ppb	15:09:37
3	Fe 238.204 Radial†	449.3	420.3	4980.5 µg/L	4980.5 ppb	15:09:57
3	K 766.490 Radial†	12020.1	11078.7	5170.2 µg/L	5170.2 ppb	15:09:37
3	Mg 279.077 IEC†	403.3	380.0	5012.2 µg/L	5012.2 ppb	15:09:57
3	Na 589.592 Radial†	11035.7	10436.5	5208.9 µg/L	5208.9 ppb	15:09:37
3	Sr 421.552†	86684.9	83256.8	494.95 µg/L	494.95 ppb	15:09:37
3	Sc 361.383	2108225.5	2108225.5	100.72 %		15:11:14
3	Y 371.029	1438019.5	1438019.5	100.36 %		15:11:14
3	Ag 328.068†	60652.9	60678.2	490.86 µg/L	490.86 ppb	15:11:20
3	As 188.979†	327.2	328.1	482.80 µg/L	482.80 ppb	15:11:40
3	B 249.677†	11656.4	11273.5	509.80 µg/L	509.80 ppb	15:11:20
3	Ba 233.527†	22850.8	22695.4	497.24 µg/L	497.24 ppb	15:11:20
3	Be 313.107†	841181.8	836308.9	491.20 µg/L	491.20 ppb	15:11:14
3	Cd 226.502†	20314.6	20339.5	483.39 µg/L	483.39 ppb	15:11:20
3	Co 228.616†	10796.2	10670.8	457.88 µg/L	457.88 ppb	15:11:40
3	Cr 267.716†	22815.1	22571.3	491.22 µg/L	491.22 ppb	15:11:20
3	Cu 324.752†	82483.8	77515.6	507.24 µg/L	507.24 ppb	15:11:20
3	Mn 257.610†	164256.5	163765.6	492.15 µg/L	492.15 ppb	15:11:20
3	Mo 202.031†	4970.8	4930.0	488.02 µg/L	488.02 ppb	15:11:40
3	Ni 231.604†	8889.2	8448.6	473.38 µg/L	473.38 ppb	15:11:40
3	P 214.914†	632.0	355.1	540.88 µg/L	540.88 ppb	15:11:40
3	Pb 220.353†	1918.6	1874.7	492.00 µg/L	492.00 ppb	15:11:40
3	S 181.975 Axial†	1598.8	1564.8	4980.1 µg/L	4980.1 ppb	15:11:40
3	Sb 206.836†	585.5	558.6	500.66 µg/L	500.66 ppb	15:11:40
3	Se 196.026†	527.7	496.6	478.40 µg/L	478.40 ppb	15:11:40
3	SiO2†	79980.3	76627.1	13834 µg/L	13834 ppb	15:11:20
3	Si 251.611†	96009.1	94896.6	6451.4 µg/L	6451.4 ppb	15:11:20
3	Sn 189.927†	1287.1	1285.3	500.91 µg/L	500.91 ppb	15:11:40
3	Ti 334.940†	205189.2	204295.2	477.40 µg/L	477.40 ppb	15:11:20
3	Tl 190.801†	465.9	496.7	489.85 µg/L	489.85 ppb	15:11:40
3	U 409.014†	5766.3	5730.8	519.36 µg/L	519.36 ppb	15:11:20
3	V 292.402†	42287.5	41871.9	499.07 µg/L	499.07 ppb	15:11:20
3	Zn 213.857†	22151.6	20983.9	479.70 µg/L	479.70 ppb	15:11:20

Mean Data: 1202047702|955132|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2099486.4	100.30 %	0.606			0.60%
Sc RADIAL	100926.4	104 %	0.4			0.36%
Y 371.029	1429468.5	99.763 %	0.7472			0.75%
Ag 328.068†	61744.8	499.53 µg/L	7.559	499.53 ppb	7.559	1.51%
Al 396.153Radial†	10246.9	4881.0 µg/L	19.38	4881.0 ppb	19.38	0.40%
As 188.979†	345.4	508.37 µg/L	22.448	508.37 ppb	22.448	4.42%
B 249.677†	11495.6	519.93 µg/L	8.860	519.93 ppb	8.860	1.70%
Ba 233.527†	23289.0	510.25 µg/L	11.321	510.25 ppb	11.321	2.22%
Be 313.107†	849362.3	498.86 µg/L	6.721	498.86 ppb	6.721	1.35%
Ca 317.933Radial†	13505.4	4914.9 µg/L	20.57	4914.9 ppb	20.57	0.42%
Cd 226.502†	20919.3	497.20 µg/L	11.961	497.20 ppb	11.961	2.41%
Co 228.616†	11223.3	481.61 µg/L	20.838	481.61 ppb	20.838	4.33%
Cr 267.716†	23460.2	510.56 µg/L	16.769	510.56 ppb	16.769	3.28%
Cu 324.752†	79755.7	521.86 µg/L	12.695	521.86 ppb	12.695	2.43%
Fe 238.204 Radial†	417.9	4953.1 µg/L	32.46	4953.1 ppb	32.46	0.66%
K 766.490 Radial†	11100.1	5180.2 µg/L	9.05	5180.2 ppb	9.05	0.17%
Mg 279.077 IEC†	376.5	4967.0 µg/L	55.64	4967.0 ppb	55.64	1.12%
Mn 257.610†	168550.8	506.53 µg/L	12.457	506.53 ppb	12.457	2.46%
Mo 202.031†	5183.6	513.12 µg/L	22.215	513.12 ppb	22.215	4.33%
Na 589.592 Radial†	10417.9	5199.6 µg/L	8.47	5199.6 ppb	8.47	0.16%

Ni 231.604†	8894.9	498.38 µg/L	21.973	498.38 ppb	21.973	4.41%
P 214.914†	362.7	552.32 µg/L	10.371	552.32 ppb	10.371	1.88%
Pb 220.353†	1955.9	513.31 µg/L	18.678	513.31 ppb	18.678	3.64%
S 181.975 Axial†	1618.2	5149.9 µg/L	147.41	5149.9 ppb	147.41	2.86%
Sb 206.836†	582.1	521.77 µg/L	18.546	521.77 ppb	18.546	3.55%
Se 196.026†	514.9	495.46 µg/L	15.028	495.46 ppb	15.028	3.03%
SiO2†	78259.6	14129 µg/L	255.4	14129 ppb	255.4	1.81%
Si 251.611†	96914.3	6588.6 µg/L	118.91	6588.6 ppb	118.91	1.80%
Sn 189.927†	1353.0	527.23 µg/L	23.186	527.23 ppb	23.186	4.40%
Sr 421.552†	83314.7	495.30 µg/L	0.801	495.30 ppb	0.801	0.16%
Ti 334.940†	210839.6	492.71 µg/L	13.273	492.71 ppb	13.273	2.69%
Tl 190.801†	516.9	509.64 µg/L	17.582	509.64 ppb	17.582	3.45%
U 409.014†	5896.9	534.45 µg/L	13.109	534.45 ppb	13.109	2.45%
V 292.402†	43285.5	516.01 µg/L	14.680	516.01 ppb	14.680	2.84%
Zn 213.857†	21592.4	493.58 µg/L	12.024	493.58 ppb	12.024	2.44%



Sequence No.: 11  
 Sample ID: 1202047703|955132|5  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 306  
 Date Collected: 3/16/2010 15:11:50  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202047703|955132|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97928.7	97928.7	101 %		15:12:20
1	Al 396.153Radial†	-129.3	-8.5	-4.1083 µg/L	-4.1083 ppb	15:12:20
1	Ca 317.933Radial†	393.0	3.2	1.1562 µg/L	1.1562 ppb	15:12:40
1	Fe 238.204 Radial†	13.3	1.2	13.914 µg/L	13.914 ppb	15:12:40
1	K 766.490 Radial†	563.3	71.4	33.335 µg/L	33.335 ppb	15:12:20
1	Mg 279.077 IEC†	8.0	-0.1	-1.5073 µg/L	-1.5073 ppb	15:12:40
1	Na 589.592 Radial†	284.4	100.5	50.173 µg/L	50.173 ppb	15:12:20
1	Sr 421.552†	166.2	24.9	0.1478 µg/L	0.1478 ppb	15:12:20
1	Sc 361.383	2105582.3	2105582.3	100.60 %		15:13:42
1	Y 371.029	1438261.9	1438261.9	100.38 %		15:13:42
1	Ag 328.068†	-510.5	-47.3	-0.3804 µg/L	-0.3804 ppb	15:13:48
1	As 188.979†	-1.8	1.4	2.1127 µg/L	2.1127 ppb	15:14:08
1	B 249.677†	418.1	116.2	5.2677 µg/L	5.2677 ppb	15:13:48
1	Ba 233.527†	-15.8	-7.3	-0.1595 µg/L	-0.1595 ppb	15:14:08
1	Be 313.107†	-1041.8	123.2	0.0723 µg/L	0.0723 ppb	15:13:48
1	Cd 226.502†	-174.4	-2.8	-0.0693 µg/L	-0.0693 ppb	15:14:08
1	Co 228.616†	48.6	0.2	0.0108 µg/L	0.0108 ppb	15:14:08
1	Cr 267.716†	81.7	0.9	0.0205 µg/L	0.0205 ppb	15:13:48
1	Cu 324.752†	4402.7	-0.1	0.0022 µg/L	0.0022 ppb	15:13:48
1	Mn 257.610†	-696.1	-5.0	-0.0140 µg/L	-0.0140 ppb	15:14:08
1	Mo 202.031†	26.8	21.6	2.1341 µg/L	2.1341 ppb	15:14:08
1	Ni 231.604†	361.2	-17.8	-0.9991 µg/L	-0.9991 ppb	15:14:08
1	P 214.914†	273.1	-0.9	-1.5757 µg/L	-1.5757 ppb	15:14:08
1	Pb 220.353†	33.8	3.5	0.9142 µg/L	0.9142 ppb	15:14:08
1	S 181.975 Axial†	27.9	5.2	16.486 µg/L	16.486 ppb	15:14:08
1	Sb 206.836†	22.3	-0.6	-0.4973 µg/L	-0.4973 ppb	15:14:08
1	Se 196.026†	19.0	-8.4	-7.8790 µg/L	-7.8790 ppb	15:14:08
1	SiO2†	6669.4	3850.1	695.09 µg/L	695.09 ppb	15:13:48
1	Si 251.611†	5306.2	4850.6	329.76 µg/L	329.76 ppb	15:13:48
1	Sn 189.927†	-11.2	-3.7	-1.4285 µg/L	-1.4285 ppb	15:14:08
1	Ti 334.940†	-512.3	68.0	0.1592 µg/L	0.1592 ppb	15:13:48
1	Tl 190.801†	-33.3	1.0	0.9844 µg/L	0.9844 ppb	15:14:08
1	U 409.014†	-37.7	-31.6	-2.8754 µg/L	-2.8754 ppb	15:13:48
1	V 292.402†	92.0	-20.9	-0.2349 µg/L	-0.2349 ppb	15:13:48
1	Zn 213.857†	702.3	-310.7	-7.1497 µg/L	-7.1497 ppb	15:14:08
2	Sc RADIAL	97954.5	97954.5	101 %		15:12:46
2	Al 396.153Radial†	-112.6	8.1	3.8329 µg/L	3.8329 ppb	15:12:46
2	Ca 317.933Radial†	405.8	15.7	5.6996 µg/L	5.6996 ppb	15:13:06
2	Fe 238.204 Radial†	12.4	0.3	3.8191 µg/L	3.8191 ppb	15:13:06
2	K 766.490 Radial†	552.6	60.7	28.324 µg/L	28.324 ppb	15:12:46
2	Mg 279.077 IEC†	10.1	2.0	25.824 µg/L	25.824 ppb	15:13:06
2	Na 589.592 Radial†	255.3	71.7	35.762 µg/L	35.762 ppb	15:12:46
2	Sr 421.552†	96.3	-44.3	-0.2633 µg/L	-0.2633 ppb	15:12:46
2	Sc 361.383	2103644.6	2103644.6	100.50 %		15:14:14
2	Y 371.029	1440062.4	1440062.4	100.50 %		15:14:14
2	Ag 328.068†	-486.2	-23.6	-0.1889 µg/L	-0.1889 ppb	15:14:20
2	As 188.979†	-2.0	1.2	1.7888 µg/L	1.7888 ppb	15:14:40
2	B 249.677†	394.9	93.6	4.2455 µg/L	4.2455 ppb	15:14:20
2	Ba 233.527†	-1.5	6.9	0.1509 µg/L	0.1509 ppb	15:14:40
2	Be 313.107†	-1027.3	136.7	0.0802 µg/L	0.0802 ppb	15:14:20
2	Cd 226.502†	-181.2	-9.7	-0.2325 µg/L	-0.2325 ppb	15:14:40
2	Co 228.616†	34.7	-13.6	-0.5819 µg/L	-0.5819 ppb	15:14:40
2	Cr 267.716†	70.0	-10.6	-0.2299 µg/L	-0.2299 ppb	15:14:20
2	Cu 324.752†	4346.9	-51.5	-0.3359 µg/L	-0.3359 ppb	15:14:20
2	Mn 257.610†	-683.6	6.8	0.0189 µg/L	0.0189 ppb	15:14:40
2	Mo 202.031†	16.5	11.3	1.1169 µg/L	1.1169 ppb	15:14:40
2	Ni 231.604†	371.8	-6.9	-0.3874 µg/L	-0.3874 ppb	15:14:40
2	P 214.914†	271.3	-2.4	-3.9650 µg/L	-3.9650 ppb	15:14:40
2	Pb 220.353†	31.2	0.8	0.2306 µg/L	0.2306 ppb	15:14:40

2	S 181.975 Axial†	22.9	0.3	0.8087 µg/L	0.8087 ppb	15:14:40
2	Sb 206.836†	25.8	2.9	2.6494 µg/L	2.6494 ppb	15:14:40
2	Se 196.026†	21.8	-5.6	-5.2689 µg/L	-5.2689 ppb	15:14:40
2	SiO2†	6613.4	3800.5	686.12 µg/L	686.12 ppb	15:14:20
2	Si 251.611†	5217.6	4767.4	324.10 µg/L	324.10 ppb	15:14:20
2	Sn 189.927†	-2.6	4.8	1.8733 µg/L	1.8733 ppb	15:14:40
2	Ti 334.940†	-473.2	106.4	0.2469 µg/L	0.2469 ppb	15:14:20
2	Tl 190.801†	-31.7	2.6	2.5215 µg/L	2.5215 ppb	15:14:40
2	U 409.014†	-86.4	-80.2	-7.2832 µg/L	-7.2832 ppb	15:14:20
2	V 292.402†	115.9	3.0	0.0359 µg/L	0.0359 ppb	15:14:20
2	Zn 213.857†	710.6	-301.8	-6.9483 µg/L	-6.9483 ppb	15:14:40
3	Sc RADIAL	98650.2	98650.2	102 %		15:13:12
3	Al 396.153Radial†	-105.5	15.8	7.5261 µg/L	7.5261 ppb	15:13:12
3	Ca 317.933Radial†	391.6	-1.1	-0.4037 µg/L	-0.4037 ppb	15:13:32
3	Fe 238.204 Radial†	13.1	0.9	10.972 µg/L	10.972 ppb	15:13:32
3	K 766.490 Radial†	597.6	101.0	47.136 µg/L	47.136 ppb	15:13:12
3	Mg 279.077 IEC†	9.9	1.7	22.091 µg/L	22.091 ppb	15:13:32
3	Na 589.592 Radial†	297.0	110.8	55.318 µg/L	55.318 ppb	15:13:12
3	Sr 421.552†	132.2	-9.7	-0.0579 µg/L	-0.0579 ppb	15:13:12
3	Sc 361.383	2112674.5	2112674.5	100.93 %		15:14:47
3	Y 371.029	1440930.8	1440930.8	100.56 %		15:14:47
3	Ag 328.068†	-502.1	-37.2	-0.2997 µg/L	-0.2997 ppb	15:14:52
3	As 188.979†	-4.9	-1.6	-2.3412 µg/L	-2.3412 ppb	15:15:13
3	B 249.677†	382.1	79.2	3.5899 µg/L	3.5899 ppb	15:14:52
3	Ba 233.527†	-6.0	2.5	0.0546 µg/L	0.0546 ppb	15:15:13
3	Be 313.107†	-1061.2	107.4	0.0630 µg/L	0.0630 ppb	15:14:52
3	Cd 226.502†	-179.3	-7.0	-0.1682 µg/L	-0.1682 ppb	15:15:13
3	Co 228.616†	41.2	-7.3	-0.3119 µg/L	-0.3119 ppb	15:15:13
3	Cr 267.716†	63.3	-17.5	-0.3812 µg/L	-0.3812 ppb	15:14:52
3	Cu 324.752†	4386.2	-31.1	-0.2011 µg/L	-0.2011 ppb	15:14:52
3	Mn 257.610†	-676.5	16.8	0.0496 µg/L	0.0496 ppb	15:15:13
3	Mo 202.031†	11.1	5.9	0.5847 µg/L	0.5847 ppb	15:15:13
3	Ni 231.604†	374.9	-5.5	-0.3079 µg/L	-0.3079 ppb	15:15:13
3	P 214.914†	273.3	-1.7	-2.6961 µg/L	-2.6961 ppb	15:15:13
3	Pb 220.353†	29.8	-0.6	-0.1681 µg/L	-0.1681 ppb	15:15:13
3	S 181.975 Axial†	26.4	3.6	11.438 µg/L	11.438 ppb	15:15:13
3	Sb 206.836†	21.1	-1.8	-1.6225 µg/L	-1.6225 ppb	15:15:13
3	Se 196.026†	21.4	-6.1	-5.6899 µg/L	-5.6899 ppb	15:15:13
3	SiO2†	6422.2	3583.0	646.85 µg/L	646.85 ppb	15:14:52
3	Si 251.611†	4948.7	4478.8	304.49 µg/L	304.49 ppb	15:14:52
3	Sn 189.927†	1.7	9.2	3.5697 µg/L	3.5697 ppb	15:15:13
3	Ti 334.940†	-500.1	81.7	0.1894 µg/L	0.1894 ppb	15:14:52
3	Tl 190.801†	-32.9	1.5	1.4547 µg/L	1.4547 ppb	15:15:13
3	U 409.014†	43.2	48.6	4.4110 µg/L	4.4110 ppb	15:14:52
3	V 292.402†	92.7	-20.5	-0.2346 µg/L	-0.2346 ppb	15:14:52
3	Zn 213.857†	713.7	-301.8	-6.9485 µg/L	-6.9485 ppb	15:15:13

## Mean Data: 1202047703|955132|5

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2107300.5	100.68 %	0.227			0.23%
Sc RADIAL	98177.8	101 %	0.4			0.42%
Y 371.029	1439751.7	100.48 %	0.095			0.09%
Ag 328.068†	-36.0	-0.2897 µg/L	0.09613	-0.2897 ppb	0.09613	33.19%
Al 396.153Radial†	5.1	2.4169 µg/L	5.94507	2.4169 ppb	5.94507	245.98%
As 188.979†	0.4	0.5201 µg/L	2.48320	0.5201 ppb	2.48320	477.45%
B 249.677†	96.4	4.3677 µg/L	0.84553	4.3677 ppb	0.84553	19.36%
Ba 233.527†	0.7	0.0153 µg/L	0.15886	0.0153 ppb	0.15886	>999.9%
Be 313.107†	122.4	0.0719 µg/L	0.00859	0.0719 ppb	0.00859	11.95%
Ca 317.933Radial†	5.9	2.1507 µg/L	3.17090	2.1507 ppb	3.17090	147.43%
Cd 226.502†	-6.5	-0.1567 µg/L	0.08220	-0.1567 ppb	0.08220	52.46%
Co 228.616†	-6.9	-0.2943 µg/L	0.29677	-0.2943 ppb	0.29677	100.83%
Cr 267.716†	-9.0	-0.1969 µg/L	0.20287	-0.1969 ppb	0.20287	103.04%
Cu 324.752†	-27.6	-0.1782 µg/L	0.17022	-0.1782 ppb	0.17022	95.49%
Fe 238.204 Radial†	0.8	9.5684 µg/L	5.19190	9.5684 ppb	5.19190	54.26%
K 766.490 Radial†	77.7	36.265 µg/L	9.7422	36.265 ppb	9.7422	26.86%
Mg 279.077 IEC†	1.2	15.469 µg/L	14.8200	15.469 ppb	14.8200	95.80%
Mn 257.610†	6.2	0.0182 µg/L	0.03183	0.0182 ppb	0.03183	175.26%
Mo 202.031†	12.9	1.2786 µg/L	0.78724	1.2786 ppb	0.78724	61.57%
Na 589.592 Radial†	94.3	47.084 µg/L	10.1374	47.084 ppb	10.1374	21.53%

Ni 231.604†	-10.1	-0.5648 µg/L	0.37825	-0.5648 ppb	0.37825	66.97%
P 214.914†	-1.7	-2.7456 µg/L	1.19544	-2.7456 ppb	1.19544	43.54%
Pb 220.353†	1.2	0.3256 µg/L	0.54736	0.3256 ppb	0.54736	168.12%
S 181.975 Axial†	3.0	9.5776 µg/L	8.00257	9.5776 ppb	8.00257	83.55%
Sb 206.836†	0.2	0.1765 µg/L	2.21420	0.1765 ppb	2.21420	>999.9%
Se 196.026†	-6.7	-6.2793 µg/L	1.40129	-6.2793 ppb	1.40129	22.32%
SiO2†	3744.5	676.02 µg/L	25.656	676.02 ppb	25.656	3.80%
Si 251.611†	4698.9	319.45 µg/L	13.265	319.45 ppb	13.265	4.15%
Sn 189.927†	3.4	1.3382 µg/L	2.54171	1.3382 ppb	2.54171	189.94%
Sr 421.552†	-9.7	-0.0578 µg/L	0.20555	-0.0578 ppb	0.20555	355.73%
Ti 334.940†	85.4	0.1985 µg/L	0.04455	0.1985 ppb	0.04455	22.44%
Tl 190.801†	1.7	1.6536 µg/L	0.78761	1.6536 ppb	0.78761	47.63%
U 409.014†	-21.1	-1.9159 µg/L	5.90582	-1.9159 ppb	5.90582	308.26%
V 292.402†	-12.8	-0.1445 µg/L	0.15629	-0.1445 ppb	0.15629	108.14%
Zn 213.857†	-304.8	-7.0155 µg/L	0.11620	-7.0155 ppb	0.11620	1.66%

Sequence No.: 12

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 15:15:22

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99922.9	99922.9	103 %		15:15:55
1	Al 396.153Radial†	10271.4	10068.4	4795.9 µg/L	4795.9 ppb	15:15:55
1	Ca 317.933Radial†	14072.7	13245.9	4820.5 µg/L	4820.5 ppb	15:15:55
1	Fe 238.204 Radial†	433.2	407.6	4831.8 µg/L	4831.8 ppb	15:16:16
1	K 766.490 Radial†	11078.1	10245.2	4781.3 µg/L	4781.3 ppb	15:15:55
1	Mg 279.077 IEC†	387.5	367.4	4846.7 µg/L	4846.7 ppb	15:16:16
1	Na 589.592 Radial†	20537.0	19712.2	9838.4 µg/L	9838.4 ppb	15:15:55
1	Sr 421.552†	84636.8	81842.3	486.54 µg/L	486.54 ppb	15:15:55
1	Sc 361.383	2120503.0	2120503.0	101.31 %		15:17:20
1	Y 371.029	1447741.8	1447741.8	101.04 %		15:17:20
1	Ag 328.068†	60931.6	60604.7	490.26 µg/L	490.26 ppb	15:17:25
1	As 188.979†	348.5	347.3	511.11 µg/L	511.11 ppb	15:17:46
1	B 249.677†	11168.5	10724.8	484.99 µg/L	484.99 ppb	15:17:25
1	Ba 233.527†	22741.8	22456.5	492.01 µg/L	492.01 ppb	15:17:25
1	Be 313.107†	845424.2	835661.0	490.81 µg/L	490.81 ppb	15:17:20
1	Cd 226.502†	20831.1	20732.6	492.77 µg/L	492.77 ppb	15:17:25
1	Co 228.616†	11718.9	11519.5	494.34 µg/L	494.34 ppb	15:17:25
1	Cr 267.716†	23264.3	22883.5	498.01 µg/L	498.01 ppb	15:17:25
1	Cu 324.752†	81115.9	75691.3	495.29 µg/L	495.29 ppb	15:17:25
1	Mn 257.610†	167386.2	165910.8	498.60 µg/L	498.60 ppb	15:17:20
1	Mo 202.031†	5221.9	5149.3	509.71 µg/L	509.71 ppb	15:17:46
1	Ni 231.604†	9272.9	8776.2	491.71 µg/L	491.71 ppb	15:17:25
1	P 214.914†	1818.2	1522.3	2480.3 µg/L	2480.3 ppb	15:17:46
1	Pb 220.353†	1967.3	1911.7	501.81 µg/L	501.81 ppb	15:17:46
1	S 181.975 Axial†	336.4	309.5	984.90 µg/L	984.90 ppb	15:17:46
1	Sb 206.836†	587.1	556.8	499.36 µg/L	499.36 ppb	15:17:46
1	Se 196.026†	563.2	528.6	508.06 µg/L	508.06 ppb	15:17:46
1	SiO2†	32357.2	29159.5	5264.3 µg/L	5264.3 ppb	15:17:25
1	Si 251.611†	37104.2	36200.8	2461.1 µg/L	2461.1 ppb	15:17:25
1	Sn 189.927†	1306.7	1297.3	505.54 µg/L	505.54 ppb	15:17:46
1	Ti 334.940†	211614.7	209458.2	489.49 µg/L	489.49 ppb	15:17:20
1	Tl 190.801†	486.2	514.0	506.73 µg/L	506.73 ppb	15:17:46
1	U 409.014†	5546.0	5480.2	496.63 µg/L	496.63 ppb	15:17:25
1	V 292.402†	42541.4	41879.5	499.33 µg/L	499.33 ppb	15:17:25
1	Zn 213.857†	22910.7	21605.9	493.98 µg/L	493.98 ppb	15:17:25
2	Sc RADIAL	100127.6	100127.6	103 %		15:16:21
2	Al 396.153Radial†	10275.5	10052.1	4788.2 µg/L	4788.2 ppb	15:16:21
2	Ca 317.933Radial†	14104.7	13249.0	4821.6 µg/L	4821.6 ppb	15:16:21
2	Fe 238.204 Radial†	438.1	411.5	4877.7 µg/L	4877.7 ppb	15:16:42
2	K 766.490 Radial†	11126.3	10269.9	4792.8 µg/L	4792.8 ppb	15:16:21
2	Mg 279.077 IEC†	394.9	373.8	4930.9 µg/L	4930.9 ppb	15:16:42
2	Na 589.592 Radial†	20578.8	19711.9	9838.3 µg/L	9838.3 ppb	15:16:21
2	Sr 421.552†	84624.1	81662.5	485.47 µg/L	485.47 ppb	15:16:21
2	Sc 361.383	2096292.7	2096292.7	100.15 %		15:17:53
2	Y 371.029	1430240.6	1430240.6	99.816 %		15:17:53
2	Ag 328.068†	61186.5	61553.8	497.93 µg/L	497.93 ppb	15:17:59
2	As 188.979†	339.7	342.4	503.96 µg/L	503.96 ppb	15:18:19
2	B 249.677†	11194.1	10877.7	491.92 µg/L	491.92 ppb	15:17:59
2	Ba 233.527†	22805.4	22779.2	499.09 µg/L	499.09 ppb	15:17:59
2	Be 313.107†	838460.9	838346.1	492.39 µg/L	492.39 ppb	15:17:53
2	Cd 226.502†	20927.3	21066.1	500.70 µg/L	500.70 ppb	15:17:59
2	Co 228.616†	11703.4	11637.5	499.40 µg/L	499.40 ppb	15:17:59
2	Cr 267.716†	23345.7	23230.0	505.55 µg/L	505.55 ppb	15:17:59
2	Cu 324.752†	81302.6	76802.4	502.56 µg/L	502.56 ppb	15:17:59
2	Mn 257.610†	166032.9	166467.7	500.27 µg/L	500.27 ppb	15:17:53
2	Mo 202.031†	5132.8	5119.9	506.81 µg/L	506.81 ppb	15:18:19
2	Ni 231.604†	9311.1	8920.1	499.77 µg/L	499.77 ppb	15:17:59
2	P 214.914†	1778.1	1503.0	2447.5 µg/L	2447.5 ppb	15:18:19
2	Pb 220.353†	1953.8	1920.7	504.13 µg/L	504.13 ppb	15:18:19

2	S 181.975 Axial†	334.2	311.1	990.09 µg/L	990.09 ppb	15:18:19
2	Sb 206.836†	578.6	555.0	497.54 µg/L	497.54 ppb	15:18:19
2	Se 196.026†	560.8	532.6	511.91 µg/L	511.91 ppb	15:18:19
2	SiO2†	32338.5	29509.6	5327.5 µg/L	5327.5 ppb	15:17:59
2	Si 251.611†	37284.9	36804.2	2502.1 µg/L	2502.1 ppb	15:17:59
2	Sn 189.927†	1294.0	1299.4	506.38 µg/L	506.38 ppb	15:18:19
2	Ti 334.940†	210114.0	210372.0	491.62 µg/L	491.62 ppb	15:17:53
2	Tl 190.801†	476.2	509.6	502.42 µg/L	502.42 ppb	15:18:19
2	U 409.014†	5554.5	5551.9	503.13 µg/L	503.13 ppb	15:17:59
2	V 292.402†	42704.3	42527.1	506.97 µg/L	506.97 ppb	15:17:59
2	Zn 213.857†	23020.3	21976.5	502.46 µg/L	502.46 ppb	15:17:59
3	Sc RADIAL	100973.8	100973.8	104 %		15:16:47
3	Al 396.153Radial†	10356.6	10046.6	4787.3 µg/L	4787.3 ppb	15:16:47
3	Ca 317.933Radial†	14208.5	13234.3	4816.2 µg/L	4816.2 ppb	15:16:47
3	Fe 238.204 Radial†	438.6	408.5	4840.9 µg/L	4840.9 ppb	15:17:08
3	K 766.490 Radial†	11175.0	10226.4	4772.5 µg/L	4772.5 ppb	15:16:47
3	Mg 279.077 IEC†	389.2	365.1	4815.1 µg/L	4815.1 ppb	15:17:08
3	Na 589.592 Radial†	20628.4	19592.7	9778.8 µg/L	9778.8 ppb	15:16:47
3	Sr 421.552†	85323.4	81647.2	485.38 µg/L	485.38 ppb	15:16:47
3	Sc 361.383	2099637.5	2099637.5	100.31 %		15:18:26
3	Y 371.029	1433165.2	1433165.2	100.02 %		15:18:26
3	Ag 328.068†	57070.6	57353.3	463.83 µg/L	463.83 ppb	15:18:32
3	As 188.979†	288.6	291.0	428.09 µg/L	428.09 ppb	15:18:52
3	B 249.677†	10398.9	10067.2	455.04 µg/L	455.04 ppb	15:18:32
3	Ba 233.527†	20731.1	20675.1	452.97 µg/L	452.97 ppb	15:18:32
3	Be 313.107†	776465.5	775209.8	455.31 µg/L	455.31 ppb	15:18:26
3	Cd 226.502†	18808.1	18920.2	449.64 µg/L	449.64 ppb	15:18:32
3	Co 228.616†	10500.5	10419.8	447.09 µg/L	447.09 ppb	15:18:32
3	Cr 267.716†	20224.9	20081.7	437.04 µg/L	437.04 ppb	15:18:32
3	Cu 324.752†	73337.0	68732.2	449.84 µg/L	449.84 ppb	15:18:32
3	Mn 257.610†	154562.0	154768.3	465.11 µg/L	465.11 ppb	15:18:26
3	Mo 202.031†	4257.3	4238.9	419.63 µg/L	419.63 ppb	15:18:52
3	Ni 231.604†	8367.4	7964.5	446.24 µg/L	446.24 ppb	15:18:32
3	P 214.914†	1549.8	1272.6	2069.1 µg/L	2069.1 ppb	15:18:52
3	Pb 220.353†	1683.8	1648.4	432.63 µg/L	432.63 ppb	15:18:52
3	S 181.975 Axial†	292.8	269.4	857.23 µg/L	857.23 ppb	15:18:52
3	Sb 206.836†	506.9	482.6	432.38 µg/L	432.38 ppb	15:18:52
3	Se 196.026†	491.5	462.6	446.15 µg/L	446.15 ppb	15:18:52
3	SiO2†	29973.8	27100.9	4892.7 µg/L	4892.7 ppb	15:18:32
3	Si 251.611†	34271.6	33741.0	2293.8 µg/L	2293.8 ppb	15:18:32
3	Sn 189.927†	1060.9	1065.0	415.11 µg/L	415.11 ppb	15:18:52
3	Ti 334.940†	193256.2	193232.5	451.55 µg/L	451.55 ppb	15:18:26
3	Tl 190.801†	431.7	464.5	457.99 µg/L	457.99 ppb	15:18:52
3	U 409.014†	4922.7	4913.2	445.14 µg/L	445.14 ppb	15:18:32
3	V 292.402†	37916.3	37686.1	448.95 µg/L	448.95 ppb	15:18:32
3	Zn 213.857†	20707.4	19634.2	448.86 µg/L	448.86 ppb	15:18:32

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2105477.7	100.59 %	0.627			0.62%
Sc RADIAL	100341.4	104 %	0.6			0.56%
Y 371.029	1437049.2	100.29 %	0.654			0.65%
Ag 328.068†	59837.3	484.01 µg/L	17.893	484.01 ppb	17.893	3.70%
QC value within limits for Ag 328.068 Recovery = 96.80%						
Al 396.153Radial†	10055.7	4790.5 µg/L	4.72	4790.5 ppb	4.72	0.10%
QC value within limits for Al 396.153Radial Recovery = 95.81%						
As 188.979†	326.9	481.06 µg/L	46.007	481.06 ppb	46.007	9.56%
QC value within limits for As 188.979 Recovery = 96.21%						
B 249.677†	10556.6	477.32 µg/L	19.597	477.32 ppb	19.597	4.11%
QC value within limits for B 249.677 Recovery = 95.46%						
Ba 233.527†	21970.3	481.36 µg/L	24.839	481.36 ppb	24.839	5.16%
QC value within limits for Ba 233.527 Recovery = 96.27%						
Be 313.107†	816405.7	479.50 µg/L	20.968	479.50 ppb	20.968	4.37%
QC value within limits for Be 313.107 Recovery = 95.90%						
Ca 317.933Radial†	13243.1	4819.4 µg/L	2.83	4819.4 ppb	2.83	0.06%
QC value within limits for Ca 317.933Radial Recovery = 96.39%						
Cd 226.502†	20239.6	481.04 µg/L	27.477	481.04 ppb	27.477	5.71%
QC value within limits for Cd 226.502 Recovery = 96.21%						
Co 228.616†	11192.3	480.28 µg/L	28.851	480.28 ppb	28.851	6.01%

QC value within limits for Co 228.616 Recovery = 96.06%							
Cr 267.716†	22065.1	480.20 µg/L	37.566	480.20 ppb	37.566	7.82%	
QC value within limits for Cr 267.716 Recovery = 96.04%							
Cu 324.752†	73742.0	482.56 µg/L	28.571	482.56 ppb	28.571	5.92%	
QC value within limits for Cu 324.752 Recovery = 96.51%							
Fe 238.204 Radial†	409.2	4850.1 µg/L	24.30	4850.1 ppb	24.30	0.50%	
QC value within limits for Fe 238.204 Radial Recovery = 97.00%							
K 766.490 Radial†	10247.2	4782.2 µg/L	10.17	4782.2 ppb	10.17	0.21%	
QC value within limits for K 766.490 Radial Recovery = 95.64%							
Mg 279.077 IEC†	368.8	4864.2 µg/L	59.81	4864.2 ppb	59.81	1.23%	
QC value within limits for Mg 279.077 IEC Recovery = 97.28%							
Mn 257.610†	162382.3	487.99 µg/L	19.833	487.99 ppb	19.833	4.06%	
QC value within limits for Mn 257.610 Recovery = 97.60%							
Mo 202.031†	4836.0	478.72 µg/L	51.190	478.72 ppb	51.190	10.69%	
QC value within limits for Mo 202.031 Recovery = 95.74%							
Na 589.592 Radial†	19672.3	9818.5 µg/L	34.38	9818.5 ppb	34.38	0.35%	
QC value within limits for Na 589.592 Radial Recovery = 98.19%							
Ni 231.604†	8553.6	479.24 µg/L	28.864	479.24 ppb	28.864	6.02%	
QC value within limits for Ni 231.604 Recovery = 95.85%							
P 214.914†	1432.6	2332.3 µg/L	228.52	2332.3 ppb	228.52	9.80%	
QC value within limits for P 214.914 Recovery = 93.29%							
Pb 220.353†	1826.9	479.52 µg/L	40.628	479.52 ppb	40.628	8.47%	
QC value within limits for Pb 220.353 Recovery = 95.90%							
S 181.975 Axial†	296.6	944.08 µg/L	75.252	944.08 ppb	75.252	7.97%	
QC value within limits for S 181.975 Axial Recovery = 94.41%							
Sb 206.836†	531.5	476.43 µg/L	38.155	476.43 ppb	38.155	8.01%	
QC value within limits for Sb 206.836 Recovery = 95.29%							
Se 196.026†	507.9	488.71 µg/L	36.909	488.71 ppb	36.909	7.55%	
QC value within limits for Se 196.026 Recovery = 97.74%							
SiO2†	28590.0	5161.5 µg/L	234.95	5161.5 ppb	234.95	4.55%	
QC value within limits for SiO2 Recovery = 96.52%							
Si 251.611†	35582.0	2419.0 µg/L	110.31	2419.0 ppb	110.31	4.56%	
QC value within limits for Si 251.611 Recovery = 96.76%							
Sn 189.927†	1220.6	475.68 µg/L	52.454	475.68 ppb	52.454	11.03%	
QC value within limits for Sn 189.927 Recovery = 95.14%							
Sr 421.552†	81717.3	485.80 µg/L	0.645	485.80 ppb	0.645	0.13%	
QC value within limits for Sr 421.552 Recovery = 97.16%							
Ti 334.940†	204354.2	477.55 µg/L	22.545	477.55 ppb	22.545	4.72%	
QC value within limits for Ti 334.940 Recovery = 95.51%							
Tl 190.801†	496.0	489.05 µg/L	26.983	489.05 ppb	26.983	5.52%	
QC value within limits for Tl 190.801 Recovery = 97.81%							
U 409.014†	5315.1	481.63 µg/L	31.768	481.63 ppb	31.768	6.60%	
QC value within limits for U 409.014 Recovery = 96.33%							
V 292.402†	40697.6	485.08 µg/L	31.529	485.08 ppb	31.529	6.50%	
QC value within limits for V 292.402 Recovery = 97.02%							
Zn 213.857†	21072.2	481.76 µg/L	28.812	481.76 ppb	28.812	5.98%	
QC value within limits for Zn 213.857 Recovery = 96.35%							

All analyte(s) passed QC.

Sequence No.: 13

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 15:19:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	101273.1	101273.1	105 %		15:19:32
1	Al 396.153Radial†	-125.9	-1.0	-0.5166 µg/L	-0.5166 ppb	15:19:32
1	Ca 317.933Radial†	379.9	-22.2	-8.0940 µg/L	-8.0940 ppb	15:19:52
1	Fe 238.204 Radial†	14.2	1.6	19.469 µg/L	19.469 ppb	15:19:52
1	K 766.490 Radial†	435.5	-69.2	-32.277 µg/L	-32.277 ppb	15:19:32
1	Mg 279.077 IEC†	6.0	-2.2	-29.120 µg/L	-29.120 ppb	15:19:52
1	Na 589.592 Radial†	241.5	50.2	25.063 µg/L	25.063 ppb	15:19:32
1	Sr 421.552†	102.6	-41.3	-0.2457 µg/L	-0.2457 ppb	15:19:32
1	Sc 361.383	2096378.6	2096378.6	100.16 %		15:20:54
1	Y 371.029	1434737.4	1434737.4	100.13 %		15:20:54
1	Ag 328.068†	-497.8	-36.8	-0.2981 µg/L	-0.2981 ppb	15:21:00
1	As 188.979†	1.7	4.9	7.2616 µg/L	7.2616 ppb	15:21:20
1	B 249.677†	328.7	28.8	1.2969 µg/L	1.2969 ppb	15:21:00
1	Ba 233.527†	-3.8	4.6	0.0990 µg/L	0.0990 ppb	15:21:20
1	Be 313.107†	-1021.6	138.8	0.0815 µg/L	0.0815 ppb	15:21:00
1	Cd 226.502†	-154.7	16.1	0.3799 µg/L	0.3799 ppb	15:21:20
1	Co 228.616†	40.4	-7.7	-0.3309 µg/L	-0.3309 ppb	15:21:20
1	Cr 267.716†	47.8	-32.5	-0.7074 µg/L	-0.7074 ppb	15:21:00
1	Cu 324.752†	4345.1	-38.3	-0.2466 µg/L	-0.2466 ppb	15:21:00
1	Mn 257.610†	-618.7	69.2	0.2112 µg/L	0.2112 ppb	15:21:20
1	Mo 202.031†	23.5	18.4	1.8197 µg/L	1.8197 ppb	15:21:20
1	Ni 231.604†	365.5	-11.9	-0.6687 µg/L	-0.6687 ppb	15:21:20
1	P 214.914†	264.3	-8.5	-14.144 µg/L	-14.144 ppb	15:21:20
1	Pb 220.353†	21.5	-8.7	-2.2740 µg/L	-2.2740 ppb	15:21:20
1	S 181.975 Axial†	22.8	0.2	0.6761 µg/L	0.6761 ppb	15:21:20
1	Sb 206.836†	30.6	7.9	7.0486 µg/L	7.0486 ppb	15:21:20
1	Se 196.026†	19.1	-8.3	-7.6821 µg/L	-7.6821 ppb	15:21:20
1	SiO2†	2666.6	-117.3	-21.170 µg/L	-21.170 ppb	15:21:00
1	Si 251.611†	415.9	-8.9	-0.6040 µg/L	-0.6040 ppb	15:21:20
1	Sn 189.927†	-7.6	-0.1	-0.0414 µg/L	-0.0414 ppb	15:21:20
1	Ti 334.940†	-440.8	137.1	0.3229 µg/L	0.3229 ppb	15:21:00
1	Tl 190.801†	-28.8	5.4	5.2646 µg/L	5.2646 ppb	15:21:20
1	U 409.014†	4.8	10.6	0.9567 µg/L	0.9567 ppb	15:21:00
1	V 292.402†	56.0	-56.4	-0.6551 µg/L	-0.6551 ppb	15:21:00
1	Zn 213.857†	672.9	-337.0	-7.7546 µg/L	-7.7546 ppb	15:21:20
2	Sc RADIAL	101341.2	101341.2	105 %		15:19:58
2	Al 396.153Radial†	-134.2	-8.9	-4.2893 µg/L	-4.2893 ppb	15:19:58
2	Ca 317.933Radial†	384.4	-18.1	-6.5959 µg/L	-6.5959 ppb	15:20:18
2	Fe 238.204 Radial†	13.9	1.3	15.131 µg/L	15.131 ppb	15:20:18
2	K 766.490 Radial†	481.8	-25.2	-11.744 µg/L	-11.744 ppb	15:19:58
2	Mg 279.077 IEC†	7.4	-1.0	-12.637 µg/L	-12.637 ppb	15:20:18
2	Na 589.592 Radial†	221.7	31.2	15.568 µg/L	15.568 ppb	15:19:58
2	Sr 421.552†	147.5	1.4	0.0085 µg/L	0.0085 ppb	15:19:58
2	Sc 361.383	2085947.6	2085947.6	99.658 %		15:21:26
2	Y 371.029	1427335.5	1427335.5	99.614 %		15:21:26
2	Ag 328.068†	-489.2	-30.7	-0.2478 µg/L	-0.2478 ppb	15:21:32
2	As 188.979†	-4.9	-1.7	-2.4564 µg/L	-2.4564 ppb	15:21:52
2	B 249.677†	288.7	-9.7	-0.4478 µg/L	-0.4478 ppb	15:21:32
2	Ba 233.527†	-5.8	2.6	0.0562 µg/L	0.0562 ppb	15:21:52
2	Be 313.107†	-1022.7	132.7	0.0778 µg/L	0.0778 ppb	15:21:32
2	Cd 226.502†	-172.3	-2.3	-0.0572 µg/L	-0.0572 ppb	15:21:52
2	Co 228.616†	37.6	-10.3	-0.4409 µg/L	-0.4409 ppb	15:21:52
2	Cr 267.716†	69.3	-10.7	-0.2328 µg/L	-0.2328 ppb	15:21:32
2	Cu 324.752†	4425.1	63.6	0.4185 µg/L	0.4185 ppb	15:21:32
2	Mn 257.610†	-630.2	54.6	0.1658 µg/L	0.1658 ppb	15:21:52
2	Mo 202.031†	24.7	19.7	1.9466 µg/L	1.9466 ppb	15:21:52
2	Ni 231.604†	356.3	-19.4	-1.0864 µg/L	-1.0864 ppb	15:21:52
2	P 214.914†	269.3	-2.2	-3.5731 µg/L	-3.5731 ppb	15:21:52
2	Pb 220.353†	38.4	8.4	2.1901 µg/L	2.1901 ppb	15:21:52

2	S 181.975 Axial†	22.4	-0.0	-0.0824 µg/L	-0.0824 ppb	15:21:52
2	Sb 206.836†	30.5	7.8	7.0283 µg/L	7.0283 ppb	15:21:52
2	Se 196.026†	19.8	-7.5	-6.9805 µg/L	-6.9805 ppb	15:21:52
2	SiO2†	2718.0	-52.4	-9.4558 µg/L	-9.4558 ppb	15:21:32
2	Si 251.611†	411.4	-11.3	-0.7694 µg/L	-0.7694 ppb	15:21:52
2	Sn 189.927†	2.3	9.7	3.7860 µg/L	3.7860 ppb	15:21:52
2	Ti 334.940†	-454.3	121.4	0.2847 µg/L	0.2847 ppb	15:21:32
2	Tl 190.801†	-23.9	10.1	9.8677 µg/L	9.8677 ppb	15:21:52
2	U 409.014†	59.2	65.2	5.9166 µg/L	5.9166 ppb	15:21:32
2	V 292.402†	81.9	-30.1	-0.3365 µg/L	-0.3365 ppb	15:21:32
2	Zn 213.857†	665.2	-341.4	-7.8561 µg/L	-7.8561 ppb	15:21:52
3	Sc RADIAL	101508.0	101508.0	105 %		15:20:24
3	Al 396.153Radial†	-131.2	-5.8	-2.8214 µg/L	-2.8214 ppb	15:20:24
3	Ca 317.933Radial†	393.8	-9.8	-3.5524 µg/L	-3.5524 ppb	15:20:44
3	Fe 238.204 Radial†	12.7	0.1	1.4170 µg/L	1.4170 ppb	15:20:44
3	K 766.490 Radial†	458.1	-48.5	-22.647 µg/L	-22.647 ppb	15:20:24
3	Mg 279.077 IEC†	4.2	-4.0	-52.777 µg/L	-52.777 ppb	15:20:44
3	Na 589.592 Radial†	218.2	27.5	13.707 µg/L	13.707 ppb	15:20:24
3	Sr 421.552†	139.5	-6.4	-0.0380 µg/L	-0.0380 ppb	15:20:24
3	Sc 361.383	2118833.1	2118833.1	101.23 %		15:21:58
3	Y 371.029	1449748.8	1449748.8	101.18 %		15:21:58
3	Ag 328.068†	-508.4	-42.0	-0.3404 µg/L	-0.3404 ppb	15:22:04
3	As 188.979†	-0.9	2.3	3.4165 µg/L	3.4165 ppb	15:22:25
3	B 249.677†	297.9	-5.1	-0.2316 µg/L	-0.2316 ppb	15:22:04
3	Ba 233.527†	-8.0	0.5	0.0094 µg/L	0.0094 ppb	15:22:25
3	Be 313.107†	-1075.9	96.0	0.0563 µg/L	0.0563 ppb	15:22:04
3	Cd 226.502†	-165.6	7.0	0.1662 µg/L	0.1662 ppb	15:22:25
3	Co 228.616†	42.1	-6.5	-0.2757 µg/L	-0.2757 ppb	15:22:25
3	Cr 267.716†	67.6	-13.5	-0.2930 µg/L	-0.2930 ppb	15:22:04
3	Cu 324.752†	4436.8	6.3	0.0412 µg/L	0.0412 ppb	15:22:04
3	Mn 257.610†	-622.1	72.4	0.2213 µg/L	0.2213 ppb	15:22:25
3	Mo 202.031†	30.3	24.8	2.4526 µg/L	2.4526 ppb	15:22:25
3	Ni 231.604†	373.3	-8.1	-0.4541 µg/L	-0.4541 ppb	15:22:25
3	P 214.914†	266.3	-9.3	-15.478 µg/L	-15.478 ppb	15:22:25
3	Pb 220.353†	25.2	-5.3	-1.3747 µg/L	-1.3747 ppb	15:22:25
3	S 181.975 Axial†	21.8	-1.0	-3.1695 µg/L	-3.1695 ppb	15:22:25
3	Sb 206.836†	27.9	4.8	4.3400 µg/L	4.3400 ppb	15:22:25
3	Se 196.026†	20.6	-7.0	-6.5418 µg/L	-6.5418 ppb	15:22:25
3	SiO2†	2720.2	-92.6	-16.710 µg/L	-16.710 ppb	15:22:04
3	Si 251.611†	417.1	-12.0	-0.8170 µg/L	-0.8170 ppb	15:22:25
3	Sn 189.927†	1.4	8.8	3.4358 µg/L	3.4358 ppb	15:22:25
3	Ti 334.940†	-427.2	155.2	0.3670 µg/L	0.3670 ppb	15:22:04
3	Tl 190.801†	-33.0	1.6	1.5267 µg/L	1.5267 ppb	15:22:25
3	U 409.014†	-5.9	-0.0	-0.0033 µg/L	-0.0033 ppb	15:22:04
3	V 292.402†	72.8	-40.4	-0.4587 µg/L	-0.4587 ppb	15:22:04
3	Zn 213.857†	670.0	-347.0	-7.9848 µg/L	-7.9848 ppb	15:22:25

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2100386.5	100.35 %	0.803			0.80%
Sc RADIAL	101374.1	105 %	0.1			0.12%
Y 371.029	1437273.9	100.31 %	0.797			0.79%
Ag 328.068†	-36.5	-0.2954 µg/L	0.04633	-0.2954 ppb	0.04633	15.68%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-5.2	-2.5424 µg/L	1.90175	-2.5424 ppb	1.90175	74.80%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.9	2.7406 µg/L	4.89412	2.7406 ppb	4.89412	178.58%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	4.7	0.2058 µg/L	0.95107	0.2058 ppb	0.95107	462.06%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.6	0.0549 µg/L	0.04482	0.0549 ppb	0.04482	81.65%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	122.5	0.0719 µg/L	0.01362	0.0719 ppb	0.01362	18.95%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-16.7	-6.0808 µg/L	2.31421	-6.0808 ppb	2.31421	38.06%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.9	0.1630 µg/L	0.21855	0.1630 ppb	0.21855	134.08%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-8.2	-0.3492 µg/L	0.08411	-0.3492 ppb	0.08411	24.09%



Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-18.9	-0.4111 µg/L	0.25842	-0.4111 ppb	0.25842 62.87%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	10.5	0.0710 µg/L	0.33355	0.0710 ppb	0.33355 469.64%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	1.0	12.006 µg/L	9.4229	12.006 ppb	9.4229 78.49%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-47.6	-22.223 µg/L	10.2730	-22.223 ppb	10.2730 46.23%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	-2.4	-31.511 µg/L	20.1763	-31.511 ppb	20.1763 64.03%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	65.4	0.1994 µg/L	0.02954	0.1994 ppb	0.02954 14.81%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	20.9	2.0730 µg/L	0.33488	2.0730 ppb	0.33488 16.15%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	36.3	18.113 µg/L	6.0908	18.113 ppb	6.0908 33.63%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	-13.1	-0.7364 µg/L	0.32155	-0.7364 ppb	0.32155 43.67%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	-6.7	-11.065 µg/L	6.5221	-11.065 ppb	6.5221 58.95%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	-1.9	-0.4862 µg/L	2.36099	-0.4862 ppb	2.36099 485.62%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-0.3	-0.8586 µg/L	2.03688	-0.8586 ppb	2.03688 237.23%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	6.8	6.1390 µg/L	1.55796	6.1390 ppb	1.55796 25.38%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-7.6	-7.0681 µg/L	0.57517	-7.0681 ppb	0.57517 8.14%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	-87.4	-15.779 µg/L	5.9126	-15.779 ppb	5.9126 37.47%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	-10.7	-0.7302 µg/L	0.11179	-0.7302 ppb	0.11179 15.31%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	6.1	2.3935 µg/L	2.11591	2.3935 ppb	2.11591 88.40%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	-15.4	-0.0917 µg/L	0.13537	-0.0917 ppb	0.13537 147.58%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	137.9	0.3249 µg/L	0.04121	0.3249 ppb	0.04121 12.68%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	5.7	5.5530 µg/L	4.17795	5.5530 ppb	4.17795 75.24%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	25.2	2.2900 µg/L	3.17718	2.2900 ppb	3.17718 138.74%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-42.3	-0.4834 µg/L	0.16071	-0.4834 ppb	0.16071 33.24%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-341.8	-7.8652 µg/L	0.11537	-7.8652 ppb	0.11537 1.47%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 20

Sample ID: 247335001|955132|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 313

Date Collected: 3/16/2010 15:43:53

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 247335001|955132|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94979.1	94979.1	98.1 %		15:44:24
1	Al 396.153Radial†	-81.6	36.1	17.236 µg/L	17.236 ppb	15:44:24
1	Ca 317.933Radial†	560.5	185.9	67.660 µg/L	67.660 ppb	15:44:44
1	Fe 238.204 Radial†	13.8	2.1	24.542 µg/L	24.542 ppb	15:44:44
1	K 766.490 Radial†	763.8	293.0	136.72 µg/L	136.72 ppb	15:44:24
1	Mg 279.077 IEC†	8.7	0.9	11.240 µg/L	11.240 ppb	15:44:44
1	Na 589.592 Radial†	555.9	385.9	192.58 µg/L	192.58 ppb	15:44:24
1	Sr 421.552†	192.7	56.9	0.3384 µg/L	0.3384 ppb	15:44:24
1	Sc 361.383	2024129.5	2024129.5	96.704 %		15:45:45
1	Y 371.029	1382122.5	1382122.5	96.458 %		15:45:45
1	Ag 328.068†	-490.4	-47.0	-0.3795 µg/L	-0.3795 ppb	15:45:51
1	As 188.979†	-0.1	3.2	4.6742 µg/L	4.6742 ppb	15:46:12
1	B 249.677†	846.9	576.4	26.147 µg/L	26.147 ppb	15:46:12
1	Ba 233.527†	13.6	22.5	0.4903 µg/L	0.4903 ppb	15:46:12
1	Be 313.107†	-1094.1	27.5	0.0161 µg/L	0.0161 ppb	15:45:51
1	Cd 226.502†	-182.2	-17.8	-0.4257 µg/L	-0.4257 ppb	15:46:12
1	Co 228.616†	44.1	-2.5	-0.1082 µg/L	-0.1082 ppb	15:46:12
1	Cr 267.716†	89.7	12.5	0.2722 µg/L	0.2722 ppb	15:46:12
1	Cu 324.752†	4997.1	790.7	5.1689 µg/L	5.1689 ppb	15:45:51
1	Mn 257.610†	-459.6	211.7	0.6369 µg/L	0.6369 ppb	15:46:12
1	Mo 202.031†	9.8	5.0	0.4957 µg/L	0.4957 ppb	15:46:12
1	Ni 231.604†	387.6	23.9	1.3436 µg/L	1.3436 ppb	15:46:12
1	P 214.914†	289.7	27.2	44.643 µg/L	44.643 ppb	15:46:12
1	Pb 220.353†	35.3	6.4	1.6570 µg/L	1.6570 ppb	15:46:12
1	S 181.975 Axial†	33.0	11.6	36.861 µg/L	36.861 ppb	15:46:12
1	Sb 206.836†	23.0	1.0	0.9381 µg/L	0.9381 ppb	15:46:12
1	Se 196.026†	22.9	-3.6	-3.3673 µg/L	-3.3673 ppb	15:46:12
1	SiO2†	21368.6	19317.1	3487.4 µg/L	3487.4 ppb	15:45:51
1	Si 251.611†	23431.5	23805.9	1618.4 µg/L	1618.4 ppb	15:45:51
1	Sn 189.927†	-1.4	6.0	2.3383 µg/L	2.3383 ppb	15:46:12
1	Ti 334.940†	-441.4	120.8	0.2826 µg/L	0.2826 ppb	15:45:51
1	Tl 190.801†	-36.2	-3.3	-3.2587 µg/L	-3.2587 ppb	15:46:12
1	U 409.014†	26.9	33.6	3.0417 µg/L	3.0417 ppb	15:45:51
1	V 292.402†	54.3	-56.2	-0.6586 µg/L	-0.6586 ppb	15:45:51
1	Zn 213.857†	813.2	-168.0	-3.8829 µg/L	-3.8829 ppb	15:46:12
2	Sc RADIAL	95103.6	95103.6	98.3 %		15:44:49
2	Al 396.153Radial†	-73.4	44.6	21.270 µg/L	21.270 ppb	15:44:49
2	Ca 317.933Radial†	557.7	182.2	66.324 µg/L	66.324 ppb	15:45:10
2	Fe 238.204 Radial†	13.8	2.1	25.065 µg/L	25.065 ppb	15:45:10
2	K 766.490 Radial†	935.9	467.2	218.01 µg/L	218.01 ppb	15:44:49
2	Mg 279.077 IEC†	8.0	0.2	2.4146 µg/L	2.4146 ppb	15:45:10
2	Na 589.592 Radial†	544.9	374.0	186.67 µg/L	186.67 ppb	15:44:49
2	Sr 421.552†	140.4	3.5	0.0206 µg/L	0.0206 ppb	15:44:49
2	Sc 361.383	2033423.7	2033423.7	97.149 %		15:46:18
2	Y 371.029	1386392.3	1386392.3	96.756 %		15:46:18
2	Ag 328.068†	-495.3	-49.6	-0.4000 µg/L	-0.4000 ppb	15:46:23
2	As 188.979†	-5.2	-2.1	-3.1177 µg/L	-3.1177 ppb	15:46:44
2	B 249.677†	852.7	578.4	26.235 µg/L	26.235 ppb	15:46:44
2	Ba 233.527†	8.9	17.6	0.3836 µg/L	0.3836 ppb	15:46:44
2	Be 313.107†	-1117.5	8.6	0.0049 µg/L	0.0049 ppb	15:46:23
2	Cd 226.502†	-168.0	-2.4	-0.0583 µg/L	-0.0583 ppb	15:46:44
2	Co 228.616†	38.6	-8.3	-0.3582 µg/L	-0.3582 ppb	15:46:44
2	Cr 267.716†	93.3	15.8	0.3444 µg/L	0.3444 ppb	15:46:44
2	Cu 324.752†	4931.6	699.7	4.5747 µg/L	4.5747 ppb	15:46:23
2	Mn 257.610†	-454.2	219.4	0.6607 µg/L	0.6607 ppb	15:46:44
2	Mo 202.031†	12.6	7.9	0.7785 µg/L	0.7785 ppb	15:46:44
2	Ni 231.604†	374.9	9.0	0.5082 µg/L	0.5082 ppb	15:46:44
2	P 214.914†	290.6	26.7	43.800 µg/L	43.800 ppb	15:46:44
2	Pb 220.353†	31.9	2.7	0.7014 µg/L	0.7014 ppb	15:46:44

2	S 181.975 Axial†	29.6	7.9	25.181 µg/L	25.181 ppb	15:46:44
2	Sb 206.836†	22.0	-0.1	-0.0627 µg/L	-0.0627 ppb	15:46:44
2	Se 196.026†	23.9	-2.7	-2.4374 µg/L	-2.4374 ppb	15:46:44
2	SiO2†	20995.1	18831.6	3399.8 µg/L	3399.8 ppb	15:46:23
2	Si 251.611†	23047.2	23299.5	1584.0 µg/L	1584.0 ppb	15:46:23
2	Sn 189.927†	-8.8	-1.6	-0.6144 µg/L	-0.6144 ppb	15:46:44
2	Ti 334.940†	-400.6	164.8	0.3863 µg/L	0.3863 ppb	15:46:23
2	Tl 190.801†	-36.0	-2.9	-2.8535 µg/L	-2.8535 ppb	15:46:44
2	U 409.014†	36.4	43.2	3.9186 µg/L	3.9186 ppb	15:46:23
2	V 292.402†	65.8	-44.5	-0.5182 µg/L	-0.5182 ppb	15:46:23
2	Zn 213.857†	818.5	-166.3	-3.8408 µg/L	-3.8408 ppb	15:46:44
3	Sc RADIAL	95561.8	95561.8	98.7 %		15:45:15
3	Al 396.153Radial†	-30.3	88.6	42.260 µg/L	42.260 ppb	15:45:15
3	Ca 317.933Radial†	553.9	175.7	63.951 µg/L	63.951 ppb	15:45:36
3	Fe 238.204 Radial†	15.5	3.8	44.671 µg/L	44.671 ppb	15:45:36
3	K 766.490 Radial†	806.4	331.4	154.66 µg/L	154.66 ppb	15:45:15
3	Mg 279.077 IEC†	7.1	-0.8	-10.186 µg/L	-10.186 ppb	15:45:36
3	Na 589.592 Radial†	580.4	407.3	203.28 µg/L	203.28 ppb	15:45:15
3	Sr 421.552†	191.6	54.7	0.3251 µg/L	0.3251 ppb	15:45:15
3	Sc 361.383	2029854.3	2029854.3	96.978 %		15:46:50
3	Y 371.029	1383933.6	1383933.6	96.585 %		15:46:50
3	Ag 328.068†	-517.9	-73.8	-0.5900 µg/L	-0.5900 ppb	15:46:55
3	As 188.979†	-0.4	2.8	4.1755 µg/L	4.1755 ppb	15:47:16
3	B 249.677†	804.8	530.5	24.054 µg/L	24.054 ppb	15:47:16
3	Ba 233.527†	8.7	17.4	0.3797 µg/L	0.3797 ppb	15:47:16
3	Be 313.107†	-1068.0	57.6	0.0337 µg/L	0.0337 ppb	15:46:55
3	Cd 226.502†	-186.3	-21.5	-0.5158 µg/L	-0.5158 ppb	15:47:16
3	Co 228.616†	40.0	-6.9	-0.2947 µg/L	-0.2947 ppb	15:47:16
3	Cr 267.716†	92.3	14.9	0.3242 µg/L	0.3242 ppb	15:47:16
3	Cu 324.752†	4925.7	702.5	4.5970 µg/L	4.5970 ppb	15:46:55
3	Mn 257.610†	-474.8	197.4	0.5966 µg/L	0.5966 ppb	15:47:16
3	Mo 202.031†	14.5	9.8	0.9753 µg/L	0.9753 ppb	15:47:16
3	Ni 231.604†	390.2	25.5	1.4302 µg/L	1.4302 ppb	15:47:16
3	P 214.914†	285.8	22.3	36.509 µg/L	36.509 ppb	15:47:16
3	Pb 220.353†	29.0	-0.3	-0.0773 µg/L	-0.0773 ppb	15:47:16
3	S 181.975 Axial†	32.6	11.1	35.252 µg/L	35.252 ppb	15:47:16
3	Sb 206.836†	23.5	1.5	1.3869 µg/L	1.3869 ppb	15:47:16
3	Se 196.026†	24.1	-2.5	-2.2225 µg/L	-2.2225 ppb	15:47:16
3	SiO2†	20832.4	18701.8	3376.3 µg/L	3376.3 ppb	15:46:55
3	Si 251.611†	22823.1	23110.2	1571.1 µg/L	1571.1 ppb	15:46:55
3	Sn 189.927†	-5.9	1.4	0.5343 µg/L	0.5343 ppb	15:47:16
3	Ti 334.940†	-410.8	153.7	0.3612 µg/L	0.3612 ppb	15:46:55
3	Tl 190.801†	-33.6	-0.6	-0.5405 µg/L	-0.5405 ppb	15:47:16
3	U 409.014†	-29.5	-24.6	-2.2418 µg/L	-2.2418 ppb	15:46:55
3	V 292.402†	99.7	-9.5	-0.1116 µg/L	-0.1116 ppb	15:46:55
3	Zn 213.857†	810.1	-173.5	-4.0107 µg/L	-4.0107 ppb	15:47:16

Mean Data: 247335001|955132|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
Sc 361.383	2029135.8	96.944 %		0.2240			0.23%
Sc RADIAL	95214.8	98.4 %		0.32			0.32%
Y 371.029	1384149.5	96.600 %		0.1496			0.15%
Ag 328.068†	-56.8	-0.4565 µg/L		0.11606	-0.4565 ppb	0.11606	25.43%
Al 396.153Radial†	56.4	26.922 µg/L		13.4355	26.922 ppb	13.4355	49.91%
As 188.979†	1.3	1.9107 µg/L		4.36184	1.9107 ppb	4.36184	228.29%
B 249.677†	561.8	25.479 µg/L		1.2348	25.479 ppb	1.2348	4.85%
Ba 233.527†	19.1	0.4178 µg/L		0.06275	0.4178 ppb	0.06275	15.02%
Be 313.107†	31.2	0.0182 µg/L		0.01453	0.0182 ppb	0.01453	79.76%
Ca 317.933Radial†	181.3	65.978 µg/L		1.8785	65.978 ppb	1.8785	2.85%
Cd 226.502†	-13.9	-0.3333 µg/L		0.24233	-0.3333 ppb	0.24233	72.72%
Co 228.616†	-5.9	-0.2537 µg/L		0.12996	-0.2537 ppb	0.12996	51.22%
Cr 267.716†	14.4	0.3136 µg/L		0.03721	0.3136 ppb	0.03721	11.87%
Cu 324.752†	731.0	4.7802 µg/L		0.33684	4.7802 ppb	0.33684	7.05%
Fe 238.204 Radial†	2.7	31.426 µg/L		11.4737	31.426 ppb	11.4737	36.51%
K 766.490 Radial†	363.8	169.80 µg/L		42.708	169.80 ppb	42.708	25.15%
Mg 279.077 IEC†	0.1	1.1563 µg/L		10.76803	1.1563 ppb	10.76803	931.24%
Mn 257.610†	209.5	0.6314 µg/L		0.03241	0.6314 ppb	0.03241	5.13%
Mo 202.031†	7.6	0.7499 µg/L		0.24109	0.7499 ppb	0.24109	32.15%
Na 589.592 Radial†	389.1	194.18 µg/L		8.421	194.18 ppb	8.421	4.34%

Ni 231.604†	19.5	1.0940 µg/L	0.50915	1.0940 ppb	0.50915	46.54%
P 214.914†	25.4	41.651 µg/L	4.4726	41.651 ppb	4.4726	10.74%
Pb 220.353†	2.9	0.7603 µg/L	0.86865	0.7603 ppb	0.86865	114.24%
S 181.975 Axial†	10.2	32.431 µg/L	6.3302	32.431 ppb	6.3302	19.52%
Sb 206.836†	0.8	0.7541 µg/L	0.74209	0.7541 ppb	0.74209	98.41%
Se 196.026†	-2.9	-2.6757 µg/L	0.60851	-2.6757 ppb	0.60851	22.74%
SiO2†	18950.2	3421.2 µg/L	58.55	3421.2 ppb	58.55	1.71%
Si 251.611†	23405.2	1591.2 µg/L	24.45	1591.2 ppb	24.45	1.54%
Sn 189.927†	1.9	0.7527 µg/L	1.48842	0.7527 ppb	1.48842	197.74%
Sr 421.552†	38.4	0.2280 µg/L	0.17975	0.2280 ppb	0.17975	78.83%
Ti 334.940†	146.4	0.3434 µg/L	0.05411	0.3434 ppb	0.05411	15.76%
Tl 190.801†	-2.3	-2.2176 µg/L	1.46646	-2.2176 ppb	1.46646	66.13%
U 409.014†	17.4	1.5728 µg/L	3.33254	1.5728 ppb	3.33254	211.88%
V 292.402†	-36.7	-0.4295 µg/L	0.28406	-0.4295 ppb	0.28406	66.14%
Zn 213.857†	-169.3	-3.9115 µg/L	0.08844	-3.9115 ppb	0.08844	2.26%

Sequence No.: 23

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 15:54:30

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97233.7	97233.7	100 %		15:55:03
1	Al 396.153Radial†	10457.9	10529.3	5015.3 µg/L	5015.3 ppb	15:55:03
1	Ca 317.933Radial†	14215.3	13764.9	5009.3 µg/L	5009.3 ppb	15:55:03
1	Fe 238.204 Radial†	439.0	425.0	5038.1 µg/L	5038.1 ppb	15:55:24
1	K 766.490 Radial†	11244.9	10708.0	4997.2 µg/L	4997.2 ppb	15:55:03
1	Mg 279.077 IEC†	394.5	384.7	5075.6 µg/L	5075.6 ppb	15:55:24
1	Na 589.592 Radial†	20511.4	20236.9	10100 µg/L	10100 ppb	15:55:03
1	Sr 421.552†	85322.8	84792.6	504.08 µg/L	504.08 ppb	15:55:03
1	Sc 361.383	2055099.7	2055099.7	98.184 %		15:56:27
1	Y 371.029	1401561.2	1401561.2	97.815 %		15:56:27
1	Ag 328.068†	62103.0	63711.8	515.39 µg/L	515.39 ppb	15:56:33
1	As 188.979†	353.6	363.4	534.92 µg/L	534.92 ppb	15:56:53
1	B 249.677†	11382.2	11293.3	510.72 µg/L	510.72 ppb	15:56:33
1	Ba 233.527†	23239.1	23677.3	518.76 µg/L	518.76 ppb	15:56:33
1	Be 313.107†	856861.3	873867.6	513.25 µg/L	513.25 ppb	15:56:27
1	Cd 226.502†	21188.5	21750.9	516.98 µg/L	516.98 ppb	15:56:33
1	Co 228.616†	11950.9	12123.8	520.27 µg/L	520.27 ppb	15:56:33
1	Cr 267.716†	23739.8	24098.6	524.45 µg/L	524.45 ppb	15:56:33
1	Cu 324.752†	82644.9	79796.7	522.14 µg/L	522.14 ppb	15:56:33
1	Mn 257.610†	169604.6	173428.4	521.19 µg/L	521.19 ppb	15:56:27
1	Mo 202.031†	5324.4	5417.7	536.28 µg/L	536.28 ppb	15:56:53
1	Ni 231.604†	9497.3	9296.0	520.83 µg/L	520.83 ppb	15:56:33
1	P 214.914†	1840.9	1602.5	2611.1 µg/L	2611.1 ppb	15:56:53
1	Pb 220.353†	2016.8	2024.0	531.25 µg/L	531.25 ppb	15:56:53
1	S 181.975 Axial†	346.5	330.4	1051.5 µg/L	1051.5 ppb	15:56:53
1	Sb 206.836†	603.7	592.1	530.98 µg/L	530.98 ppb	15:56:53
1	Se 196.026†	582.4	565.8	543.53 µg/L	543.53 ppb	15:56:53
1	SiO2†	32900.3	30729.0	5547.7 µg/L	5547.7 ppb	15:56:33
1	Si 251.611†	37899.4	38176.2	2595.4 µg/L	2595.4 ppb	15:56:33
1	Sn 189.927†	1346.2	1378.5	537.18 µg/L	537.18 ppb	15:56:53
1	Ti 334.940†	214841.1	219391.8	512.70 µg/L	512.70 ppb	15:56:27
1	Tl 190.801†	491.8	535.0	527.40 µg/L	527.40 ppb	15:56:53
1	U 409.014†	5685.9	5796.8	525.34 µg/L	525.34 ppb	15:56:33
1	V 292.402†	43268.9	43956.9	524.12 µg/L	524.12 ppb	15:56:33
1	Zn 213.857†	23380.3	22803.9	521.36 µg/L	521.36 ppb	15:56:33
2	Sc RADIAL	97535.2	97535.2	101 %		15:55:29
2	Al 396.153Radial†	10452.8	10492.0	4997.7 µg/L	4997.7 ppb	15:55:29
2	Ca 317.933Radial†	14265.7	13771.2	5011.6 µg/L	5011.6 ppb	15:55:29
2	Fe 238.204 Radial†	437.9	422.6	5009.5 µg/L	5009.5 ppb	15:55:50
2	K 766.490 Radial†	11246.9	10675.4	4982.0 µg/L	4982.0 ppb	15:55:29
2	Mg 279.077 IEC†	397.2	386.2	5095.0 µg/L	5095.0 ppb	15:55:50
2	Na 589.592 Radial†	20557.7	20219.7	10092 µg/L	10092 ppb	15:55:29
2	Sr 421.552†	85474.7	84680.8	503.42 µg/L	503.42 ppb	15:55:29
2	Sc 361.383	2062290.9	2062290.9	98.528 %		15:57:00
2	Y 371.029	1405199.3	1405199.3	98.069 %		15:57:00
2	Ag 328.068†	62454.5	63848.0	516.48 µg/L	516.48 ppb	15:57:06
2	As 188.979†	349.5	358.0	526.92 µg/L	526.92 ppb	15:57:26
2	B 249.677†	11457.7	11329.5	512.38 µg/L	512.38 ppb	15:57:06
2	Ba 233.527†	23369.2	23726.8	519.84 µg/L	519.84 ppb	15:57:06
2	Be 313.107†	859786.7	873793.6	513.21 µg/L	513.21 ppb	15:57:00
2	Cd 226.502†	21394.2	21884.5	520.16 µg/L	520.16 ppb	15:57:06
2	Co 228.616†	12018.7	12150.2	521.40 µg/L	521.40 ppb	15:57:06
2	Cr 267.716†	23889.7	24166.4	525.93 µg/L	525.93 ppb	15:57:06
2	Cu 324.752†	83171.0	80037.1	523.71 µg/L	523.71 ppb	15:57:06
2	Mn 257.610†	170523.3	173758.5	522.18 µg/L	522.18 ppb	15:57:00
2	Mo 202.031†	5253.3	5326.7	527.27 µg/L	527.27 ppb	15:57:26
2	Ni 231.604†	9598.2	9364.8	524.69 µg/L	524.69 ppb	15:57:06
2	P 214.914†	1823.4	1578.3	2570.5 µg/L	2570.5 ppb	15:57:26
2	Pb 220.353†	1995.9	1995.5	523.78 µg/L	523.78 ppb	15:57:26

2	S 181.975 Axial†	339.8	322.3	1025.8 µg/L	1025.8 ppb	15:57:26
2	Sb 206.836†	595.8	581.9	521.72 µg/L	521.72 ppb	15:57:26
2	Se 196.026†	572.0	553.2	531.60 µg/L	531.60 ppb	15:57:26
2	SiO2†	33130.5	30845.8	5568.8 µg/L	5568.8 ppb	15:57:06
2	Si 251.611†	38151.0	38297.0	2603.6 µg/L	2603.6 ppb	15:57:06
2	Sn 189.927†	1320.9	1348.1	525.33 µg/L	525.33 ppb	15:57:26
2	Ti 334.940†	215471.4	219268.5	512.41 µg/L	512.41 ppb	15:57:00
2	Tl 190.801†	488.8	530.2	522.76 µg/L	522.76 ppb	15:57:26
2	U 409.014†	5630.4	5720.4	518.40 µg/L	518.40 ppb	15:57:06
2	V 292.402†	43490.2	44027.8	524.89 µg/L	524.89 ppb	15:57:06
2	Zn 213.857†	23579.7	22923.2	524.09 µg/L	524.09 ppb	15:57:06
3	Sc RADIAL	97298.9	97298.9	101 %		15:55:55
3	Al 396.153Radial†	10465.2	10529.6	5017.6 µg/L	5017.6 ppb	15:55:55
3	Ca 317.933Radial†	14270.5	13810.4	5025.9 µg/L	5025.9 ppb	15:55:55
3	Fe 238.204 Radial†	442.3	428.0	5071.9 µg/L	5071.9 ppb	15:56:16
3	K 766.490 Radial†	11242.5	10698.2	4992.6 µg/L	4992.6 ppb	15:55:55
3	Mg 279.077 IEC†	398.7	388.6	5125.2 µg/L	5125.2 ppb	15:56:16
3	Na 589.592 Radial†	20533.7	20245.4	10105 µg/L	10105 ppb	15:55:55
3	Sr 421.552†	85316.6	84729.4	503.71 µg/L	503.71 ppb	15:55:55
3	Sc 361.383	2061146.1	2061146.1	98.473 %		15:57:34
3	Y 371.029	1407044.7	1407044.7	98.198 %		15:57:34
3	Ag 328.068†	57832.1	59189.1	478.68 µg/L	478.68 ppb	15:57:39
3	As 188.979†	294.5	302.3	444.72 µg/L	444.72 ppb	15:58:00
3	B 249.677†	10574.9	10439.5	471.84 µg/L	471.84 ppb	15:57:39
3	Ba 233.527†	21133.5	21469.6	470.37 µg/L	470.37 ppb	15:57:39
3	Be 313.107†	799146.3	812697.5	477.33 µg/L	477.33 ppb	15:57:34
3	Cd 226.502†	19167.6	19635.4	466.63 µg/L	466.63 ppb	15:57:39
3	Co 228.616†	10669.2	10786.6	462.82 µg/L	462.82 ppb	15:57:39
3	Cr 267.716†	20573.1	20811.9	452.93 µg/L	452.93 ppb	15:57:39
3	Cu 324.752†	74555.8	71335.3	466.88 µg/L	466.88 ppb	15:57:39
3	Mn 257.610†	158734.8	161883.3	486.49 µg/L	486.49 ppb	15:57:34
3	Mo 202.031†	4347.8	4410.1	436.58 µg/L	436.58 ppb	15:58:00
3	Ni 231.604†	8515.2	8270.3	463.37 µg/L	463.37 ppb	15:57:39
3	P 214.914†	1582.1	1334.3	2169.9 µg/L	2169.9 ppb	15:58:00
3	Pb 220.353†	1698.9	1695.0	444.89 µg/L	444.89 ppb	15:58:00
3	S 181.975 Axial†	295.3	277.4	882.66 µg/L	882.66 ppb	15:58:00
3	Sb 206.836†	513.4	498.6	446.76 µg/L	446.76 ppb	15:58:00
3	Se 196.026†	504.7	485.3	467.89 µg/L	467.89 ppb	15:58:00
3	SiO2†	30494.3	28187.4	5088.8 µg/L	5088.8 ppb	15:57:39
3	Si 251.611†	34842.2	34958.4	2376.6 µg/L	2376.6 ppb	15:57:39
3	Sn 189.927†	1074.5	1098.6	428.22 µg/L	428.22 ppb	15:58:00
3	Ti 334.940†	198697.1	202355.5	472.86 µg/L	472.86 ppb	15:57:34
3	Tl 190.801†	438.0	478.9	472.31 µg/L	472.31 ppb	15:58:00
3	U 409.014†	4922.9	5005.1	453.44 µg/L	453.44 ppb	15:57:39
3	V 292.402†	38466.3	38950.5	464.02 µg/L	464.02 ppb	15:57:39
3	Zn 213.857†	21054.9	20372.5	465.72 µg/L	465.72 ppb	15:57:39

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2059512.2	98.395 %	0.1846			0.19%
Sc RADIAL	97355.9	101 %	0.2			0.16%
Y 371.029	1404601.7	98.027 %	0.1947			0.20%
Ag 328.068†	62249.6	503.52 µg/L	21.514	503.52 ppb	21.514	4.27%
QC value within limits for Ag 328.068 Recovery = 100.70%						
Al 396.153Radial†	10517.0	5010.2 µg/L	10.85	5010.2 ppb	10.85	0.22%
QC value within limits for Al 396.153Radial Recovery = 100.20%						
As 188.979†	341.2	502.19 µg/L	49.925	502.19 ppb	49.925	9.94%
QC value within limits for As 188.979 Recovery = 100.44%						
B 249.677†	11020.8	498.32 µg/L	22.941	498.32 ppb	22.941	4.60%
QC value within limits for B 249.677 Recovery = 99.66%						
Ba 233.527†	22957.9	502.99 µg/L	28.255	502.99 ppb	28.255	5.62%
QC value within limits for Ba 233.527 Recovery = 100.60%						
Be 313.107†	853452.9	501.26 µg/L	20.729	501.26 ppb	20.729	4.14%
QC value within limits for Be 313.107 Recovery = 100.25%						
Ca 317.933Radial†	13782.1	5015.6 µg/L	8.97	5015.6 ppb	8.97	0.18%
QC value within limits for Ca 317.933Radial Recovery = 100.31%						
Cd 226.502†	21090.3	501.26 µg/L	30.030	501.26 ppb	30.030	5.99%
QC value within limits for Cd 226.502 Recovery = 100.25%						
Co 228.616†	11686.9	501.50 µg/L	33.503	501.50 ppb	33.503	6.68%

QC value within limits for Co 228.616 Recovery = 100.30%							
Cr 267.716†	23025.7	501.11 µg/L	41.725	501.11 ppb	41.725	8.33%	
QC value within limits for Cr 267.716 Recovery = 100.22%							
Cu 324.752†	77056.4	504.25 µg/L	32.366	504.25 ppb	32.366	6.42%	
QC value within limits for Cu 324.752 Recovery = 100.85%							
Fe 238.204 Radial†	425.2	5039.8 µg/L	31.24	5039.8 ppb	31.24	0.62%	
QC value within limits for Fe 238.204 Radial Recovery = 100.80%							
K 766.490 Radial†	10693.9	4990.6 µg/L	7.81	4990.6 ppb	7.81	0.16%	
QC value within limits for K 766.490 Radial Recovery = 99.81%							
Mg 279.077 IEC†	386.5	5098.6 µg/L	25.00	5098.6 ppb	25.00	0.49%	
QC value within limits for Mg 279.077 IEC Recovery = 101.97%							
Mn 257.610†	169690.0	509.95 µg/L	20.325	509.95 ppb	20.325	3.99%	
QC value within limits for Mn 257.610 Recovery = 101.99%							
Mo 202.031†	5051.5	500.05 µg/L	55.145	500.05 ppb	55.145	11.03%	
QC value within limits for Mo 202.031 Recovery = 100.01%							
Na 589.592 Radial†	20234.0	10099 µg/L	6.5	10099 ppb	6.5	0.06%	
QC value within limits for Na 589.592 Radial Recovery = 100.99%							
Ni 231.604†	8977.0	502.97 µg/L	34.341	502.97 ppb	34.341	6.83%	
QC value within limits for Ni 231.604 Recovery = 100.59%							
P 214.914†	1505.0	2450.5 µg/L	243.85	2450.5 ppb	243.85	9.95%	
QC value within limits for P 214.914 Recovery = 98.02%							
Pb 220.353†	1904.8	499.97 µg/L	47.850	499.97 ppb	47.850	9.57%	
QC value within limits for Pb 220.353 Recovery = 99.99%							
S 181.975 Axial†	310.0	986.65 µg/L	90.964	986.65 ppb	90.964	9.22%	
QC value within limits for S 181.975 Axial Recovery = 98.67%							
Sb 206.836†	557.6	499.82 µg/L	46.182	499.82 ppb	46.182	9.24%	
QC value within limits for Sb 206.836 Recovery = 99.96%							
Se 196.026†	534.8	514.34 µg/L	40.667	514.34 ppb	40.667	7.91%	
QC value within limits for Se 196.026 Recovery = 102.87%							
SiO2†	29920.8	5401.8 µg/L	271.21	5401.8 ppb	271.21	5.02%	
QC value within limits for SiO2 Recovery = 101.01%							
Si 251.611†	37143.9	2525.2 µg/L	128.74	2525.2 ppb	128.74	5.10%	
QC value within limits for Si 251.611 Recovery = 101.01%							
Sn 189.927†	1275.0	496.91 µg/L	59.785	496.91 ppb	59.785	12.03%	
QC value within limits for Sn 189.927 Recovery = 99.38%							
Sr 421.552†	84734.2	503.73 µg/L	0.333	503.73 ppb	0.333	0.07%	
QC value within limits for Sr 421.552 Recovery = 100.75%							
Ti 334.940†	213671.9	499.32 µg/L	22.919	499.32 ppb	22.919	4.59%	
QC value within limits for Ti 334.940 Recovery = 99.86%							
Tl 190.801†	514.7	507.49 µg/L	30.557	507.49 ppb	30.557	6.02%	
QC value within limits for Tl 190.801 Recovery = 101.50%							
U 409.014†	5507.4	499.06 µg/L	39.658	499.06 ppb	39.658	7.95%	
QC value within limits for U 409.014 Recovery = 99.81%							
V 292.402†	42311.7	504.34 µg/L	34.926	504.34 ppb	34.926	6.93%	
QC value within limits for V 292.402 Recovery = 100.87%							
Zn 213.857†	22033.2	503.73 µg/L	32.940	503.73 ppb	32.940	6.54%	
QC value within limits for Zn 213.857 Recovery = 100.75%							

All analyte(s) passed QC.

Sequence No.: 24

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 15:58:09

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98998.7	98998.7	102 %		15:58:40
1	Al 396.153Radial†	-144.1	-21.6	-10.340 µg/L	-10.340 ppb	15:58:40
1	Ca 317.933Radial†	372.0	-21.6	-7.8617 µg/L	-7.8617 ppb	15:59:00
1	Fe 238.204 Radial†	13.5	1.2	14.689 µg/L	14.689 ppb	15:59:00
1	K 766.490 Radial†	357.6	-135.7	-63.342 µg/L	-63.342 ppb	15:58:40
1	Mg 279.077 IEC†	8.6	0.4	5.1501 µg/L	5.1501 ppb	15:59:00
1	Na 589.592 Radial†	210.2	24.9	12.437 µg/L	12.437 ppb	15:58:40
1	Sr 421.552†	130.4	-11.9	-0.0710 µg/L	-0.0710 ppb	15:58:40
1	Sc 361.383	2084090.4	2084090.4	99.569 %		16:00:02
1	Y 371.029	1427133.0	1427133.0	99.600 %		16:00:02
1	Ag 328.068†	-567.0	-109.3	-0.8805 µg/L	-0.8805 ppb	16:00:08
1	As 188.979†	-0.6	2.6	3.8737 µg/L	3.8737 ppb	16:00:28
1	B 249.677†	298.1	0.0	-0.0072 µg/L	-0.0072 ppb	16:00:08
1	Ba 233.527†	-9.7	-1.3	-0.0292 µg/L	-0.0292 ppb	16:00:28
1	Be 313.107†	-1099.9	54.1	0.0317 µg/L	0.0317 ppb	16:00:08
1	Cd 226.502†	-167.7	2.1	0.0492 µg/L	0.0492 ppb	16:00:28
1	Co 228.616†	45.5	-2.4	-0.1018 µg/L	-0.1018 ppb	16:00:28
1	Cr 267.716†	49.5	-30.5	-0.6642 µg/L	-0.6642 ppb	16:00:08
1	Cu 324.752†	4460.4	103.0	0.6756 µg/L	0.6756 ppb	16:00:08
1	Mn 257.610†	-640.6	43.6	0.1317 µg/L	0.1317 ppb	16:00:28
1	Mo 202.031†	25.6	20.6	2.0397 µg/L	2.0397 ppb	16:00:28
1	Ni 231.604†	370.7	-4.6	-0.2555 µg/L	-0.2555 ppb	16:00:28
1	P 214.914†	271.7	0.5	0.7804 µg/L	0.7804 ppb	16:00:28
1	Pb 220.353†	37.8	7.8	2.0551 µg/L	2.0551 ppb	16:00:28
1	S 181.975 Axial†	27.3	4.9	15.660 µg/L	15.660 ppb	16:00:28
1	Sb 206.836†	27.1	4.5	4.0557 µg/L	4.0557 ppb	16:00:28
1	Se 196.026†	20.2	-7.0	-6.5765 µg/L	-6.5765 ppb	16:00:28
1	SiO2†	2752.8	-15.1	-2.7188 µg/L	-2.7188 ppb	16:00:08
1	Si 251.611†	407.7	-14.6	-0.9945 µg/L	-0.9945 ppb	16:00:28
1	Sn 189.927†	1.2	8.6	3.3584 µg/L	3.3584 ppb	16:00:28
1	Ti 334.940†	-426.6	148.8	0.3474 µg/L	0.3474 ppb	16:00:08
1	Tl 190.801†	-39.4	-5.5	-5.3488 µg/L	-5.3488 ppb	16:00:28
1	U 409.014†	-65.2	-59.7	-5.4240 µg/L	-5.4240 ppb	16:00:08
1	V 292.402†	56.3	-55.8	-0.6514 µg/L	-0.6514 ppb	16:00:08
1	Zn 213.857†	663.7	-342.2	-7.8807 µg/L	-7.8807 ppb	16:00:28
2	Sc RADIAL	98732.8	98732.8	102 %		15:59:06
2	Al 396.153Radial†	-122.3	-0.6	-0.3409 µg/L	-0.3409 ppb	15:59:06
2	Ca 317.933Radial†	381.9	-10.9	-3.9829 µg/L	-3.9829 ppb	15:59:26
2	Fe 238.204 Radial†	12.5	0.3	3.8232 µg/L	3.8232 ppb	15:59:26
2	K 766.490 Radial†	355.5	-136.8	-63.843 µg/L	-63.843 ppb	15:59:06
2	Mg 279.077 IEC†	9.9	1.7	22.168 µg/L	22.168 ppb	15:59:26
2	Na 589.592 Radial†	188.7	4.4	2.1910 µg/L	2.1910 ppb	15:59:06
2	Sr 421.552†	118.7	-23.1	-0.1374 µg/L	-0.1374 ppb	15:59:06
2	Sc 361.383	2080595.7	2080595.7	99.402 %		16:00:34
2	Y 371.029	1425280.7	1425280.7	99.470 %		16:00:34
2	Ag 328.068†	-503.6	-46.4	-0.3761 µg/L	-0.3761 ppb	16:00:40
2	As 188.979†	-0.4	2.8	4.1966 µg/L	4.1966 ppb	16:01:00
2	B 249.677†	319.3	21.9	0.9922 µg/L	0.9922 ppb	16:00:40
2	Ba 233.527†	-8.5	-0.1	-0.0042 µg/L	-0.0042 ppb	16:01:00
2	Be 313.107†	-1105.1	47.1	0.0276 µg/L	0.0276 ppb	16:00:40
2	Cd 226.502†	-177.0	-7.5	-0.1788 µg/L	-0.1788 ppb	16:01:00
2	Co 228.616†	51.2	3.4	0.1474 µg/L	0.1474 ppb	16:01:00
2	Cr 267.716†	92.5	12.8	0.2779 µg/L	0.2779 ppb	16:00:40
2	Cu 324.752†	4414.9	64.8	0.4240 µg/L	0.4240 ppb	16:00:40
2	Mn 257.610†	-633.7	49.5	0.1474 µg/L	0.1474 ppb	16:01:00
2	Mo 202.031†	23.6	18.6	1.8392 µg/L	1.8392 ppb	16:01:00
2	Ni 231.604†	363.7	-11.1	-0.6205 µg/L	-0.6205 ppb	16:01:00
2	P 214.914†	266.2	-4.6	-7.6776 µg/L	-7.6776 ppb	16:01:00
2	Pb 220.353†	32.2	2.2	0.5786 µg/L	0.5786 ppb	16:01:00



2	S 181.975 Axial†	22.0	-0.5	-1.4458 µg/L	-1.4458 ppb	16:01:00
2	Sb 206.836†	25.6	3.0	2.7103 µg/L	2.7103 ppb	16:01:00
2	Se 196.026†	28.2	1.0	0.9682 µg/L	0.9682 ppb	16:01:00
2	SiO2†	2771.3	8.2	1.4780 µg/L	1.4780 ppb	16:00:40
2	Si 251.611†	424.5	2.9	0.2005 µg/L	0.2005 ppb	16:01:00
2	Sn 189.927†	1.3	8.8	3.4074 µg/L	3.4074 ppb	16:01:00
2	Ti 334.940†	-497.2	77.1	0.1785 µg/L	0.1785 ppb	16:00:40
2	Tl 190.801†	-32.9	1.0	1.0276 µg/L	1.0276 ppb	16:01:00
2	U 409.014†	50.0	56.1	5.0918 µg/L	5.0918 ppb	16:00:40
2	V 292.402†	62.9	-49.0	-0.5595 µg/L	-0.5595 ppb	16:00:40
2	Zn 213.857†	650.1	-354.8	-8.1684 µg/L	-8.1684 ppb	16:01:00
3	Sc RADIAL	99400.2	99400.2	103 %		15:59:32
3	Al 396.153Radial†	-154.7	-31.3	-14.980 µg/L	-14.980 ppb	15:59:32
3	Ca 317.933Radial†	375.9	-19.3	-7.0192 µg/L	-7.0192 ppb	15:59:52
3	Fe 238.204 Radial†	14.7	2.3	27.612 µg/L	27.612 ppb	15:59:52
3	K 766.490 Radial†	441.9	-55.0	-25.691 µg/L	-25.691 ppb	15:59:32
3	Mg 279.077 IEC†	8.5	0.3	4.2157 µg/L	4.2157 ppb	15:59:52
3	Na 589.592 Radial†	213.0	26.8	13.364 µg/L	13.364 ppb	15:59:32
3	Sr 421.552†	137.9	-5.1	-0.0305 µg/L	-0.0305 ppb	15:59:32
3	Sc 361.383	2079208.6	2079208.6	99.336 %		16:01:06
3	Y 371.029	1423599.6	1423599.6	99.353 %		16:01:06
3	Ag 328.068†	-486.2	-29.3	-0.2325 µg/L	-0.2325 ppb	16:01:12
3	As 188.979†	-4.8	-1.6	-2.3249 µg/L	-2.3249 ppb	16:01:33
3	B 249.677†	302.5	5.2	0.2204 µg/L	0.2204 ppb	16:01:12
3	Ba 233.527†	-13.5	-5.2	-0.1138 µg/L	-0.1138 ppb	16:01:33
3	Be 313.107†	-1003.6	148.5	0.0872 µg/L	0.0872 ppb	16:01:12
3	Cd 226.502†	-161.6	7.9	0.1825 µg/L	0.1825 ppb	16:01:33
3	Co 228.616†	33.2	-14.7	-0.6304 µg/L	-0.6304 ppb	16:01:33
3	Cr 267.716†	81.1	1.4	0.0310 µg/L	0.0310 ppb	16:01:12
3	Cu 324.752†	4374.2	26.8	0.1801 µg/L	0.1801 ppb	16:01:12
3	Mn 257.610†	-643.0	39.6	0.1205 µg/L	0.1205 ppb	16:01:33
3	Mo 202.031†	16.5	11.4	1.1335 µg/L	1.1335 ppb	16:01:33
3	Ni 231.604†	351.0	-23.5	-1.3176 µg/L	-1.3176 ppb	16:01:33
3	P 214.914†	264.8	-5.8	-9.6970 µg/L	-9.6970 ppb	16:01:33
3	Pb 220.353†	27.1	-2.9	-0.7598 µg/L	-0.7598 ppb	16:01:33
3	S 181.975 Axial†	25.2	2.8	9.0515 µg/L	9.0515 ppb	16:01:33
3	Sb 206.836†	28.5	6.0	5.3697 µg/L	5.3697 ppb	16:01:33
3	Se 196.026†	21.4	-5.8	-5.3362 µg/L	-5.3362 ppb	16:01:33
3	SiO2†	2740.2	-21.2	-3.8277 µg/L	-3.8277 ppb	16:01:12
3	Si 251.611†	431.4	10.2	0.6932 µg/L	0.6932 ppb	16:01:33
3	Sn 189.927†	1.3	8.7	3.3979 µg/L	3.3979 ppb	16:01:33
3	Ti 334.940†	-488.7	85.3	0.1990 µg/L	0.1990 ppb	16:01:12
3	Tl 190.801†	-34.7	-0.9	-0.8375 µg/L	-0.8375 ppb	16:01:33
3	U 409.014†	-78.4	-73.1	-6.6428 µg/L	-6.6428 ppb	16:01:12
3	V 292.402†	117.5	6.0	0.0688 µg/L	0.0688 ppb	16:01:12
3	Zn 213.857†	679.9	-324.5	-7.4662 µg/L	-7.4662 ppb	16:01:33

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2081298.2	99.436 %	0.1202			0.12%
Sc RADIAL	99043.9	102 %	0.3			0.34%
Y 371.029	1425337.8	99.474 %	0.1233			0.12%
Ag 328.068†	-61.6	-0.4964 µg/L	0.34034	-0.4964 ppb	0.34034	68.57%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-17.8	-8.5536 µg/L	7.48128	-8.5536 ppb	7.48128	87.46%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.3	1.9151 µg/L	3.67554	1.9151 ppb	3.67554	191.92%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	9.0	0.4018 µg/L	0.52379	0.4018 ppb	0.52379	130.36%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.2	-0.0491 µg/L	0.05742	-0.0491 ppb	0.05742	116.99%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	83.3	0.0488 µg/L	0.03329	0.0488 ppb	0.03329	68.17%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-17.3	-6.2880 µg/L	2.04017	-6.2880 ppb	2.04017	32.45%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	0.8	0.0176 µg/L	0.18274	0.0176 ppb	0.18274	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.6	-0.1949 µg/L	0.39722	-0.1949 ppb	0.39722	203.77%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated		
	-5.4	-0.1184 µg/L	0.48849	-0.1184 ppb
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated		
	64.9	0.4266 µg/L	0.24775	0.4266 ppb
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated		
	1.3	15.374 µg/L	11.9090	15.374 ppb
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
	-109.2	-50.959 µg/L	21.8842	-50.959 ppb
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated		
	0.8	10.511 µg/L	10.1056	10.511 ppb
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
	44.3	0.1332 µg/L	0.01355	0.1332 ppb
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated		
	16.9	1.6708 µg/L	0.47599	1.6708 ppb
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated		
	18.7	9.3308 µg/L	6.20056	9.3308 ppb
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
	-13.0	-0.7312 µg/L	0.53962	-0.7312 ppb
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated		
	-3.3	-5.5314 µg/L	5.55868	-5.5314 ppb
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated		
	2.4	0.6246 µg/L	1.40804	0.6246 ppb
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated		
	2.4	7.7553 µg/L	8.62636	7.7553 ppb
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated		
	4.5	4.0452 µg/L	1.32969	4.0452 ppb
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated		
	-3.9	-3.6482 µg/L	4.04566	-3.6482 ppb
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated		
	-9.4	-1.6895 µg/L	2.79862	-1.6895 ppb
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated		
	-0.5	-0.0336 µg/L	0.86789	-0.0336 ppb
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated		
	8.7	3.3879 µg/L	0.02602	3.3879 ppb
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated		
	-13.4	-0.0796 µg/L	0.05397	-0.0796 ppb
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated		
	103.7	0.2416 µg/L	0.09219	0.2416 ppb
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated		
	-1.8	-1.7196 µg/L	3.27847	-1.7196 ppb
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated		
	-25.6	-2.3250 µg/L	6.45195	-2.3250 ppb
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated		
	-32.9	-0.3807 µg/L	0.39202	-0.3807 ppb
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated		
	-340.5	-7.8384 µg/L	0.35304	-7.8384 ppb
	QC value within limits for Zn 213.857 Recovery = Not calculated			

All analyte(s) passed QC.

## ICPMS#3 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Wednesday, March 17, 2010 11:29:49

Sample Description:

Method File: C:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.7527

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	471.8	471.808	16.239	3.4
Mg	24.0	5042.9	5042.890	124.438	2.5
Co	58.9	7261.0	7261.046	198.314	2.7
Rh	102.9	16804.1	16804.083	431.451	2.6
In	114.9	24734.2	24734.201	522.538	2.1
Pb	208.0	14057.1	14057.114	175.371	1.2
[> Ba	137.9	18780.9	18780.938	448.169	2.4
[ Ba++	69.0	291.4	0.016	0.001	4.2
[> Ce	139.9	24812.3	24812.333	376.713	1.5
[ CeO	155.9	488.3	0.020	0.000	2.1
Bkgd	220.0	0.6	0.600	0.224	37.3

### Current Optimization File Data

Current Value	Description
1.09	Nebulizer Gas Flow
8.40	Lens Voltage
1450.00	ICP RF Power
-1855.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	8.3	601.0
Co	59	25	10.5	9090.6
In	115	25	11.8	46012.6

## ICPMS#3 Instrument Tuning Report

File Name: 100317.tun  
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.1	591	2060	0.646
Be	9.0	9.0	2056	2040	0.667
Mg	24.0	24.0	5708	2110	0.618
Mg	25.0	25.0	5896	2020	0.662
Mg	26.0	26.0	6230	2140	0.650
Co	58.9	58.9	14201	2115	0.625
Rh	102.9	102.9	24906	2165	0.659
In	114.9	114.9	27827	2180	0.649
Ce	139.9	139.9	33907	2220	0.619
Pb	206.0	206.0	50004	2280	0.674
Pb	207.0	207.0	50272	2310	0.664
Pb	208.0	208.0	50486	2300	0.646
U	238.1	238.0	57837	2340	0.669

## ICPMS#3 - Summary Report

Sample ID: Blank

Sample Date/Time: Wednesday, March 17, 2010 20:19:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\Blank.183

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		53646	
	Tl	205	ug/L		57	
	Pb	208	ug/L		16	
[	U	238	ug/L		24	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	
Pb	208Linear Thru Zero	
U	238Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
	Tl	205				
	Pb	208				
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Wednesday, March 17, 2010 20:22:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\Standard 1.184

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		53451	53451.315
	Tl	205	10.000 ug/L	0.811	18257	0.341
	Pb	208	10.000 ug/L	1.875	21671	0.405
	U	238	10.000 ug/L	1.789	23180	0.434

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
	Tl	205				
	Pb	208				
	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Wednesday, March 17, 2010 20:24:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\Standard 2.185

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		52958	52958.316
	Tl 205	100.026	ug/L	2.206	185125	3.499
	Pb 208	100.018	ug/L	2.962	218273	4.128
	U 238	100.032	ug/L	2.580	237032	4.482

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
	Tl 205					
	Pb 208					
	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Wednesday, March 17, 2010 20:27:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 1.186

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		53328	53328.211
	Tl	205	49.724 ug/L	2.540	92716	1.739
	Pb	208	50.459 ug/L	2.275	110957	2.083
	U	238	51.585 ug/L	1.912	123170	2.311

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.4		
	Tl	205	99.448			
	Pb	208	100.918			
	U	238	103.171			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#3 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Wednesday, March 17, 2010 20:29:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 2.187

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		52610	52609.575
	Tl 205	0.273	ug/L	1.756	557	0.010
	Pb 208	0.005	ug/L	67.702	26	0.000
[	U 238	0.047	ug/L	11.195	133	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		98.1			
	Tl 205					
	Pb 208					
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Wednesday, March 17, 2010 20:29:51

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Wednesday, March 17, 2010 20:31:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 3.188

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		52404	52404.049
TI	205	1.170	ug/L	3.676	2196	0.041
Pb	208	2.235	ug/L	3.558	4842	0.092
[ U	238	0.277	ug/L	0.251	673	0.012

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu	175			97.7		
TI	205	116.961				
Pb	208	111.741				
[ U	238	138.253				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	U	238	CRDL is out of limits

### QC Action

QC Action Line: Continue

Sample ID: QC Std 3

Report Date/Time: Wednesday, March 17, 2010 20:32:14

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Wednesday, March 17, 2010 20:34:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 4.189

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
> Lu 175		ug/L		42223	42222.908
TI 205	0.052	ug/L	23.145	123	0.002
Pb 208	0.231	ug/L	2.820	415	0.010
U 238	0.012	ug/L	21.963	42	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
> Lu 175		78.7			
TI 205					
Pb 208	122.246				
U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Lu 175 Int Std for QCLu		175

### QC Action

QC Action Line: Continue

Sample ID: QC Std 4

Report Date/Time: Wednesday, March 17, 2010 20:34:37

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Wednesday, March 17, 2010 20:36:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 5.190

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		41702	41702.150
	Tl 205	20.991	ug/L	1.938	30633	0.734
	Pb 208	22.089	ug/L	3.958	37946	0.912
[	U 238	24.271	ug/L	5.236	45240	1.087

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			77.7		
	Tl 205	104.956				
	Pb 208	109.411				
[	U 238	121.356				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Lu 175 Int Std for QCLu		175
QC Std 5	U	238ICSAB is out of limits

### QC Action

QC Action Line: Continue

Sample ID: QC Std 5

Report Date/Time: Wednesday, March 17, 2010 20:37:01

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, March 17, 2010 20:39:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.191

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		49228	49228.453
	Tl	205	49.353 ug/L	0.386	85053	1.726
	Pb	208	50.154 ug/L	1.903	101825	2.070
[	U	238	49.948 ug/L	2.069	110089	2.238

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		91.8		
	Tl	205	98.707			
	Pb	208	100.308			
[	U	238	99.896			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, March 17, 2010 20:39:26

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, March 17, 2010 20:41:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.192

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		49410	49410.467
	TI 205	0.385	ug/L	4.539	718	0.013
	Pb 208	0.008	ug/L	28.858	31	0.000
[	U 238	0.027	ug/L	14.023	83	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		92.1			
	TI 205					
	Pb 208					
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, March 17, 2010 20:41:53

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, March 17, 2010 21:10:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.203

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		50876	50875.907
	Tl	205	48.392 ug/L	3.126	86074	1.693
	Pb	208	49.112 ug/L	2.196	103050	2.027
[	U	238	48.692 ug/L	2.778	110875	2.182

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		94.8		
	Tl	205	96.784			
	Pb	208	98.223			
[	U	238	97.384			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, March 17, 2010 21:10:54

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, March 17, 2010 21:12:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.204

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		50834	50834.014
TI 205	0.335	ug/L	6.126	648	0.012
Pb 208	0.007	ug/L	25.330	30	0.000
[ U 238	0.019	ug/L	27.542	67	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		94.8			
TI 205					
Pb 208					
[ U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, March 17, 2010 21:13:21

Page 1



## ICPMS#3 - Summary Report

Sample ID: 1202047704

Sample Date/Time: Wednesday, March 17, 2010 21:15:21

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\1202047704.205

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		48641	48640.741
	Tl 205	0.077	ug/L	10.355	183	0.003
	Pb 208	0.012	ug/L	23.684	38	0.000
	U 238	0.002	ug/L	228.289	26	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		90.7			
	Tl 205					
	Pb 208					
	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047704

Report Date/Time: Wednesday, March 17, 2010 21:15:44

Page 1

## ICPMS#3 - Summary Report

Sample ID: 1202047705

Sample Date/Time: Wednesday, March 17, 2010 21:17:44

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\1202047705.206

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		49496	49496.047
	Tl 205	50.174	ug/L	1.750	86857	1.755
	Pb 208	54.159	ug/L	2.104	110555	2.235
[	U 238	53.988	ug/L	2.787	119592	2.419

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			92.3		
	Tl 205					
	Pb 208					
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047705

Report Date/Time: Wednesday, March 17, 2010 21:18:08

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, March 17, 2010 21:37:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.214

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		49568	49567.728
	Tl	205	47.660 ug/L	1.560	82620	1.667
	Pb	208	49.096 ug/L	3.910	100245	2.026
[	U	238	49.111 ug/L	3.148	108905	2.200

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		92.4		
	Tl	205	95.320			
	Pb	208	98.192			
[	U	238	98.222			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, March 17, 2010 21:37:35

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, March 17, 2010 21:39:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.215

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		49341	49340.558
	Tl 205	0.410	ug/L	6.874	758	0.014
	Pb 208	0.010	ug/L	13.276	35	0.000
[	U 238	0.050	ug/L	6.639	132	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		92.0			
	Tl 205					
	Pb 208					
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, March 17, 2010 21:40:02

Page 1

## ICPMS#3 - Summary Report

Sample ID: Blank

Sample Date/Time: Wednesday, March 17, 2010 23:13:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Lu only.mth

Dataset File: C:\elandata\Dataset\100317\Blank.253

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		45113	
[	U	238	ug/L		32	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Blank

Report Date/Time: Wednesday, March 17, 2010 23:14:01

Page 1

## ICPMS#3 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Wednesday, March 17, 2010 23:15:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\Standard 1.254

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		45037	45036.906
[	U	238	10.000 ug/L	1.883	20535	0.456

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Wednesday, March 17, 2010 23:15:40

Page 1

## ICPMS#3 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Wednesday, March 17, 2010 23:17:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\Standard 2.255

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		46100	46100.061
[	U	238	99.991 ug/L	2.492	207880	4.514

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Wednesday, March 17, 2010 23:18:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\U only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 1.256

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		46458	46458.155
[ U	238	51.689	ug/L	0.785	108406	2.334

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu	175		103.0			
[ U	238	103.378				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#3 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Wednesday, March 17, 2010 23:20:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 2.257

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		46580	46580.159
[	U	238	0.130 ug/L	4.655	306	0.006

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		103.3		
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Wednesday, March 17, 2010 23:22:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 3.258

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		46519	46519.298
[	U	238	0.224 ug/L	4.322	503	0.010

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		103.1		
[	U	238	111.759			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 3

Report Date/Time: Wednesday, March 17, 2010 23:22:25

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Wednesday, March 17, 2010 23:23:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 4.259

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		38241	38241.355
[	U	238	0.020 ug/L	29.711	61	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		84.8		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Wednesday, March 17, 2010 23:24:06

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Wednesday, March 17, 2010 23:25:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 5.260

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		40347	40347.462
[	U	238	23.321 ug/L	1.493	42485	1.053

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		89.4		
[	U	238	116.607			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, March 17, 2010 23:27:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.261

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		44078	44078.316
[	U	238	52.612 ug/L	2.952	104562	2.375

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		97.7		
[	U	238	105.223			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, March 17, 2010 23:27:27

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## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, March 17, 2010 23:28:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.262

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		44252	44252.439
[	U	238	0.055 ug/L	10.022	142	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		98.1		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, March 17, 2010 23:29:12

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## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, March 17, 2010 23:42:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.270

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		45613	45613.128
[	U	238	51.704 ug/L	2.711	106356	2.334

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		101.1		
[	U	238	103.408			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, March 17, 2010 23:44:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.271

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		45316	45316.103
[ U	238	0.054	ug/L	11.263	141	0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu	175		100.5			
[ U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, March 17, 2010 23:53:17

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.276

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		44782	44781.518
[ U 238	51.982	ug/L	2.844	104968	2.347

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			99.3		
[ U 238	103.964				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, March 17, 2010 23:55:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.277

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		45015	45015.181
[	U	238	0.054 ug/L	3.849	142	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.8		
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: 1202047704

Sample Date/Time: Wednesday, March 17, 2010 23:56:42

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\1202047704.278

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		42627	42626.791
[	U	238	0.010 ug/L	20.452	49	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		94.5		
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: 1202047705

Sample Date/Time: Wednesday, March 17, 2010 23:58:23

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\1202047705.279

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		42991	42991.002
[	U	238	53.663 ug/L	2.906	104016	2.423

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		95.3		
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 00:10:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.286

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		46654	46653.745
[	U	238	50.095 ug/L	1.109	105554	2.262

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		103.4		
[	U	238	100.189			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, March 18, 2010 00:10:30

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## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 00:12:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.287

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		46620	46619.682
[ U 238	0.114	ug/L	5.831	274	0.005

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		103.3			
[ U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, March 18, 2010 00:12:14

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## ICPMS#3 - Summary Report

Sample ID: 247335001

Sample Date/Time: Thursday, March 18, 2010 00:13:44

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\247335001.288

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		42942	42941.822
[	U	238	0.043 ug/L	10.351	113	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		95.2		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 247335001

Report Date/Time: Thursday, March 18, 2010 00:13:56

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## ICPMS#3 - Summary Report

Sample ID: 1202047706

Sample Date/Time: Thursday, March 18, 2010 00:20:35

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\1202047706.292

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		43370	43369.665
[ U	238	-0.009	ug/L	14.297	12	-0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu	175			96.1		
[ U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047706

Report Date/Time: Thursday, March 18, 2010 00:20:48

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## ICPMS#3 - Summary Report

Sample ID: 1202047707

Sample Date/Time: Thursday, March 18, 2010 00:22:20

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\1202047707.293

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		43592	43591.835
[	U	238	49.117 ug/L	3.216	96518	2.217

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		96.6		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047707

Report Date/Time: Thursday, March 18, 2010 00:22:33

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## ICPMS#3 - Summary Report

Sample ID: 1202047708

Sample Date/Time: Thursday, March 18, 2010 00:24:03

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 955134|5|prb

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\1202047708.294

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		45053	45053.283
[ U 238	0.074	ug/L	8.681	181	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			99.9		
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 00:25:44

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 6.295

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		46924	46924.393
[	U	238	50.026 ug/L	2.733	105884	2.259

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		104.0		
[	U	238	100.052			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 00:27:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only.mth

Dataset File: C:\elandata\Dataset\100317\QC Std 7.296

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		46344	46343.703
[	U	238	0.114 ug/L	11.565	271	0.005

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		102.7		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Thursday, March 18, 2010 12:58:10

Sample Description:

Method File: C:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.7542

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		479.6		479.608		16.891		3.5
Mg	24.0		4271.4		4271.439		42.045		1.0
Co	58.9		10678.4		10678.390		76.095		0.7
Rh	102.9		28410.6		28410.633		597.377		2.1
In	114.9		44449.7		44449.661		764.269		1.7
Pb	208.0		29337.9		29337.898		386.066		1.3
[> Ba	137.9		34356.6		34356.586		585.954		1.7
[ Ba++	69.0		403.2		0.012		0.000		3.3
[> Ce	139.9		44738.8		44738.765		843.521		1.9
[ CeO	155.9		791.1		0.018		0.001		3.6
Bkgd	220.0		1.2		1.200		0.758		63.2

### Current Optimization File Data

Current Value	Description
1.07	Nebulizer Gas Flow
8.40	Lens Voltage
1450.00	ICP RF Power
-1984.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	8.3	685.0
Co	59	25	10.5	11350.2
In	115	25	11.5	64331.2

## ICPMS#3 Instrument Tuning Report

File Name: 100318.tun  
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	584	2060	0.645
Be	9.0	9.0	2063	2040	0.664
Mg	24.0	23.9	5704	2110	0.638
Mg	25.0	25.0	5892	2020	0.646
Mg	26.0	25.9	6216	2140	0.654
Co	58.9	59.0	14209	2115	0.627
Rh	102.9	102.9	24904	2165	0.659
In	114.9	114.9	27825	2180	0.654
Ce	139.9	139.9	33905	2220	0.621
Pb	206.0	206.0	50004	2280	0.690
Pb	207.0	207.0	50260	2310	0.646
Pb	208.0	208.0	50498	2300	0.637
U	238.1	238.1	57849	2340	0.668

## ICPMS#3 - Summary Report

Sample ID: Blank

Sample Date/Time: Thursday, March 18, 2010 13:19:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\Blank.435

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		123041	
	Tl	205	ug/L		265	
[	Pb	208	ug/L		45	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	
Pb	208Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
	Tl	205				
[	Pb	208				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Thursday, March 18, 2010 13:21:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\Standard 1.436

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		128413	128412.637
	Tl	205	10.000 ug/L	6.063	48327	0.375
	Pb	208	10.000 ug/L	9.085	57571	0.451

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
	Tl	205				
	Pb	208				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Thursday, March 18, 2010 13:22:10

Page 1



## ICPMS#3 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, March 18, 2010 13:24:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\Standard 2.437

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		130015	130014.881
	Tl	205	99.995 ug/L	7.465	484250	3.736
	Pb	208	99.991 ug/L	5.175	579873	4.467

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
	Tl	205				
	Pb	208				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, March 18, 2010 13:26:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 1.438

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		130501	130500.682
	Tl	205	49.146 ug/L	6.758	239189	1.836
[	Pb	208	50.836 ug/L	6.802	296064	2.271

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		106.1		
	Tl	205	98.292			
[	Pb	208	101.671			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Thursday, March 18, 2010 13:26:47

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, March 18, 2010 13:28:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 2.439

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		126173	126172.954
	Tl	205	0.346 ug/L	4.545	1899	0.013
[	Pb	208	0.015 ug/L	69.666	129	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		102.5		
	Tl	205				
[	Pb	208				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Thursday, March 18, 2010 13:29:11

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, March 18, 2010 13:31:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 3.440

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		128821	128820.664
	Tl	205	1.160 ug/L	8.323	5844	0.043
[	Pb	208	2.216 ug/L	6.069	12775	0.099

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		104.7		
	Tl	205	115.987			
[	Pb	208	110.782			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, March 18, 2010 13:33:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 4.441

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175	ug/L		105433	105433.237
	Tl	205	0.073 ug/L	20.684	514	0.003
	Pb	208	0.228 ug/L	7.000	1112	0.010

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		85.7		
	Tl	205				
	Pb	208	120.797			

### QC Out Of Limits

Measurement Type: Analyte      MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Thursday, March 18, 2010 13:33:50

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, March 18, 2010 13:35:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 5.442

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175	ug/L		104189	104188.866
	Tl	205	21.274 ug/L	5.898	83111	0.795
	Pb	208	22.273 ug/L	5.662	103486	0.995

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		84.7		
	Tl	205	106.369			
	Pb	208	110.321			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

Report Date/Time: Thursday, March 18, 2010 13:36:11

Page 1

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 13:38:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 6.443

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175	ug/L		125613	125613.205
	Tl	205	50.011 ug/L	6.600	234299	1.868
	Pb	208	51.041 ug/L	5.083	286134	2.280

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		102.1		
	Tl	205	100.021			
	Pb	208	102.083			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 13:40:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 7.444

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		122230	122229.575
	Tl	205	0.292 ug/L	7.898	1601	0.011
[	Pb	208	0.010 ug/L	29.281	99	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.3		
	Tl	205				
[	Pb	208				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#3 - Summary Report

Sample ID: 247335001

Sample Date/Time: Thursday, March 18, 2010 13:42:57

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\247335001.445

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		116172	116171.662
	Tl	205	0.093 ug/L	19.859	653	0.003
[	Pb	208	0.124 ug/L	6.387	689	0.006

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		94.4		
	Tl	205				
[	Pb	208				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: 1202047706

Sample Date/Time: Thursday, March 18, 2010 13:52:25

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\1202047706.449

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		116646	116645.931
TI 205	-0.005	ug/L	72.673	229	-0.000
[ Pb 208	0.071	ug/L	2.749	411	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			94.8		
TI 205					
[ Pb 208					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047706

Report Date/Time: Thursday, March 18, 2010 13:52:47

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## ICPMS#3 - Summary Report

Sample ID: 1202047707

Sample Date/Time: Thursday, March 18, 2010 13:54:49

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 955134|1|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\1202047707.450

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		118958	118957.744
	Tl	205	71.774 ug/L	6.950	318822	2.681
[	Pb	208	42.155 ug/L	4.875	224120	1.883

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		96.7		
	Tl	205				
[	Pb	208				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047707

Report Date/Time: Thursday, March 18, 2010 13:55:11

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## ICPMS#3 - Summary Report

Sample ID: 1202047708

Sample Date/Time: Thursday, March 18, 2010 13:57:11

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 955134|5|prb

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\1202047708.451

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		123476	123476.334
	Tl 205	3.174	ug/L	6.677	14886	0.119
[	Pb 208	0.051	ug/L	9.535	324	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		100.4			
	Tl 205					
[	Pb 208					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 13:59:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 6.452

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		127052	127052.305
	Tl	205	ug/L	7.663	230359	1.821
[	Pb	208	ug/L	10.121	282275	2.239

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		103.3		
	Tl	205	97.477			
[	Pb	208	100.220			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#3 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 14:01:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\misc.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 7.453

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		123596	123595.514
	Tl	205	1.160 ug/L	8.988	5625	0.043
[	Pb	208	0.010 ug/L	15.470	102	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		100.5		
	Tl	205				
[	Pb	208				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limits ( +/- PQL)

### QC Action

QC Action Line: Continue

## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Monday, March 15, 2010 11:49:49

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.731

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		3870.9		3870.924		21.944		0.6
Mg	24.0		48922.4		48922.432		465.568		1.0
Co	58.9		88703.4		88703.374		1147.297		1.3
Rh	102.9		170324.8		170324.804		1372.464		0.8
In	114.9		234972.6		234972.563		1929.394		0.8
Pb	208.0		237752.2		237752.248		2423.747		1.0
[> Ba	137.9		225503.8		225503.775		1300.803		0.6
[ Ba++	69.0		3607.1		0.016		0.000		1.0
[> Ce	139.9		277260.6		277260.595		1748.070		0.6
[ CeO	155.9		5905.0		0.021		0.000		1.9
Bkgd	220.0		20.5		20.500		3.571		17.4

### Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow
7.25	Lens Voltage
1450.00	ICP RF Power
-1750.00	Analog Stage Voltage
1250.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	7.0	4285.0
Co	59	13	8.0	88894.1
In	115	13	8.8	222733.6

## ICPMS #5 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	584	2050	0.668
Be	9.0	9.0	2050	2075	0.629
Mg	24.0	24.0	5691	2080	0.604
Mg	25.0	25.0	5955	2080	0.659
Mg	26.0	26.0	6150	2080	0.641
Co	58.9	58.9	14185	2110	0.626
Rh	102.9	102.9	24870	2160	0.641
In	114.9	114.9	27796	2180	0.638
Ce	139.9	139.9	33868	2200	0.646
Pb	206.0	206.0	49948	2295	0.597
Pb	207.0	207.0	50171	2240	0.634
Pb	208.0	208.0	50451	2265	0.694
U	238.1	238.0	57725	2275	0.730



## ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, March 16, 2010 04:13:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\NanI er.mth

Dataset File: C:\elandata\Dataset\100315\Blank.312

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9		ug/L		14	
>	Sc	45		ug/L		276185	
[	Mn	55		ug/L		982	
[	Cd	111		ug/L		13	
	Cd	114		ug/L		39	
>	In	115		ug/L		222407	
	Sb	121		ug/L		128	
[	Sb	123		ug/L		109	
>	Lu	175		ug/L		428405	
	Tl	205		ug/L		1004	
	Pb	208		ug/L		516	
[	U	238		ug/L		259	

Sample ID: Blank

Report Date/Time: Tuesday, March 16, 2010 04:14:18

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	0.9999
Sb	121Simple Linear	
Sb	123Simple Linear	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	
Pb	208Simple Linear	
U	238Simple Linear	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45					
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
[	Sb	123					
[>	Lu	175					
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, March 16, 2010 04:17:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\Standard 1.313

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	10.000	ug/L	1.370	3514	0.013
>	Sc	45		ug/L		269284	269283.784
[	Mn	55	10.000	ug/L	1.898	67241	0.246
[	Cd	111	10.000	ug/L	1.647	12198	0.056
	Cd	114		ug/L		29359	0.134
>	In	115		ug/L		218214	218213.854
	Sb	121	10.000	ug/L	1.251	40633	0.186
[	Sb	123		ug/L		31622	0.144
>	Lu	175		ug/L		420379	420378.861
	Tl	205	10.000	ug/L	1.162	183902	0.435
	Pb	208	10.000	ug/L	1.696	321160	0.763
[	U	238	10.000	ug/L	0.790	433254	1.030

Sample ID: Standard 1

Report Date/Time: Tuesday, March 16, 2010 04:18:14

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45					
[	Mn	55					
[	Cd	111					
	Cd	114					
[>	In	115					
	Sb	121					
[	Sb	123					
[>	Lu	175					
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, March 16, 2010 04:21:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\Standard 2.314

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	99.940	ug/L	1.024	35384	0.123
[>	Sc	45		ug/L		288559	288558.553
[	Mn	55	99.900	ug/L	0.594	646119	2.236
[	Cd	111	99.950	ug/L	0.730	123298	0.532
	Cd	114		ug/L		291495	1.257
[>	In	115		ug/L		231951	231951.221
	Sb	121	99.995	ug/L	1.067	428452	1.847
[	Sb	123		ug/L		334988	1.444
[>	Lu	175		ug/L		449491	449491.060
	Tl	205	99.798	ug/L	0.858	1625284	3.614
	Pb	208	99.821	ug/L	1.074	2903446	6.459
[	U	238	99.729	ug/L	0.867	3634435	8.084

Sample ID: Standard 2

Report Date/Time: Tuesday, March 16, 2010 04:22:11

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996



### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45					
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
[	Sb	123					
[>	Lu	175					
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, March 16, 2010 04:25:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\NanI er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 1.315

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	50.978	ug/L	0.517	18648	0.063
[>	Sc	45		ug/L		297979	297978.882
[	Mn	55	53.536	ug/L	0.138	358075	1.198
[	Cd	111	51.944	ug/L	1.150	65706	0.276
	Cd	114		ug/L		158509	0.666
[>	In	115		ug/L		237840	237839.739
	Sb	121	53.092	ug/L	0.248	233337	0.981
[	Sb	123		ug/L		180328	0.758
[>	Lu	175		ug/L		451737	451737.162
	Tl	205	54.098	ug/L	1.630	885846	1.959
	Pb	208	54.377	ug/L	0.835	1589843	3.518
[	U	238	54.367	ug/L	1.744	1990900	4.407

Sample ID: QC Std 1

Report Date/Time: Tuesday, March 16, 2010 04:26:08

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	101.956				
[>	Sc	45			107.9		
[	Mn	55	107.073				
[	Cd	111	103.887				
	Cd	114					
[>	In	115			106.9		
	Sb	121	106.183				
[	Sb	123					
[>	Lu	175			105.4		
	Tl	205	108.196				
	Pb	208	108.754				
[	U	238	108.734				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, March 16, 2010 04:29:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 2.316

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.002	ug/L	233.421	16	0.000
[>	Sc	45		ug/L		292572	292571.905
[	Mn	55	-0.009	ug/L	15.192	981	-0.000
[	Cd	111	0.009	ug/L	89.009	24	0.000
	Cd	114		ug/L		37	-0.000
[>	In	115		ug/L		230214	230213.605
	Sb	121	0.271	ug/L	1.943	1283	0.005
[	Sb	123		ug/L		1007	0.004
[>	Lu	175		ug/L		440258	440257.956
	Tl	205	0.289	ug/L	8.837	5636	0.010
	Pb	208	0.002	ug/L	44.150	591	0.000
[	U	238	0.004	ug/L	3.709	393	0.000

Sample ID: QC Std 2

Report Date/Time: Tuesday, March 16, 2010 04:30:10

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45		105.9			
[	Mn	55					
[	Cd	111					
	Cd	114					
[>	In	115		103.5			
	Sb	121					
[	Sb	123					
[>	Lu	175		102.8			
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, March 16, 2010 04:33:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 3.317

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.544	ug/L	3.060	217	0.001
>	Sc	45		ug/L		302136	302135.933
[	Mn	55	5.857	ug/L	1.968	40678	0.131
[	Cd	111	1.128	ug/L	2.249	1490	0.006
	Cd	114		ug/L		3518	0.014
>	In	115		ug/L		246106	246106.254
	Sb	121	3.132	ug/L	1.733	14377	0.058
[	Sb	123		ug/L		10996	0.044
>	Lu	175		ug/L		458917	458916.862
	Tl	205	1.287	ug/L	1.484	22466	0.047
	Pb	208	2.451	ug/L	0.800	73317	0.159
[	U	238	0.295	ug/L	0.579	11252	0.024



## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9	108.821					
>	Sc	45		109.4				
[	Mn	55	117.146					
[	Cd	111	112.812					
	Cd	114						
>	In	115		110.7				
	Sb	121	104.395					
[	Sb	123						
>	Lu	175		107.1				
	Tl	205	128.727					
	Pb	208	122.526					
[	U	238	147.502					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	U	238	CRDL is out of limits

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, March 16, 2010 04:37:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\NanI er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 4.318

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.111	ug/L	13.242	53	0.000
>	Sc	45		ug/L		282771	282770.617
[	Mn	55	6.320	ug/L	1.018	40998	0.141
[	Cd	111	0.580	ug/L	20.574	704	0.003
	Cd	114		ug/L		7739	0.034
>	In	115		ug/L		224581	224580.926
	Sb	121	0.136	ug/L	4.988	695	0.003
[	Sb	123		ug/L		541	0.002
[>	Lu	175		ug/L		425219	425219.080
	Tl	205	0.054	ug/L	1.527	1831	0.002
	Pb	208	0.234	ug/L	0.773	6944	0.015
[	U	238	-0.003	ug/L	23.875	152	-0.000

Sample ID: QC Std 4

Report Date/Time: Tuesday, March 16, 2010 04:38:06

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % DI	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		102.4			
[	Mn	55	108.958				
[	Cd	111	130.608				
	Cd	114					
>	In	115		101.0			
	Sb	121					
[	Sb	123					
>	Lu	175		99.3			
	Tl	205					
	Pb	208	123.699				
[	U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, March 16, 2010 04:41:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanl er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 5.319

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	19.506	ug/L	2.939	6665	0.024
[>	Sc	45		ug/L		278066	278065.650
[	Mn	55	28.722	ug/L	2.504	179667	0.643
[	Cd	111	20.629	ug/L	0.268	24885	0.110
	Cd	114		ug/L		66278	0.292
[>	In	115		ug/L		226719	226718.869
	Sb	121	22.466	ug/L	0.480	94196	0.415
[	Sb	123		ug/L		73026	0.322
[>	Lu	175		ug/L		426558	426558.436
	Tl	205	22.088	ug/L	0.651	342143	0.800
	Pb	208	22.424	ug/L	1.168	619384	1.451
[	U	238	24.959	ug/L	0.878	863321	2.023

Sample ID: QC Std 5

Report Date/Time: Tuesday, March 16, 2010 04:42:05

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	97.529				
>	Sc	45		100.7			
[	Mn	55	111.327				
[	Cd	111	100.903				
	Cd	114					
>	In	115		101.9			
	Sb	121	112.329				
[	Sb	123					
>	Lu	175		99.6			
	Tl	205	110.441				
	Pb	208	111.071				
[	U	238	124.796				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	U	238	ICSAB is out of limits

### QC Action

QC Action Line: Continue



## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, March 16, 2010 04:45:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 6.320

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	51.389	ug/L	0.827	18469	0.063
[>	Sc	45		ug/L		292787	292786.701
[	Mn	55	54.464	ug/L	1.335	357862	1.219
[	Cd	111	52.093	ug/L	0.383	65579	0.277
	Cd	114		ug/L		157680	0.666
[>	In	115		ug/L		236665	236665.089
	Sb	121	53.707	ug/L	0.683	234876	0.992
[	Sb	123		ug/L		181107	0.765
[>	Lu	175		ug/L		446405	446404.981
	Tl	205	54.021	ug/L	1.115	874217	1.956
	Pb	208	55.176	ug/L	0.754	1594215	3.570
[	U	238	55.415	ug/L	0.205	2005562	4.492

Sample ID: QC Std 6

Report Date/Time: Tuesday, March 16, 2010 04:46:04

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	102.777				
>	Sc	45		106.0			
[	Mn	55	108.928				
[	Cd	111	104.187				
	Cd	114					
>	In	115		106.4			
	Sb	121	107.415				
[	Sb	123					
>	Lu	175		104.2			
	Tl	205	108.042				
	Pb	208	110.352				
[	U	238	110.830				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Pb	208	208CCV is out of limits (+/- 10%)
QC Std 6	U	238	238CCV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, March 16, 2010 04:49:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lanier.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 7.321

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.006	ug/L	117.633	17	0.000
>	Sc	45		ug/L		292805	292805.256
[	Mn	55	-0.006	ug/L	104.234	998	-0.000
[	Cd	111	0.004	ug/L	295.441	18	0.000
	Cd	114		ug/L		50	0.000
>	In	115		ug/L		234233	234232.683
	Sb	121	0.127	ug/L	2.629	685	0.002
[	Sb	123		ug/L		519	0.002
[>	Lu	175		ug/L		445298	445297.622
	Tl	205	0.367	ug/L	8.690	6956	0.013
	Pb	208	0.003	ug/L	10.276	617	0.000
[	U	238	0.005	ug/L	6.064	431	0.000

Sample ID: QC Std 7

Report Date/Time: Tuesday, March 16, 2010 04:50:06

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
>	Sc	45			106.0			
	Mn	55						
	Cd	111						
	Cd	114						
>	In	115			105.3			
	Sb	121						
	Sb	123						
>	Lu	175			103.9			
	Tl	205						
	Pb	208						
	U	238						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202047704

Sample Date/Time: Tuesday, March 16, 2010 04:53:04

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 955134|1|baj

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\1202047704.322

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.004	ug/L	110.294	17	0.000
[>	Sc	45		ug/L		298817	298816.583
[	Mn	55	0.132	ug/L	3.499	1944	0.003
[	Cd	111	0.011	ug/L	39.863	26	0.000
	Cd	114		ug/L		39	-0.000
[>	In	115		ug/L		224388	224387.748
	Sb	121	0.073	ug/L	4.859	433	0.001
[	Sb	123		ug/L		371	0.001
[>	Lu	175		ug/L		435213	435212.895
	Tl	205	0.095	ug/L	4.565	2515	0.003
	Pb	208	-0.003	ug/L	17.445	450	-0.000
[	U	238	-0.005	ug/L	7.658	89	-0.000

Sample ID: 1202047704

Report Date/Time: Tuesday, March 16, 2010 04:54:05

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996



### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
>	Sc	45			108.2			
[	Mn	55						
[	Cd	111						
	Cd	114						
>	In	115			100.9			
	Sb	121						
[	Sb	123						
[>	Lu	175			101.6			
	Tl	205						
	Pb	208						
[	U	238						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202047705

Sample Date/Time: Tuesday, March 16, 2010 04:57:03

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 955134|1|baj

Method File: c:\elandata\Method\lanl er.mth

Dataset File: C:\elandata\Dataset\100315\1202047705.323

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	53.563	ug/L	1.530	19285	0.066
>	Sc	45		ug/L		293297	293296.910
[	Mn	55	57.019	ug/L	1.698	375280	1.276
[	Cd	111	55.906	ug/L	2.462	64834	0.297
	Cd	114		ug/L		156876	0.719
>	In	115		ug/L		218083	218082.730
	Sb	121	0.038	ug/L	21.334	278	0.001
[	Sb	123		ug/L		248	0.001
>	Lu	175		ug/L		421803	421802.974
	Tl	205	54.252	ug/L	1.294	829545	1.964
	Pb	208	59.068	ug/L	2.101	1612166	3.822
[	U	238	57.999	ug/L	2.685	1982702	4.702

Sample ID: 1202047705

Report Date/Time: Tuesday, March 16, 2010 04:58:04

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		106.2			
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115		98.1			
	Sb	121					
[	Sb	123					
>	Lu	175		98.5			
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, March 16, 2010 05:24:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ani er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 8.330

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	51.005	ug/L	1.353	18265	0.063
[>	Sc	45		ug/L		291694	291694.457
[	Mn	55	53.353	ug/L	1.123	349328	1.194
[	Cd	111	51.419	ug/L	2.195	64622	0.273
	Cd	114		ug/L		156325	0.661
[>	In	115		ug/L		236344	236344.108
	Sb	121	52.811	ug/L	2.222	230574	0.975
[	Sb	123		ug/L		179177	0.758
[>	Lu	175		ug/L		451974	451974.457
	Tl	205	51.129	ug/L	1.743	837723	1.851
	Pb	208	53.469	ug/L	1.894	1563942	3.460
[	U	238	53.685	ug/L	1.355	1966981	4.352

Sample ID: QC Std 8

Report Date/Time: Tuesday, March 16, 2010 05:25:54

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	102.009				
>	Sc	45		105.6			
[	Mn	55	106.707				
[	Cd	111	102.838				
	Cd	114					
>	In	115		106.3			
	Sb	121	105.623				
[	Sb	123					
>	Lu	175		105.5			
	Tl	205	102.259				
	Pb	208	106.937				
[	U	238	107.370				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, March 16, 2010 05:28:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Vanl er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 9.331

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.009	ug/L	91.940	18	0.000
>	Sc	45		ug/L		289691	289691.329
[	Mn	55	-0.006	ug/L	180.966	989	-0.000
[	Cd	111	0.013	ug/L	38.416	30	0.000
	Cd	114		ug/L		48	0.000
>	In	115		ug/L		232771	232770.839
	Sb	121	0.105	ug/L	0.830	583	0.002
[	Sb	123		ug/L		475	0.002
[>	Lu	175		ug/L		439626	439626.310
	Tl	205	0.381	ug/L	7.980	7089	0.014
	Pb	208	0.003	ug/L	40.711	611	0.000
[	U	238	0.003	ug/L	15.019	362	0.000

Sample ID: QC Std 9

Report Date/Time: Tuesday, March 16, 2010 05:29:55

Page 1



## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45					104.9
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115					104.7
	Sb	121					
[	Sb	123					
>	Lu	175					102.6
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 247335001

Sample Date/Time: Tuesday, March 16, 2010 05:32:54

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955134|1|baj

Method File: c:\elandata\Method\Nani er.mth

Dataset File: C:\elandata\Dataset\100315\247335001.332

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.013	ug/L	108.361	20	0.000
>	Sc	45		ug/L		294589	294589.074
[	Mn	55	0.737	ug/L	1.224	5909	0.017
[	Cd	111	0.016	ug/L	35.270	30	0.000
	Cd	114		ug/L		49	0.000
>	In	115		ug/L		212000	212000.341
	Sb	121	0.095	ug/L	2.484	492	0.002
[	Sb	123		ug/L		397	0.001
[>	Lu	175		ug/L		410603	410603.452
	Tl	205	0.111	ug/L	6.772	2608	0.004
	Pb	208	0.103	ug/L	1.531	3218	0.007
[	U	238	0.005	ug/L	16.082	403	0.000

Sample ID: 247335001

Report Date/Time: Tuesday, March 16, 2010 05:33:55

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
>	Sc	45		106.7				
[	Mn	55						
[	Cd	111						
	Cd	114						
>	In	115		95.3				
	Sb	121						
[	Sb	123						
>	Lu	175		95.8				
	Tl	205						
	Pb	208						
[	U	238						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202047706

Sample Date/Time: Tuesday, March 16, 2010 05:48:49

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 955134[1]ba]

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\1202047706.336

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.002	ug/L	518.300	16	0.000
>	Sc	45		ug/L		289906	289906.494
[	Mn	55	0.403	ug/L	3.036	3647	0.009
[	Cd	111	0.007	ug/L	167.141	19	0.000
	Cd	114		ug/L		45	0.000
>	In	115		ug/L		207890	207890.170
	Sb	121	0.001	ug/L	326.146	125	0.000
[	Sb	123		ug/L		104	0.000
>	Lu	175		ug/L		405894	405893.932
	Tl	205	-0.009	ug/L	57.654	816	-0.000
	Pb	208	0.070	ug/L	1.615	2315	0.004
[	U	238	-0.005	ug/L	5.660	84	-0.000

Sample ID: 1202047706

Report Date/Time: Tuesday, March 16, 2010 05:49:50

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		105.0			
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115		93.5			
	Sb	121					
[	Sb	123					
>	Lu	175		94.7			
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type   Analyte                      MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#5 - Summary Report

Sample ID: 1202047707

Sample Date/Time: Tuesday, March 16, 2010 05:52:48

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 955134|1|baj

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\1202047707.337

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	47.978	ug/L	1.147	17092	0.059
[>	Sc	45		ug/L		290186	290185.922
[	Mn	55	50.830	ug/L	0.241	331137	1.138
[	Cd	111	11.010	ug/L	0.403	12222	0.059
	Cd	114		ug/L		27948	0.134
[>	In	115		ug/L		208523	208522.577
	Sb	121	214.752	ug/L	0.848	827112	3.966
[	Sb	123		ug/L		654773	3.140
[>	Lu	175		ug/L		403416	403415.951
	Tl	205	79.699	ug/L	4.724	1164910	2.886
	Pb	208	44.273	ug/L	1.117	1156069	2.865
[	U	238	54.518	ug/L	1.096	1783027	4.419

Sample ID: 1202047707

Report Date/Time: Tuesday, March 16, 2010 05:53:48

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
>	Sc	45			105.1			
	Mn	55						
	Cd	111						
	Cd	114						
>	In	115			93.8			
	Sb	121						
	Sb	123						
>	Lu	175			94.2			
	Tl	205						
	Pb	208						
	U	238						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202047708

Sample Date/Time: Tuesday, March 16, 2010 05:56:47

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 955134|5|baj

Method File: c:\elandata\Method\lanl er.mth

Dataset File: C:\elandata\Dataset\100315\1202047708.338

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.014	ug/L	55.862	19	0.000
[>	Sc	45		ug/L		274889	274888.611
[	Mn	55	0.104	ug/L	13.615	1620	0.002
[	Cd	111	0.006	ug/L	177.791	19	0.000
	Cd	114		ug/L		42	0.000
[>	In	115		ug/L		216338	216338.084
	Sb	121	0.024	ug/L	30.034	220	0.000
[	Sb	123		ug/L		181	0.000
[>	Lu	175		ug/L		415119	415118.860
	Tl	205	2.663	ug/L	4.685	41002	0.096
	Pb	208	0.008	ug/L	5.632	705	0.000
[	U	238	-0.003	ug/L	44.481	160	-0.000

Sample ID: 1202047708

Report Date/Time: Tuesday, March 16, 2010 05:57:47

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		99.5			
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115		97.3			
	Sb	121					
[	Sb	123					
>	Lu	175		96.9			
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, March 16, 2010 06:00:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\anl er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 8.339

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	50.658	ug/L	1.216	17895	0.062
[>	Sc	45		ug/L		287763	287763.030
[	Mn	55	53.558	ug/L	0.102	345940	1.199
[	Cd	111	51.265	ug/L	2.503	63523	0.273
	Cd	114		ug/L		151785	0.651
[>	In	115		ug/L		233007	233007.099
	Sb	121	52.243	ug/L	2.052	224904	0.965
[	Sb	123		ug/L		175434	0.753
[>	Lu	175		ug/L		433828	433827.704
	Tl	205	47.518	ug/L	2.798	747405	1.721
	Pb	208	54.622	ug/L	0.666	1533754	3.534
[	U	238	54.932	ug/L	1.102	1932052	4.453

Sample ID: QC Std 8

Report Date/Time: Tuesday, March 16, 2010 06:01:47

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996



### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	101.315				
>	Sc	45		104.2			
[	Mn	55	107.116				
[	Cd	111	102.529				
	Cd	114					
>	In	115		104.8			
	Sb	121	104.485				
[	Sb	123					
[>	Lu	175		101.3			
	Tl	205	95.037				
	Pb	208	109.244				
[	U	238	109.863				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, March 16, 2010 06:04:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\NanI er.mth

Dataset File: C:\elandata\Dataset\100315\QC Std 9.340

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.043	ug/L	37.232	30	0.000
[>	Sc	45		ug/L		283169	283169.213
[	Mn	55	-0.006	ug/L	118.489	968	-0.000
[	Cd	111	0.000	ug/L	6595.069	13	0.000
	Cd	114		ug/L		53	0.000
[>	In	115		ug/L		226022	226021.504
	Sb	121	0.111	ug/L	10.131	592	0.002
[	Sb	123		ug/L		459	0.002
[>	Lu	175		ug/L		428364	428364.066
	Tl	205	1.516	ug/L	2.421	24512	0.055
	Pb	208	0.004	ug/L	25.713	636	0.000
[	U	238	0.006	ug/L	39.600	477	0.001

Sample ID: QC Std 9

Report Date/Time: Tuesday, March 16, 2010 06:05:48

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9996

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		102.5			
[	Mn	55					
[	Cd	111					
	Cd	114					
>	In	115		101.6			
	Sb	121					
[	Sb	123					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Tl	205	CCB is out of limits (+/- PQL)

### QC Action

QC Action Line: Continue

## ICPMS #6 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Friday, March 19, 2010 20:10:42

Sample Description:

Method File: C:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\100318\Sample.301

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	2092.8	2092.753	42.063	2.0
Mg	24.0	26958.0	26958.016	371.179	1.4
Co	58.9	36322.5	36322.523	413.529	1.1
Rh	102.9	69674.5	69674.505	596.093	0.9
In	114.9	76811.3	76811.350	372.060	0.5
Pb	208.0	41087.0	41087.007	505.911	1.2
[> Ba	137.9	69276.7	69276.726	941.574	1.4
[ Ba++	69.0	1977.3	0.029	0.001	2.1
[> Ce	139.9	89510.2	89510.194	1302.404	1.5
[ CeO	155.9	1337.6	0.015	0.000	2.4
Bkgd	220.0	13.9	13.900	1.194	8.6

### Current Optimization File Data

Current Value	Description
0.80	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1800.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
30.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	6.5	4422.0
Co	59	21	7.3	57833.8
In	115	21	8.5	116713.8

## ICPMS #6 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	584	2080	0.651
Be	9.0	9.0	2025	2080	0.673
Mg	24.0	24.0	5686	2120	0.636
Mg	25.0	25.0	5918	2080	0.717
Mg	26.0	26.1	6161	2120	0.680
Co	58.9	58.9	14184	2170	0.661
Rh	102.9	102.8	24853	2230	0.722
In	114.9	114.8	27769	2260	0.706
Ce	139.9	139.9	33854	2280	0.760
Pb	206.0	206.0	49936	2420	0.665
Pb	207.0	206.9	50147	2385	0.708
Pb	208.0	208.0	50427	2430	0.725
U	238.1	238.0	57729	2470	0.707

## ICPMS#6 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, March 20, 2010 03:37:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\Blank.115

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115	ug/L		121666	
	Sb	121	ug/L		1106	
	Sb	123	ug/L		845	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115				
	Sb	121				
	Sb	123				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Saturday, March 20, 2010 03:40:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\Standard 1.116

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		122850	122850.273
	Sb 121	10.000	ug/L	15.351	24635	0.193
[	Sb 123		ug/L		18854	0.147

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115					
	Sb 121					
[	Sb 123					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Saturday, March 20, 2010 03:43:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\Standard 2.117

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115	ug/L		119912	119911.854
	Sb	121	100.064 ug/L	11.312	247249	2.063
[	Sb	123	ug/L		192788	1.606

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115				
	Sb	121				
[	Sb	123				

### QC Out Of Limits

Measurement Type: Analyte      Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Saturday, March 20, 2010 03:46:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 1.118

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		121031	121030.645
	Sb 121	46.500	ug/L	12.697	116511	0.958
	Sb 123		ug/L		89436	0.735

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115		99.5			
	Sb 121	93.000				
	Sb 123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, March 20, 2010 03:50:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 2.119

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		120724	120724.276
	Sb 121	0.072	ug/L	52.366	1273	0.001
	Sb 123		ug/L		1004	0.001

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115			99.2		
	Sb 121					
	Sb 123					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, March 20, 2010 03:53:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 3.120

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		124196	124196.420
	Sb 121	2.009	ug/L	13.160	6247	0.041
	Sb 123		ug/L		4905	0.033

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115			102.1		
	Sb 121	100.455				
	Sb 123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, March 20, 2010 03:56:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 4.121

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		116778	116778.084
	Sb 121	0.003	ug/L	895.738	1066	0.000
[	Sb 123		ug/L		848	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In 115			96.0			
	Sb 121	2.942					
[	Sb 123						

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Saturday, March 20, 2010 03:59:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 5.122

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		117124	117124.439
	Sb 121	21.624	ug/L	12.327	53012	0.446
[	Sb 123		ug/L		40519	0.340

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In 115		96.3				
	Sb 121	107.583					
[	Sb 123						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, March 20, 2010 04:03:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 6.123

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In 115		ug/L		118879	118878.589
	Sb 121	47.908	ug/L	14.506	117545	0.987
	Sb 123		ug/L		91213	0.765

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
>	In 115			97.7			
	Sb 121	95.815					
	Sb 123						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, March 20, 2010 04:06:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 7.124

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		118426	118426.331
	Sb 121	-0.224	ug/L	12.405	526	-0.005
	Sb 123		ug/L		418	-0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115		97.3			
	Sb 121					
	Sb 123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 1202075029

Sample Date/Time: Saturday, March 20, 2010 04:09:36

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 966864|1|rmj

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\1202075029.125

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		118352	118351.872
	Sb 121	0.196	ug/L	33.079	1545	0.004
	Sb 123		ug/L		1220	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115		97.3			
	Sb 121					
	Sb 123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202075030

Sample Date/Time: Saturday, March 20, 2010 04:12:50

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 966864|1|rmj

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\1202075030.126

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In 115		ug/L		119101	119101.144
	Sb 121	54.136	ug/L	12.661	133227	1.116
	Sb 123		ug/L		103801	0.869

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
>	In 115		97.9				
	Sb 121						
	Sb 123						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, March 20, 2010 04:16:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 6.127

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		122147	122147.386
	Sb 121	45.188	ug/L	13.039	114174	0.931
	Sb 123		ug/L		89073	0.726

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115		100.4			
	Sb 121	90.375				
	Sb 123					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, March 20, 2010 04:19:17

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 7.128

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115	ug/L		119000	118999.993
	Sb	121	ug/L	4.112	378	-0.006
	Sb	123	ug/L		297	-0.004

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel.	% Difference
[>	In	115		97.8			
	Sb	121					
	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247335001

Sample Date/Time: Saturday, March 20, 2010 04:41:52

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 966864|1|rmj

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\247335001.135

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		120353	120353.370
	Sb 121	-0.079	ug/L	58.695	893	-0.002
[	Sb 123		ug/L		709	-0.001

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In 115		98.9				
	Sb 121						
[	Sb 123						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, March 20, 2010 04:48:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 6.137

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> In 115		ug/L		122331	122330.687
Sb 121	47.863	ug/L	9.592	121403	0.987
[ Sb 123		ug/L		93429	0.760

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	

### QC Calculated Values

Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[> In 115				100.5				
Sb 121		95.726						
[ Sb 123								

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, March 20, 2010 04:51:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 7.138

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
In	115		ug/L		121455	121454.501
Sb	121	-0.327	ug/L	3.072	283	-0.007
Sb	123		ug/L		232	-0.005

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
In	115		99.8			
Sb	121					
Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202075031

Sample Date/Time: Saturday, March 20, 2010 05:01:15

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 966864|1|rmj

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\1202075031.141

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		117363	117363.313
	Sb 121	-0.148	ug/L	18.223	705	-0.003
[	Sb 123		ug/L		587	-0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[>	In 115			96.5		
	Sb 121					
[	Sb 123					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 1202075032

Sample Date/Time: Saturday, March 20, 2010 05:04:29

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 966864|1|rmj

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\1202075032.142

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		117320	117320.229
	Sb 121	208.350	ug/L	14.047	501327	4.295
[	Sb 123		ug/L		390901	3.349

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In 115			96.4			
	Sb 121						
[	Sb 123						

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202075033

Sample Date/Time: Saturday, March 20, 2010 05:07:43

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 966864|5|rmj

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\1202075033.143

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		120210	120210.298
	Sb 121	-0.281	ug/L	5.074	396	-0.006
	Sb 123		ug/L		315	-0.004

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115		98.8			
	Sb 121					
	Sb 123					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, March 20, 2010 05:10:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 6.144

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		121600	121599.722
	Sb 121	47.061	ug/L	13.287	118382	0.970
L	Sb 123		ug/L		91762	0.751

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In 115		99.9			
	Sb 121	94.122				
L	Sb 123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, March 20, 2010 05:14:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb.mth

Dataset File: C:\elandata\Dataset\100319\QC Std 7.145

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115	ug/L		121391	121390.527
	Sb	121	ug/L	1.449	249	-0.007
[	Sb	123	ug/L		204	-0.005

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In	115		99.8			
	Sb	121					
[	Sb	123					

### QC Out Of Limits

Measurement Type    Analyte    Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Method Name: WATER  
 Method Description: 7470A, 245.2, ILM04 ANALYST JXL  
 Element: Hg

Date: 02/25/2010  
 Technique: FI-MHS  
 Calibration Type:  
 Hg, Calc. Intercept : Linear  
 Wavelength: 253.7 nm  
 Sample Info Name: 022510W1.SIF Results Data Set Name: 022510W1

Element: Hg Seq. No.: 36 AS Loc.: 1 Date: 02/25/2010  
 Sample ID: Calib Blank

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0015	0.0015	10:54:34	No
2			0.0014	0.0014	10:55:09	No
Mean:			0.0015			
SD :			0.0001			
%RSD:			5.3762			

Auto-zero performed.

Element: Hg Seq. No.: 37 AS Loc.: 2 Date: 02/25/2010  
 Sample ID: S0.2

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0011	0.0026	10:56:32	No
2			0.0011	0.0026	10:57:07	No
Mean:			0.0011			
SD :			0.0000			
%RSD:			2.3514			

[Hg] Standard number 1 applied. [0.200]  
 Correlation Coefficient: 1.00000 Slope: 0.00551  
 Intercept : 0.00000

Element: Hg Seq. No.: 38 AS Loc.: 3 Date: 02/25/2010  
 Sample ID: S0.5

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0035	0.0049	10:58:31	No
2			0.0033	0.0048	10:59:06	No
Mean:			0.0034			
SD :			0.0001			
%RSD:			3.7263			

[Hg] Standard number 2 applied. [0.500]  
 Correlation Coefficient: 0.99653 Slope: 0.00682  
 Intercept : -0.00010

Element: Hg Seq. No.: 39 AS Loc.: 4 Date: 02/25/2010  
 Sample ID: S2.0

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0133	0.0148	11:00:31	No
2			0.0133	0.0148	11:01:05	No
Mean:			0.0133			
SD :			0.0000			
%RSD:			0.2404			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99980  
Intercept : -0.00007

Slope: 0.00670

=====

Element: Hg Seq. No.: 40 AS Loc.: 5 Date: 02/25/2010  
Sample ID: S5.0

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0332	0.0346	11:02:31	No
2			0.0330	0.0345	11:03:06	No
Mean:			0.0331			
SD :			0.0001			
%RSD:			0.2985			

[Hg] Standard number 4 applied. [5.000]  
Correlation Coefficient: 0.99996 Slope: 0.00663  
Intercept : -0.00004

=====

Element: Hg Seq. No.: 41 AS Loc.: 6 Date: 02/25/2010  
Sample ID: S10

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0658	0.0673	11:04:33	No
2			0.0657	0.0672	11:05:07	No
Mean:			0.0658			
SD :			0.0001			
%RSD:						

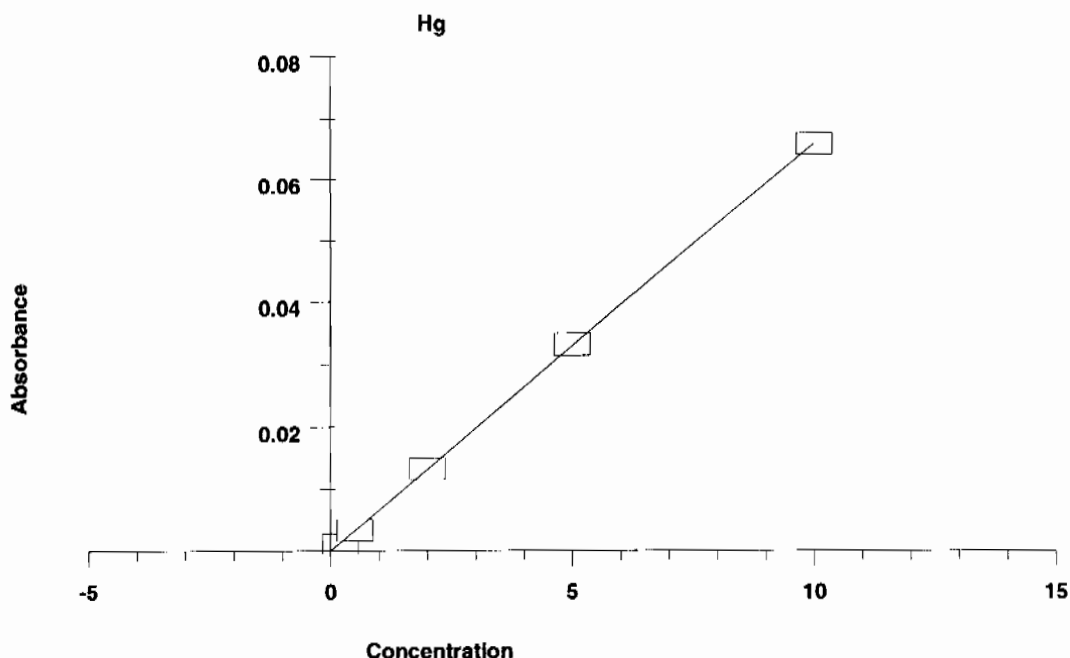
[Hg] Standard number 5 applied. [10.00]  
Correlation Coefficient: 0.99998 Slope: 0.00658  
Intercept : 0.00002

-----

#### Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0015	---	----	----	----
S0.2	0.0011	0.200	0.165	0.0000	2.4
S0.5	0.0034	0.500	0.510	0.0001	3.7
S2.0	0.0133	2.000	2.019	0.0000	0.2
S5.0	0.0331	5.000	5.024	0.0001	0.3
S10	0.0658	10.000	9.984	0.0001	----
Correlation Coefficient: 0.99998		Slope:	0.00658	Intercept:	0.0000

-----



=====  
 Element: Hg Seq. No.: 42 AS Loc.: 9 Date: 02/25/2010  
 Sample ID: ICV

Repl #	SampleConc µg/L	StdConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.138	5.138	0.0338	0.0353	11:06:35	No
2	5.110	5.110	0.0337	0.0351	11:07:09	No
Mean:	5.124	5.124	0.0338			
SD :	0.0203	0.0203	0.0001			
%RSD:	0.4	0.4	0.3959			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 43 AS Loc.: 10 Date: 02/25/2010  
 Sample ID: ICB

Repl #	SampleConc µg/L	StdConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.006	0.006	0.0001	0.0015	11:08:31	No
2	-0.010	-0.010	0.0000	0.0014	11:09:06	No
Mean:	-0.002	-0.002	0.0000			
SD :	0.0111	0.0111	0.0001			
%RSD:	647.6	647.6	1145.2686			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 44 AS Loc.: 11 Date: 02/25/2010  
 Sample ID: CRDL

Repl #	SampleConc µg/L	StdConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.258	0.258	0.0017	0.0032	11:10:28	No
2	0.257	0.257	0.0017	0.0032	11:11:03	No
Mean:	0.257	0.257	0.0017			
SD :	0.0012	0.0012	0.0000			
%RSD:	0.4	0.4	0.4436			

QC value within specified limits.

=====

Element: Hg Seq. No.: 45 AS Loc.: 7 Date: 02/25/2010

Sample ID: CCV

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.949	4.949	0.0326	0.0341	11:12:28	No
2	4.924	4.924	0.0324	0.0339	11:13:03	No
Mean:	4.937	4.937	0.0325			
SD :	0.0175	0.0175	0.0001			
%RSD:	0.4	0.4	0.3545			

QC value within specified limits.

=====

Element: Hg Seq. No.: 46 AS Loc.: 8 Date: 02/25/2010

Sample ID: CCB

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0003	0.0018	11:14:31	No
2	0.017	0.017	0.0001	0.0016	11:15:06	No
Mean:	0.031	0.031	0.0002			
SD :	0.0186	0.0186	0.0001			
%RSD:	60.9	60.9	56.0211			

QC value within specified limits.

=====

Element: Hg Seq. No.: 47 AS Loc.: 22 Date: 02/25/2010

Sample ID: 1202051914|i||956984|MB

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.040	0.040	0.0003	0.0018	11:16:31	No
2	0.002	0.002	0.0000	0.0015	11:17:06	No
Mean:	0.021	0.021	0.0002			
SD :	0.0270	0.0270	0.0002			
%RSD:	129.8	129.8	114.9934			

=====

Element: Hg Seq. No.: 48 AS Loc.: 23 Date: 02/25/2010

Sample ID: 1202051915|i||LCS

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.109	2.109	0.0139	0.0154	11:18:30	No
2	2.117	2.117	0.0140	0.0154	11:19:05	No
Mean:	2.113	2.113	0.0139			
SD :	0.0053	0.0053	0.0000			
%RSD:	0.3	0.3	0.2514			

=====

Element: Hg Seq. No.: 49 AS Loc.: 24 Date: 02/25/2010

Sample ID: 247850001|i|||

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.041	0.041	0.0003	0.0018	11:20:29	No
2	0.023	0.023	0.0002	0.0016	11:21:04	No
Mean:	0.032	0.032	0.0002			
SD :	0.0127	0.0127	0.0001			
%RSD:	40.1	40.1	36.9422			

=====

Element: Hg Seq. No.: 50 AS Loc.: 25 Date: 02/25/2010

Sample ID: 1202051916|i|||DUP



%RSD: 67.0 67.0 31.8435

=====  
 Element: Hg Seq. No.: 56 AS Loc.: 31 Date: 02/25/2010  
 Sample ID: 247850005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.477	0.477	0.0032	0.0046	11:34:35	No
2	0.440	0.440	0.0029	0.0044	11:35:10	No
Mean:	0.459	0.459	0.0030			
SD :	0.0260	0.0260	0.0002			
%RSD:	5.7	5.7	5.6376			

=====  
 Element: Hg Seq. No.: 57 AS Loc.: 7 Date: 02/25/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.027	5.027	0.0331	0.0346	11:36:37	No
2	5.029	5.029	0.0331	0.0346	11:37:11	No
Mean:	5.028	5.028	0.0331			
SD :	0.0012	0.0012	0.0000			
%RSD:						

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 58 AS Loc.: 8 Date: 02/25/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.027	0.027	0.0002	0.0017	11:38:39	No
2	0.004	0.004	0.0000	0.0015	11:39:14	No
Mean:	0.015	0.015	0.0001			
SD :	0.0162	0.0162	0.0001			
%RSD:	105.3	105.3	89.6157			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 59 AS Loc.: 32 Date: 02/25/2010  
 Sample ID: 247850006|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.452	0.452	0.0030	0.0045	11:40:38	No
2	0.437	0.437	0.0029	0.0044	11:41:13	No
Mean:	0.444	0.444	0.0029			
SD :	0.0107	0.0107	0.0001			
%RSD:	2.4	2.4	2.3869			

=====  
 Element: Hg Seq. No.: 60 AS Loc.: 33 Date: 02/25/2010  
 Sample ID: 247850007|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.004	-0.004	0.0000	0.0015	11:42:33	No
2	-0.009	-0.009	0.0000	0.0014	11:43:07	No
Mean:	-0.006	-0.006	0.0000			
SD :	0.0034	0.0034	0.0000			
%RSD:	52.8	52.8	91.2736			

=====  
 Element: Hg Seq. No.: 61 AS Loc.: 34 Date: 02/25/2010  
 Sample ID: 247850008|i|||

%RSD: 64.2 64.2 73.9600

=====

Element: Hg Seq. No.: 67 AS Loc.: 40 Date: 02/25/2010  
 Sample ID: 246883001|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0001	0.0015	11:56:13	No
2	-0.011	-0.011	-0.0001	0.0014	11:56:48	No
Mean:	-0.002	-0.002	0.0000			
SD :	0.0131	0.0131	0.0001			
%RSD:	702.5	702.5	1607.0531			

=====

Element: Hg Seq. No.: 68 AS Loc.: 41 Date: 02/25/2010  
 Sample ID: 246883002|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0001	0.0016	11:58:12	No
2	0.010	0.010	0.0001	0.0016	11:58:47	No
Mean:	0.012	0.012	0.0001			
SD :	0.0033	0.0033	0.0000			
%RSD:	27.1	27.1	22.1377			

=====

Element: Hg Seq. No.: 69 AS Loc.: 7 Date: 02/25/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.321	5.321	0.0351	0.0365	12:00:13	No
2	5.286	5.286	0.0348	0.0363	12:00:47	No
Mean:	5.304	5.304	0.0349			
SD :	0.0249	0.0249	0.0002			
%RSD:	0.5	0.5	0.4690			

QC value within specified limits.

=====

Element: Hg Seq. No.: 70 AS Loc.: 8 Date: 02/25/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.033	0.033	0.0002	0.0017	12:02:15	No
2	0.037	0.037	0.0003	0.0017	12:02:50	No
Mean:	0.035	0.035	0.0002			
SD :	0.0030	0.0030	0.0000			
%RSD:	8.6	8.6	8.0146			

QC value within specified limits.

=====

Element: Hg Seq. No.: 71 AS Loc.: 42 Date: 02/25/2010  
 Sample ID: 246883003|i|

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.015	0.015	0.0001	0.0016	12:04:16	No
2	0.019	0.019	0.0001	0.0016	12:04:51	No
Mean:	0.017	0.017	0.0001			
SD :	0.0024	0.0024	0.0000			
%RSD:	14.0	14.0	12.0684			

=====

Element: Hg Seq. No.: 72 AS Loc.: 43 Date: 02/25/2010  
 Sample ID: 246883004|i|

%RSD: 36.0 36.0 20.1861

=====  
 Element: Hg Seq. No.: 78 AS Loc.: 49 Date: 02/25/2010  
 Sample ID: 247039002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.027	0.027	0.0002	0.0017	12:18:12	No
2	0.010	0.010	0.0001	0.0016	12:18:47	No
Mean:	0.018	0.018	0.0001			
SD :	0.0119	0.0119	0.0001			
%RSD:	64.7	64.7	56.4602			

=====  
 Element: Hg Seq. No.: 79 AS Loc.: 50 Date: 02/25/2010  
 Sample ID: 247039003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.015	0.015	0.0001	0.0016	12:20:07	No
2	0.005	0.005	0.0001	0.0015	12:20:42	No
Mean:	0.010	0.010	0.0001			
SD :	0.0068	0.0068	0.0000			
%RSD:	68.3	68.3	53.8421			

=====  
 Element: Hg Seq. No.: 80 AS Loc.: 51 Date: 02/25/2010  
 Sample ID: 247039004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.002	0.002	0.0000	0.0015	12:22:03	No
2	-0.014	-0.014	-0.0001	0.0014	12:22:39	No
Mean:	-0.006	-0.006	0.0000			
SD :	0.0115	0.0115	0.0001			
%RSD:	192.3	192.3	348.5142			

=====  
 Element: Hg Seq. No.: 81 AS Loc.: 7 Date: 02/25/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.031	5.031	0.0331	0.0346	12:24:03	No
2	5.034	5.034	0.0332	0.0346	12:24:38	No
Mean:	5.032	5.032	0.0332			
SD :	0.0018	0.0018	0.0000			
%RSD:						

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 82 AS Loc.: 8 Date: 02/25/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.029	0.029	0.0002	0.0017	12:26:06	No
2	0.016	0.016	0.0001	0.0016	12:26:41	No
Mean:	0.022	0.022	0.0002			
SD :	0.0087	0.0087	0.0001			
%RSD:	39.1	39.1	34.9168			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 83 AS Loc.: 52 Date: 02/25/2010  
 Sample ID: 247098001|i|||

%RSD: 78.9 78.9 64.7392

=====  
 Element: Hg Seq. No.: 89 AS Loc.: 58 Date: 02/25/2010  
 Sample ID: 247098004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.006	0.006	0.0001	0.0015	12:39:55	No
2	-0.002	-0.002	0.0000	0.0015	12:40:30	No
Mean:	0.002	0.002	0.0000			
SD :	0.0058	0.0058	0.0000			
%RSD:	251.8	251.8	116.7255			

=====  
 Element: Hg Seq. No.: 90 AS Loc.: 59 Date: 02/25/2010  
 Sample ID: 1202052034|i||957034|MB

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.027	0.027	0.0002	0.0017	12:41:55	No
2	-0.003	-0.003	0.0000	0.0015	12:42:30	No
Mean:	0.012	0.012	0.0001			
SD :	0.0209	0.0209	0.0001			
%RSD:	176.4	176.4	143.7482			

=====  
 Element: Hg Seq. No.: 91 AS Loc.: 60 Date: 02/25/2010  
 Sample ID: 1202052035|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	2.345	2.345	0.0155	0.0169	12:43:56	No
2	2.330	2.330	0.0154	0.0168	12:44:31	No
Mean:	2.338	2.338	0.0154			
SD :	0.0108	0.0108	0.0001			
%RSD:	0.5	0.5	0.4613			

=====  
 Element: Hg Seq. No.: 92 AS Loc.: 61 Date: 02/25/2010  
 Sample ID: 247182001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	-0.004	-0.004	0.0000	0.0015	12:45:57	No
2	-0.003	-0.003	0.0000	0.0015	12:46:31	No
Mean:	-0.003	-0.003	0.0000			
SD :	0.0009	0.0009	0.0000			
%RSD:	27.6	27.6	131.6391			

=====  
 Element: Hg Seq. No.: 93 AS Loc.: 7 Date: 02/25/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	5.071	5.071	0.0334	0.0349	12:47:58	No
2	5.094	5.094	0.0336	0.0350	12:48:32	No
Mean:	5.083	5.083	0.0335			
SD :	0.0159	0.0159	0.0001			
%RSD:	0.3	0.3	0.3128			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 94 AS Loc.: 8 Date: 02/25/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.006	-0.006	0.0000	0.0015	12:50:00	No
2	-0.002	-0.002	0.0000	0.0015	12:50:35	No
Mean:	-0.004	-0.004	0.0000			
SD :	0.0023	0.0023	0.0000			
%RSD:	57.3	57.3	177.8653			

QC value within specified limits.

=====

Element: Hg Seq. No.: 95 AS Loc.: 62 Date: 02/25/2010  
Sample ID: 247192001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.038	-0.038	-0.0002	0.0012	12:52:02	No
2	-0.039	-0.039	-0.0002	0.0012	12:52:37	No
Mean:	-0.039	-0.039	-0.0002			
SD :	0.0013	0.0013	0.0000			
%RSD:	3.2	3.2	3.4875			

=====

Element: Hg Seq. No.: 96 AS Loc.: 63 Date: 02/25/2010  
Sample ID: 247250001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	-0.0003	0.0012	12:54:00	No
2	-0.057	-0.057	-0.0004	0.0011	12:54:35	No
Mean:	-0.049	-0.049	-0.0003			
SD :	0.0115	0.0115	0.0001			
%RSD:	23.5	23.5	24.8640			

=====

Element: Hg Seq. No.: 97 AS Loc.: 64 Date: 02/25/2010  
Sample ID: 247250002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.036	-0.036	-0.0002	0.0013	12:55:55	No
2	-0.051	-0.051	-0.0003	0.0012	12:56:30	No
Mean:	-0.043	-0.043	-0.0003			
SD :	0.0105	0.0105	0.0001			
%RSD:	24.2	24.2	25.8362			

=====

Element: Hg Seq. No.: 98 AS Loc.: 65 Date: 02/25/2010  
Sample ID: 247256001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.042	-0.042	-0.0003	0.0012	12:57:49	No
2	-0.056	-0.056	-0.0004	0.0011	12:58:25	No
Mean:	-0.049	-0.049	-0.0003			
SD :	0.0103	0.0103	0.0001			
%RSD:	21.0	21.0	22.2172			

=====

Element: Hg Seq. No.: 99 AS Loc.: 66 Date: 02/25/2010  
Sample ID: 247256002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0002	0.0013	12:59:46	No
2	-0.038	-0.038	-0.0002	0.0012	13:00:21	No
Mean:	-0.032	-0.032	-0.0002			
SD :	0.0077	0.0077	0.0001			

%RSD: 23.7 23.7 25.8136

=====  
 Element: Hg Seq. No.: 100 AS Loc.: 67 Date: 02/25/2010  
 Sample ID: 247322001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.008	-0.008	0.0000	0.0014	13:01:42	No
2	-0.016	-0.016	-0.0001	0.0014	13:02:16	No
Mean:	-0.012	-0.012	-0.0001			
SD :	0.0051	0.0051	0.0000			
%RSD:	42.3	42.3	54.3606			

=====  
 Element: Hg Seq. No.: 101 AS Loc.: 68 Date: 02/25/2010  
 Sample ID: 247322002|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.040	-0.040	-0.0002	0.0012	13:03:37	No
2	-0.016	-0.016	-0.0001	0.0014	13:04:11	No
Mean:	-0.028	-0.028	-0.0002			
SD :	0.0170	0.0170	0.0001			
%RSD:	61.5	61.5	68.0719			

=====  
 Element: Hg Seq. No.: 102 AS Loc.: 69 Date: 02/25/2010  
 Sample ID: 247335001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	-0.0003	0.0012	13:05:33	No
2	-0.033	-0.033	-0.0002	0.0013	13:06:08	No
Mean:	-0.039	-0.039	-0.0002			
SD :	0.0094	0.0094	0.0001			
%RSD:	23.8	23.8	25.4861			

=====  
 Element: Hg Seq. No.: 103 AS Loc.: 70 Date: 02/25/2010  
 Sample ID: 247339001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0004	0.0011	13:07:30	No
2	-0.074	-0.074	-0.0005	0.0010	13:08:05	No
Mean:	-0.068	-0.068	-0.0004			
SD :	0.0077	0.0077	0.0001			
%RSD:	11.3	11.3	11.7966			

=====  
 Element: Hg Seq. No.: 104 AS Loc.: 71 Date: 02/25/2010  
 Sample ID: 247339002|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.066	-0.066	-0.0004	0.0011	13:09:28	No
2	-0.070	-0.070	-0.0004	0.0010	13:10:03	No
Mean:	-0.068	-0.068	-0.0004			
SD :	0.0029	0.0029	0.0000			
%RSD:	4.2	4.2	4.3655			

=====  
 Element: Hg Seq. No.: 105 AS Loc.: 7 Date: 02/25/2010  
 Sample ID: CCV

Repl	SampleConc	StdndConc	BlkCorr	Peak	Time	Peak
------	------------	-----------	---------	------	------	------

#	µg/L	µg/L	Signal	Height		Stored
1	5.211	5.211	0.0343	0.0358	13:11:29	No
2	5.179	5.179	0.0341	0.0356	13:12:04	No
Mean:	5.195	5.195	0.0342			
SD :	0.0223	0.0223	0.0001			
%RSD:	0.4	0.4	0.4289			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 106 AS Loc.: 8 Date: 02/25/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	-0.0003	0.0012	13:13:32	No
2	-0.053	-0.053	-0.0003	0.0011	13:14:07	No
Mean:	-0.050	-0.050	-0.0003			
SD :	0.0052	0.0052	0.0000			
%RSD:	10.6	10.6	11.1757			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 107 AS Loc.: 72 Date: 02/25/2010  
 Sample ID: 247350001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0004	0.0011	13:15:32	No
2	-0.057	-0.057	-0.0004	0.0011	13:16:06	No
Mean:	-0.059	-0.059	-0.0004			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.8	4.8	5.0087			

=====  
 Element: Hg Seq. No.: 108 AS Loc.: 73 Date: 02/25/2010  
 Sample ID: 247424001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0002	0.0012	13:17:30	No
2	-0.037	-0.037	-0.0002	0.0013	13:18:05	No
Mean:	-0.038	-0.038	-0.0002			
SD :	0.0016	0.0016	0.0000			
%RSD:	4.2	4.2	4.5125			

=====  
 Element: Hg Seq. No.: 109 AS Loc.: 74 Date: 02/25/2010  
 Sample ID: 247458001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.037	-0.037	-0.0002	0.0013	13:19:29	No
2	-0.043	-0.043	-0.0003	0.0012	13:20:03	No
Mean:	-0.040	-0.040	-0.0002			
SD :	0.0042	0.0042	0.0000			
%RSD:	10.4	10.4	11.1477			

=====  
 Element: Hg Seq. No.: 110 AS Loc.: 75 Date: 02/25/2010  
 Sample ID: 247540001|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0002	0.0012	13:21:27	No
2	-0.061	-0.061	-0.0004	0.0011	13:22:02	No
Mean:	-0.050	-0.050	-0.0003			
SD :	0.0156	0.0156	0.0001			

%RSD: 31.2 31.2 32.9893

=====  
 Element: Hg Seq. No.: 111 AS Loc.: 76 Date: 02/25/2010  
 Sample ID: 247548001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.048	-0.048	-0.0003	0.0012	13:23:29	No
2	-0.042	-0.042	-0.0003	0.0012	13:24:04	No
Mean:	-0.045	-0.045	-0.0003			
SD :	0.0045	0.0045	0.0000			
%RSD:	9.9	9.9	10.4989			

=====  
 Element: Hg Seq. No.: 112 AS Loc.: 77 Date: 02/25/2010  
 Sample ID: 1202052036|i|||DUP

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.062	-0.062	-0.0004	0.0011	13:25:30	No
2	-0.063	-0.063	-0.0004	0.0011	13:26:05	No
Mean:	-0.062	-0.062	-0.0004			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.5	0.5	0.5072			

=====  
 Element: Hg Seq. No.: 113 AS Loc.: 78 Date: 02/25/2010  
 Sample ID: 1202052037|i|||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.257	2.257	0.0149	0.0164	13:27:27	No
2	2.246	2.246	0.0148	0.0163	13:28:02	No
Mean:	2.252	2.252	0.0148			
SD :	0.0078	0.0078	0.0001			
%RSD:	0.3	0.3	0.3455			

=====  
 Element: Hg Seq. No.: 114 AS Loc.: 79 Date: 02/25/2010  
 Sample ID: 1202052041|i|5|SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.109	-0.109	-0.0007	0.0008	13:29:21	No
2	-0.095	-0.095	-0.0006	0.0009	13:29:56	No
Mean:	-0.102	-0.102	-0.0007			
SD :	0.0094	0.0094	0.0001			
%RSD:	9.3	9.3	9.5254			

=====  
 Element: Hg Seq. No.: 115 AS Loc.: 80 Date: 02/25/2010  
 Sample ID: 247548002|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.073	-0.073	-0.0005	0.0010	13:31:16	No
2	-0.037	-0.037	-0.0002	0.0013	13:31:50	No
Mean:	-0.055	-0.055	-0.0003			
SD :	0.0256	0.0256	0.0002			
%RSD:	46.6	46.6	48.9887			

=====  
 Element: Hg Seq. No.: 116 AS Loc.: 81 Date: 02/25/2010  
 Sample ID: 247559001|i|||

Repl	SampleConc	StdConc	BlkCorr	Peak	Time	Peak
------	------------	---------	---------	------	------	------



#	µg/L	µg/L	Signal	Height		Stored
1	-0.055	-0.055	-0.0003	0.0011	13:33:10	No
2	-0.060	-0.060	-0.0004	0.0011	13:33:46	No
Mean:	-0.057	-0.057	-0.0004			
SD :	0.0031	0.0031	0.0000			
%RSD:	5.4	5.4	5.6309			

=====  
 Element: Hg Seq. No.: 117 AS Loc.: 7 Date: 02/25/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.524	5.524	0.0364	0.0379	13:35:10	No
2	5.556	5.556	0.0366	0.0381	13:35:45	No
Mean:	5.540	5.540	0.0365			
SD :	0.0221	0.0221	0.0001			
%RSD:	0.4	0.4	0.3993			

QC failed, value greater than upper limit for Hg.  
 Current analysis method being continued.

=====  
 Element: Hg Seq. No.: 118 AS Loc.: 8 Date: 02/25/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0000	0.0015	13:37:13	No
2	-0.142	-0.142	-0.0009	0.0006	13:37:48	No
Mean:	-0.069	-0.069	-0.0004			
SD :	0.1036	0.1036	0.0007			
%RSD:	151.1	151.1	157.2977			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 119 AS Loc.: 82 Date: 02/25/2010  
 Sample ID: 247560001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.012	-0.012	-0.0001	0.0014	13:39:12	No
2	0.012	0.012	0.0001	0.0016	13:39:47	No
Mean:	0.000	0.000	0.0000			
SD :	0.0172	0.0172	0.0001			
%RSD:	7437	7437	589.4619			

=====  
 Element: Hg Seq. No.: 120 AS Loc.: 83 Date: 02/25/2010  
 Sample ID: 247567001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0001	0.0015	13:41:09	No
2	-0.006	-0.006	0.0000	0.0015	13:41:44	No
Mean:	0.000	0.000	0.0000			
SD :	0.0087	0.0087	0.0001			
%RSD:	2194	2194	281.1419			

=====  
 Element: Hg Seq. No.: 121 AS Loc.: 84 Date: 02/25/2010  
 Sample ID: 1202049850|i||956966|TB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.020	0.020	0.0001	0.0016	13:43:06	No
2	0.028	0.028	0.0002	0.0017	13:43:41	No
Mean:	0.024	0.024	0.0002			

# Miscellaneous

Prep Logbook

Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 955131.0      Verified by:  
Analyst: Francena Armstrong  
Method: SW846 3005A  
Lab SOP: GL-MA-E-006 REV# 9  
Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202047700	Metals Spike Mix I	U1100205-01	.25	mL
LCS	1202047700	Metals Spike Mix II	U1100205-06	.25	mL
MS	1202047702	Metals Spike Mix I	U1100205-01	.25	mL
MS	1202047702	Metals Spike Mix II	U1100205-06	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202047699 MB	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047700 LCS	24-FEB-2010 14:00:00	Water	50	50	1	<2
247250001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247250002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247256001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247256002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247322001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247322002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247335001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247339001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247339002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247350001	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047701 DUP (247350001)	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047702 MS (247350001)	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047703 SDILT (247350001)	24-FEB-2010 14:00:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount	Comments:
1265209	HYDROCHLORIC ACID	2.5 mL	
1268732	Nitric Acid CONC.	1 mL	

## Prep Logbook

### Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Batch ID: 955133.0  
 Analyst: Francena Armstrong  
 Method: SW846 3005A  
 Lab SOP: GL-MA-E-006 REV# 9  
 Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202047705	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).	U1100205-A	.5	mL
LCS	1202047705	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).	U1100205-B	.5	mL
MS	1202047707	ICP-MS DOE liquid Spike Solution A	U1090930-A	.5	mL
MS	1202047707	ICP-MS DOE Liquid Spike Solution B	U1090930-B	.5	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202047704 MB	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047705 LCS	24-FEB-2010 14:00:00	Water	50	50	1	<2
247250001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247250002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247256001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247256002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247322001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247322002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247335001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247339001	24-FEB-2010 14:00:00	Water	50	50	1	<2
247339002	24-FEB-2010 14:00:00	Water	50	50	1	<2
247350001	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047706 DUP (247350001)	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047707 MS (247350001)	24-FEB-2010 14:00:00	Water	50	50	1	<2
1202047708 SDIL.T (247350001)	24-FEB-2010 14:00:00	Water	50	50	1	<2

Reagent/Solvent Lot ID	Description	Amount	Comments:
1265209	HYDROCHLORIC ACID	2.5 mL	
1268732	Nitric Acid CONC.	1 mL	

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GEL Laboratories LLC

# Prep Logbook

## Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Batch ID:** 957032.0  
**Analyst:** Tara Griffin  
**Method:** SW846 7470A Prep  
**Lab SOP:** GL-MA-E-010 REV# 23  
**Instrument:** No analytical instrument

**Verified by:** \_\_\_\_\_

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check	Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
1202052034 MB	24-FEB-2010 12:10:00	Water	20	20	1	<2	LCS	1202052035	Mercury working intermediate standard for LCS/MS	WHG100224-13	.2	mL
1202052035 LCS	24-FEB-2010 12:10:00	Water	20	20	1	<2	MS	1202052037	Mercury working intermediate standard for LCS/MS	WHG100224-13	.2	mL
247182001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247192001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247250001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247250002	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247256001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247256002	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247322001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247322002	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247335001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247339001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247339002	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247350001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247424001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247458001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247540001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247548001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
1202052036 DUP (247548001)	24-FEB-2010 12:10:00	Water	20	20	1	<2						
1202052037 MS (247548001)	24-FEB-2010 12:10:00	Water	20	20	1	<2						
1202052041 SDILT (247548001)	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247548002	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247559001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247560001	24-FEB-2010 12:10:00	Water	20	20	1	<2						
247567001	24-FEB-2010 12:10:00	Water	20	20	1	<2						

**Reagent/Solvent Lot ID**    **Description**    **Amount**    **Comments:**

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GEL Laboratories LLC

# Prep Logbook

Batch ID: 957032.0  
 Analyst: Tara Griffin  
 Method: SW846 7470A Prep  
 Lab SOP: GL-MA-E-010 REV# 23  
 Instrument: No analytical instrument

Verified by: \_\_\_\_\_

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202052035	Mercury working intermediate standard for LCS/MS	WHG100224-13	.2	mL
MS	1202052037	Mercury working intermediate standard for LCS/MS	WHG100224-13	.2	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1176183	Sulfuric Acid, Concentrated		1 mL			
125532-C	Hg reducing agent		1 mL			
1261483-C	5% Potassium Persulfate		1.5 mL			
1274391-I	NITRIC ACID		.5 mL			
1274397-C	5% KMnO4 solution		3 mL			
WHG100224-01a	Mercury Working 1st Source CAL 0.2/CRA		20 uL			
WHG100224-02	Mercury Working 1st Source CAL 0.5		50 uL			
WHG100224-03	Mercury Working 1st Source CAL 2.0		200 uL			
WHG100224-04	Mercury Working 1st Source CAL 5.0/CCV		500 uL			
WHG100224-05	Mercury Working 1st Source CAL 10.0		1 mL			
WHG100224-06	Mercury Working 2nd Source 5.0/ICV		500 uL			

Digestion Start Date: 24-FEB-10 12:10  
 Digestion End Date: 24-FEB-10 14:10

# Acid Digestion of Total Recoverable or Dissolved Metals in Surface and Groundwater Samples for Analysis by ICP or ICP-MS

Analyst: Anthony Green  
Method: SW846 3005A  
Lab SOP: GL-MA-E-006 REV# 9  
Instrument: Metals Manual Instrument

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202075030	ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A)	U11268746-A	.25	mL
LCS	1202075030	MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B)	U11268749-B	.25	mL
MS	1202075032	ICP-MS DOE liquid Spike Solution A	U1090930-A	.25	mL
MS	1202075032	ICP-MS DOE Liquid Spike Solution B	U1090930-B	.25	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202075029 MB	19-MAR-2010 07:45:00	Water	25	25	1	<2
1202075030 LCS	19-MAR-2010 07:45:00	Water	25	25	1	<2
247250001 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247250002 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247256001 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247256002 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247322001 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247322002 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247335001 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247339001 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247339002 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
247350001 - 2	19-MAR-2010 07:45:00	Water	25	25	1	<2
1202075031 - 2 DUP (247350001)	19-MAR-2010 07:45:00	Water	25	25	1	<2
1202075032 - 2 MS (247350001)	19-MAR-2010 07:45:00	Water	25	25	1	<2
1202075033 - 2 SDILT (247350001)	19-MAR-2010 07:45:00	Water	25	25	1	<2

Reagent/Solvent Lot ID	Description	Amount
1277916	HYDROCHLORIC ACID	1.25 mL
1277919	Nitric Acid CONC.	.5 mL

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 18-MAR-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> ICP/MS	<b>Test / Method:</b> SW846 3005/6020	<b>Matrix Type:</b> Liquid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 955134	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 247250(10-1877-1),247256(10-1879-1),247322(10-1893-1),247335(10-1906),247339(10-1909-1),247350(10-1912-1)			
<b>Application Issues:</b>  Failed Recovery for MS/PS			
<b>Specification and Requirements Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/PS:  QC 1202047707MS		The matrix spike recovery failed outside of the control limits for TI due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

**Originator's Name:**

Paul Boyd

21-MAR-10

**Data Validator/Group Leader:**

Rose Jenkins

22-MAR-10



# Standard Logbook

**Serial ID:** UHG1167639-01      **Opened:** 13-AUG-09      **Amount :** 125 mL  
**Name:** MHGSTOCK1      **Received:** 13-AUG-09      **Catalog Number :** PLHG4-2Y  
**Type:** Source Material      **Expires:** 13-AUG-10      **Lot Number :** 15-37HG  
**Employee:** Bryan Davis      **Solvent :** 10% HNO3  
**Supplier:** Spex  
**Description:** Mercury Source Standard #1 1,000 mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

**Serial ID:** UHG1167641-02      **Opened:** 13-AUG-09      **Amount :** 100 mL  
**Name:** MHGSTOCK2      **Received:** 13-AUG-09      **Catalog Number :** AHG1KN-100  
**Type:** Source Material      **Expires:** 13-AUG-10      **Lot Number :** 4905530  
**Employee:** Bryan Davis      **Solvent :** 3% HNO3  
**Supplier:** Ricca Chemical Company  
**Description:** Mercury Source Standard #2 1,000 mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

**Serial ID:** UI090421-40      **Opened:** 09-OCT-09      **Amount :** 250 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 21-APR-09      **Catalog Number :** HP100052-1  
**Type:** Source Material      **Expires:** 09-OCT-10      **Lot Number :** 0830227  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** ENVIRONMENTAL EXPRESS  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

**Serial ID:** UI090422-40      **Opened:** 04-MAY-09      **Amount :** 500 mL  
**Name:** TRACE ICP ICSA SOLN A      **Received:** 22-APR-09      **Catalog Number :** 160005-01-03  
**Type:** Source Material      **Expires:** 04-MAY-10      **Lot Number :** 1013357  
**Employee:** Helen Camello      **Solvent :** 5%HNO3  
**Supplier:** o2si  
**Description:** TRACE ICP ICSA SOLN A mg/L +/- 0.5% IN 5% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

# Standard Logbook

**Serial ID:** UI090612-02      **Opened:** 12-JUN-09      **Catalog Number :** 060074-06-01  
**Name:** ICPMS Tungsten - 10mg/L      **Received:** 12-JUN-09      **Lot Number :** 1016377  
**Type:** Source Material      **Expires:** 12-JUN-10      **Solvent :** 2% HNO3  
**Employee:** Paul Boyd  
**Supplier:** O2SI  
**Description:** ICPMS Tungsten standard SPIKE - 10mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

**Serial ID:** UI090701-09      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #1      **Received:** 01-JUL-09      **Catalog Number :** 160044-09-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016477  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** O2SI  
**Description:** ICPMS CRDL Master Soln #1  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UI090701-10      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #2      **Received:** 01-JUL-09      **Catalog Number :** 160044-08-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016476  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** O2SI  
**Description:** ICPMS CRDL Soln #2  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Zirconium	2 mg/L		

**Serial ID:** UI090701-40      **Opened:** 01-JUL-09      **Amount :** 500 mL  
**Name:** TRACE ICP Stock PQL Str      **Received:** 30-JUN-09      **Catalog Number :** 160543-01-03  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016475  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3+TrHF  
**Supplier:** 02si  
**Description:** TRACE ICP Stock PQL Standard  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

**Serial ID:** UI090925-40      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX38-500N  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909129  
**Employee:** Helen Camello      **Solvent :** 5%HNO3  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1A 5%HNO3  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

# Standard Logbook

**Serial ID:** UI090925-41      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX39-500B  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909130  
**Employee:** Helen Camello      **Solvent :** 5%HNO3,TR.HF  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

**Serial ID:** UI090930-A      **Opened:** 30-SEP-09      **Catalog Number :** 160067-02  
**Name:** ICP-MS DOE Liquid SPIKE      **Received:** 28-SEP-09      **Lot Number :** 1017141  
**Type:** Source Material      **Expires:** 30-SEP-10  
**Employee:** Francena Armstrong      **Verified:** 21-NOV-08  
**Supplier:** O2Si  
**Description:** ICP-MS DOE liquid Spike Solution A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	4 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	10 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

# Standard Logbook

**Serial ID:** UI090930-B      **Opened:** 30-SEP-09      **Catalog Number :** 160067-02  
**Name:** ICP-MS DOE Liquid SPIKE      **Received:** 28-SEP-09      **Lot Number :** 1017141  
**Type:** Source Material      **Expires:** 30-SEP-10  
**Employee:** Francena Armstrong      **Verified:** 21-NOV-08  
**Supplier:** O2Si  
**Description:** ICP-MS DOE Liquid Spike Solution B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UI091015-42      **Opened:** 28-OCT-09      **Amount :** 500 mL  
**Name:** SI 1000mg/L      **Received:** 15-OCT-09      **Catalog Number :** 060014-02-03  
**Type:** Source Material      **Expires:** 28-OCT-10      **Lot Number :** 1017581  
**Employee:** Helen Camello      **Solvent :** 0.3%H2O(NH4)2SiF6  
**Supplier:** o2si  
**Description:** Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091102-40      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1A SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-1-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930215  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Std #1A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

# Standard Logbook

**Serial ID:** UI091102-41      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1B SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-2-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930216  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Standard #1B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

**Serial ID:** UI091102-42      **Opened:** 17-NOV-09      **Amount :** 200 mL  
**Name:** SILICON      **Received:** 02-NOV-09      **Catalog Number :** HP100050-4F  
**Type:** Source Material      **Expires:** 17-NOV-10      **Lot Number :** 0921924  
**Employee:** Helen Camello      **Solvent :** H2O/tr HF  
**Supplier:** ENVIRONMENTAL EXPRESS  
**Description:** SILICON 1000mg/L H2O/tr HF  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091217-06      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master A      **Received:** 17-DEC-09      **Catalog Number :** 160055-01  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018209  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV SOLN A - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

**Serial ID:** UI091217-07      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master B      **Received:** 17-DEC-09      **Catalog Number :** 160054-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018210  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln B - 10ppm  
**Comments:** None

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

**Serial ID:** UI091217-08      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS IGV/CCV Master C      **Received:** 17-DEC-09      **Catalog Number :** 160054-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018211  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** Q2SI  
**Description:** ICPMS IGV/CCV Soln C - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

**Serial ID:** UI091217-12      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master B      **Received:** 17-DEC-09      **Catalog Number :** 160033-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018212  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** Q2SI  
**Description:** ICPMS ICSAB Master B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

# Standard Logbook

**Serial ID:** UI091217-13      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master C      **Received:** 17-DEC-09      **Catalog Number :** 160033-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1016926  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** OSI  
**Description:** ICPMS ICSAB Master C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI100205-01      **Opened:** 05-FEB-10      **Lot Number :** 1018514  
**Name:** METALSPIKE-1      **Received:** 05-FEB-10  
**Type:** Source Material      **Expires:** 05-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** OSI  
**Description:** Metals Spike Mix I  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

**Serial ID:** UI100205-06      **Opened:** 05-FEB-10      **Lot Number :** 1018515  
**Name:** METALSPIKE-2      **Received:** 05-FEB-10  
**Type:** Source Material      **Expires:** 05-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** OSI  
**Description:** Metals Spike Mix II  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL



# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Titanium	100 ug/mL	Uranium	100 ug/mL
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

**Serial ID:** UI100205-A      **Opened:** 05-FEB-10      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 05-FEB-10      **Lot Number :** 1018516  
**Type:** Source Material      **Expires:** 05-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** O2si  
**Description:** ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

**Serial ID:** UI100205-B      **Opened:** 05-FEB-10      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 05-FEB-10      **Lot Number :** 1018516  
**Type:** Source Material      **Expires:** 05-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** O2si  
**Description:** MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

# Standard Logbook

**Serial ID:** UI100217-48      **Opened:** 04-MAR-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSA      **Received:** 17-FEB-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 19-MAR-10      **Lot Number :** 1018878  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

**Serial ID:** UI100219-11      **Opened:** 19-FEB-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 19-FEB-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 19-FEB-11      **Lot Number :** 1018321  
**Employee:** Paul Boyd      **Solvent :** 2% HNO3  
**Supplier:** O2SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

**Serial ID:** UI100310-49.1      **Opened:** 16-MAR-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 12-MAR-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 17-MAR-10      **Lot Number :** 1019142  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard AB  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

**Serial ID:** UI100312-40      **Opened:** 14-MAR-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 12-MAR-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 14-MAR-11      **Lot Number :** 1018981  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

**Serial ID:** UI100312-41      **Opened:** 14-MAR-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 12-MAR-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 14-MAR-11      **Lot Number :** 1018981  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

# Standard Logbook

**Serial ID:** UI100317-06      **Opened:** 17-MAR-10      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master A      **Received:** 17-MAR-10      **Catalog Number :** 160055-01  
**Type:** Source Material      **Expires:** 17-MAR-11      **Lot Number :** 1019161  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV SOLN A - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

**Serial ID:** UI100317-07      **Opened:** 17-MAR-10      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master B      **Received:** 17-MAR-10      **Catalog Number :** 160054-02  
**Type:** Source Material      **Expires:** 17-MAR-11      **Lot Number :** 1019162  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln B - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

**Serial ID:** UI100317-08      **Opened:** 17-MAR-10      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master C      **Received:** 17-MAR-10      **Catalog Number :** 160054-03  
**Type:** Source Material      **Expires:** 17-MAR-11      **Lot Number :** 1019163  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln C - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Zirconium	20 mg/L		

**Serial ID:** UI100318-11      **Opened:** 18-MAR-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 18-MAR-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 18-MAR-11      **Lot Number :** 1018321  
**Employee:** Paul Boyd      **Solvent :** 2% HNO3  
**Supplier:** 02SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

**Serial ID:** UI1268746-A      **Opened:** 11-FEB-10      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 11-FEB-10      **Lot Number :** 1018516  
**Type:** Source Material      **Expires:** 11-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** Q2si  
**Description:** ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

# Standard Logbook

**Serial ID:** UI1268749-B      **Opened:** 11-FEB-10      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 11-FEB-10      **Lot Number :** 1018516  
**Type:** Source Material      **Expires:** 11-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** O2si  
**Description:** MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UMS100226-01      **Opened:** 26-FEB-10      **Amount :** 250 mL  
**Name:** ICPMSCaSPIKEB      **Received:** 26-FEB-10      **Catalog Number :** ZGEL-100-250  
**Type:** Source Material      **Expires:** 26-FEB-11      **Lot Number :** 21-104JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UMS100226-02      **Opened:** 26-FEB-10      **Catalog Number :** ZGEL-102-250  
**Name:** ICPMSCaSPIKEA      **Received:** 26-FEB-10      **Lot Number :** 21-103JB  
**Type:** Source Material      **Expires:** 26-FEB-11  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

# Standard Logbook

**Serial ID:** UMS100226-03      **Opened:** 26-FEB-10      **Amount :** 250 ml  
**Name:** ICPMSCaSPIKEC      **Received:** 26-FEB-10      **Catalog Number :** ZGEL-101-250  
**Type:** Source Material      **Expires:** 26-FEB-11      **Lot Number :** 21-102JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

**Serial ID:** IHG100224-01      **Opened:** 24-FEB-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 24-FEB-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 25-FEB-10      **Solvent :** 1mL HNO3 + Typel H2O  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 1st Source 200 ug/L  
**Comments:** Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** IHG100224-02      **Opened:** 24-FEB-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Intermediate      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 2nd Source 200 ug/L  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** WHG100224-01a      **Opened:** 24-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL0.2CRA      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL 0.2/CRA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100224-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

# Standard Logbook

**Serial ID:** WHG100224-02      **Opened:** 24-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL0.5      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL 0.5  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100224-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

**Serial ID:** WHG100224-03      **Opened:** 24-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL2.0      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL 2.0  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100224-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

**Serial ID:** WHG100224-04      **Opened:** 24-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL5.0CCV      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL 5.0/CCV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100224-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

**Serial ID:** WHG100224-05      **Opened:** 24-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL10.0      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL 10.0  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100224-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L



# Standard Logbook

**Serial ID:** WHG100224-06      **Opened:** 24-FEB-10      **Pipet Id :** Hq1289245  
**Name:** MHGWORK5.0ICV      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working 2nd Source 5.0/ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100224-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

**Serial ID:** WHG100224-13      **Opened:** 24-FEB-10      **Pipet Id :** Hq1289245  
**Name:** MHGLIQLCSMSSPIKE      **Received:** 24-FEB-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 25-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury working intermediate standard for LCS/MS  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** WI100316-42      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.1 PPM STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1%HNO3 -1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.1 PPM CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100316-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100316-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100316-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100316-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100316-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100316-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

**Serial ID:** WI100316-43      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1%HNO3 --1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.5/CCV CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090421-40	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

**Serial ID:** WI100316-44      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1 %HNO3-1285629  
**Employee:** Helen Camello  
**Supplier:** o2si  
**Description:** Trace ICP Calibration Standard 1.0ppm  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

**Serial ID:** WI100316-45      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1%HNO3 -1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP S-10 CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090421-40	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L

**Serial ID:** WI100316-46      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL AND 1%HNO3-1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** Initial Calibration Verification ICP Trace Metals  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

**Serial ID:** WI100316-47      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL & 1%HNO3-1285629  
**Employee:** Helen Camello  
**Supplier:** 02si  
**Description:** PQL Working Standard  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

**Serial ID:** WMS100315-04      **Opened:** 15-MAR-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 15-MAR-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 16-MAR-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1285348  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100226-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UMS100226-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100315-04A      **Opened:** 15-MAR-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 15-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 16-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WMS100315-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100315-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100315-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100315-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100315-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100315-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100315-05      **Opened:** 15-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 15-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 16-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100315-06      **Opened:** 15-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 15-MAR-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 16-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100315-07      **Opened:** 15-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 15-MAR-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 16-MAR-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100219-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100219-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100219-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100315-08      **Opened:** 15-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 15-MAR-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 16-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100219-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100219-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100219-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100317-04      **Opened:** 17-MAR-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 17-MAR-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 18-MAR-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1285348  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100226-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UMS100226-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100317-04A      **Opened:** 17-MAR-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 17-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
WMS100317-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100317-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100317-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100317-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100317-05      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 17-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100317-06      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 17-MAR-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100317-07      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 17-MAR-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 18-MAR-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100219-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100219-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100219-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100219-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

<b>Serial ID:</b> <u>WMS100317-08</u>	<b>Opened:</b> <u>17-MAR-10</u>	<b>Balance Id :</b> <u>40245216</u>
<b>Name:</b> <u>ICPMS ICSAB</u>	<b>Received:</b> <u>17-MAR-10</u>	<b>Pipet Id :</b> <u>1758088</u>
<b>Type:</b> <u>Working</u>	<b>Expires:</b> <u>18-MAR-10</u>	<b>Solvent :</b> <u>2%HNO3/1%HCl - 1285348</u>
<b>Employee:</b> <u>Paul Boyd</u>		
<b>Supplier:</b> <u>GEL</u>		
<b>Description:</b> <u>ICPMS ICSAB</u>		
<b>Comments:</b> <u>None</u>		

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100219-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100219-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100219-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI100219-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100318-04      **Opened:** 18-MAR-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 18-MAR-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 19-MAR-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1285348  
**Supplier:** GEL

**Description:** ICPMS Calibration Standard (100 ppb)

**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100226-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

**Serial ID:** WMS100318-04A      **Opened:** 18-MAR-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 18-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100318-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100318-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100318-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

**Serial ID:** WMS100318-05      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 18-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100317-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100317-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

# Standard Logbook

**Serial ID:** WMS100318-06      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 18-MAR-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

# Standard Logbook

**Serial ID:** WMS100318-07      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 18-MAR-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 19-MAR-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100219-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100219-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100219-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100318-08      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 18-MAR-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100219-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100219-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100219-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100219-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100319-04AB      **Opened:** 19-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS Cal Standard 10      **Received:** 19-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 20-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100319-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100319-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100319-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100319-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100319-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100319-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100319-04B      **Opened:** 19-MAR-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 19-MAR-10      **Balance Id :** 40245216  
**Type:** Working      **Expires:** 20-MAR-10      **Pipet Id :** 1758088  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl- 1285348  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100226-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5	50 mL	100 ug/l

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100226-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

**Serial ID:** WMS100319-05B      **Opened:** 19-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 19-MAR-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 20-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100317-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100317-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100319-06B      **Opened:** 19-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 19-MAR-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 20-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins      **Verified:** 06-MAR-10  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100319-07B      **Opened:** 19-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 19-MAR-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 20-MAR-10      **Pipet Id :** 3541598  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100319-08B      **Opened:** 19-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 19-MAR-10      **Pipet Id :** 3541598/1758088  
**Type:** Working      **Expires:** 20-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** 100202      **Opened:** 02-FEB-10      **Lot Number :** 200930201  
**Name:** I-HCL      **Received:** 02-FEB-10  
**Type:** Reagent/Solvent      **Expires:** 02-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** J.T. BAKER  
**Description:** HYDROCHLORIC ACID  
**Comments:** None

# Standard Logbook

Serial ID: 1100721TCLP      Opened: 16-APR-09      Lot Number : H02026 L  
Name: I-HNO3      Received: 02-APR-09  
Type: Reagent/Solvent      Expires: 02-APR-10  
Employee: Clifford Postell  
Supplier: BAKER  
Description: Nitric Acid CONC.  
Comments: None

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Serial ID: 1156689-A      Opened: 20-JUL-09      Lot Number : 41226920  
Name: B-KMnO4(VWR)-MER      Received: 20-JUL-09  
Type: Reagent/Solvent      Expires: 20-JUL-10  
Employee: Tara Griffin      Verified: 07-AUG-07  
Supplier: VWR  
Description: Potassium Permanganate  
Comments: None

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Serial ID: 1176183      Opened: 24-AUG-09      Lot Number : H20001  
Name: B-H2SO4-MER      Received: 24-AUG-09  
Type: Reagent/Solvent      Expires: 24-AUG-10  
Employee: Tara Griffin  
Supplier: Mallinckrodt  
Description: Sulfuric Acid, Concentrated  
Comments: None

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Serial ID: 1215906      Opened: 06-NOV-09      Lot Number : H44465  
Name: B-K2S2O8S-MER      Received: 06-NOV-09  
Type: Reagent/Solvent      Expires: 06-NOV-10  
Employee: Tara Griffin  
Supplier: J.T BAKER  
Description: Potassium Persulfate Concentrate.  
Comments: None

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Serial ID: 1228372-A      Opened: 12-NOV-09      Lot Number : 49215936  
Name: B-NH2OH.HCl-MER      Received: 12-NOV-09  
Type: Reagent/Solvent      Expires: 12-NOV-10  
Employee: Tara Griffin  
Supplier: Fisher Scientific  
Description: Hydroxylamine Hydrochloride  
Comments: None

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# Standard Logbook

**Serial ID:** 125532-C      **Opened:** 15-JAN-10      **Balance Id :** BAL-002  
**Name:** B-NaCl.NH2OH.HCl-MER      **Received:** 15-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 15-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Hg reducing agent  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

**Serial ID:** 1261483-C      **Opened:** 28-JAN-10      **Balance Id :** BAL-002  
**Name:** B-K2S2O8-MER      **Received:** 28-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 28-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** 5% Potassium Persulfate  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1215906	B-K2S2O8-MER	N/A	50 g	1000 mL	N/A

**Serial ID:** 1265209      **Opened:** 04-FEB-10      **Lot Number :** J02039  
**Name:** I-HCL      **Received:** 04-FEB-10      **Preservative Id :** 5 none  
**Type:** Reagent/Solvent      **Expires:** 04-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** J.T. BAKER  
**Description:** HYDROCHLORIC ACID  
**Comments:** None

**Serial ID:** 1268732      **Opened:** 11-FEB-10      **Lot Number :** H12022 L  
**Name:** I-HNO3      **Received:** 11-FEB-10  
**Type:** Reagent/Solvent      **Expires:** 11-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** BAKER  
**Description:** Nitric Acid CONC.  
**Comments:** None

**Serial ID:** 1274391-1      **Opened:** 24-FEB-10      **Instrument Id :** MERCURY  
**Name:** B-HNO3-MER      **Received:** 24-FEB-10      **Lot Number :** H44025  
**Type:** Reagent/Solvent      **Expires:** 24-FEB-11  
**Employee:** Tara Griffin  
**Supplier:** Mallinckrodt Chemicals  
**Description:** NITRIC ACID

# Standard Logbook

Comments: None

Serial ID: 1274397-C      Opened: 24-FEB-10      Balance Id : BAL-002  
 Name: B-KMnO4-MER      Received: 24-FEB-10  
 Type: Reagent/Solvent      Expires: 20-JUL-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: 5% KMnO4 solution  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1277916      Opened: 02-MAR-10      Lot Number : J02039  
 Name: I-HCL      Received: 02-MAR-10      Preservative Id : 5 none  
 Type: Reagent/Solvent      Expires: 02-MAR-11  
 Employee: Francena Armstrong  
 Supplier: J.T. BAKER  
 Description: HYDROCHLORIC ACID  
 Comments: None

Serial ID: 1277919      Opened: 02-MAR-10      Lot Number : J 04043 L  
 Name: I-HNO3      Received: 02-MAR-10  
 Type: Reagent/Solvent      Expires: 02-MAR-11  
 Employee: Francena Armstrong  
 Supplier: BAKER  
 Description: Nitric Acid CONC.  
 Comments: None

Serial ID: 1285348      Opened: 15-MAR-10      Solvent : Type I Water  
 Name: B-2%HNO3/1%HCl-ICPMS      Received: 15-MAR-10  
 Type: Reagent/Solvent      Expires: 22-MAR-10  
 Employee: Paul Boyd  
 Supplier: GEL  
 Description: 2%HNO3/1%HCl Solution (Type I Water)  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
100202	I-HCL	36.5-38.0	90 mL	9 l	N/A
1100721TCLP	I-HNO3	69.0-70.0	180 mL	9 l	N/A

## Standard Logbook

**Serial ID:** 1285629      **Opened:** 15-MAR-10      **Amount :** 20 L  
**Name:** B-ICP-RINSE SOLN      **Received:** 05-MAR-10      **Lot Number :** H04040+G34050  
**Type:** Reagent/Solvent      **Expires:** 21-MAR-10      **Solvent :** 3%HCL+1%HNO3  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** 3%HCL+1%HNO3 RINSE SOLN.  
**Comments:** None

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# **Metals Analysis**



# Case Narrative

**Metals Fractional Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1906-1**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
247336001	RE15-10-8346
247336002	RE15-10-8347
247336003	RE15-10-8344
247336004	RE15-10-8345
247336005	RE15-10-8342
247336006	RE15-10-8343
247336007	RE15-10-8377
1202047709	Method Blank (MB) ICP
1202047714	Laboratory Control Sample (LCS)
1202047711	247325001(RE46-10-12661L) Serial Dilution (SD)
1202047710	247325001(RE46-10-12661D) Sample Duplicate (DUP)
1202047712	247325001(RE46-10-12661S) Matrix Spike (MS)
1202047713	247325001(RE46-10-12661SD) Matrix Spike Duplicate (MSD)
1202047715	Method Blank (MB) ICP-MS
1202047720	Laboratory Control Sample (LCS)
1202047717	247325001(RE46-10-12661L) Serial Dilution (SD)
1202047716	247325001(RE46-10-12661D) Sample Duplicate (DUP)
1202047718	247325001(RE46-10-12661S) Matrix Spike (MS)
1202047719	247325001(RE46-10-12661SD) Matrix Spike Duplicate (MSD)
1202055914	Method Blank (MB) CVAA

1202055915	Laboratory Control Sample (LCS)
1202055918	247321001(RE46-10-12942L) Serial Dilution (SD)
1202055916	247321001(RE46-10-12942D) Sample Duplicate (DUP)
1202055917	247321001(RE46-10-12942S) Matrix Spike (MS)
1202055919	247321001(RE46-10-12942SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

#### **Method/Analysis Information**

<b>Analytical Batch:</b>	955136, 955138 and 958626
<b>Prep Batch :</b>	955135, 955137 and 958625
<b>Standard Operating Procedures:</b>	GL-MA-E-013 REV# 20, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23
<b>Analytical Method:</b>	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
<b>Prep Method :</b>	SW846 3050B and SW846 7471A Prep

#### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

#### **System Configuration**

The Metals analysis-ICP was performed on a P E 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/- 7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

### **Calibration Information**

#### **Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

#### **CRDL Requirements**

All CRDL standard(s) met the referenced advisory control limits with the exception of zinc, which recovered outside of the advisory limits of 70-130%.

#### **ICSA/ICSAB Statement**

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

#### **Continuing Calibration Blank (CCB) Requirements**

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

#### **Continuing Calibration Verification (CCV) Requirements**

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MBs analyzed with this SDG met the acceptance criteria.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **Quality Control (QC) Sample Statement**

The following samples were selected as the quality control (QC) samples for this SDG: 247325001 (RE46-10-12661) and 247321001 (RE46-10-12942).

#### **Matrix Spike (MS) Recovery Statement**

The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of antimony, barium, magnesium, manganese, potassium, zinc, nickel and selenium, as indicated by the "N" qualifiers.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD meet the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of antimony, barium, magnesium, manganese, potassium, nickel and selenium, as indicated by the "N" qualifiers.

**MS/MSD Relative Percent Difference (RPD) Statement**

The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20% with the exception of nickel, as indicated by the "\*" qualifier.

**Duplicate Relative Percent Difference (RPD) Statement**

The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of aluminum, barium, calcium, magnesium and manganese, as indicated by the "\*" qualifiers.

**Serial Dilution % Difference Statement**

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

**Technical Information****Holding Time Specifications**

GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

**Sample Dilutions**

Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

**Preparation Information**

The samples in this SDG were prepared exactly according to the cited SOP.

## **Miscellaneous Information**

### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

### **Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DERs were generated for this SDG: 805135 and 806482. A copy of each DER is included in the Miscellaneous Data section of this package.

### **Additional Comments**

Additional comments were not required for this SDG.

### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

### **Review Validation:**

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

**The following data validator verified the information presented in this case narrative:**

Reviewer: Kristen Ranson Date: 3/22/10

# Sample Data Summary

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336001

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8346

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3990000	ug/Kg		7350	21600	21600	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-36-0	Antimony	1080	ug/Kg	U	357	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-38-2	Arsenic	1.7	mg/kg		0.22	1.1	1.1	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-39-3	Barium	51400	ug/Kg		108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-41-7	Beryllium	0.647	mg/kg		0.022	0.11	0.11	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-43-9	Cadmium	247	ug/Kg	J	108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-70-2	Calcium	5300000	ug/Kg		8650	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-47-3	Chromium	5150	ug/Kg		162	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-48-4	Cobalt	1510	ug/Kg		162	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-50-8	Copper	7240	ug/Kg		324	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-89-6	Iron	10300000	ug/Kg		8650	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-92-1	Lead	130000	ug/Kg		270	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-95-4	Magnesium	801000	ug/Kg		9190	32400	32400	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-96-5	Manganese	315000	ug/Kg		216	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7439-97-6	Mercury	13.3	ug/kg		4.33	12.7	12.7	1	AV	JXL1	03/03/10 12:40	030310S2-4	958626
7440-02-0	Nickel	4.29	mg/kg		0.11	0.44	0.44	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-09-7	Potassium	651000	ug/Kg		6920	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7782-49-2	Selenium	1.1	mg/kg	U	0.55	1.1	1.1	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-22-4	Silver	127	ug/Kg	J	108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-23-5	Sodium	203000	ug/Kg		7570	27000	27000	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-28-0	Thallium	0.220	mg/kg	U	0.066	0.22	0.22	2	MS	RMJ	03/18/10 15:18	100317-2	955138
7440-61-1	Uranium	3.27	mg/kg		0.0145	0.044	0.044	2	MS	RMJ	03/18/10 22:14	100318-3	955138
7440-62-2	Vanadium	9070	ug/Kg		108	540	540	1	P	JWJ	03/16/10 23:11	031610B-1	955136
7440-66-6	Zinc	56300	ug/Kg		357	1080	1080	1	P	JWJ	03/16/10 23:11	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.517	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.508	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.527	g	30	mL	03/02/10	TXB3



**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336002

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8347

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 97.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1780000	ug/Kg		6790	20000	20000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-36-0	Antimony	998	ug/Kg	U	329	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-38-2	Arsenic	0.639	mg/kg	J	0.203	1.02	1.02	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-39-3	Barium	18100	ug/Kg		99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-41-7	Beryllium	0.458	mg/kg		0.0203	0.102	0.102	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-43-9	Cadmium	124	ug/Kg	J	99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-70-2	Calcium	500000	ug/Kg		7990	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-47-3	Chromium	1200	ug/Kg		150	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-48-4	Cobalt	546	ug/Kg		150	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-50-8	Copper	2310	ug/Kg		299	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-89-6	Iron	7100000	ug/Kg		7990	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-92-1	Lead	4780	ug/Kg		250	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-95-4	Magnesium	360000	ug/Kg		8480	29900	29900	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-96-5	Manganese	232000	ug/Kg		200	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7439-97-6	Mercury	5.92	ug/kg	J	4.03	11.8	11.8	1	AV	JXL	03/03/10 12:42	030310S2-4	958626
7440-02-0	Nickel	1.14	mg/kg		0.102	0.406	0.406	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-09-7	Potassium	480000	ug/Kg		6390	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7782-49-2	Selenium	1.02	mg/kg	U	0.508	1.02	1.02	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-22-4	Silver	499	ug/Kg	U	99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-23-5	Sodium	315000	ug/Kg		6990	25000	25000	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-28-0	Thallium	0.203	mg/kg	U	0.061	0.203	0.203	2	MS	RMJ	03/18/10 15:23	100317-2	955138
7440-61-1	Uranium	0.593	mg/kg		0.0134	0.0406	0.0406	2	MS	RMJ	03/18/10 22:24	100318-3	955138
7440-62-2	Vanadium	2880	ug/Kg		99.8	499	499	1	P	JWJ	03/16/10 23:14	031610B-1	955136
7440-66-6	Zinc	41700	ug/Kg		329	998	998	1	P	JWJ	03/16/10 23:14	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.515	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.506	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.521	g	30	mL	03/02/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336003

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8344

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4180000	ug/Kg		6900	20300	20300	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-36-0	Antimony	1010	ug/Kg	U	335	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-38-2	Arsenic	1.43	mg/kg		0.205	1.03	1.03	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-39-3	Barium	51100	ug/Kg		101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-41-7	Beryllium	0.547	mg/kg		0.0205	0.103	0.103	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-43-9	Cadmium	161	ug/Kg	J	101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-70-2	Calcium	1350000	ug/Kg		8120	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-47-3	Chromium	3970	ug/Kg		152	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-48-4	Cobalt	1810	ug/Kg		152	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-50-8	Copper	5150	ug/Kg		304	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-89-6	Iron	11000000	ug/Kg		8120	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-92-1	Lead	11200	ug/Kg		254	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-95-4	Magnesium	714000	ug/Kg		8630	30400	30400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-96-5	Manganese	268000	ug/Kg		203	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7439-97-6	Mercury	14.6	ug/kg		4.04	11.9	11.9	1	AV	JX1.1	03/03/10 12:44	030310S2-4	958626
7440-02-0	Nickel	3.4	mg/kg		0.103	0.411	0.411	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-09-7	Potassium	702000	ug/Kg		6490	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7782-49-2	Selenium	1.03	mg/kg	U	0.513	1.03	1.03	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-22-4	Silver	132	ug/Kg	J	101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-23-5	Sodium	183000	ug/Kg		7100	25400	25400	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-28-0	Thallium	0.0712	mg/kg	J	0.0616	0.205	0.205	2	MS	RMJ	03/18/10 15:27	100317-2	955138
7440-61-1	Uranium	1.51	mg/kg		0.0136	0.0411	0.0411	2	MS	RMJ	03/18/10 22:27	100318-3	955138
7440-62-2	Vanadium	8780	ug/Kg		101	507	507	1	P	JWJ	03/16/10 23:18	031610B-1	955136
7440-66-6	Zinc	35900	ug/Kg		335	1010	1010	1	P	JWJ	03/16/10 23:18	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.521	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.515	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.534	g	30	mL	03/02/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336004

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8345

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 93.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4370000	ug/Kg		7100	20900	20900	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-36-0	Antimony	1040	ug/Kg	U	344	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-38-2	Arsenic	1.92	mg/kg		0.21	1.05	1.05	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-39-3	Barium	56800	ug/Kg		104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-41-7	Beryllium	0.579	mg/kg		0.021	0.105	0.105	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-43-9	Cadmium	304	ug/Kg	J	104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-70-2	Calcium	6730000	ug/Kg		8350	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-47-3	Chromium	4800	ug/Kg		157	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-48-4	Cobalt	2030	ug/Kg		157	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-50-8	Copper	8650	ug/Kg		313	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-89-6	Iron	11700000	ug/Kg		8350	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-92-1	Lead	20900	ug/Kg		261	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-95-4	Magnesium	810000	ug/Kg		8870	31300	31300	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-96-5	Manganese	286000	ug/Kg		209	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7439-97-6	Mercury	15.6	ug/kg		3.75	11	11	1	AV	JXLJ	03/03/10 12:45	030310S2-4	958626
7440-02-0	Nickel	7.99	mg/kg		0.105	0.42	0.42	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-09-7	Potassium	883000	ug/Kg		6680	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7782-49-2	Selenium	1.05	mg/kg	U	0.525	1.05	1.05	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-22-4	Silver	150	ug/Kg	J	104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-23-5	Sodium	281000	ug/Kg		7310	26100	26100	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-28-0	Thallium	0.0729	mg/kg	J	0.063	0.21	0.21	2	MS	RMJ	03/18/10 15:39	100317-2	955138
7440-61-1	Uranium	8.19	mg/kg		0.0139	0.042	0.042	2	MS	RMJ	03/18/10 22:31	100318-3	955138
7440-62-2	Vanadium	11100	ug/Kg		104	522	522	1	P	JWJ	03/16/10 23:22	031610B-1	955136
7440-66-6	Zinc	47200	ug/Kg		344	1040	1040	1	P	JWJ	03/16/10 23:22	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.511	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.508	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.581	g	30	mL	03/02/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336005

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8342

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3070000	ug/Kg		7120	20900	20900	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-36-0	Antimony	1050	ug/Kg	U	345	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-38-2	Arsenic	1.42	mg/kg		0.208	1.04	1.04	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-39-3	Barium	42100	ug/Kg		105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-41-7	Beryllium	0.605	mg/kg		0.0208	0.104	0.104	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-43-9	Cadmium	194	ug/Kg	J	105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-70-2	Calcium	3780000	ug/Kg		8370	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-47-3	Chromium	3030	ug/Kg		157	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-48-4	Cobalt	1280	ug/Kg		157	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-50-8	Copper	6690	ug/Kg		314	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-89-6	Iron	8920000	ug/Kg		8370	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-92-1	Lead	8090	ug/Kg		262	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-95-4	Magnesium	603000	ug/Kg		8900	31400	31400	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-96-5	Manganese	282000	ug/Kg		209	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7439-97-6	Mercury	10.8	ug/kg	J	4.16	12.2	12.2	1	AV	JXL	03/03/10 12:47	030310S2-4	958626
7440-02-0	Nickel	7.35	mg/kg		0.104	0.415	0.415	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-09-7	Potassium	532000	ug/Kg		6700	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7782-49-2	Selenium	1.04	mg/kg	U	0.519	1.04	1.04	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-22-4	Silver	523	ug/Kg	U	105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-23-5	Sodium	260000	ug/Kg		7330	26200	26200	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-28-0	Thallium	0.208	mg/kg	U	0.0623	0.208	0.208	2	MS	RMJ	03/18/10 15:43	100317-2	955138
7440-61-1	Uranium	1.8	mg/kg		0.0137	0.0415	0.0415	2	MS	RMJ	03/18/10 22:35	100318-3	955138
7440-62-2	Vanadium	6680	ug/Kg		105	523	523	1	P	JWJ	03/16/10 23:25	031610B-1	955136
7440-66-6	Zinc	53800	ug/Kg		345	1050	1050	1	P	JWJ	03/16/10 23:25	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.505	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.509	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.518	g	30	mL	03/02/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336006

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8343

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 95.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2880000	ug/Kg		6830	20100	20100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-36-0	Antimony	1000	ug/Kg	U	332	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-38-2	Arsenic	0.996	mg/kg	J	0.203	1.02	1.02	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-39-3	Barium	31300	ug/Kg		100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-41-7	Beryllium	0.534	mg/kg		0.0203	0.102	0.102	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-43-9	Cadmium	145	ug/Kg	J	100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-70-2	Calcium	1730000	ug/Kg		8040	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-47-3	Chromium	2340	ug/Kg		151	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-48-4	Cobalt	983	ug/Kg		151	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-50-8	Copper	3960	ug/Kg		301	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-89-6	Iron	9290000	ug/Kg		8040	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-92-1	Lead	9530	ug/Kg		251	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-95-4	Magnesium	555000	ug/Kg		8540	30100	30100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-96-5	Manganese	250000	ug/Kg		201	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7439-97-6	Mercury	9.53	ug/kg	J	3.93	11.5	11.5	1	AV	JXL	03/03/10 12:49	030310S2-4	958626
7440-02-0	Nickel	2.18	mg/kg		0.102	0.407	0.407	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-09-7	Potassium	538000	ug/Kg		6430	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7782-49-2	Selenium	1.02	mg/kg	U	0.508	1.02	1.02	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-22-4	Silver	502	ug/Kg	U	100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-23-5	Sodium	236000	ug/Kg		7030	25100	25100	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-28-0	Thallium	0.203	mg/kg	U	0.061	0.203	0.203	2	MS	RMJ	03/18/10 15:47	100317-2	955138
7440-61-1	Uranium	1.22	mg/kg		0.0134	0.0407	0.0407	2	MS	RMJ	03/18/10 22:38	100318-3	955138
7440-62-2	Vanadium	5950	ug/Kg		100	502	502	1	P	JWJ	03/16/10 23:29	031610B-1	955136
7440-66-6	Zinc	49400	ug/Kg		332	1000	1000	1	P	JWJ	03/16/10 23:29	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.519	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.513	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.542	g	30	mL	03/02/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1906-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 247336007

BASIS: Dry Weight

DATE COLLECTED 12-FEB-10

CLIENT ID: RE15-10-8377

LEVEL: Low

DATE RECEIVED 18-FEB-10

MATRIX: SOIL

%SOLIDS: 94.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4820000	ug/Kg		7090	20800	20800	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-36-0	Antimony	1040	ug/Kg	U	344	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-38-2	Arsenic	1.57	mg/kg		0.201	1	1	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-39-3	Barium	63300	ug/Kg		104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-41-7	Beryllium	0.605	mg/kg		0.0201	0.1	0.1	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-43-9	Cadmium	184	ug/Kg	J	104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-70-2	Calcium	1930000	ug/Kg		8340	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-47-3	Chromium	3810	ug/Kg		156	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-48-4	Cobalt	1850	ug/Kg		156	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-50-8	Copper	6200	ug/Kg		313	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-89-6	Iron	10200000	ug/Kg		8340	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-92-1	Lead	11800	ug/Kg		260	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-95-4	Magnesium	749000	ug/Kg		8860	31300	31300	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-96-5	Manganese	296000	ug/Kg		208	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7439-97-6	Mercury	18.6	ug/kg		4.13	12.1	12.1	1	AV	JXL1	03/03/10 12:54	030310S2-4	958626
7440-02-0	Nickel	4.27	mg/kg		0.1	0.402	0.402	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-09-7	Potassium	803000	ug/Kg		6670	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7782-49-2	Selenium	1	mg/kg	U	0.502	1	1	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-22-4	Silver	132	ug/Kg	J	104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-23-5	Sodium	222000	ug/Kg		7290	26000	26000	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-28-0	Thallium	0.0789	mg/kg	J	0.0603	0.201	0.201	2	MS	RMJ	03/18/10 15:51	100317-2	955138
7440-61-1	Uranium	1.35	mg/kg		0.0133	0.0402	0.0402	2	MS	RMJ	03/18/10 22:42	100318-3	955138
7440-62-2	Vanadium	10400	ug/Kg		104	521	521	1	P	JWJ	03/16/10 23:33	031610B-1	955136
7440-66-6	Zinc	42700	ug/Kg		344	1040	1040	1	P	JWJ	03/16/10 23:33	031610B-1	955136

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
955136	955135	SW846 3050B	0.507	g	50	mL	02/25/10	AXG2
955138	955137	SW846 3050B	0.526	g	50	mL	02/25/10	AXG2
958626	958625	SW846 7471A Prep	0.522	g	30	mL	03/02/10	TXB3

# **Quality Control Summary**

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Mercury	5.23	ug/L	5	ug/L	104.7	90.0 – 110.0	AV	03-MAR-10 10:25	030310S2-4
	Aluminum	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Cadmium	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Calcium	4940	ug/L	5000	ug/L	98.7	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Chromium	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Cobalt	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Iron	5010	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Lead	485	ug/L	500	ug/L	97	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Magnesium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Manganese	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Potassium	2370	ug/L	2500	ug/L	94.8	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Silver	253	ug/L	250	ug/L	101.1	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Sodium	2410	ug/L	2500	ug/L	96.5	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Zinc	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	16-MAR-10 13:56	031610B-1
	Arsenic	50.7	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	18-MAR-10 14:14	100317-2
	Beryllium	50	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	18-MAR-10 14:14	100317-2
	Nickel	50.2	ug/L	50	ug/L	100.3	90.0 – 110.0	MS	18-MAR-10 14:14	100317-2
	Selenium	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	18-MAR-10 14:14	100317-2
	Thallium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	18-MAR-10 14:14	100317-2
	Uranium	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	18-MAR-10 21:27	100318-3
CCV01										
	Mercury	5.2	ug/L	5	ug/L	103.9	80.0 – 120.0	AV	03-MAR-10 10:30	030310S2-4
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Antimony	548	ug/L	500	ug/L	109.6	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Barium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Cadmium	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1



**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	5360	ug/L	5000	ug/L	107.1	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Chromium	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Cobalt	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Copper	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Iron	5310	ug/L	5000	ug/L	106.2	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Lead	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Magnesium	5400	ug/L	5000	ug/L	107.9	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Manganese	531	ug/L	500	ug/L	106.3	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Potassium	5710	ug/L	5000	ug/L	114.1	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Silver	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Sodium	10700	ug/L	10000	ug/L	106.6	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Zinc	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	16-MAR-10 14:19	031610B-1
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	18-MAR-10 14:34	100317-2
	Beryllium	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	18-MAR-10 14:34	100317-2
	Nickel	51.1	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	18-MAR-10 14:34	100317-2
	Selenium	52.4	ug/L	50	ug/L	104.7	90.0 – 110.0	MS	18-MAR-10 14:34	100317-2
	Thallium	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	18-MAR-10 14:34	100317-2
	Uranium	54.1	ug/L	50	ug/L	108.2	90.0 – 110.0	MS	18-MAR-10 21:43	100318-3
CCV02										
	Mercury	5.37	ug/L	5	ug/L	107.3	80.0 – 120.0	AV	03-MAR-10 10:50	030310S2-4
	Aluminum	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Antimony	484	ug/L	500	ug/L	96.7	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Barium	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Cadmium	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Chromium	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Cobalt	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Copper	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Iron	4850	ug/L	5000	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA I

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Magnesium	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Manganese	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Potassium	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Silver	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Sodium	9790	ug/L	10000	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Vanadium	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Zinc	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 14:36	031610B-1
	Arsenic	51.6	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	18-MAR-10 14:50	100317-2
	Beryllium	49.2	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	18-MAR-10 14:50	100317-2
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 – 110.0	MS	18-MAR-10 14:50	100317-2
	Selenium	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	18-MAR-10 14:50	100317-2
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	18-MAR-10 14:50	100317-2
	Uranium	53.9	ug/L	50	ug/L	107.8	90.0 – 110.0	MS	18-MAR-10 22:18	100318-3
CCV03										
	Mercury	5.25	ug/L	5	ug/L	105	80.0 – 120.0	AV	03-MAR-10 11:10	030310S2-4
	Aluminum	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Antimony	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Barium	492	ug/L	500	ug/L	98.3	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Cadmium	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Chromium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Cobalt	490	ug/L	500	ug/L	98	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Copper	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Lead	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Magnesium	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Manganese	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Potassium	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Silver	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Sodium	9740	ug/L	10000	ug/L	97.4	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Vanadium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	16-MAR-10 14:46	031610B-1
	Arsenic	51.1	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	18-MAR-10 15:31	100317-2
	Beryllium	51.9	ug/L	50	ug/L	103.9	90.0 – 110.0	MS	18-MAR-10 15:31	100317-2
	Nickel	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	18-MAR-10 15:31	100317-2
	Selenium	51.5	ug/L	50	ug/L	103	90.0 – 110.0	MS	18-MAR-10 15:31	100317-2
	Thallium	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	18-MAR-10 15:31	100317-2
	Uranium	53.8	ug/L	50	ug/L	107.6	90.0 – 110.0	MS	18-MAR-10 22:53	100318-3
CCV04										
	Mercury	5.32	ug/L	5	ug/L	106.5	80.0 – 120.0	AV	03-MAR-10 11:30	030310S2-4
	Aluminum	4790	ug/L	5000	ug/L	95.8	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Antimony	476	ug/L	500	ug/L	95.3	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Barium	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Cadmium	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Calcium	4820	ug/L	5000	ug/L	96.4	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Chromium	480	ug/L	500	ug/L	96	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Copper	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Iron	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Lead	480	ug/L	500	ug/L	95.9	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Magnesium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Manganese	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Potassium	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Silver	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Sodium	9820	ug/L	10000	ug/L	98.2	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Vanadium	485	ug/L	500	ug/L	97	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Zinc	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	16-MAR-10 15:15	031610B-1
	Arsenic	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	18-MAR-10 16:11	100317-2
	Beryllium	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	18-MAR-10 16:11	100317-2

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV05	Nickel	47.7	ug/L	50	ug/L	95.3	90.0 - 110.0	MS	18-MAR-10 16:11	100317-2
	Selenium	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	18-MAR-10 16:11	100317-2
	Thallium	50.6	ug/L	50	ug/L	101.2	90.0 - 110.0	MS	18-MAR-10 16:11	100317-2
	Mercury	5.44	ug/L	5	ug/L	108.7	80.0 - 120.0	AV	03-MAR-10 11:50	030310S2-4
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Antimony	500	ug/L	500	ug/L	100	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Barium	503	ug/L	500	ug/L	100.6	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Cadmium	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Calcium	5020	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Chromium	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Cobalt	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Copper	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Lead	500	ug/L	500	ug/L	100	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Magnesium	5100	ug/L	5000	ug/L	102	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Manganese	510	ug/L	500	ug/L	102	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Potassium	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Silver	504	ug/L	500	ug/L	100.7	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Sodium	10100	ug/L	10000	ug/L	101	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Vanadium	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	16-MAR-10 15:54	031610B-1
CCV06	Mercury	5.58	ug/L	5	ug/L	111.6	80.0 - 120.0	AV	03-MAR-10 12:10	030310S2-4
	Aluminum	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Antimony	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Barium	489	ug/L	500	ug/L	97.7	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Cadmium	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Calcium	4890	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Chromium	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Copper	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Iron	4980	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Lead	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Magnesium	4920	ug/L	5000	ug/L	98.5	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Potassium	4850	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Silver	492	ug/L	500	ug/L	98.5	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Sodium	10000	ug/L	10000	ug/L	100.1	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Vanadium	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
	Zinc	490	ug/L	500	ug/L	98	90.0 - 110.0	P	16-MAR-10 16:34	031610B-1
CCV07										
	Mercury	5.58	ug/L	5	ug/L	111.5	80.0 - 120.0	AV	03-MAR-10 12:30	030310S2-4
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Antimony	485	ug/L	500	ug/L	97	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Barium	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Cadmium	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Chromium	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Copper	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Iron	5100	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Lead	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Magnesium	4960	ug/L	5000	ug/L	99.2	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Potassium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Silver	490	ug/L	500	ug/L	98	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Vanadium	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1
	Zinc	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	16-MAR-10 17:14	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV08										
	Mercury	5.18	ug/L	5	ug/L	103.6	80.0 – 120.0	AV	03-MAR-10 12:50	030310S2-4
	Aluminum	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Antimony	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Barium	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Cadmium	485	ug/L	500	ug/L	97	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Calcium	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Chromium	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Cobalt	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Copper	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Iron	4940	ug/L	5000	ug/L	98.8	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Lead	485	ug/L	500	ug/L	97	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Potassium	4860	ug/L	5000	ug/L	97.1	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Silver	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Sodium	9960	ug/L	10000	ug/L	99.6	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Vanadium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
	Zinc	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	16-MAR-10 17:38	031610B-1
CCV09										
	Mercury	5.2	ug/L	5	ug/L	104	80.0 – 120.0	AV	03-MAR-10 13:11	030310S2-4
	Aluminum	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Antimony	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Barium	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Cadmium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Calcium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Chromium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Cobalt	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Copper	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Iron	5400	ug/L	5000	ug/L	108	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1
	Lead	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	16-MAR-10 18:24	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Magnesium	5320	ug/L	5000	ug/L	106.4	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
	Manganese	521	ug/L	500	ug/L	104.1	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
	Potassium	5110	ug/L	5000	ug/L	102.2	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
	Silver	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
	Sodium	10800	ug/L	10000	ug/L	107.6	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
	Vanadium	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
	Zinc	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	16-MAR-10 18:24	031610B-1
CCV10										
	Aluminum	5070	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Antimony	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Barium	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Cadmium	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Chromium	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Cobalt	507	ug/L	500	ug/L	101.3	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Copper	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Lead	504	ug/L	500	ug/L	100.7	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Magnesium	5090	ug/L	5000	ug/L	101.8	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Manganese	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Potassium	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Silver	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Sodium	10400	ug/L	10000	ug/L	103.9	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Vanadium	512	ug/L	500	ug/L	102.5	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
	Zinc	510	ug/L	500	ug/L	102	90.0 - 110.0	P	16-MAR-10 18:46	031610B-1
CCV11										
	Aluminum	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Antimony	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Barium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Cadmium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	4960	ug/L	5000	ug/L	99.2	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Chromium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Cobalt	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Copper	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Lead	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Magnesium	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Manganese	505	ug/L	500	ug/L	100.9	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Potassium	4940	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Silver	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Sodium	10300	ug/L	10000	ug/L	103.4	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Vanadium	503	ug/L	500	ug/L	100.5	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
	Zinc	500	ug/L	500	ug/L	100	90.0 - 110.0	P	16-MAR-10 19:24	031610B-1
CCV12	Aluminum	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Antimony	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Barium	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Cadmium	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Calcium	5130	ug/L	5000	ug/L	102.7	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Chromium	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Cobalt	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Copper	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Iron	5230	ug/L	5000	ug/L	104.6	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Lead	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Manganese	518	ug/L	500	ug/L	103.6	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Potassium	5060	ug/L	5000	ug/L	101.2	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Silver	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Sodium	10500	ug/L	10000	ug/L	104.6	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1
	Vanadium	510	ug/L	500	ug/L	101.9	90.0 - 110.0	P	16-MAR-10 19:51	031610B-1



**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV13	Zinc	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	16-MAR-10 19:51	031610B-1
	Aluminum	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Antimony	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Barium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Cadmium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Cobalt	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Copper	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Iron	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Lead	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Manganese	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Potassium	5000	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Silver	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Sodium	10400	ug/L	10000	ug/L	103.6	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	16-MAR-10 20:31	031610B-1
CCV14	Aluminum	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Antimony	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Barium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Cobalt	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Copper	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Iron	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Lead	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Manganese	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Silver	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Sodium	10200	ug/L	10000	ug/L	101.8	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Vanadium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	16-MAR-10 21:11	031610B-1
CCV15										
	Aluminum	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Antimony	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Barium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Cadmium	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Calcium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Chromium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Cobalt	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Copper	525	ug/L	500	ug/L	105.1	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Iron	5440	ug/L	5000	ug/L	108.8	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Lead	520	ug/L	500	ug/L	104	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Magnesium	5290	ug/L	5000	ug/L	105.8	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Manganese	535	ug/L	500	ug/L	106.9	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Potassium	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Silver	525	ug/L	500	ug/L	105	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Sodium	10800	ug/L	10000	ug/L	107.9	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Vanadium	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
	Zinc	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	16-MAR-10 21:47	031610B-1
CCV16										
	Aluminum	5320	ug/L	5000	ug/L	106.3	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Antimony	527	ug/L	500	ug/L	105.4	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Barium	531	ug/L	500	ug/L	106.1	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Cadmium	529	ug/L	500	ug/L	105.9	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	5350	ug/L	5000	ug/L	107	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Chromium	532	ug/L	500	ug/L	106.3	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Cobalt	528	ug/L	500	ug/L	105.5	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Copper	530	ug/L	500	ug/L	106.1	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Iron	5440	ug/L	5000	ug/L	108.7	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Lead	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Magnesium	5400	ug/L	5000	ug/L	108	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Manganese	542	ug/L	500	ug/L	108.4	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Potassium	5310	ug/L	5000	ug/L	106.3	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Silver	530	ug/L	500	ug/L	106	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Sodium	10800	ug/L	10000	ug/L	108.1	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Vanadium	534	ug/L	500	ug/L	106.8	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
	Zinc	532	ug/L	500	ug/L	106.3	90.0 – 110.0	P	16-MAR-10 22:27	031610B-1
CCV17	Aluminum	5280	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Antimony	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Barium	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Cadmium	533	ug/L	500	ug/L	106.7	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Calcium	5320	ug/L	5000	ug/L	106.4	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Chromium	536	ug/L	500	ug/L	107.3	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Cobalt	530	ug/L	500	ug/L	106	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Copper	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Iron	5440	ug/L	5000	ug/L	108.8	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Lead	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Magnesium	5440	ug/L	5000	ug/L	108.9	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Manganese	547	ug/L	500	ug/L	109.4	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Potassium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Silver	533	ug/L	500	ug/L	106.7	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Sodium	10700	ug/L	10000	ug/L	107	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Vanadium	538	ug/L	500	ug/L	107.7	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,JCPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV18	Zinc	533	ug/L	500	ug/L	106.7	90.0 – 110.0	P	16-MAR-10 23:03	031610B-1
	Aluminum	5390	ug/L	5000	ug/L	107.8	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Antimony	538	ug/L	500	ug/L	107.7	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Barium	533	ug/L	500	ug/L	106.5	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Cadmium	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Calcium	5400	ug/L	5000	ug/L	107.9	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Chromium	534	ug/L	500	ug/L	106.8	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Cobalt	531	ug/L	500	ug/L	106.2	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Copper	532	ug/L	500	ug/L	106.5	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Iron	5400	ug/L	5000	ug/L	108.1	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Lead	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Magnesium	5390	ug/L	5000	ug/L	107.8	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Manganese	546	ug/L	500	ug/L	109.2	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Potassium	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Silver	532	ug/L	500	ug/L	106.5	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Sodium	10600	ug/L	10000	ug/L	106	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Vanadium	537	ug/L	500	ug/L	107.4	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1
	Zinc	535	ug/L	500	ug/L	107	90.0 – 110.0	P	16-MAR-10 23:49	031610B-1

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01										
	Mercury	.182	ug/L	.2	ug/L	91	70.0 – 130.0	AV	03-MAR-10 10:28	030310S2-4
	Nickel	2.2	ug/L	2	ug/L	110	70.0 – 130.0	MS	18-MAR-10 14:22	100317-2
	Thallium	1.14	ug/L	1	ug/L	114.2	70.0 – 130.0	MS	18-MAR-10 14:22	100317-2
	Arsenic	6.2	ug/L	5	ug/L	123.9	70.0 – 130.0	MS	18-MAR-10 14:22	100317-2
	Beryllium	.582	ug/L	.5	ug/L	116.4	70.0 – 130.0	MS	18-MAR-10 14:22	100317-2
	Selenium	6.25	ug/L	5	ug/L	125	70.0 – 130.0	MS	18-MAR-10 14:22	100317-2
	Uranium	.22	ug/L	.2	ug/L	110	70.0 – 130.0	MS	18-MAR-10 21:33	100318-3
PQL01										
	Manganese	9.84	ug/L	10	ug/L	98.4	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Potassium	136	ug/L	150	ug/L	90.6	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Silver	4.67	ug/L	5	ug/L	93.5	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Sodium	292	ug/L	300	ug/L	97.4	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Antimony	11.2	ug/L	10	ug/L	112	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Barium	5.08	ug/L	5	ug/L	101.7	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Cadmium	4.73	ug/L	5	ug/L	94.7	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Chromium	4.43	ug/L	5	ug/L	88.5	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Cobalt	4.31	ug/L	5	ug/L	86.3	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Magnesium	323	ug/L	300	ug/L	107.8	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Lead	10.1	ug/L	10	ug/L	100.8	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Iron	85.9	ug/L	100	ug/L	85.9	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Aluminum	207	ug/L	200	ug/L	103.3	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Copper	10.4	ug/L	10	ug/L	104	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Vanadium	4.72	ug/L	5	ug/L	94.5	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Zinc	6.89	ug/L	10	ug/L	68.9	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
	Calcium	205	ug/L	200	ug/L	102.6	70.0 – 130.0	P	16-MAR-10 14:04	031610B-1
PQL02										
	Aluminum	211	ug/L	200	ug/L	105.6	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Iron	124	ug/L	100	ug/L	123.8	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Lead	9.85	ug/L	10	ug/L	98.5	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Magnesium	309	ug/L	300	ug/L	103.1	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: HG3,ICPMS6,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	10.3	ug/L	10	ug/L	103.3	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Potassium	161	ug/L	150	ug/L	107.3	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Silver	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Sodium	353	ug/L	300	ug/L	117.5	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Antimony	12.5	ug/L	10	ug/L	124.6	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Barium	5.36	ug/L	5	ug/L	107.2	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Cadmium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Chromium	5.04	ug/L	5	ug/L	100.8	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Cobalt	5.21	ug/L	5	ug/L	104.1	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Copper	11.1	ug/L	10	ug/L	111.1	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Vanadium	4.94	ug/L	5	ug/L	98.8	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Zinc	7.46	ug/L	10	ug/L	74.6	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1
	Calcium	202	ug/L	200	ug/L	101.2	70.0 – 130.0	P	16-MAR-10 22:31	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
ICB01	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 10:26	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 14:00	031610B-1
	Antimony	4.74	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:00	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:00	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:00	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:00	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:00	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:00	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 14:00	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:00	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 14:00	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 14:00	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 14:00	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 14:00	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:00	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 14:00	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:00	031610B-1
	Zinc	-7.4	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:00	031610B-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	18-MAR-10 14:18	100317-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	18-MAR-10 14:18	100317-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	18-MAR-10 14:18	100317-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	18-MAR-10 14:18	100317-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	18-MAR-10 14:18	100317-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	18-MAR-10 21:30	100318-3
CCB01	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 10:31	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 14:22	031610B-1
	Antimony	7.98	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:22	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:22	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:22	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:22	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:22	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:22	031610B-1
	Copper	4.17	+/-10	J	3.0	10.0	SOL	P	16-MAR-10 14:22	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:22	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 14:22	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 14:22	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 14:22	031610B-1
	Potassium	127.57	+/-250	J	64.0	250	SOL	P	16-MAR-10 14:22	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:22	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 14:22	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:22	031610B-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 14:22	031610B-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	18-MAR-10 14:38	100317-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	18-MAR-10 14:38	100317-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	18-MAR-10 14:38	100317-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	18-MAR-10 14:38	100317-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	18-MAR-10 14:38	100317-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	18-MAR-10 21:46	100318-3
<b>CCB02</b>										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 10:51	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 14:39	031610B-1
	Antimony	7.02	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:39	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:39	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:39	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:39	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:39	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:39	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 14:39	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:39	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 14:39	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 14:39	031610B-1



**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 14:39	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 14:39	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:39	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 14:39	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:39	031610B-1
	Zinc	-7.61	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:39	031610B-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	18-MAR-10 14:54	100317-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	18-MAR-10 14:54	100317-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	18-MAR-10 14:54	100317-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	18-MAR-10 14:54	100317-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	18-MAR-10 14:54	100317-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	18-MAR-10 22:21	100318-3
<b>CCB03</b>										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 11:11	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 14:50	031610B-1
	Antimony	4.51	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:50	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:50	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:50	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:50	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:50	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 14:50	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 14:50	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 14:50	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 14:50	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 14:50	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 14:50	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 14:50	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:50	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 14:50	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 14:50	031610B-1
	Zinc	-7.64	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 14:50	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	18-MAR-10 15:35	100317-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	18-MAR-10 15:35	100317-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	18-MAR-10 15:35	100317-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	18-MAR-10 15:35	100317-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	18-MAR-10 15:35	100317-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	18-MAR-10 22:56	100318-3
<b>CCB04</b>										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 11:31	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 15:19	031610B-1
	Antimony	6.14	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 15:19	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:19	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:19	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 15:19	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 15:19	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 15:19	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 15:19	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 15:19	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 15:19	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 15:19	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 15:19	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 15:19	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:19	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 15:19	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:19	031610B-1
	Zinc	-7.87	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 15:19	031610B-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	18-MAR-10 16:15	100317-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	18-MAR-10 16:15	100317-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	18-MAR-10 16:15	100317-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	18-MAR-10 16:15	100317-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	18-MAR-10 16:15	100317-2

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>CCB05</b>										
	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	03-MAR-10 11:52	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 15:58	031610B-1
	Antimony	4.05	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 15:58	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:58	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:58	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 15:58	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 15:58	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 15:58	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 15:58	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 15:58	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 15:58	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 15:58	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 15:58	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 15:58	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:58	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 15:58	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 15:58	031610B-1
	Zinc	-7.84	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 15:58	031610B-1
<b>CCB06</b>										
	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	03-MAR-10 12:12	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 16:37	031610B-1
	Antimony	4.36	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 16:37	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 16:37	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 16:37	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 16:37	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 16:37	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 16:37	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 16:37	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 16:37	031610B-1
	Lead	2.56	+/-10	J	2.5	10.0	SOL	P	16-MAR-10 16:37	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 16:37	031610B-1

SW846

**Metals**  
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**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 16:37	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 16:37	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 16:37	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 16:37	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 16:37	031610B-1
	Zinc	-4.45	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 16:37	031610B-1
<b>CCB07</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 12:32	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 17:17	031610B-1
	Antimony	5.12	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 17:17	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:17	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:17	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 17:17	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 17:17	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 17:17	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 17:17	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 17:17	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 17:17	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 17:17	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 17:17	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 17:17	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:17	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 17:17	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:17	031610B-1
	Zinc	-4.27	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 17:17	031610B-1
<b>CCB08</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	03-MAR-10 12:52	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 17:42	031610B-1
	Antimony	5.33	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 17:42	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:42	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:42	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 17:42	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 17:42	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 17:42	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 17:42	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 17:42	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 17:42	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 17:42	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 17:42	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 17:42	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:42	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 17:42	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 17:42	031610B-1
	Zinc	-3.81	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 17:42	031610B-1
<b>CCB09</b>										
	Mercury	0.068	+/- .2	U	0.068	0.2	SOL	AV	03-MAR-10 13:12	030310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 18:28	031610B-1
	Antimony	7.84	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 18:28	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:28	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:28	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 18:28	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 18:28	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 18:28	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 18:28	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 18:28	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 18:28	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 18:28	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 18:28	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 18:28	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:28	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 18:28	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:28	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ng/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
CCB10	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 18:28	031610B-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 18:50	031610B-1
	Antimony	4.87	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 18:50	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:50	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:50	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 18:50	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 18:50	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 18:50	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 18:50	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 18:50	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 18:50	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 18:50	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 18:50	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 18:50	031610B-1
	Silver	-1.02	+/-5	J	1.0	5.0	SOL	P	16-MAR-10 18:50	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 18:50	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 18:50	031610B-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 18:50	031610B-1
CCB11	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 19:28	031610B-1
	Antimony	5.26	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 19:28	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:28	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:28	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 19:28	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 19:28	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 19:28	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 19:28	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 19:28	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 19:28	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 19:28	031610B-1

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB12	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 19:28	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 19:28	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:28	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 19:28	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:28	031610B-1
	Zinc	-3.49	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 19:28	031610B-1
CCB12	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 19:55	031610B-1
	Antimony	3.83	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 19:55	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:55	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:55	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 19:55	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 19:55	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 19:55	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 19:55	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 19:55	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 19:55	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 19:55	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 19:55	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 19:55	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:55	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 19:55	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 19:55	031610B-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 19:55	031610B-1
CCB13	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 20:35	031610B-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 20:35	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 20:35	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 20:35	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 20:35	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 20:35	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 20:35	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 20:35	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 20:35	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 20:35	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 20:35	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 20:35	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 20:35	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 20:35	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 20:35	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 20:35	031610B-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 20:35	031610B-1
CCB14	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 21:15	031610B-1
	Antimony	3.56	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 21:15	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:15	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:15	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 21:15	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 21:15	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 21:15	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 21:15	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 21:15	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 21:15	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 21:15	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 21:15	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 21:15	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:15	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 21:15	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:15	031610B-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 21:15	031610B-1
CCB15	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 21:51	031610B-1



**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 21:51	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:51	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:51	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 21:51	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 21:51	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 21:51	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 21:51	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 21:51	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 21:51	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 21:51	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 21:51	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 21:51	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:51	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 21:51	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 21:51	031610B-1
	Zinc	-6.16	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 21:51	031610B-1
<b>CCB16</b>	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 22:34	031610B-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 22:34	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 22:34	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 22:34	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 22:34	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 22:34	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 22:34	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 22:34	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 22:34	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 22:34	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 22:34	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 22:34	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 22:34	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 22:34	031610B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB17	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 22:34	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 22:34	031610B-1
	Zinc	-5.7	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 22:34	031610B-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 23:07	031610B-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	16-MAR-10 23:07	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:07	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:07	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 23:07	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 23:07	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 23:07	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 23:07	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 23:07	031610B-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 23:07	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 23:07	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 23:07	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 23:07	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:07	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 23:07	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:07	031610B-1
	Zinc	-5.95	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 23:07	031610B-1
CCB18	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	16-MAR-10 23:52	031610B-1
	Antimony	5.52	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 23:52	031610B-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:52	031610B-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:52	031610B-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 23:52	031610B-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 23:52	031610B-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	16-MAR-10 23:52	031610B-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	16-MAR-10 23:52	031610B-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	16-MAR-10 23:52	031610B-1

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	16-MAR-10 23:52	031610B-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	16-MAR-10 23:52	031610B-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	16-MAR-10 23:52	031610B-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	16-MAR-10 23:52	031610B-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:52	031610B-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	16-MAR-10 23:52	031610B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	16-MAR-10 23:52	031610B-1
	Zinc	-5.65	+/-10	J	3.3	10.0	SOL	P	16-MAR-10 23:52	031610B-1

**METALS**  
**-3b-**  
**PREPARATION BLANK SUMMARY**

SDG NO. 10-1906-1

Contract: LANL01004

Matrix: SOIL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M</u>	<u>MDL</u>	<u>RDL</u>
1202047709	Aluminum	6790	ug/Kg	+/-20000	U	P	6790	20000
	Antimony	329	ug/Kg	+/-998	U	P	329	998
	Barium	99.8	ug/Kg	+/-499	U	P	99.8	499
	Chromium	150	ug/Kg	+/-499	U	P	150	499
	Cobalt	150	ug/Kg	+/-499	U	P	150	499
	Calcium	7980	ug/Kg	+/-25000	U	P	7980	25000
	Cadmium	99.8	ug/Kg	+/-499	U	P	99.8	499
	Copper	299	ug/Kg	+/-998	U	P	299	998
	Lead	250	ug/Kg	+/-998	U	P	250	998
	Zinc	-493	ug/Kg	+/-998	J	P	329	998
	Vanadium	99.8	ug/Kg	+/-499	U	P	99.8	499
	Sodium	6990	ug/Kg	+/-25000	U	P	6990	25000
	Silver	99.8	ug/Kg	+/-499	U	P	99.8	499
	Potassium	6390	ug/Kg	+/-25000	U	P	6390	25000
	Manganese	200	ug/Kg	+/-998	U	P	200	998
	Magnesium	8480	ug/Kg	+/-29900	U	P	8480	29900
	Iron	7980	ug/Kg	+/-25000	U	P	7980	25000
1202047715	Beryllium	0.0194	mg/kg	+/-0.0971	U	MS	0.0194	0.0971
	Nickel	0.0971	mg/kg	+/-0.388	U	MS	0.0971	0.388
	Selenium	0.485	mg/kg	+/-0.971	U	MS	0.485	0.971
	Arsenic	0.194	mg/kg	+/-0.971	U	MS	0.194	0.971
	Thallium	0.0583	mg/kg	+/-0.194	U	MS	0.0583	0.194
	Uranium	0.0128	mg/kg	+/-0.0388	U	MS	0.0128	0.0388
1202055914	Mercury	3.83	ug/kg	+/-11.3	U	AV	3.83	11.3

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
<b>ICSA01</b>									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Antimony	-8.1	ug/L					16-MAR-10 14:07	031610B-1
	Barium	7.2	ug/L					16-MAR-10 14:07	031610B-1
	Cadmium	3.89	ug/L					16-MAR-10 14:07	031610B-1
	Calcium	491000	ug/L	500000	ug/L	98.3	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Chromium	-2.06	ug/L					16-MAR-10 14:07	031610B-1
	Cobalt	3.0	ug/L					16-MAR-10 14:07	031610B-1
	Copper	1.49	ug/L					16-MAR-10 14:07	031610B-1
	Iron	190000	ug/L	200000	ug/L	94.9	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Lead	-0.626	ug/L					16-MAR-10 14:07	031610B-1
	Magnesium	501000	ug/L	500000	ug/L	100	80.0 – 120.0	16-MAR-10 14:07	031610B-1
	Manganese	0.59	ug/L					16-MAR-10 14:07	031610B-1
	Potassium	-117.0	ug/L					16-MAR-10 14:07	031610B-1
	Silver	0.397	ug/L					16-MAR-10 14:07	031610B-1
	Sodium	8.24	ug/L					16-MAR-10 14:07	031610B-1
	Vanadium	-5.16	ug/L					16-MAR-10 14:07	031610B-1
	Zinc	-5.14	ug/L					16-MAR-10 14:07	031610B-1
<b>ICSAB01</b>									
	Aluminum	527000	ug/L	500000	ug/L	105	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Antimony	533	ug/L	500	ug/L	107	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Barium	507	ug/L	500	ug/L	101	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Cadmium	472	ug/L	500	ug/L	94.3	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Calcium	495000	ug/L	500000	ug/L	99.1	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Chromium	491	ug/L	500	ug/L	98.1	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Cobalt	452	ug/L	500	ug/L	90.4	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Copper	563	ug/L	500	ug/L	113	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Iron	190000	ug/L	200000	ug/L	95	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Lead	496	ug/L	500	ug/L	99.3	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Magnesium	504000	ug/L	500000	ug/L	101	80.0 – 120.0	16-MAR-10 14:10	031610B-1

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	494	ug/L	500	ug/L	98.7	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Potassium	5300	ug/L	5000	ug/L	106	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Silver	268	ug/L	250	ug/L	107	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Sodium	5270	ug/L	5000	ug/L	105	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 – 120.0	16-MAR-10 14:10	031610B-1
	Zinc	477	ug/L	500	ug/L	95.5	80.0 – 120.0	16-MAR-10 14:10	031610B-1

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS6

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
<b>ICSA01</b>									
	Arsenic	0.472	ug/L					18-MAR-10 14:26	100317-2
	Beryllium	0.108	ug/L					18-MAR-10 14:26	100317-2
	Nickel	3.01	ug/L					18-MAR-10 14:26	100317-2
	Selenium	-1.41	ug/L					18-MAR-10 14:26	100317-2
	Thallium	0.006	ug/L					18-MAR-10 14:26	100317-2
<b>ICSAB01</b>									
	Arsenic	22.8	ug/L	20	ug/L	114	80.0 - 120.0	18-MAR-10 14:30	100317-2
	Beryllium	21.0	ug/L	20	ug/L	105	80.0 - 120.0	18-MAR-10 14:30	100317-2
	Nickel	23.2	ug/L	23.31	ug/L	99.5	80.0 - 120.0	18-MAR-10 14:30	100317-2
	Selenium	21.8	ug/L	20	ug/L	109	80.0 - 120.0	18-MAR-10 14:30	100317-2
	Thallium	20.6	ug/L	20	ug/L	103	80.0 - 120.0	18-MAR-10 14:30	100317-2

METALS  
-4-  
Interference Check Sample

SDG No: 10-1906-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS6

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Uranium	0.001	ug/L					18-MAR-10 21:36	100318-3
ICSAB01	Uranium	22.3	ug/L	20	ug/L	111	80.0 - 120.0	18-MAR-10 21:40	100318-3



## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1906-1 Client ID RE46-10-12661S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 83

Sample ID: 247325001 Spike ID: 1202047712

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		18500000		12500000		586000	1030	N/A	P
Antimony	ug/Kg	75-125	42400		377	U	58600	72.3	N	P
Barium	ug/Kg	75-125	187000		202000		58600	-26	N	P
Cadmium	ug/Kg	75-125	63200		224	J	58600	107		P
Calcium	ug/Kg		3380000		3860000		586000	-81.6	N/A	P
Chromium	ug/Kg	75-125	73500		8420		58600	111		P
Cobalt	ug/Kg	75-125	62600		2960		58600	102		P
Copper	ug/Kg	75-125	76400		7730		58600	117		P
Iron	ug/Kg		16100000		13600000		586000	437	N/A	P
Lead	ug/Kg	75-125	73700		10400		58600	108		P
Magnesium	ug/Kg	75-125	3010000		2240000		586000	131	N	P
Manganese	ug/Kg	75-125	314000		225000		58600	151	N	P
Potassium	ug/Kg	75-125	2470000		1600000		586000	148	N	P
Silver	ug/Kg	75-125	63800		173	J	58600	109		P
Sodium	ug/Kg	75-125	889000		278000		586000	104		P
Vanadium	ug/Kg	75-125	84200		20000		58600	110		P
Zinc	ug/Kg	75-125	111000		33600		58600	132	N	P

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1906-1 Client ID RE46-10-12661SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 83

Sample ID: 247325001 Spike ID: 1202047713

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		18600000		12500000		596000	1030	N/A	P
Antimony	ug/Kg	75-125	44100		377	U	59600	73.9	N	P
Barium	ug/Kg	75-125	200000		202000		59600	-3.18	N	P
Cadmium	ug/Kg	75-125	63000		224	J	59600	105		P
Calcium	ug/Kg		3830000		3860000		596000	-4.93	N/A	P
Chromium	ug/Kg	75-125	74600		8420		59600	111		P
Cobalt	ug/Kg	75-125	63700		2960		59600	102		P
Copper	ug/Kg	75-125	76900		7730		59600	116		P
Iron	ug/Kg		16300000		13600000		596000	454	N/A	P
Lead	ug/Kg	75-125	75500		10400		59600	109		P
Magnesium	ug/Kg	75-125	3050000		2240000		596000	136	N	P
Manganese	ug/Kg	75-125	373000		225000		59600	247	N	P
Potassium	ug/Kg	75-125	2510000		1600000		596000	153	N	P
Silver	ug/Kg	75-125	64000		173	J	59600	107		P
Sodium	ug/Kg	75-125	891000		278000		596000	103		P
Vanadium	ug/Kg	75-125	88100		20000		59600	114		P
Zinc	ug/Kg	75-125	108000		33600		59600	124		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1906-1 Client ID RE46-10-12661S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 83

Sample ID: 247325001 Spike ID: 1202047718

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	9.85		2.2		9.65	79.3		MS
Beryllium	mg/kg	75-125	6.1		0.848		6.03	87.2		MS
Nickel	mg/kg	75-125	11.5		7.84		6.03	60.6	N	MS
Selenium	mg/kg	75-125	1.76		0.599	U	2.41	72.8	N	MS
Thallium	mg/kg	75-125	10.7		0.187	J	12.1	87.5		MS
Uranium	mg/kg	75-125	6.99		0.66		6.03	105		MS

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1906-1 Client ID RE46-10-12661SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 83

Sample ID: 247325001 Spike ID: 1202047719

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	9.81		2.2		9.31	81.7		MS
Beryllium	mg/kg	75-125	5.94		0.848		5.82	87.5		MS
Nickel	mg/kg	75-125	15.3		7.84		5.82	128	N	MS
Selenium	mg/kg	75-125	1.7		0.599	U	2.33	72.9	N	MS
Thallium	mg/kg	75-125	10.5		0.187	J	11.6	88.5		MS
Uranium	mg/kg	75-125	6.84		0.66		5.82	106		MS

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1906-1 Client ID RE46-10-12942S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 94.8

Sample ID: 247321001 Spike ID: 1202055917

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	145		4.06	U	119	120		AV

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1906-1 Client ID: RE46-10-12942SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 94.8

Sample ID: 247321001 Spike ID: 1202055919

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	146		4.06	U	117	123		AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-12661D

Sample ID: 247325001

Duplicate ID: 1202047710

Percent Solids for Dup: 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	12500000		9930000		22.8	*	P
Antimony	ug/Kg		377 U		383 U				P
Barium	ug/Kg	+/-20%	202000		162000		21.9	*	P
Cadmium	ug/Kg	+/-580	224 J		221 J		1.24		P
Calcium	ug/Kg	+/-20%	3860000		2850000		30.3	*	P
Chromium	ug/Kg	+/-20%	8420		8170		3.09		P
Cobalt	ug/Kg	+/-20%	2960		3620		19.8		P
Copper	ug/Kg	+/-20%	7730		7310		5.54		P
Iron	ug/Kg	+/-20%	13600000		13700000		.922		P
Lead	ug/Kg	+/-20%	10400		10400		.279		P
Magnesium	ug/Kg	+/-20%	2240000		1710000		26.7	*	P
Manganese	ug/Kg	+/-20%	225000		277000		20.7	*	P
Potassium	ug/Kg	+/-20%	1600000		1340000		17.7		P
Silver	ug/Kg	+/-580	173 J		181 J		4.57		P
Sodium	ug/Kg	+/-20%	278000		245000		12.5		P
Vanadium	ug/Kg	+/-20%	20000		18700		6.45		P
Zinc	ug/Kg	+/-20%	33600		33200		1.19		P

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-12661SD

Sample ID: 1202047712

Duplicate ID: 1202047713

Percent Solids for Dup: 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	18500000		18600000		.465		P
Antimony	ug/Kg	+/-20	42400		44100		3.94		P
Barium	ug/Kg	+/-20	187000		200000		6.88		P
Cadmium	ug/Kg	+/-20	63200		63000		.17		P
Calcium	ug/Kg	+/-20	3380000		3830000		12.4		P
Chromium	ug/Kg	+/-20	73500		74600		1.48		P
Cobalt	ug/Kg	+/-20	62600		63700		1.7		P
Copper	ug/Kg	+/-20	76400		76900		.649		P
Iron	ug/Kg	+/-20	16100000		16300000		.911		P
Lead	ug/Kg	+/-20	73700		75500		2.38		P
Magnesium	ug/Kg	+/-20	3010000		3050000		1.28		P
Manganese	ug/Kg	+/-20	314000		373000		17.2		P
Potassium	ug/Kg	+/-20	2470000		2510000		1.75		P
Silver	ug/Kg	+/-20	63800		64000		.374		P
Sodium	ug/Kg	+/-20	889000		891000		.262		P
Vanadium	ug/Kg	+/-20	84200		88100		4.51		P
Zinc	ug/Kg	+/-20	111000		108000		3.23		P



## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906-J

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-12661D

Sample ID: 247325001

Duplicate ID: 1202047716

Percent Solids for Dup: 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1.18	2.2		1.83		18.1		MS
Beryllium	mg/kg	+/-20%	0.848		0.801		5.7		MS
Nickel	mg/kg	+/-20%	7.84		7.57		3.47		MS
Selenium	mg/kg		0.599 U		0.59 U				MS
Thallium	mg/kg	+/- .236	0.187 J		0.154 J		19.6		MS
Uranium	mg/kg	+/-20%	0.66		0.643		2.48		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-12661SD

Sample ID: 1202047718

Duplicate ID: 1202047719

Percent Solids for Dup: 83

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	9.85		9.81		.434		MS
Beryllium	mg/kg	+/-20	6.1		5.94		2.68		MS
Nickel	mg/kg	+/-20	11.5		15.3		28.2	*	MS
Selenium	mg/kg	+/-20	1.76		1.7		3.29		MS
Thallium	mg/kg	+/-20	10.7		10.5		2.35		MS
Uranium	mg/kg	+/-20	6.99		6.84		2.11		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-12942D

Sample ID: 247321001

Duplicate ID: 1202055916

Percent Solids for Dup: 94.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg		4.06 U		3.82 U				AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1906-1

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE46-10-12942SD

Sample ID: 1202055917

Duplicate ID: 1202055919

Percent Solids for Dup: 94.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	145		146		.341		AV

**METALS**  
**-7-**  
**Laboratory Control Sample Summary**

SDG NO. 10-1906-1

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202047714								
	Chromium	ug/Kg	236000	272000		115	80-120	P
	Cobalt	ug/Kg	91200	100000		110	81-120	P
	Copper	ug/Kg	174000	204000		117	81-118	P
	Iron	ug/Kg	18000000	21900000		121	51-149	P
	Lead	ug/Kg	86000	95000		110	79-121	P
	Magnesium	ug/Kg	4000000	4330000		108	79-122	P
	Manganese	ug/Kg	558000	645000		116	81-119	P
	Potassium	ug/Kg	4300000	4620000		107	74-127	P
	Silver	ug/Kg	30100	34800		116	66-134	P
	Sodium	ug/Kg	1020000	1120000		110	74-127	P
	Vanadium	ug/Kg	115000	138000		120	79-121	P
	Zinc	ug/Kg	594000	659000		111	80-121	P
	Aluminum	ug/Kg	10500000	10400000		98.8	56-144	P
	Antimony	ug/Kg	173000	128000		73.7	71-130	P
	Barium	ug/Kg	198000	223000		113	80-120	P
	Cadmium	ug/Kg	60700	67200		111	81-120	P
	Calcium	ug/Kg	9870000	11000000		111	83-117	P

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1906-1

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202047720								
	Arsenic	mg/kg	104	109		104	78-123	MS
	Beryllium	mg/kg	77.6	65.5		84.4	84-116	MS
	Nickel	mg/kg	134	118		87.7	78-123	MS
	Selenium	mg/kg	286	287		101	77-123	MS
	Thallium	mg/kg	121	126		104	78-122	MS
	Uranium	mg/kg	2.13	2.04		95.6	73-127	MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1906-1

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

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<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202055915	Mercury	ug/kg	5150	6230		121	71.6-128.3	AV

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## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1906-1 Client ID RE46-10-12661L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 247325001 Serial Dilution ID: 1202047711

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	109000		111000		1.83		10	P
Antimony	3.3	U	16.5	U				P
Barium	1770		1790		1.13		10	P
Cadmium	1.96	J	5	U	100			P
Calcium	33800		34600		2.37		10	P
Chromium	73.7		73		.95			P
Cobalt	26		26.4		1.54			P
Copper	67.6		68.5		1.33			P
Iron	119000		125000		4.62		10	P
Lead	91.5		94.5		3.28			P
Magnesium	19600		20100		2.55		10	P
Manganese	1970		1980		.254		10	P
Potassium	14000		14300		1.79		10	P
Silver	1.51	J	5	U	100			P
Sodium	2430		2550		4.94			P
Vanadium	175		173		1.43		10	P
Zinc	294		275		6.63		10	P



## METALS

-9-

## Serial Dilution Sample Summary

**SDG NO.** 10-1906-1 **Client ID** RE46-10-12661L**Contract:** LANL01004**Matrix:** SOLID **Level:** Low**Sample ID:** 247325001 **Serial Dilution ID:** 1202047717

<b>Analyte</b>	<b>Initial Value ug/L</b>	<b>C</b>	<b>Serial Value ug/L</b>	<b>C</b>	<b>% Difference</b>	<b>Qual</b>	<b>Acceptance Limit</b>	<b>M</b>
Arsenic	9.16		9.15	J	.109			MS
Beryllium	3.54		4.37		23.4			MS
Nickel	32.7		35.8		9.48			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.781	J	1.5	U	100			MS
Uranium	2.75		2.62		4.73			MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1906-1 Client ID RE46-10-12942L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 247321001 Serial Dilution ID: 1202055918

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.068	U	.34	U				AV

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**METALS**  
**-13-**  
**SAMPLE PREPARATION SUMMARY**

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SDG No: 10-1906-1

Method Type: P

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 955135							
1202047709	MB for batch 955135	MB	S	25-FEB-10	.501g	50mL	
1202047714	LCS for batch 955135	LCS	S	25-FEB-10	.519g	50mL	
1202047712	RE46-10-12661S	MS	S	25-FEB-10	.517g	50mL	
1202047713	RE46-10-12661SD	MSD	S	25-FEB-10	.508g	50mL	
1202047710	RE46-10-12661D	DUP	S	25-FEB-10	.522g	50mL	
247336001	RE15-10-8346	SAMPLE	S	25-FEB-10	.517g	50mL	
247336002	RE15-10-8347	SAMPLE	S	25-FEB-10	.515g	50mL	
247336003	RE15-10-8344	SAMPLE	S	25-FEB-10	.521g	50mL	
247336004	RE15-10-8345	SAMPLE	S	25-FEB-10	.511g	50mL	
247336005	RE15-10-8342	SAMPLE	S	25-FEB-10	.505g	50mL	
247336006	RE15-10-8343	SAMPLE	S	25-FEB-10	.519g	50mL	
247336007	RE15-10-8377	SAMPLE	S	25-FEB-10	.507g	50mL	

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SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1906-1

Method Type: MS

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 955137							
1202047715	MB for batch 955137	MB	S	25-FEB-10	.515g	50mL	
1202047720	LCS for batch 955137	LCS	S	25-FEB-10	.505g	50mL	
1202047718	RE46-10-12661S	MS	S	25-FEB-10	.502g	50mL	
1202047719	RE46-10-12661SD	MSD	S	25-FEB-10	.52g	50mL	
1202047716	RE46-10-12661D	DUP	S	25-FEB-10	.513g	50mL	
247336001	RE15-10-8346	SAMPLE	S	25-FEB-10	.508g	50mL	
247336002	RE15-10-8347	SAMPLE	S	25-FEB-10	.506g	50mL	
247336003	RE15-10-8344	SAMPLE	S	25-FEB-10	.515g	50mL	
247336004	RE15-10-8345	SAMPLE	S	25-FEB-10	.508g	50mL	
247336005	RE15-10-8342	SAMPLE	S	25-FEB-10	.509g	50mL	
247336006	RE15-10-8343	SAMPLE	S	25-FEB-10	.513g	50mL	
247336007	RE15-10-8377	SAMPLE	S	25-FEB-10	.526g	50mL	

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SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1906-1

Method Type: AV

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	958625						
1202055914	MB for batch 958625	MB	S	02-MAR-10	.532g	30mL	
1202055915	LCS for batch 958625	LCS	S	02-MAR-10	.202g	30mL	
1202055917	RE46-10-12942S	MS	S	02-MAR-10	.53g	30mL	
1202055919	RE46-10-12942SD	MSD	S	02-MAR-10	.541g	30mL	
1202055916	RE46-10-12942D	DUP	S	02-MAR-10	.564g	30mL	
247336001	RE15-10-8346	SAMPLE	S	02-MAR-10	.527g	30mL	
247336002	RE15-10-8347	SAMPLE	S	02-MAR-10	.521g	30mL	
247336003	RE15-10-8344	SAMPLE	S	02-MAR-10	.534g	30mL	
247336004	RE15-10-8345	SAMPLE	S	02-MAR-10	.581g	30mL	
247336005	RE15-10-8342	SAMPLE	S	02-MAR-10	.518g	30mL	
247336006	RE15-10-8343	SAMPLE	S	02-MAR-10	.542g	30mL	
247336007	RE15-10-8377	SAMPLE	S	02-MAR-10	.522g	30mL	

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SW846

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS6

Start Date: 18-MAR-10

End Date: 18-MAR-10

Client Sdg: 10-1906-1

Method: MS

Data File: 100317-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	14:02			X		X											X	X			X				
S10	1	14:06			X		X											X	X			X				
S100	1	14:10			X		X											X	X			X				
ICV01	1	14:14			X		X											X	X			X				
ICB01	1	14:18			X		X											X	X			X				
CRDL01	1	14:22			X		X											X	X			X				
ICSA01	1	14:26			X		X											X	X			X				
ICSAB01	1	14:30			X		X											X	X			X				
CCV01	1	14:34			X		X											X	X			X				
CCB01	1	14:38			X		X											X	X			X				
1202047715	2	14:42			X		X											X	X			X				
1202047720	40	14:46			X		X											X	X			X				
CCV02	1	14:50			X		X											X	X			X				
CCB02	1	14:54			X		X											X	X			X				
ZZZZZZ	2	14:58																								
1202047716	2	15:02			X		X											X	X			X				
1202047718	2	15:06			X		X											X	X			X				
1202047719	2	15:10			X		X											X	X			X				
1202047717	10	15:14			X		X											X	X			X				
247336001	2	15:18			X		X											X	X			X				
247336002	2	15:23			X		X											X	X			X				
247336003	2	15:27			X		X											X	X			X				
CCV03	1	15:31			X		X											X	X			X				
CCB03	1	15:35			X		X											X	X			X				
247336004	2	15:39			X		X											X	X			X				
247336005	2	15:43			X		X											X	X			X				
247336006	2	15:47			X		X											X	X			X				
247336007	2	15:51			X		X											X	X			X				
ZZZZZZ	2	15:55																								
ZZZZZZ	2	15:59																								
ZZZZZZ	2	16:03																								
ZZZZZZ	2	16:07																								
CCV04	1	16:11			X		X											X	X			X				
CCB04	1	16:15			X		X											X	X			X				

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS6

Start Date: 18-MAR-10

End Date: 18-MAR-10

Client Sdg: 10-1906-1

Method MS

Data File: 100318-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	21:18																						X		
S10	1	21:21																						X		
S100	1	21:24																						X		
ICV01	1	21:27																						X		
ICB01	1	21:30																						X		
CRDL01	1	21:33																						X		
ICSA01	1	21:36																						X		
ICSAB01	1	21:40																						X		
CCV01	1	21:43																						X		
CCB01	1	21:46																						X		
1202047715	2	21:49																						X		
1202047720	40	21:52																						X		
ZZZZZZ	2	21:56																								
1202047716	2	22:00																						X		
1202047718	2	22:03																						X		
1202047719	2	22:07																						X		
1202047717	10	22:10																						X		
247336001	2	22:14																						X		
CCV02	1	22:18																						X		
CCB02	1	22:21																						X		
247336002	2	22:24																						X		
247336003	2	22:27																						X		
247336004	2	22:31																						X		
247336005	2	22:35																						X		
247336006	2	22:38																						X		
247336007	2	22:42																						X		
ZZZZZZ	2	22:45																								
ZZZZZZ	2	22:49																								
CCV03	1	22:53																						X		
CCB03	1	22:56																						X		

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: HG3

Start Date: 03-MAR-10

End Date: 03-MAR-10

Client Sdg: 10-1906-1

Method: AV

Data File: 030310S2-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	10:15															X									
S0.2	1	10:16															X									
S0.5	1	10:18															X									
S2.0	1	10:20															X									
S5.0	1	10:21															X									
S10.0	1	10:23															X									
ICV01	1	10:25															X									
ICB01	1	10:26															X									
CRDL01	1	10:28															X									
CCV01	1	10:30															X									
CCB01	1	10:31															X									
ZZZZZZ	1	10:33																								
ZZZZZZ	1	10:35																								
ZZZZZZ	1	10:36																								
ZZZZZZ	1	10:38																								
ZZZZZZ	1	10:40																								
ZZZZZZ	1	10:41																								
ZZZZZZ	5	10:43																								
ZZZZZZ	1	10:45																								
ZZZZZZ	1	10:46																								
ZZZZZZ	1	10:48																								
CCV02	1	10:50															X									
CCB02	1	10:51															X									
ZZZZZZ	1	10:53																								
ZZZZZZ	1	10:55																								
ZZZZZZ	1	10:56																								
ZZZZZZ	1	10:58																								
ZZZZZZ	1	11:00																								
ZZZZZZ	1	11:01																								
ZZZZZZ	1	11:03																								
ZZZZZZ	1	11:05																								
ZZZZZZ	1	11:06																								
ZZZZZZ	1	11:08																								
CCV03	1	11:10															X									
CCB03	1	11:11															X									
ZZZZZZ	1	11:13																								
ZZZZZZ	1	11:15																								
ZZZZZZ	1	11:16																								
ZZZZZZ	1	11:18																								
ZZZZZZ	1	11:20																								



Samp No.	D/F	Run Time
777777	1	11:21
777777	1	11:23
777777	1	11:25
777777	1	11:26
777777	5	11:28
CCV04	1	11:30
CCB04	1	11:31
777777	1	11:33
777777	10	11:35
777777	1	11:36
777777	1	11:38
777777	1	11:40
777777	1	11:42
777777	5	11:43
777777	1	11:45
777777	1	11:47
777777	1	11:48
CCV05	1	11:50
CCB05	1	11:52
777777	1	11:53
777777	1	11:55
777777	1	11:57
777777	1	11:58
777777	1	12:00
777777	1	12:02
777777	1	12:03
777777	1	12:05
777777	1	12:07
777777	1	12:08
CCV06	1	12:10
CCB06	1	12:12
1202055914	1	12:13
1202055915	10	12:15
777777	1	12:17
1202055916	1	12:18
1202055917	1	12:20
1202055918 1202055919	71	12:22
1202055919 1202055918	75	12:23
777777	1	12:25
777777	1	12:27

03031052

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
ZZZZZZ	1	12:29																								
CCV07	1	12:30															X									
CCB07	1	12:32															X									
ZZZZZZ	1	12:34																								
ZZZZZZ	1	12:35																								
ZZZZZZ	1	12:37																								
ZZZZZZ	1	12:39																								
247336001	1	12:40															X									
247336002	1	12:42															X									
247336003	1	12:44															X									
247336004	1	12:45															X									
247336005	1	12:47															X									
247336006	1	12:49															X									
CCV08	1	12:50															X									
CCB08	1	12:52															X									
247336007	1	12:54															X									
ZZZZZZ	1	12:55																								
ZZZZZZ	10	12:57																								
ZZZZZZ	1	12:59																								
ZZZZZZ	1	13:01																								
ZZZZZZ	1	13:02																								
ZZZZZZ	1	13:04																								
ZZZZZZ	5	13:06																								
ZZZZZZ	1	13:07																								
ZZZZZZ	1	13:09																								
CCV09	1	13:11															X									
CCB09	1	13:12															X									

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 16-MAR-10

Client Sdg: 10-1906-1

Method P

Data File: 031610B-1

End Date: 16-MAR-10

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	13:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	13:44		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	13:47	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	13:54	X						X				X		X							X				
ICV01	1	13:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	14:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	14:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	14:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	14:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	14:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	14:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV01	1	14:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	14:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	14:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	14:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	14:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV03	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	14:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	14:53																								
ZZZZZZ	1	14:57																								
ZZZZZZ	1	15:01																								
ZZZZZZ	1	15:04																								
ZZZZZZ	1	15:08																								
ZZZZZZ	5	15:11																								
CCV04	1	15:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	15:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	15:22																								
ZZZZZZ	1	15:26																								
ZZZZZZ	1	15:29																								
ZZZZZZ	1	15:33																								
ZZZZZZ	1	15:36																								
ZZZZZZ	1	15:40																								
ZZZZZZ	1	15:43																								
ZZZZZZ	1	15:47																								
ZZZZZZ	1	15:50																								
CCV05	1	15:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB05	1	15:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	16:01																								
ZZZZZZ	1	16:05																								

SW846

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
ZZZZZZ	1	19:33																								
ZZZZZZ	1	19:37																								
ZZZZZZ	1	19:40																								
ZZZZZZ	1	19:44																								
CCV12	1	19:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB12	1	19:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	19:58																								
ZZZZZZ	2	20:02																								
ZZZZZZ	1	20:05																								
ZZZZZZ	1	20:09																								
ZZZZZZ	1	20:13																								
ZZZZZZ	1	20:16																								
ZZZZZZ	5	20:20																								
ZZZZZZ	1	20:24																								
ZZZZZZ	1	20:27																								
CCV13	1	20:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB13	1	20:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	20:38																								
ZZZZZZ	1	20:42																								
ZZZZZZ	1	20:45																								
ZZZZZZ	1	20:49																								
ZZZZZZ	1	20:53																								
ZZZZZZ	1	20:56																								
ZZZZZZ	1	21:00																								
ZZZZZZ	1	21:04																								
ZZZZZZ	1	21:07																								
CCV14	1	21:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB14	1	21:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	21:18																								
ZZZZZZ	1	21:22																								
ZZZZZZ	1	21:25																								
ZZZZZZ	1	21:29																								
ZZZZZZ	1	21:33																								
ZZZZZZ	1	21:36																								
ZZZZZZ	1	21:40																								
ZZZZZZ	1	21:44																								
CCV15	1	21:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB15	1	21:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	21:57																								
ZZZZZZ	1	22:01																								

**Metals**  
**-14-**  
**Analysis Run Log**

[illegible]

# Standards

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1906-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum		15.0	50
	Antimony		0.5	3
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.066	.2
	Vanadium		2.0	10
	Zinc		2.0	10



METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1906-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 15-JUN-09

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		<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY	<u>Analyte</u>			
SOLID	Mercury		0.068	.2

**METALS**  
**-10-**  
**Instrument Detection Limits**

SDG NO. 10-1906-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength</u>	<u>MDL</u>	<u>RDL</u>
		<u>(nm)</u>	<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1906-1

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.05500	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.28800	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.04600	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GELGEL Job No: **10-1906-1**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	11.3250	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	-1.59900	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-21.2250	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.68400
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.19100	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	105.59
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.36300	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	-2.30400	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.61100

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GELGEL Job No: **10-1906-1**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	20.5430
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3320
Arsenic	188.979	-0.05800	0.00000	0.00000	0.00000	1.97700
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.13300	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-0.90500
Copper	324.752	-0.13900	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.03800	-2.87600	0.00000	0.00000	0.00000
Magnesium	279.077	1.07300	0.00000	0.00000	0.00000	-16.8110
Manganese	257.61	-0.13900	0.00000	0.04000	0.00000	0.00000
Molybdenum	202.031	-0.03800	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	-0.01300	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.81200	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.88200	0.00000	0.28200	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	-0.06300	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.03900	0.00000	0.00000	-4.11700	0.00000
Tin	189.927	-0.09200	0.00000	-0.19600	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.07900	0.00000	0.00000
Uranium	409.014	0.13900	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.05300	0.00000	0.00000	0.00000	-7.71400
Zinc	213.857	0.14460	0.00000	0.02030	0.00000	0.00000

**METALS**  
**-11-**  
**Interement Correction Factors**

Lab Code: GELGEL Job No: **10-1906-1**

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: **01-FEB-10**

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Nickel	Phosphorous	Selenium	Silicon	Silver
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.99900	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	4.41600	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1906-1

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Sulfur	Thallium	Tin	Titanium	Uranium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.38100	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	2.08700	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.04000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	-14.8110	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-8.68900	-1.22400
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	-1.03900
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1906-1

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000
Antimony	206.836	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000
Barium	233.527	-1.80500	0.00000
Beryllium	313.107	0.00000	0.00000
Boron	249.677	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000
Chromium	267.716	-0.63000	0.00000
Cobalt	228.616	0.00000	0.00000
Copper	324.752	0.00000	0.00000
Iron	238.204	0.00000	0.00000
Lead	220.353	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000
Manganese	257.61	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000
Nickel	231.604	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000
Selenium	196.026	0.00000	0.00000
Silicon	251.611	0.00000	0.00000
Silver	328.068	-6.59800	0.00000
Sulfur	181.975	0.00000	0.00000
Thallium	190.801	0.00000	0.00000
Tin	189.927	0.00000	0.00000
Titanium	334.94	0.00000	0.00000
Uranium	409.014	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000
Zinc	213.857	0.00000	0.00000



**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1906-1

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS6

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1906-1

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA I

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Calcium	20	500000	ug/L	01-FEB-10
Chromium	20	25000	ug/L	01-FEB-10
Cobalt	20	10000	ug/L	01-FEB-10
Copper	20	20000	ug/L	01-FEB-10
Iron	20	500000	ug/L	01-FEB-10
Lead	20	25000	ug/L	01-FEB-10
Magnesium	20	500000	ug/L	01-FEB-10
Manganese	20	10000	ug/L	01-FEB-10
Nickel	20	10000	ug/L	01-FEB-10
Potassium	20	300000	ug/L	01-FEB-10
Selenium	20	10000	ug/L	01-FEB-10
Silver	20	1000	ug/L	01-FEB-10
Sodium	20	500000	ug/L	01-FEB-10
Thallium	20	10000	ug/L	01-FEB-10
Uranium	20	15000	ug/L	01-FEB-10
Vanadium	20	10000	ug/L	01-FEB-10
Zinc	20	15000	ug/L	01-FEB-10
Aluminum	20	500000	ug/L	01-FEB-10
Antimony	20	10000	ug/L	01-FEB-10
Arsenic	20	10000	ug/L	01-FEB-10
Barium	20	15000	ug/L	01-FEB-10
Beryllium	20	3000	ug/L	01-FEB-10
Cadmium	20	10000	ug/L	01-FEB-10

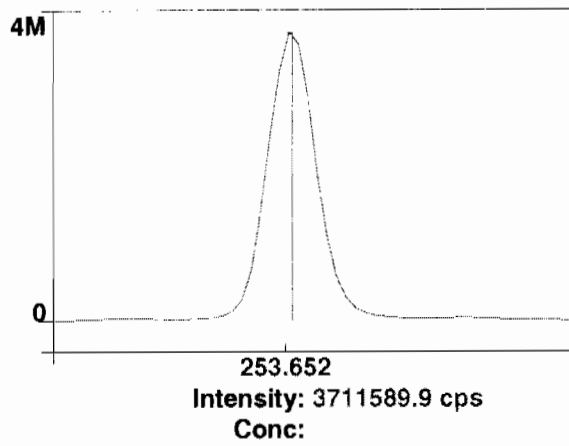
# Raw Data

Method: Hg\_ReAlign  
Result: 032210

Sample ID: Hg\_ReAlign

Hg 253.652

Rep: 1



1

## =====

Analysis Begun

Start Time: 3/16/2010 13:41:04

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\031610A.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb

## =====

Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 3/16/2010 10:34:08

IEC File: 011510.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 3/16/2010 13:41:07

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	96310.1	96310.1	99.5 %	13:41:44
1	Al 396.153Radial†	-113.6	-114.1	[0.00] µg/L	13:41:44
1	Ca 317.933Radial†	391.5	393.5	[0.00] µg/L	13:42:04
1	Fe 238.204 Radial†	11.9	12.0	[0.00] µg/L	13:42:04

1	K 766.490 Radial†	454.1	456.3	[0.00]	µg/L	13:41:44
1	Mg 279.077 IEC†	9.1	9.1	[0.00]	µg/L	13:42:04
1	Na 589.592 Radial†	168.2	169.0	[0.00]	µg/L	13:41:44
1	Sr 421.552†	145.4	146.2	[0.00]	µg/L	13:41:44
1	Sc 361.383	2092200.5	2092200.5	99.957	%	13:43:06
1	Y 371.029	1431573.2	1431573.2	99.909	%	13:43:06
1	Ag 328.068†	-464.1	-464.3	[0.00]	µg/L	13:43:12
1	As 188.979†	-7.3	-7.3	[0.00]	µg/L	13:43:32
1	B 249.677†	288.8	288.9	[0.00]	µg/L	13:43:12
1	Ba 233.527†	-11.7	-11.7	[0.00]	µg/L	13:43:32
1	Be 313.107†	-1126.7	-1127.2	[0.00]	µg/L	13:43:12
1	Cd 226.502†	-174.7	-174.8	[0.00]	µg/L	13:43:32
1	Co 228.616†	46.1	46.2	[0.00]	µg/L	13:43:32
1	Cr 267.716†	105.5	105.6	[0.00]	µg/L	13:43:12
1	Cu 324.752†	4384.9	4386.8	[0.00]	µg/L	13:43:12
1	Mn 257.610†	-689.4	-689.7	[0.00]	µg/L	13:43:32
1	Mo 202.031†	4.1	4.1	[0.00]	µg/L	13:43:32
1	Ni 231.604†	375.1	375.3	[0.00]	µg/L	13:43:32
1	P 214.914†	275.1	275.3	[0.00]	µg/L	13:43:32
1	Pb 220.353†	24.9	25.0	[0.00]	µg/L	13:43:32
1	S 181.975 Axial†	22.5	22.6	[0.00]	µg/L	13:43:32
1	Sb 206.836†	23.7	23.7	[0.00]	µg/L	13:43:32
1	Se 196.026†	28.4	28.4	[0.00]	µg/L	13:43:32
1	SiO2†	2772.9	2774.1	[0.00]	µg/L	13:43:12
1	Si 251.611†	421.5	421.7	[0.00]	µg/L	13:43:32
1	Sn 189.927†	-10.0	-10.0	[0.00]	µg/L	13:43:32
1	Ti 334.940†	-613.0	-613.3	[0.00]	µg/L	13:43:12
1	Tl 190.801†	-35.5	-35.5	[0.00]	µg/L	13:43:32
1	U 409.014†	3.8	3.8	[0.00]	µg/L	13:43:12
1	V 292.402†	86.7	86.7	[0.00]	µg/L	13:43:12
1	Zn 213.857†	1026.4	1026.9	[0.00]	µg/L	13:43:32
2	Sc RADIAL	96813.2	96813.2	100	%	13:42:10
2	Al 396.153Radial†	-133.0	-132.9	[0.00]	µg/L	13:42:10
2	Ca 317.933Radial†	378.8	378.7	[0.00]	µg/L	13:42:30
2	Fe 238.204 Radial†	12.4	12.4	[0.00]	µg/L	13:42:30
2	K 766.490 Radial†	490.3	490.2	[0.00]	µg/L	13:42:10
2	Mg 279.077 IEC†	8.0	8.0	[0.00]	µg/L	13:42:30
2	Na 589.592 Radial†	213.5	213.4	[0.00]	µg/L	13:42:10
2	Sr 421.552†	120.7	120.7	[0.00]	µg/L	13:42:10
2	Sc 361.383	2084241.1	2084241.1	99.576	%	13:43:38
2	Y 371.029	1427836.1	1427836.1	99.649	%	13:43:38
2	Ag 328.068†	-405.9	-407.7	[0.00]	µg/L	13:43:44
2	As 188.979†	-0.6	-0.6	[0.00]	µg/L	13:44:04
2	B 249.677†	309.9	311.2	[0.00]	µg/L	13:43:44
2	Ba 233.527†	-8.2	-8.2	[0.00]	µg/L	13:44:04
2	Be 313.107†	-1135.5	-1140.3	[0.00]	µg/L	13:43:44
2	Cd 226.502†	-167.9	-168.6	[0.00]	µg/L	13:44:04
2	Co 228.616†	47.5	47.7	[0.00]	µg/L	13:44:04
2	Cr 267.716†	80.4	80.7	[0.00]	µg/L	13:43:44
2	Cu 324.752†	4400.5	4419.2	[0.00]	µg/L	13:43:44
2	Mn 257.610†	-687.2	-690.2	[0.00]	µg/L	13:44:04
2	Mo 202.031†	11.2	11.3	[0.00]	µg/L	13:44:04
2	Ni 231.604†	375.1	376.7	[0.00]	µg/L	13:44:04
2	P 214.914†	273.4	274.6	[0.00]	µg/L	13:44:04
2	Pb 220.353†	35.0	35.2	[0.00]	µg/L	13:44:04
2	S 181.975 Axial†	24.5	24.6	[0.00]	µg/L	13:44:04
2	Sb 206.836†	23.8	23.9	[0.00]	µg/L	13:44:04
2	Se 196.026†	28.3	28.5	[0.00]	µg/L	13:44:04
2	SiO2†	2774.9	2786.7	[0.00]	µg/L	13:43:44
2	Si 251.611†	424.0	425.8	[0.00]	µg/L	13:44:04
2	Sn 189.927†	-8.3	-8.4	[0.00]	µg/L	13:44:04
2	Ti 334.940†	-620.9	-623.6	[0.00]	µg/L	13:43:44
2	Tl 190.801†	-34.2	-34.3	[0.00]	µg/L	13:44:04
2	U 409.014†	-6.4	-6.5	[0.00]	µg/L	13:43:44
2	V 292.402†	143.8	144.4	[0.00]	µg/L	13:43:44
2	Zn 213.857†	1021.1	1025.5	[0.00]	µg/L	13:44:04
3	Sc RADIAL	97241.5	97241.5	100	%	13:42:36
3	Al 396.153Radial†	-111.4	-110.8	[0.00]	µg/L	13:42:36
3	Ca 317.933Radial†	385.6	383.8	[0.00]	µg/L	13:42:56
3	Fe 238.204 Radial†	11.5	11.4	[0.00]	µg/L	13:42:56
3	K 766.490 Radial†	511.9	509.5	[0.00]	µg/L	13:42:36

3	Mg 279.077 IEC†	6.9	6.9	[0.00] µg/L	13:42:56
3	Na 589.592 Radial†	160.0	159.3	[0.00] µg/L	13:42:36
3	Sr 421.552†	152.1	151.4	[0.00] µg/L	13:42:36
3	Sc 361.383	2102883.6	2102883.6	100.47 %	13:44:10
3	Y 371.029	1439201.5	1439201.5	100.44 %	13:44:10
3	Ag 328.068†	-511.0	-508.7	[0.00] µg/L	13:44:16
3	As 188.979†	-1.9	-1.9	[0.00] µg/L	13:44:36
3	B 249.677†	299.4	298.0	[0.00] µg/L	13:44:16
3	Ba 233.527†	-5.3	-5.3	[0.00] µg/L	13:44:36
3	Be 313.107†	-1214.7	-1209.0	[0.00] µg/L	13:44:16
3	Cd 226.502†	-169.1	-168.3	[0.00] µg/L	13:44:36
3	Co 228.616†	50.5	50.3	[0.00] µg/L	13:44:36
3	Cr 267.716†	54.7	54.4	[0.00] µg/L	13:44:16
3	Cu 324.752†	4344.2	4324.0	[0.00] µg/L	13:44:16
3	Mn 257.610†	-684.2	-681.1	[0.00] µg/L	13:44:36
3	Mo 202.031†	-0.0	-0.0	[0.00] µg/L	13:44:36
3	Ni 231.604†	380.5	378.7	[0.00] µg/L	13:44:36
3	P 214.914†	268.6	267.4	[0.00] µg/L	13:44:36
3	Pb 220.353†	30.5	30.4	[0.00] µg/L	13:44:36
3	S 181.975 Axial†	20.6	20.5	[0.00] µg/L	13:44:36
3	Sb 206.836†	20.6	20.5	[0.00] µg/L	13:44:36
3	Se 196.026†	25.2	25.1	[0.00] µg/L	13:44:36
3	SiO2†	2791.5	2778.5	[0.00] µg/L	13:44:16
3	Si 251.611†	426.8	424.8	[0.00] µg/L	13:44:36
3	Sn 189.927†	-4.0	-4.0	[0.00] µg/L	13:44:36
3	Ti 334.940†	-497.2	-494.9	[0.00] µg/L	13:44:16
3	Tl 190.801†	-32.7	-32.6	[0.00] µg/L	13:44:36
3	U 409.014†	-14.9	-14.8	[0.00] µg/L	13:44:16
3	V 292.402†	106.3	105.8	[0.00] µg/L	13:44:16
3	Zn 213.857†	978.8	974.2	[0.00] µg/L	13:44:36

## Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2093108.4	9354.33	0.45%	100.00 %	
Sc RADIAL	96788.3	466.20	0.48%	100 %	
Y 371.029	1432870.2	5792.65	0.40%	100.00 %	
Ag 328.068†	-460.2	50.62	11.00%	[0.00] µg/L	
Al 396.153Radial†	-119.3	11.92	9.99%	[0.00] µg/L	
As 188.979†	-3.3	3.57	109.72%	[0.00] µg/L	
B 249.677†	299.4	11.22	3.75%	[0.00] µg/L	
Ba 233.527†	-8.4	3.24	38.46%	[0.00] µg/L	
Be 313.107†	-1158.8	43.95	3.79%	[0.00] µg/L	
Ca 317.933Radial†	385.3	7.52	1.95%	[0.00] µg/L	
Cd 226.502†	-170.6	3.66	2.15%	[0.00] µg/L	
Co 228.616†	48.1	2.09	4.36%	[0.00] µg/L	
Cr 267.716†	80.2	25.59	31.89%	[0.00] µg/L	
Cu 324.752†	4376.7	48.39	1.11%	[0.00] µg/L	
Fe 238.204 Radial†	12.0	0.51	4.24%	[0.00] µg/L	
K 766.490 Radial†	485.3	26.93	5.55%	[0.00] µg/L	
Mg 279.077 IEC†	8.0	1.10	13.82%	[0.00] µg/L	
Mn 257.610†	-687.0	5.13	0.75%	[0.00] µg/L	
Mo 202.031†	5.1	5.73	111.70%	[0.00] µg/L	
Na 589.592 Radial†	180.6	28.84	15.97%	[0.00] µg/L	
Ni 231.604†	376.9	1.75	0.46%	[0.00] µg/L	
P 214.914†	272.4	4.38	1.61%	[0.00] µg/L	
Pb 220.353†	30.2	5.11	16.94%	[0.00] µg/L	
S 181.975 Axial†	22.5	2.05	9.11%	[0.00] µg/L	
Sb 206.836†	22.7	1.93	8.48%	[0.00] µg/L	
Se 196.026†	27.3	1.95	7.13%	[0.00] µg/L	
SiO2†	2779.7	6.41	0.23%	[0.00] µg/L	
Si 251.611†	424.1	2.16	0.51%	[0.00] µg/L	
Sn 189.927†	-7.4	3.11	41.86%	[0.00] µg/L	
Sr 421.552†	139.4	16.44	11.79%	[0.00] µg/L	
Ti 334.940†	-577.2	71.51	12.39%	[0.00] µg/L	
Tl 190.801†	-34.1	1.46	4.28%	[0.00] µg/L	
U 409.014†	-5.8	9.33	160.61%	[0.00] µg/L	
V 292.402†	112.3	29.35	26.13%	[0.00] µg/L	
Zn 213.857†	1008.9	29.99	2.97%	[0.00] µg/L	

Sequence No.: 2

Sample ID: S0.1

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 2

Date Collected: 3/16/2010 13:44:45

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	98715.8	98715.8	102 %		13:45:17
1	K 766.490 Radial†	2592.4	2056.4	[1000] µg/L		13:45:17
1	Sr 421.552†	17263.6	16787.1	[100] µg/L		13:45:17
1	Sc 361.383	2094721.1	2094721.1	100.08 %		13:45:39
1	Y 371.029	1434102.7	1434102.7	100.09 %		13:45:39
1	Ag 328.068†	12293.9	12744.6	[100] µg/L		13:45:44
1	As 188.979†	70.0	73.2	[100] µg/L		13:46:05
1	B 249.677†	2506.5	2205.2	[100] µg/L		13:45:44
1	Ba 233.527†	4749.0	4753.7	[100] µg/L		13:46:05
1	Be 313.107†	175330.6	176354.4	[100] µg/L		13:45:39
1	Cd 226.502†	4244.7	4412.1	[100] µg/L		13:46:05
1	Co 228.616†	2472.2	2422.2	[100] µg/L		13:46:05
1	Cr 267.716†	4944.8	4860.7	[100] µg/L		13:45:44
1	Cu 324.752†	20439.1	16046.7	[100] µg/L		13:45:44
1	Mn 257.610†	34361.8	35022.3	[100] µg/L		13:45:44
1	Mo 202.031†	1112.9	1106.9	[100] µg/L		13:46:05
1	Ni 231.604†	2269.8	1891.1	[100] µg/L		13:46:05
1	P 214.914†	594.3	321.5	[500] µg/L		13:46:05
1	Pb 220.353†	447.5	417.0	[100] µg/L		13:46:05
1	S 181.975 Axial†	92.0	69.4	[200] µg/L		13:46:05
1	Sb 206.836†	145.3	122.4	[100] µg/L		13:46:05
1	Se 196.026†	137.0	109.6	[100] µg/L		13:46:05
1	SiO2†	9003.6	6216.9	[1069.5] µg/L		13:45:44
1	Si 251.611†	8093.8	7663.5	[500] µg/L		13:45:44
1	Sn 189.927†	275.6	282.9	[100] µg/L		13:46:05
1	Ti 334.940†	42939.4	43483.5	[100] µg/L		13:45:44
1	Tl 190.801†	72.6	106.7	[100] µg/L		13:46:05
1	U 409.014†	1155.3	1160.3	[100] µg/L		13:45:44
1	V 292.402†	8861.3	8742.1	[100] µg/L		13:45:44
1	Zn 213.857†	5580.6	4567.5	[100] µg/L		13:46:05
2	Sc RADIAL	98746.9	98746.9	102 %		13:45:23
2	K 766.490 Radial†	2620.5	2083.2	[1000] µg/L		13:45:23
2	Sr 421.552†	17298.0	16815.5	[100] µg/L		13:45:23
2	Sc 361.383	2100226.4	2100226.4	100.34 %		13:46:11
2	Y 371.029	1439792.5	1439792.5	100.48 %		13:46:11
2	Ag 328.068†	12345.5	12763.8	[100] µg/L		13:46:17
2	As 188.979†	67.3	70.3	[100] µg/L		13:46:37
2	B 249.677†	2557.3	2249.3	[100] µg/L		13:46:17
2	Ba 233.527†	4728.4	4720.8	[100] µg/L		13:46:37
2	Be 313.107†	175386.8	175951.2	[100] µg/L		13:46:11
2	Cd 226.502†	4247.0	4403.2	[100] µg/L		13:46:37
2	Co 228.616†	2478.6	2422.1	[100] µg/L		13:46:37
2	Cr 267.716†	4958.6	4861.5	[100] µg/L		13:46:17
2	Cu 324.752†	20540.7	16094.4	[100] µg/L		13:46:17
2	Mn 257.610†	34546.6	35116.5	[100] µg/L		13:46:17
2	Mo 202.031†	1110.1	1101.2	[100] µg/L		13:46:37
2	Ni 231.604†	2257.9	1873.3	[100] µg/L		13:46:37
2	P 214.914†	593.4	319.0	[500] µg/L		13:46:37
2	Pb 220.353†	453.6	421.9	[100] µg/L		13:46:37
2	S 181.975 Axial†	98.5	75.6	[200] µg/L		13:46:37
2	Sb 206.836†	142.4	119.2	[100] µg/L		13:46:37
2	Se 196.026†	136.6	108.9	[100] µg/L		13:46:37
2	SiO2†	8990.1	6179.9	[1069.5] µg/L		13:46:17
2	Si 251.611†	8054.1	7602.7	[500] µg/L		13:46:17
2	Sn 189.927†	279.4	285.9	[100] µg/L		13:46:37
2	Ti 334.940†	43205.6	43636.4	[100] µg/L		13:46:17
2	Tl 190.801†	71.0	104.9	[100] µg/L		13:46:37
2	U 409.014†	1121.8	1123.8	[100] µg/L		13:46:17
2	V 292.402†	8955.3	8812.6	[100] µg/L		13:46:17



2	Zn 213.857†	5596.7	4568.9	[100] µg/L	13:46:37
3	Sc RADIAL	99227.6	99227.6	103 %	13:45:28
3	K 766.490 Radial†	2604.0	2054.7	[1000] µg/L	13:45:28
3	Sr 421.552†	17310.0	16745.0	[100] µg/L	13:45:28
3	Sc 361.383	2097900.5	2097900.5	100.23 %	13:46:44
3	Y 371.029	1438218.9	1438218.9	100.37 %	13:46:44
3	Ag 328.068†	12354.9	12786.9	[100] µg/L	13:46:49
3	As 188.979†	72.1	75.2	[100] µg/L	13:47:10
3	B 249.677†	2500.5	2195.5	[100] µg/L	13:46:49
3	Ba 233.527†	4717.5	4715.1	[100] µg/L	13:47:10
3	Be 313.107†	175589.1	176346.9	[100] µg/L	13:46:44
3	Cd 226.502†	4212.4	4373.3	[100] µg/L	13:47:10
3	Co 228.616†	2475.0	2421.3	[100] µg/L	13:47:10
3	Cr 267.716†	4959.0	4867.4	[100] µg/L	13:46:49
3	Cu 324.752†	20426.8	16003.5	[100] µg/L	13:46:49
3	Mn 257.610†	34298.5	34907.1	[100] µg/L	13:46:49
3	Mo 202.031†	1110.6	1103.0	[100] µg/L	13:47:10
3	Ni 231.604†	2254.1	1872.1	[100] µg/L	13:47:10
3	P 214.914†	602.9	329.1	[500] µg/L	13:47:10
3	Pb 220.353†	435.3	404.2	[100] µg/L	13:47:10
3	S 181.975 Axial†	83.4	60.6	[200] µg/L	13:47:10
3	Sb 206.836†	141.8	118.8	[100] µg/L	13:47:10
3	Se 196.026†	130.1	102.5	[100] µg/L	13:47:10
3	SiO2†	8943.3	6143.1	[1069.5] µg/L	13:46:49
3	Si 251.611†	8011.5	7569.1	[500] µg/L	13:46:49
3	Sn 189.927†	278.7	285.5	[100] µg/L	13:47:10
3	Ti 334.940†	42980.6	43459.6	[100] µg/L	13:46:49
3	Tl 190.801†	69.6	103.6	[100] µg/L	13:47:10
3	U 409.014†	1134.7	1137.9	[100] µg/L	13:46:49
3	V 292.402†	8902.5	8769.9	[100] µg/L	13:46:49
3	Zn 213.857†	5560.8	4539.2	[100] µg/L	13:47:10

## Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2097616.0	2763.63	0.13%	100.22	%
Sc RADIAL	98896.7	286.93	0.29%	102	%
Y 371.029	1437371.4	2938.05	0.20%	100.31	%
Ag 328.068†	12765.1	21.16	0.17%	[100]	µg/L
As 188.979†	72.9	2.47	3.39%	[100]	µg/L
B 249.677†	2216.6	28.68	1.29%	[100]	µg/L
Ba 233.527†	4729.9	20.84	0.44%	[100]	µg/L
Be 313.107†	176217.5	230.67	0.13%	[100]	µg/L
Cd 226.502†	4396.2	20.30	0.46%	[100]	µg/L
Co 228.616†	2421.9	0.50	0.02%	[100]	µg/L
Cr 267.716†	4863.2	3.65	0.08%	[100]	µg/L
Cu 324.752†	16048.2	45.49	0.28%	[100]	µg/L
K 766.490 Radial†	2064.8	15.99	0.77%	[1000]	µg/L
Mn 257.610†	35015.3	104.84	0.30%	[100]	µg/L
Mo 202.031†	1103.7	2.93	0.27%	[100]	µg/L
Ni 231.604†	1878.8	10.66	0.57%	[100]	µg/L
P 214.914†	323.2	5.29	1.64%	[500]	µg/L
Pb 220.353†	414.4	9.14	2.21%	[100]	µg/L
S 181.975 Axial†	68.5	7.51	10.96%	[200]	µg/L
Sb 206.836†	120.1	2.01	1.68%	[100]	µg/L
Se 196.026†	107.0	3.88	3.63%	[100]	µg/L
SiO2†	6179.9	36.90	0.60%	[1069.5]	µg/L
Si 251.611†	7611.8	47.81	0.63%	[500]	µg/L
Sn 189.927†	284.7	1.65	0.58%	[100]	µg/L
Sr 421.552†	16782.5	35.44	0.21%	[100]	µg/L
Ti 334.940†	43526.5	95.91	0.22%	[100]	µg/L
Tl 190.801†	105.0	1.56	1.48%	[100]	µg/L
U 409.014†	1140.7	18.37	1.61%	[100]	µg/L
V 292.402†	8774.9	35.49	0.40%	[100]	µg/L
Zn 213.857†	4558.5	16.73	0.37%	[100]	µg/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 3/16/2010 13:47:19

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	100074.7	100074.7	103	%	13:47:50
1	Al 396.153Radial†	10699.0	10467.0	[5000]	µg/L	13:47:50
1	Ca 317.933Radial†	14852.2	13979.2	[5000]	µg/L	13:47:50
1	K 766.490 Radial†	11694.6	10825.2	[5000]	µg/L	13:47:50
1	Mg 279.077 IEC†	407.4	386.1	[5000]	µg/L	13:48:10
1	Sr 421.552†	87389.5	84380.3	[500]	µg/L	13:47:50
1	Sc 361.383	2086321.5	2086321.5	99.676	%	13:49:14
1	Y 371.029	1422836.0	1422836.0	99.300	%	13:49:14
1	Ag 328.068†	62741.3	63405.6	[500]	µg/L	13:49:19
1	As 188.979†	358.5	363.0	[500]	µg/L	13:49:40
1	B 249.677†	11575.1	11313.4	[500]	µg/L	13:49:19
1	Ba 233.527†	23656.5	23741.9	[500]	µg/L	13:49:19
1	Be 313.107†	878338.7	882354.8	[500]	µg/L	13:49:14
1	Cd 226.502†	21751.7	21993.0	[500]	µg/L	13:49:19
1	Co 228.616†	12217.5	12209.2	[500]	µg/L	13:49:19
1	Cr 267.716†	24228.1	24226.7	[500]	µg/L	13:49:19
1	Cu 324.752†	83409.3	79304.0	[500]	µg/L	13:49:19
1	Mn 257.610†	173738.8	174991.0	[500]	µg/L	13:49:14
1	Mo 202.031†	5418.2	5430.7	[500]	µg/L	13:49:40
1	Ni 231.604†	9708.7	9363.4	[500]	µg/L	13:49:19
1	P 214.914†	1882.2	1615.9	[2500]	µg/L	13:49:40
1	Pb 220.353†	2060.0	2036.5	[500]	µg/L	13:49:40
1	S 181.975 Axial†	351.4	330.0	[1000]	µg/L	13:49:40
1	Sb 206.836†	613.4	592.6	[500]	µg/L	13:49:40
1	Se 196.026†	600.7	575.3	[500]	µg/L	13:49:40
1	SiO2†	33299.9	30628.5	[5347.5]	µg/L	13:49:19
1	Si 251.611†	38386.1	38086.9	[2500]	µg/L	13:49:19
1	Sn 189.927†	1373.2	1385.1	[500]	µg/L	13:49:40
1	Ti 334.940†	218890.7	220180.0	[500]	µg/L	13:49:14
1	Tl 190.801†	509.8	545.5	[500]	µg/L	13:49:40
1	U 409.014†	5659.3	5683.5	[500]	µg/L	13:49:19
1	V 292.402†	44006.7	44037.6	[500]	µg/L	13:49:19
1	Zn 213.857†	23916.7	22985.7	[500]	µg/L	13:49:19
2	Sc RADIAL	99306.2	99306.2	103	%	13:48:16
2	Al 396.153Radial†	10633.8	10483.5	[5000]	µg/L	13:48:16
2	Ca 317.933Radial†	14719.7	13961.2	[5000]	µg/L	13:48:16
2	K 766.490 Radial†	11489.6	10713.0	[5000]	µg/L	13:48:16
2	Mg 279.077 IEC†	411.2	392.8	[5000]	µg/L	13:48:36
2	Sr 421.552†	86575.3	84240.8	[500]	µg/L	13:48:16
2	Sc 361.383	2088104.0	2088104.0	99.761	%	13:49:47
2	Y 371.029	1424214.4	1424214.4	99.396	%	13:49:47
2	Ag 328.068†	62542.8	63152.9	[500]	µg/L	13:49:53
2	As 188.979†	350.4	354.5	[500]	µg/L	13:50:13
2	B 249.677†	11540.6	11268.9	[500]	µg/L	13:49:53
2	Ba 233.527†	23599.4	23664.4	[500]	µg/L	13:49:53
2	Be 313.107†	878324.6	881588.5	[500]	µg/L	13:49:47
2	Cd 226.502†	21731.5	21954.1	[500]	µg/L	13:49:53
2	Co 228.616†	12180.9	12162.1	[500]	µg/L	13:49:53
2	Cr 267.716†	24125.0	24102.6	[500]	µg/L	13:49:53
2	Cu 324.752†	83124.2	78946.8	[500]	µg/L	13:49:53
2	Mn 257.610†	174021.4	175125.4	[500]	µg/L	13:49:47
2	Mo 202.031†	5328.5	5336.1	[500]	µg/L	13:50:13
2	Ni 231.604†	9688.3	9334.6	[500]	µg/L	13:49:53
2	P 214.914†	1853.7	1585.7	[2500]	µg/L	13:50:13
2	Pb 220.353†	2027.1	2001.8	[500]	µg/L	13:50:13
2	S 181.975 Axial†	346.2	324.4	[1000]	µg/L	13:50:13
2	Sb 206.836†	596.8	575.5	[500]	µg/L	13:50:13
2	Se 196.026†	588.3	562.4	[500]	µg/L	13:50:13
2	SiO2†	33286.2	30586.2	[5347.5]	µg/L	13:49:53

2	Si 251.611†	38283.7	37951.4	[2500]	µg/L	13:49:53
2	Sn 189.927†	1350.6	1361.3	[500]	µg/L	13:50:13
2	Ti 334.940†	219123.4	220225.8	[500]	µg/L	13:49:47
2	Tl 190.801†	494.4	529.7	[500]	µg/L	13:50:13
2	U 409.014†	5782.8	5802.5	[500]	µg/L	13:49:53
2	V 292.402†	43961.3	43954.3	[500]	µg/L	13:49:53
2	Zn 213.857†	23783.8	22831.9	[500]	µg/L	13:49:53
3	Sc RADIAL	100050.4	100050.4	103	%	13:48:42
3	Al 396.153Radial†	10642.3	10414.6	[5000]	µg/L	13:48:42
3	Ca 317.933Radial†	14755.5	13889.1	[5000]	µg/L	13:48:42
3	K 766.490 Radial†	11490.7	10630.7	[5000]	µg/L	13:48:42
3	Mg 279.077 IEC†	404.2	383.1	[5000]	µg/L	13:49:02
3	Sr 421.552†	87086.2	84107.4	[500]	µg/L	13:48:42
3	Sc 361.383	2071228.8	2071228.8	98.955	%	13:50:21
3	Y 371.029	1409380.7	1409380.7	98.361	%	13:50:21
3	Ag 328.068†	58350.1	59426.7	[500]	µg/L	13:50:26
3	As 188.979†	297.3	303.7	[500]	µg/L	13:50:47
3	B 249.677†	10705.3	10519.0	[500]	µg/L	13:50:26
3	Ba 233.527†	21400.9	21635.4	[500]	µg/L	13:50:26
3	Be 313.107†	804451.5	814108.2	[500]	µg/L	13:50:21
3	Cd 226.502†	19505.4	19882.1	[500]	µg/L	13:50:26
3	Co 228.616†	10876.1	10943.0	[500]	µg/L	13:50:26
3	Cr 267.716†	20805.6	20945.1	[500]	µg/L	13:50:26
3	Cu 324.752†	75185.9	71603.4	[500]	µg/L	13:50:26
3	Mn 257.610†	160217.0	162596.4	[500]	µg/L	13:50:21
3	Mo 202.031†	4437.6	4479.4	[500]	µg/L	13:50:47
3	Ni 231.604†	8697.8	8412.8	[500]	µg/L	13:50:26
3	P 214.914†	1618.8	1363.5	[2500]	µg/L	13:50:47
3	Pb 220.353†	1745.4	1733.6	[500]	µg/L	13:50:47
3	S 181.975 Axial†	306.0	286.7	[1000]	µg/L	13:50:47
3	Sb 206.836†	524.6	507.4	[500]	µg/L	13:50:47
3	Se 196.026†	508.3	486.3	[500]	µg/L	13:50:47
3	SiO2†	30775.8	28321.1	[5347.5]	µg/L	13:50:26
3	Si 251.611†	35188.6	35136.2	[2500]	µg/L	13:50:26
3	Sn 189.927†	1102.7	1121.7	[500]	µg/L	13:50:47
3	Ti 334.940†	199565.5	202250.8	[500]	µg/L	13:50:21
3	Tl 190.801†	449.2	488.1	[500]	µg/L	13:50:47
3	U 409.014†	5033.3	5092.2	[500]	µg/L	13:50:26
3	V 292.402†	38957.9	39257.2	[500]	µg/L	13:50:26
3	Zn 213.857†	21411.0	20628.3	[500]	µg/L	13:50:26

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2081884.7	9271.29	0.45%	99.464	%
Sc RADIAL	99810.4	436.87	0.44%	103	%
Y 371.029	1418810.4	8195.38	0.58%	99.019	%
Ag 328.068†	61995.1	2227.89	3.59%	[500]	µg/L
Al 396.153Radial†	10455.0	35.97	0.34%	[5000]	µg/L
As 188.979†	340.4	32.05	9.41%	[500]	µg/L
B 249.677†	11033.8	446.33	4.05%	[500]	µg/L
Ba 233.527†	23013.9	1194.42	5.19%	[500]	µg/L
Be 313.107†	859350.5	39182.84	4.56%	[500]	µg/L
Ca 317.933Radial†	13943.2	47.65	0.34%	[5000]	µg/L
Cd 226.502†	21276.4	1207.69	5.68%	[500]	µg/L
Co 228.616†	11771.4	717.85	6.10%	[500]	µg/L
Cr 267.716†	23091.4	1859.81	8.05%	[500]	µg/L
Cu 324.752†	76618.1	4346.48	5.67%	[500]	µg/L
K 766.490 Radial†	10723.0	97.65	0.91%	[5000]	µg/L
Mg 279.077 IEC†	387.3	4.96	1.28%	[5000]	µg/L
Mn 257.610†	170904.3	7195.12	4.21%	[500]	µg/L
Mo 202.031†	5082.1	524.08	10.31%	[500]	µg/L
Ni 231.604†	9036.9	540.71	5.98%	[500]	µg/L
P 214.914†	1521.7	137.85	9.06%	[2500]	µg/L
Pb 220.353†	1924.0	165.75	8.62%	[500]	µg/L
S 181.975 Axial†	313.7	23.60	7.52%	[1000]	µg/L
Sb 206.836†	558.5	45.06	8.07%	[500]	µg/L
Se 196.026†	541.3	48.09	8.88%	[500]	µg/L
SiO2†	29845.3	1320.12	4.42%	[5347.5]	µg/L
Si 251.611†	37058.1	1665.82	4.50%	[2500]	µg/L

Sn 189.927†	1289.4	145.66	11.30%	[500]	µg/L
Sr 421.552†	84242.8	136.48	0.16%	[500]	µg/L
Ti 334.940†	214218.9	10364.68	4.84%	[500]	µg/L
Tl 190.801†	521.1	29.67	5.69%	[500]	µg/L
U 409.014†	5526.1	380.40	6.88%	[500]	µg/L
V 292.402†	42416.4	2736.26	6.45%	[500]	µg/L
Zn 213.857†	22148.6	1318.91	5.95%	[500]	µg/L

Sequence No.: 4  
 Sample ID: SCAL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 4  
 Date Collected: 3/16/2010 13:50:57  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Sc RADIAL	99005.9	99005.9	102	%	13:51:27
1	Al 396.153Radial†	21396.9	21036.9	[10000]	µg/L	13:51:27
1	Ca 317.933Radial†	28774.4	27744.6	[10000]	µg/L	13:51:27
1	Fe 238.204 Radial†	886.3	854.5	[10000]	µg/L	13:51:48
1	K 766.490 Radial†	22406.6	21419.4	[10000]	µg/L	13:51:27
1	Mg 279.077 IEC†	796.2	770.3	[10000]	µg/L	13:51:48
1	Na 589.592 Radial†	20579.8	19938.3	[10000]	µg/L	13:51:27
1	Sr 421.552†	171886.5	167897.0	[1000]	µg/L	13:51:27
1	Sc 361.383	2084281.9	2084281.9	99.578	%	13:52:51
1	Y 371.029	1417699.3	1417699.3	98.941	%	13:52:51
1	Ag 328.068†	127625.8	128626.5	[1000]	µg/L	13:52:57
1	As 188.979†	716.7	723.0	[1000]	µg/L	13:53:18
1	B 249.677†	23034.3	22832.5	[1000]	µg/L	13:52:57
1	Ba 233.527†	47400.5	47609.6	[1000]	µg/L	13:52:57
1	Be 313.107†	1736563.9	1745076.7	[1000]	µg/L	13:52:51
1	Cd 226.502†	43541.3	43896.3	[1000]	µg/L	13:52:57
1	Co 228.616†	24264.4	24319.0	[1000]	µg/L	13:52:57
1	Cr 267.716†	48452.1	48577.0	[1000]	µg/L	13:52:57
1	Cu 324.752†	163712.1	160028.7	[1000]	µg/L	13:52:57
1	Mn 257.610†	343886.1	346029.4	[1000]	µg/L	13:52:57
1	Mo 202.031†	10846.8	10887.6	[1000]	µg/L	13:53:18
1	Ni 231.604†	18887.7	18590.8	[1000]	µg/L	13:52:57
1	P 214.914†	3477.5	3219.9	[5000]	µg/L	13:53:18
1	Pb 220.353†	4063.4	4050.5	[1000]	µg/L	13:53:18
1	S 181.975 Axial†	685.2	665.6	[2000]	µg/L	13:53:18
1	Sb 206.836†	1217.9	1200.4	[1000]	µg/L	13:53:18
1	Se 196.026†	1145.3	1122.8	[1000]	µg/L	13:53:18
1	SiO2†	63781.6	61271.9	[10695]	µg/L	13:52:57
1	Si 251.611†	76182.5	76081.1	[5000]	µg/L	13:52:57
1	Sn 189.927†	2763.0	2782.1	[1000]	µg/L	13:53:18
1	Ti 334.940†	438415.6	440849.5	[1000]	µg/L	13:52:51
1	Tl 190.801†	1032.2	1070.7	[1000]	µg/L	13:53:18
1	U 409.014†	11613.3	11668.3	[1000]	µg/L	13:52:57
1	V 292.402†	88724.4	88987.8	[1000]	µg/L	13:52:57
1	Zn 213.857†	46062.2	45248.4	[1000]	µg/L	13:52:57
2	Sc RADIAL	98878.3	98878.3	102	%	13:51:53
2	Al 396.153Radial†	21291.7	20961.0	[10000]	µg/L	13:51:53
2	Ca 317.933Radial†	28704.1	27712.1	[10000]	µg/L	13:51:53
2	Fe 238.204 Radial†	882.4	851.7	[10000]	µg/L	13:52:13
2	K 766.490 Radial†	22391.6	21432.9	[10000]	µg/L	13:51:53
2	Mg 279.077 IEC†	797.4	772.6	[10000]	µg/L	13:52:13
2	Na 589.592 Radial†	20571.2	19955.8	[10000]	µg/L	13:51:53
2	Sr 421.552†	171860.0	168088.0	[1000]	µg/L	13:51:53
2	Sc 361.383	2086112.0	2086112.0	99.666	%	13:53:24
2	Y 371.029	1420463.0	1420463.0	99.134	%	13:53:24
2	Ag 328.068†	126833.0	127718.5	[1000]	µg/L	13:53:30
2	As 188.979†	701.1	706.7	[1000]	µg/L	13:53:51
2	B 249.677†	22869.1	22646.4	[1000]	µg/L	13:53:30
2	Ba 233.527†	47051.7	47217.9	[1000]	µg/L	13:53:30
2	Be 313.107†	1742218.7	1749220.6	[1000]	µg/L	13:53:24
2	Cd 226.502†	43183.6	43499.0	[1000]	µg/L	13:53:30
2	Co 228.616†	24100.7	24133.5	[1000]	µg/L	13:53:30
2	Cr 267.716†	48201.6	48283.0	[1000]	µg/L	13:53:30
2	Cu 324.752†	163007.4	159177.4	[1000]	µg/L	13:53:30
2	Mn 257.610†	341756.3	343589.5	[1000]	µg/L	13:53:30
2	Mo 202.031†	10599.6	10630.0	[1000]	µg/L	13:53:51
2	Ni 231.604†	18831.1	18517.4	[1000]	µg/L	13:53:30
2	P 214.914†	3401.5	3140.5	[5000]	µg/L	13:53:51
2	Pb 220.353†	3993.0	3976.2	[1000]	µg/L	13:53:51

2	S 181.975 Axial†	672.9	652.6	[2000]	µg/L	13:53:51
2	Sb 206.836†	1190.1	1171.4	[1000]	µg/L	13:53:51
2	Se 196.026†	1125.5	1102.0	[1000]	µg/L	13:53:51
2	SiO2†	63502.5	60935.8	[10695]	µg/L	13:53:30
2	Si 251.611†	75835.9	75666.1	[5000]	µg/L	13:53:30
2	Sn 189.927†	2693.2	2709.7	[1000]	µg/L	13:53:51
2	Ti 334.940†	439551.1	441602.5	[1000]	µg/L	13:53:24
2	Tl 190.801†	1022.7	1060.2	[1000]	µg/L	13:53:51
2	U 409.014†	11401.7	11445.7	[1000]	µg/L	13:53:30
2	V 292.402†	88057.2	88240.2	[1000]	µg/L	13:53:30
2	Zn 213.857†	45789.6	44934.3	[1000]	µg/L	13:53:30
3	Sc RADIAL	98949.7	98949.7	102	%	13:52:19
3	Al 396.153Radial†	21345.9	20999.0	[10000]	µg/L	13:52:19
3	Ca 317.933Radial†	28773.8	27759.9	[10000]	µg/L	13:52:19
3	Fe 238.204 Radial†	884.5	853.3	[10000]	µg/L	13:52:39
3	K 766.490 Radial†	22416.2	21441.2	[10000]	µg/L	13:52:19
3	Mg 279.077 IEC†	802.2	776.7	[10000]	µg/L	13:52:39
3	Na 589.592 Radial†	20655.3	20023.5	[10000]	µg/L	13:52:19
3	Sr 421.552†	172362.1	168457.6	[1000]	µg/L	13:52:19
3	Sc 361.383	2098634.1	2098634.1	100.26	%	13:53:57
3	Y 371.029	1431664.8	1431664.8	99.916	%	13:53:57
3	Ag 328.068†	117444.6	117595.6	[1000]	µg/L	13:54:03
3	As 188.979†	593.3	595.0	[1000]	µg/L	13:54:24
3	B 249.677†	20953.8	20599.3	[1000]	µg/L	13:54:03
3	Ba 233.527†	42175.0	42072.3	[1000]	µg/L	13:54:03
3	Be 313.107†	1600289.8	1597235.1	[1000]	µg/L	13:53:57
3	Cd 226.502†	38322.8	38392.5	[1000]	µg/L	13:54:03
3	Co 228.616†	21253.1	21149.1	[1000]	µg/L	13:54:03
3	Cr 267.716†	41031.4	40843.1	[1000]	µg/L	13:54:03
3	Cu 324.752†	144535.2	139778.0	[1000]	µg/L	13:54:03
3	Mn 257.610†	301338.4	301232.0	[1000]	µg/L	13:54:03
3	Mo 202.031†	8756.9	8728.7	[1000]	µg/L	13:54:24
3	Ni 231.604†	16588.3	16167.7	[1000]	µg/L	13:54:03
3	P 214.914†	2923.2	2643.2	[5000]	µg/L	13:54:24
3	Pb 220.353†	3418.8	3379.6	[1000]	µg/L	13:54:24
3	S 181.975 Axial†	590.2	566.1	[2000]	µg/L	13:54:24
3	Sb 206.836†	1017.2	991.8	[1000]	µg/L	13:54:24
3	Se 196.026†	983.1	953.2	[1000]	µg/L	13:54:24
3	SiO2†	58031.5	55098.9	[10695]	µg/L	13:54:03
3	Si 251.611†	68995.1	68389.4	[5000]	µg/L	13:54:03
3	Sn 189.927†	2196.1	2197.8	[1000]	µg/L	13:54:24
3	Ti 334.940†	400140.2	399663.8	[1000]	µg/L	13:53:57
3	Tl 190.801†	896.8	928.5	[1000]	µg/L	13:54:24
3	U 409.014†	9905.6	9885.3	[1000]	µg/L	13:54:03
3	V 292.402†	76998.0	76683.0	[1000]	µg/L	13:54:03
3	Zn 213.857†	40519.9	39404.4	[1000]	µg/L	13:54:03

## Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2089676.0	7811.74	0.37%	99.836 %
Sc RADIAL	98944.6	63.99	0.06%	102 %
Y 371.029	1423275.7	7395.42	0.52%	99.330 %
Ag 328.068†	124646.9	6123.42	4.91%	[1000] µg/L
Al 396.153Radial†	20998.9	37.98	0.18%	[10000] µg/L
As 188.979†	674.9	69.69	10.33%	[1000] µg/L
B 249.677†	22026.1	1239.12	5.63%	[1000] µg/L
Ba 233.527†	45633.3	3090.08	6.77%	[1000] µg/L
Be 313.107†	1697177.5	86577.45	5.10%	[1000] µg/L
Ca 317.933Radial†	27738.9	24.43	0.09%	[10000] µg/L
Cd 226.502†	41929.3	3069.39	7.32%	[1000] µg/L
Co 228.616†	23200.5	1779.01	7.67%	[1000] µg/L
Cr 267.716†	45901.0	4382.79	9.55%	[1000] µg/L
Cu 324.752†	152994.7	11453.92	7.49%	[1000] µg/L
Fe 238.204 Radial†	853.2	1.38	0.16%	[10000] µg/L
K 766.490 Radial†	21431.2	10.99	0.05%	[10000] µg/L
Mg 279.077 IEC†	773.2	3.23	0.42%	[10000] µg/L
Mn 257.610†	330283.6	25189.03	7.63%	[1000] µg/L
Mo 202.031†	10082.1	1179.12	11.70%	[1000] µg/L
Na 589.592 Radial†	19972.5	45.03	0.23%	[10000] µg/L

Ni 231.604†	17758.6	1378.29	7.76%	[1000]	µg/L
P 214.914†	3001.2	312.58	10.42%	[5000]	µg/L
Pb 220.353†	3802.1	367.77	9.67%	[1000]	µg/L
S 181.975 Axial†	628.1	54.07	8.61%	[2000]	µg/L
Sb 206.836†	1121.2	113.00	10.08%	[1000]	µg/L
Se 196.026†	1059.3	92.51	8.73%	[1000]	µg/L
SiO2†	59102.2	3471.01	5.87%	[10695]	µg/L
Si 251.611†	73378.9	4325.99	5.90%	[5000]	µg/L
Sn 189.927†	2563.2	318.50	12.43%	[1000]	µg/L
Sr 421.552†	168147.5	285.01	0.17%	[1000]	µg/L
Ti 334.940†	427371.9	23998.85	5.62%	[1000]	µg/L
Tl 190.801†	1019.8	79.22	7.77%	[1000]	µg/L
U 409.014†	10999.8	971.55	8.83%	[1000]	µg/L
V 292.402†	84637.0	6898.52	8.15%	[1000]	µg/L
Zn 213.857†	43195.7	3287.12	7.61%	[1000]	µg/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 3/16/2010 13:54:34

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Sc RADIAL	98789.2	98789.2	102 %		13:55:04
1	Al 396.153Radial†	107058.1	105009.0	[50000] µg/L		13:55:04
1	Ca 317.933Radial†	140672.7	137438.2	[50000] µg/L		13:55:04
1	Fe 238.204 Radial†	1738.5	1691.3	[20000] µg/L		13:55:24
1	Mg 279.077 IEC†	3867.4	3781.1	[50000] µg/L		13:55:24
1	Na 589.592 Radial†	41160.6	40146.4	[20000] µg/L		13:55:04
1	Sc 361.383	2092272.1	2092272.1	99.960 %		13:56:28
1	Y 371.029	1418049.8	1418049.8	98.966 %		13:56:28
2	Sc RADIAL	99260.5	99260.5	103 %		13:55:30
2	Al 396.153Radial†	107263.0	104710.8	[50000] µg/L		13:55:30
2	Ca 317.933Radial†	141368.5	137462.3	[50000] µg/L		13:55:30
2	Fe 238.204 Radial†	1735.4	1680.3	[20000] µg/L		13:55:50
2	Mg 279.077 IEC†	3879.3	3774.7	[50000] µg/L		13:55:50
2	Na 589.592 Radial†	41276.8	40068.2	[20000] µg/L		13:55:30
2	Sc 361.383	2104318.4	2104318.4	100.54 %		13:56:36
2	Y 371.029	1426757.5	1426757.5	99.573 %		13:56:36
3	Sc RADIAL	98790.7	98790.7	102 %		13:55:56
3	Al 396.153Radial†	106517.5	104477.8	[50000] µg/L		13:55:56
3	Ca 317.933Radial†	140287.9	137059.1	[50000] µg/L		13:55:56
3	Fe 238.204 Radial†	1736.9	1689.7	[20000] µg/L		13:56:16
3	Mg 279.077 IEC†	3898.1	3811.1	[50000] µg/L		13:56:16
3	Na 589.592 Radial†	41109.8	40096.0	[20000] µg/L		13:55:56
3	Sc 361.383	2096930.4	2096930.4	100.18 %		13:56:43
3	Y 371.029	1423055.3	1423055.3	99.315 %		13:56:43

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib. Units
Sc 361.383	2097840.3	6074.46	0.29%	100.23 %	
Sc RADIAL	98946.8	271.66	0.27%	102 %	
Y 371.029	1422620.9	4370.07	0.31%	99.285 %	
Al 396.153Radial†	104732.5	266.28	0.25%	[50000] µg/L	
Ca 317.933Radial†	137319.9	226.12	0.16%	[50000] µg/L	
Fe 238.204 Radial†	1687.1	5.98	0.35%	[20000] µg/L	
Mg 279.077 IEC†	3788.9	19.42	0.51%	[50000] µg/L	
Na 589.592 Radial†	40103.5	39.62	0.10%	[20000] µg/L	

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	124.5	0.00000	0.999995	
Al 396.153Radial	3	Lin Thru 0	0.0	2.095	0.00000	1.000000	
As 188.979	3	Lin Thru 0	0.0	0.6765	0.00000	0.999970	
B 249.677	3	Lin Thru 0	0.0	22.04	0.00000	1.000000	
Ba 233.527	3	Lin Thru 0	0.0	45.72	0.00000	0.999989	
Be 313.107	3	Lin Thru 0	0.0	1702	0.00000	0.999982	
Ca 317.933Radial	3	Lin Thru 0	0.0	2.748	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	42.07	0.00000	0.999974	
Co 228.616	3	Lin Thru 0	0.0	23.28	0.00000	0.999976	
Cr 267.716	3	Lin Thru 0	0.0	45.98	0.00000	0.999984	
Cu 324.752	3	Lin Thru 0	0.0	153.1	0.00000	0.999991	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0845	0.00000	0.999990	
K 766.490 Radial	3	Lin Thru 0	0.0	2.143	0.00000	0.999995	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0759	0.00000	0.999990	
Mn 257.610	3	Lin Thru 0	0.0	332.7	0.00000	0.999894	
Mo 202.031	3	Lin Thru 0	0.0	10.11	0.00000	0.999961	
Na 589.592 Radia	2	Lin Thru 0	0.0	2.004	0.00000	0.999999	



Ni 231.604	3	Lin Thru 0	0.0	17.83	0.00000	0.999964
P 214.914	3	Lin Thru 0	0.0	0.6023	0.00000	0.999963
Pb 220.353	3	Lin Thru 0	0.0	3.814	0.00000	0.999959
S 181.975 Axial	3	Lin Thru 0	0.0	0.3142	0.00000	0.999967
Sb 206.836	3	Lin Thru 0	0.0	1.121	0.00000	0.999978
Se 196.026	3	Lin Thru 0	0.0	1.064	0.00000	0.999962
SiO2	3	Lin Thru 0	0.0	5.539	0.00000	0.999985
Si 251.611	3	Lin Thru 0	0.0	14.71	0.00000	0.999987
Sn 189.927	3	Lin Thru 0	0.0	2.569	0.00000	0.999950
Sr 421.552	3	Lin Thru 0	0.0	168.2	0.00000	1.000000
Ti 334.940	3	Lin Thru 0	0.0	427.6	0.00000	0.999998
Tl 190.801	3	Lin Thru 0	0.0	1.024	0.00000	0.999960
U 409.014	3	Lin Thru 0	0.0	11.01	0.00000	0.999993
V 292.402	3	Lin Thru 0	0.0	84.70	0.00000	0.999994
Zn 213.857	3	Lin Thru 0	0.0	43.43	0.00000	0.999939

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 3/16/2010 13:56:52

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99945.7	99945.7	103 %		13:57:23
1	Al 396.153Radial†	10634.7	10418.1	4961.7 µg/L	4961.7 ppb	13:57:23
1	Ca 317.933Radial†	14480.5	13637.8	4963.1 µg/L	4963.1 ppb	13:57:23
1	Fe 238.204 Radial†	451.0	424.8	5035.4 µg/L	5035.4 ppb	13:57:44
1	K 766.490 Radial†	5776.3	5108.5	2384.0 µg/L	2384.0 ppb	13:57:23
1	Mg 279.077 IEC†	410.2	389.2	5135.4 µg/L	5135.4 ppb	13:57:44
1	Na 589.592 Radial†	5193.0	4848.4	2419.9 µg/L	2419.9 ppb	13:57:23
1	Sr 421.552†	90141.5	87154.4	518.12 µg/L	518.12 ppb	13:57:23
1	Sc 361.383	2114320.9	2114320.9	101.01 %		13:58:48
1	Y 371.029	1441880.8	1441880.8	100.63 %		13:58:48
1	Ag 328.068†	31503.5	31647.7	257.94 µg/L	257.94 ppb	13:58:53
1	As 188.979†	333.9	333.8	491.09 µg/L	491.09 ppb	13:59:14
1	B 249.677†	11823.0	11405.0	515.75 µg/L	515.75 ppb	13:58:53
1	Ba 233.527†	23518.4	23290.9	510.31 µg/L	510.31 ppb	13:58:53
1	Be 313.107†	457938.9	454503.3	266.85 µg/L	266.85 ppb	13:58:48
1	Cd 226.502†	21241.4	21198.9	503.85 µg/L	503.85 ppb	13:58:53
1	Co 228.616†	12109.8	11940.2	512.43 µg/L	512.43 ppb	13:58:53
1	Cr 267.716†	23238.8	22925.4	498.94 µg/L	498.94 ppb	13:58:53
1	Cu 324.752†	83176.1	77964.9	510.18 µg/L	510.18 ppb	13:58:53
1	Mn 257.610†	177529.9	176435.7	530.22 µg/L	530.22 ppb	13:58:48
1	Mo 202.031†	5774.7	5711.7	565.37 µg/L	565.37 ppb	13:59:14
1	Ni 231.604†	9654.4	9180.7	514.37 µg/L	514.37 ppb	13:58:53
1	P 214.914†	1866.2	1575.1	2567.3 µg/L	2567.3 ppb	13:59:14
1	Pb 220.353†	2014.0	1963.6	515.56 µg/L	515.56 ppb	13:59:14
1	S 181.975 Axial†	841.6	810.7	2579.9 µg/L	2579.9 ppb	13:59:14
1	Sb 206.836†	616.5	587.6	527.70 µg/L	527.70 ppb	13:59:14
1	Se 196.026†	2837.8	2782.1	2626.3 µg/L	2626.3 ppb	13:59:14
1	SiO2†	61735.1	58336.0	10532 µg/L	10532 ppb	13:58:53
1	Si 251.611†	73401.3	72240.8	4911.2 µg/L	4911.2 ppb	13:58:53
1	Sn 189.927†	1479.9	1472.4	573.76 µg/L	573.76 ppb	13:59:14
1	Ti 334.940†	217908.1	216299.1	505.46 µg/L	505.46 ppb	13:58:48
1	Tl 190.801†	523.1	552.0	543.97 µg/L	543.97 ppb	13:59:14
1	U 409.014†	5561.7	5511.7	499.45 µg/L	499.45 ppb	13:58:53
1	V 292.402†	44746.7	44185.4	526.97 µg/L	526.97 ppb	13:58:53
1	Zn 213.857†	23850.3	22602.2	516.77 µg/L	516.77 ppb	13:58:53
2	Sc RADIAL	100715.7	100715.7	104 %		13:57:49
2	Al 396.153Radial†	10725.7	10426.7	4966.0 µg/L	4966.0 ppb	13:57:49
2	Ca 317.933Radial†	14488.3	13538.0	4926.8 µg/L	4926.8 ppb	13:57:49
2	Fe 238.204 Radial†	449.0	419.5	4972.5 µg/L	4972.5 ppb	13:58:10
2	K 766.490 Radial†	5822.1	5109.7	2384.6 µg/L	2384.6 ppb	13:57:49
2	Mg 279.077 IEC†	416.5	392.3	5175.6 µg/L	5175.6 ppb	13:58:10
2	Na 589.592 Radial†	5226.0	4841.6	2416.5 µg/L	2416.5 ppb	13:57:49
2	Sr 421.552†	90833.6	87152.1	518.11 µg/L	518.11 ppb	13:57:49
2	Sc 361.383	2122266.1	2122266.1	101.39 %		13:59:21
2	Y 371.029	1448400.7	1448400.7	101.08 %		13:59:21
2	Ag 328.068†	31661.8	31687.0	258.25 µg/L	258.25 ppb	13:59:27
2	As 188.979†	332.8	331.5	487.65 µg/L	487.65 ppb	13:59:47
2	B 249.677†	11881.3	11418.7	516.41 µg/L	516.41 ppb	13:59:27
2	Ba 233.527†	23693.3	23376.2	512.18 µg/L	512.18 ppb	13:59:27
2	Be 313.107†	459566.7	454411.5	266.80 µg/L	266.80 ppb	13:59:21
2	Cd 226.502†	21357.6	21234.8	504.71 µg/L	504.71 ppb	13:59:27
2	Co 228.616†	12210.4	11994.6	514.75 µg/L	514.75 ppb	13:59:27
2	Cr 267.716†	23436.5	23034.3	501.31 µg/L	501.31 ppb	13:59:27
2	Cu 324.752†	83758.0	78230.6	511.90 µg/L	511.90 ppb	13:59:27
2	Mn 257.610†	178049.4	176290.1	529.78 µg/L	529.78 ppb	13:59:21
2	Mo 202.031†	5680.3	5597.2	554.04 µg/L	554.04 ppb	13:59:47
2	Ni 231.604†	9693.7	9183.6	514.54 µg/L	514.54 ppb	13:59:27
2	P 214.914†	1830.4	1532.9	2496.8 µg/L	2496.8 ppb	13:59:47
2	Pb 220.353†	1974.9	1917.6	503.46 µg/L	503.46 ppb	13:59:47

2	S 181.975 Axial†	833.1	799.1	2543.2 µg/L	2543.2 ppb	13:59:47
2	Sb 206.836†	613.3	582.1	522.62 µg/L	522.62 ppb	13:59:47
2	Se 196.026†	2802.5	2736.6	2583.4 µg/L	2583.4 ppb	13:59:47
2	SiO2†	62170.4	58536.5	10568 µg/L	10568 ppb	13:59:27
2	Si 251.611†	74003.3	72562.5	4933.1 µg/L	4933.1 ppb	13:59:27
2	Sn 189.927†	1444.1	1431.7	557.90 µg/L	557.90 ppb	13:59:47
2	Ti 334.940†	218656.1	216229.2	505.30 µg/L	505.30 ppb	13:59:21
2	Tl 190.801†	522.5	549.4	541.49 µg/L	541.49 ppb	13:59:47
2	U 409.014†	5610.5	5539.2	501.96 µg/L	501.96 ppb	13:59:27
2	V 292.402†	44884.0	44155.0	526.53 µg/L	526.53 ppb	13:59:27
2	Zn 213.857†	23949.9	22612.0	516.99 µg/L	516.99 ppb	13:59:27
3	Sc RADIAL	100642.0	100642.0	104 %		13:58:16
3	Al 396.153Radial†	10698.5	10408.1	4959.0 µg/L	4959.0 ppb	13:58:16
3	Ca 317.933Radial†	14455.7	13516.9	4919.1 µg/L	4919.1 ppb	13:58:16
3	Fe 238.204 Radial†	451.9	422.6	5008.6 µg/L	5008.6 ppb	13:58:36
3	K 766.490 Radial†	5717.9	5013.6	2339.8 µg/L	2339.8 ppb	13:58:16
3	Mg 279.077 IEC†	411.4	387.7	5113.5 µg/L	5113.5 ppb	13:58:36
3	Na 589.592 Radial†	5192.1	4812.7	2402.0 µg/L	2402.0 ppb	13:58:16
3	Sr 421.552†	90503.1	86898.2	516.60 µg/L	516.60 ppb	13:58:16
3	Sc 361.383	2113439.8	2113439.8	100.97 %		13:59:54
3	Y 371.029	1442067.2	1442067.2	100.64 %		13:59:54
3	Ag 328.068†	29525.7	29701.9	241.91 µg/L	241.91 ppb	14:00:00
3	As 188.979†	279.5	280.1	411.91 µg/L	411.91 ppb	14:00:21
3	B 249.677†	11019.1	10613.8	479.75 µg/L	479.75 ppb	14:00:00
3	Ba 233.527†	21385.6	21188.3	464.22 µg/L	464.22 ppb	14:00:00
3	Be 313.107†	419133.8	416260.5	244.40 µg/L	244.40 ppb	13:59:54
3	Cd 226.502†	19161.1	19147.4	455.03 µg/L	455.03 ppb	14:00:00
3	Co 228.616†	10856.6	10704.1	459.32 µg/L	459.32 ppb	14:00:00
3	Cr 267.716†	20175.8	19901.5	433.13 µg/L	433.13 ppb	14:00:00
3	Cu 324.752†	75195.8	70095.7	458.78 µg/L	458.78 ppb	14:00:00
3	Mn 257.610†	162921.4	162041.0	486.96 µg/L	486.96 ppb	13:59:54
3	Mo 202.031†	4706.2	4655.8	460.89 µg/L	460.89 ppb	14:00:21
3	Ni 231.604†	8636.6	8176.6	458.12 µg/L	458.12 ppb	14:00:00
3	P 214.914†	1589.7	1302.0	2117.6 µg/L	2117.6 ppb	14:00:21
3	Pb 220.353†	1705.7	1659.1	435.58 µg/L	435.58 ppb	14:00:21
3	S 181.975 Axial†	735.0	705.3	2244.7 µg/L	2244.7 ppb	14:00:21
3	Sb 206.836†	518.9	491.2	440.70 µg/L	440.70 ppb	14:00:21
3	Se 196.026†	2434.0	2383.3	2251.5 µg/L	2251.5 ppb	14:00:21
3	SiO2†	57058.2	53729.6	9700.1 µg/L	9700.1 ppb	14:00:00
3	Si 251.611†	67611.4	66536.9	4523.4 µg/L	4523.4 ppb	14:00:00
3	Sn 189.927†	1175.9	1172.0	456.80 µg/L	456.80 ppb	14:00:21
3	Ti 334.940†	198210.0	196880.4	460.06 µg/L	460.06 ppb	13:59:54
3	Tl 190.801†	461.1	490.8	483.79 µg/L	483.79 ppb	14:00:21
3	U 409.014†	4826.7	4786.1	433.57 µg/L	433.57 ppb	14:00:00
3	V 292.402†	39492.8	39000.6	464.74 µg/L	464.74 ppb	14:00:00
3	Zn 213.857†	21512.4	20296.6	464.02 µg/L	464.02 ppb	14:00:00

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Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2116675.6	101.13 %	0.232			0.23%
Sc RADIAL	100434.5	104 %	0.4			0.42%
Y 371.029	1444116.3	100.78 %	0.259			0.26%
Ag 328.068†	31012.2	252.70 µg/L	9.345	252.70 ppb	9.345	3.70%
QC value within limits for Ag 328.068 Recovery = 101.08%						
Al 396.153Radial†	10417.6	4962.2 µg/L	3.52	4962.2 ppb	3.52	0.07%
QC value within limits for Al 396.153Radial Recovery = 99.24%						
As 188.979†	315.1	463.55 µg/L	44.757	463.55 ppb	44.757	9.66%
QC value within limits for As 188.979 Recovery = 92.71%						
B 249.677†	11145.9	503.97 µg/L	20.977	503.97 ppb	20.977	4.16%
QC value within limits for B 249.677 Recovery = 100.79%						
Ba 233.527†	22618.5	495.57 µg/L	27.168	495.57 ppb	27.168	5.48%
QC value within limits for Ba 233.527 Recovery = 99.11%						
Be 313.107†	441725.1	259.35 µg/L	12.947	259.35 ppb	12.947	4.99%
QC value within limits for Be 313.107 Recovery = 103.74%						
Ca 317.933Radial†	13564.2	4936.3 µg/L	23.49	4936.3 ppb	23.49	0.48%
QC value within limits for Ca 317.933Radial Recovery = 98.73%						
Cd 226.502†	20527.0	487.87 µg/L	28.437	487.87 ppb	28.437	5.83%
QC value within limits for Cd 226.502 Recovery = 97.57%						
Co 228.616†	11546.3	495.50 µg/L	31.354	495.50 ppb	31.354	6.33%

QC value within limits for Co 228.616 Recovery = 99.10%						
Cr 267.716†	21953.7	477.79 µg/L	38.695	477.79 ppb	38.695	8.10%
QC value within limits for Cr 267.716 Recovery = 95.56%						
Cu 324.752†	75430.4	493.62 µg/L	30.188	493.62 ppb	30.188	6.12%
QC value within limits for Cu 324.752 Recovery = 98.72%						
Fe 238.204 Radial†	422.3	5005.5 µg/L	31.56	5005.5 ppb	31.56	0.63%
QC value within limits for Fe 238.204 Radial Recovery = 100.11%						
K 766.490 Radial†	5077.3	2369.5 µg/L	25.73	2369.5 ppb	25.73	1.09%
QC value within limits for K 766.490 Radial Recovery = 94.78%						
Mg 279.077 IEC†	389.7	5141.5 µg/L	31.48	5141.5 ppb	31.48	0.61%
QC value within limits for Mg 279.077 IEC Recovery = 102.83%						
Mn 257.610†	171589.0	515.65 µg/L	24.851	515.65 ppb	24.851	4.82%
QC value within limits for Mn 257.610 Recovery = 103.13%						
Mo 202.031†	5321.6	526.77 µg/L	57.328	526.77 ppb	57.328	10.88%
QC value within limits for Mo 202.031 Recovery = 105.35%						
Na 589.592 Radial†	4834.2	2412.8 µg/L	9.47	2412.8 ppb	9.47	0.39%
QC value within limits for Na 589.592 Radial Recovery = 96.51%						
Ni 231.604†	8847.0	495.68 µg/L	32.524	495.68 ppb	32.524	6.56%
QC value within limits for Ni 231.604 Recovery = 99.14%						
P 214.914†	1470.0	2393.9 µg/L	241.87	2393.9 ppb	241.87	10.10%
QC value within limits for P 214.914 Recovery = 95.76%						
Pb 220.353†	1846.8	484.87 µg/L	43.115	484.87 ppb	43.115	8.89%
QC value within limits for Pb 220.353 Recovery = 96.97%						
S 181.975 Axial†	771.7	2456.0 µg/L	183.85	2456.0 ppb	183.85	7.49%
QC value within limits for S 181.975 Axial Recovery = 98.24%						
Sb 206.836†	553.6	497.01 µg/L	48.831	497.01 ppb	48.831	9.82%
QC value within limits for Sb 206.836 Recovery = 99.40%						
Se 196.026†	2634.0	2487.1 µg/L	205.14	2487.1 ppb	205.14	8.25%
QC value within limits for Se 196.026 Recovery = 99.48%						
SiO2†	56867.4	10267 µg/L	490.9	10267 ppb	490.9	4.78%
QC value within limits for SiO2 Recovery = 95.99%						
Si 251.611†	70446.7	4789.2 µg/L	230.45	4789.2 ppb	230.45	4.81%
QC value within limits for Si 251.611 Recovery = 95.78%						
Sn 189.927†	1358.7	529.49 µg/L	63.445	529.49 ppb	63.445	11.98%
QC value within limits for Sn 189.927 Recovery = 105.90%						
Sr 421.552†	87068.2	517.61 µg/L	0.875	517.61 ppb	0.875	0.17%
QC value within limits for Sr 421.552 Recovery = 103.52%						
Ti 334.940†	209802.9	490.27 µg/L	26.168	490.27 ppb	26.168	5.34%
QC value within limits for Ti 334.940 Recovery = 98.05%						
Tl 190.801†	530.7	523.08 µg/L	34.051	523.08 ppb	34.051	6.51%
QC value within limits for Tl 190.801 Recovery = 104.62%						
U 409.014†	5279.0	478.33 µg/L	38.781	478.33 ppb	38.781	8.11%
QC value within limits for U 409.014 Recovery = 95.67%						
V 292.402†	42447.0	506.08 µg/L	35.801	506.08 ppb	35.801	7.07%
QC value within limits for V 292.402 Recovery = 101.22%						
Zn 213.857†	21836.9	499.26 µg/L	30.520	499.26 ppb	30.520	6.11%
QC value within limits for Zn 213.857 Recovery = 99.85%						

All analyte(s) passed QC.

Sequence No.: 7  
 Sample ID: ICB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 10  
 Date Collected: 3/16/2010 14:00:31  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98878.3	98878.3	102 %		14:01:01
1	Al 396.153Radial†	-142.3	-20.0	-9.5824 µg/L	-9.5824 ppb	14:01:01
1	Ca 317.933Radial†	360.4	-32.5	-11.815 µg/L	-11.815 ppb	14:01:22
1	Fe 238.204 Radial†	14.8	2.6	30.450 µg/L	30.450 ppb	14:01:22
1	K 766.490 Radial†	418.0	-76.2	-35.567 µg/L	-35.567 ppb	14:01:01
1	Mg 279.077 IEC†	9.3	1.2	15.202 µg/L	15.202 ppb	14:01:22
1	Na 589.592 Radial†	185.1	0.6	0.3180 µg/L	0.3180 ppb	14:01:01
1	Sr 421.552†	119.7	-22.3	-0.1323 µg/L	-0.1323 ppb	14:01:01
1	Sc 361.383	2093188.4	2093188.4	100.00 %		14:02:23
1	Y 371.029	1429929.2	1429929.2	99.795 %		14:02:23
1	Ag 328.068†	-530.5	-70.3	-0.5637 µg/L	-0.5637 ppb	14:02:29
1	As 188.979†	-2.2	1.1	1.5852 µg/L	1.5852 ppb	14:02:49
1	B 249.677†	312.8	13.4	0.5924 µg/L	0.5924 ppb	14:02:29
1	Ba 233.527†	-4.3	4.1	0.0899 µg/L	0.0899 ppb	14:02:49
1	Be 313.107†	-1082.3	76.6	0.0449 µg/L	0.0449 ppb	14:02:29
1	Cd 226.502†	-168.9	1.6	0.0345 µg/L	0.0345 ppb	14:02:49
1	Co 228.616†	38.1	-10.0	-0.4293 µg/L	-0.4293 ppb	14:02:49
1	Cr 267.716†	48.0	-32.2	-0.7015 µg/L	-0.7015 ppb	14:02:29
1	Cu 324.752†	4412.7	35.9	0.2399 µg/L	0.2399 ppb	14:02:29
1	Mn 257.610†	-696.0	-9.0	-0.0262 µg/L	-0.0262 ppb	14:02:49
1	Mo 202.031†	17.2	12.1	1.1957 µg/L	1.1957 ppb	14:02:49
1	Ni 231.604†	356.5	-20.4	-1.1452 µg/L	-1.1452 ppb	14:02:49
1	P 214.914†	267.6	-4.8	-8.0633 µg/L	-8.0633 ppb	14:02:49
1	Pb 220.353†	33.6	3.4	0.9019 µg/L	0.9019 ppb	14:02:49
1	S 181.975 Axial†	23.4	0.9	2.7755 µg/L	2.7755 ppb	14:02:49
1	Sb 206.836†	25.0	2.2	2.0202 µg/L	2.0202 ppb	14:02:49
1	Se 196.026†	25.9	-1.5	-1.2774 µg/L	-1.2774 ppb	14:02:49
1	SiO2†	2754.4	-25.4	-4.5897 µg/L	-4.5897 ppb	14:02:29
1	Si 251.611†	426.2	2.1	0.1440 µg/L	0.1440 ppb	14:02:49
1	Sn 189.927†	-0.7	6.8	2.6268 µg/L	2.6268 ppb	14:02:49
1	Ti 334.940†	-488.2	89.0	0.2068 µg/L	0.2068 ppb	14:02:29
1	Tl 190.801†	-35.7	-1.6	-1.5349 µg/L	-1.5349 ppb	14:02:49
1	U 409.014†	-35.4	-29.5	-2.6859 µg/L	-2.6859 ppb	14:02:29
1	V 292.402†	92.2	-20.1	-0.2365 µg/L	-0.2365 ppb	14:02:29
1	Zn 213.857†	694.1	-314.7	-7.2440 µg/L	-7.2440 ppb	14:02:49
2	Sc RADIAL	97865.4	97865.4	101 %		14:01:27
2	Al 396.153Radial†	-126.8	-6.1	-2.9435 µg/L	-2.9435 ppb	14:01:27
2	Ca 317.933Radial†	362.1	-27.2	-9.8807 µg/L	-9.8807 ppb	14:01:47
2	Fe 238.204 Radial†	12.9	0.8	9.9891 µg/L	9.9891 ppb	14:01:47
2	K 766.490 Radial†	411.9	-78.0	-36.400 µg/L	-36.400 ppb	14:01:27
2	Mg 279.077 IEC†	11.2	3.1	40.653 µg/L	40.653 ppb	14:01:47
2	Na 589.592 Radial†	186.4	3.8	1.9010 µg/L	1.9010 ppb	14:01:27
2	Sr 421.552†	106.6	-34.0	-0.2022 µg/L	-0.2022 ppb	14:01:27
2	Sc 361.383	2104830.6	2104830.6	100.56 %		14:02:55
2	Y 371.029	1442517.7	1442517.7	100.67 %		14:02:55
2	Ag 328.068†	-488.0	-25.1	-0.2033 µg/L	-0.2033 ppb	14:03:01
2	As 188.979†	-4.3	-1.0	-1.4916 µg/L	-1.4916 ppb	14:03:22
2	B 249.677†	332.6	31.3	1.4168 µg/L	1.4168 ppb	14:03:01
2	Ba 233.527†	-1.9	6.5	0.1414 µg/L	0.1414 ppb	14:03:22
2	Be 313.107†	-1052.8	111.9	0.0657 µg/L	0.0657 ppb	14:03:01
2	Cd 226.502†	-168.8	2.7	0.0619 µg/L	0.0619 ppb	14:03:22
2	Co 228.616†	44.8	-3.5	-0.1498 µg/L	-0.1498 ppb	14:03:22
2	Cr 267.716†	69.2	-11.4	-0.2483 µg/L	-0.2483 ppb	14:03:01
2	Cu 324.752†	4345.3	-55.6	-0.3613 µg/L	-0.3613 ppb	14:03:01
2	Mn 257.610†	-711.9	-21.0	-0.0652 µg/L	-0.0652 ppb	14:03:22
2	Mo 202.031†	27.8	22.5	2.2254 µg/L	2.2254 ppb	14:03:22
2	Ni 231.604†	362.7	-16.2	-0.9109 µg/L	-0.9109 ppb	14:03:22
2	P 214.914†	268.4	-5.5	-9.1439 µg/L	-9.1439 ppb	14:03:22
2	Pb 220.353†	28.8	-1.5	-0.3967 µg/L	-0.3967 ppb	14:03:22

2	S 181.975 Axial†	21.2	-1.4	-4.5519 µg/L	-4.5519 ppb	14:03:22
2	Sb 206.836†	34.9	12.0	10.707 µg/L	10.707 ppb	14:03:22
2	Se 196.026†	17.8	-9.6	-9.0158 µg/L	-9.0158 ppb	14:03:22
2	SiO2†	2763.3	-31.9	-5.7561 µg/L	-5.7561 ppb	14:03:01
2	Si 251.611†	425.4	-1.0	-0.0708 µg/L	-0.0708 ppb	14:03:22
2	Sn 189.927†	-4.2	3.3	1.2784 µg/L	1.2784 ppb	14:03:22
2	Ti 334.940†	-463.0	116.9	0.2699 µg/L	0.2699 ppb	14:03:01
2	Tl 190.801†	-37.3	-3.0	-2.9282 µg/L	-2.9282 ppb	14:03:22
2	U 409.014†	-2.6	3.2	0.2885 µg/L	0.2885 ppb	14:03:01
2	V 292.402†	76.3	-36.4	-0.4141 µg/L	-0.4141 ppb	14:03:01
2	Zn 213.857†	695.2	-317.5	-7.3089 µg/L	-7.3089 ppb	14:03:22
3	Sc RADIAL	98474.2	98474.2	102 %		14:01:53
3	Al 396.153Radial†	-101.8	19.3	9.1663 µg/L	9.1663 ppb	14:01:53
3	Ca 317.933Radial†	363.5	-28.0	-10.188 µg/L	-10.188 ppb	14:02:13
3	Fe 238.204 Radial†	11.5	-0.7	-7.9882 µg/L	-7.9882 ppb	14:02:13
3	K 766.490 Radial†	504.8	10.9	5.0664 µg/L	5.0664 ppb	14:01:53
3	Mg 279.077 IEC†	8.6	0.4	5.8894 µg/L	5.8894 ppb	14:02:13
3	Na 589.592 Radial†	170.1	-13.4	-6.6870 µg/L	-6.6870 ppb	14:01:53
3	Sr 421.552†	121.2	-20.3	-0.1205 µg/L	-0.1205 ppb	14:01:53
3	Sc 361.383	2113179.1	2113179.1	100.96 %		14:03:28
3	Y 371.029	1448101.8	1448101.8	101.06 %		14:03:28
3	Ag 328.068†	-468.7	-4.1	-0.0340 µg/L	-0.0340 ppb	14:03:33
3	As 188.979†	-3.8	-0.5	-0.7547 µg/L	-0.7547 ppb	14:03:54
3	B 249.677†	302.2	0.0	0.0043 µg/L	0.0043 ppb	14:03:33
3	Ba 233.527†	-6.5	2.0	0.0434 µg/L	0.0434 ppb	14:03:54
3	Be 313.107†	-1083.7	85.5	0.0502 µg/L	0.0502 ppb	14:03:33
3	Cd 226.502†	-158.7	13.4	0.3186 µg/L	0.3186 ppb	14:03:54
3	Co 228.616†	36.5	-12.0	-0.5125 µg/L	-0.5125 ppb	14:03:54
3	Cr 267.716†	63.5	-17.3	-0.3764 µg/L	-0.3764 ppb	14:03:33
3	Cu 324.752†	4351.9	-66.1	-0.4333 µg/L	-0.4333 ppb	14:03:33
3	Mn 257.610†	-722.6	-28.8	-0.0874 µg/L	-0.0874 ppb	14:03:54
3	Mo 202.031†	21.2	15.8	1.5657 µg/L	1.5657 ppb	14:03:54
3	Ni 231.604†	370.2	-10.2	-0.5706 µg/L	-0.5706 ppb	14:03:54
3	P 214.914†	270.8	-4.2	-6.8446 µg/L	-6.8446 ppb	14:03:54
3	Pb 220.353†	41.8	11.2	2.9432 µg/L	2.9432 ppb	14:03:54
3	S 181.975 Axial†	17.7	-5.0	-15.964 µg/L	-15.964 ppb	14:03:54
3	Sb 206.836†	24.6	1.6	1.4824 µg/L	1.4824 ppb	14:03:54
3	Se 196.026†	23.1	-4.4	-4.2103 µg/L	-4.2103 ppb	14:03:54
3	SiO2†	2761.4	-44.6	-8.0543 µg/L	-8.0543 ppb	14:03:33
3	Si 251.611†	427.7	-0.5	-0.0318 µg/L	-0.0318 ppb	14:03:54
3	Sn 189.927†	-2.9	4.6	1.7858 µg/L	1.7858 ppb	14:03:54
3	Ti 334.940†	-517.8	64.3	0.1498 µg/L	0.1498 ppb	14:03:33
3	Tl 190.801†	-32.6	1.8	1.7516 µg/L	1.7516 ppb	14:03:54
3	U 409.014†	37.3	42.7	3.8804 µg/L	3.8804 ppb	14:03:33
3	V 292.402†	105.8	-7.5	-0.0725 µg/L	-0.0725 ppb	14:03:33
3	Zn 213.857†	682.6	-332.8	-7.6580 µg/L	-7.6580 ppb	14:03:54

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Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2103732.7	100.51 %	0.480			0.48%
Sc RADIAL	98406.0	102 %	0.5			0.52%
Y 371.029	1440182.9	100.51 %	0.650			0.65%
Ag 328.068†	-33.2	-0.2670 µg/L	0.27050	-0.2670 ppb	0.27050	101.31%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-2.3	-1.1199 µg/L	9.50643	-1.1199 ppb	9.50643	848.88%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.1	-0.2203 µg/L	1.60649	-0.2203 ppb	1.60649	729.07%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	14.9	0.6712 µg/L	0.70954	0.6712 ppb	0.70954	105.72%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	4.2	0.0916 µg/L	0.04902	0.0916 ppb	0.04902	53.52%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	91.3	0.0536 µg/L	0.01078	0.0536 ppb	0.01078	20.12%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-29.2	-10.628 µg/L	1.0398	-10.628 ppb	1.0398	9.78%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	5.9	0.1383 µg/L	0.15671	0.1383 ppb	0.15671	113.31%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-8.5	-0.3639 µg/L	0.18997	-0.3639 ppb	0.18997	52.21%

QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	-20.3	-0.4421 µg/L	0.23363	-0.4421 ppb	0.23363 52.85%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	-28.6	-0.1849 µg/L	0.36967	-0.1849 ppb	0.36967 199.95%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	0.9	10.817 µg/L	19.2327	10.817 ppb	19.2327 177.80%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	-47.8	-22.300 µg/L	23.7038	-22.300 ppb	23.7038 106.29%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	1.6	20.581 µg/L	17.9950	20.581 ppb	17.9950 87.43%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	-19.6	-0.0596 µg/L	0.03099	-0.0596 ppb	0.03099 52.00%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	16.8	1.6623 µg/L	0.52156	1.6623 ppb	0.52156 31.38%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	-3.0	-1.4893 µg/L	4.57035	-1.4893 ppb	4.57035 306.88%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-15.6	-0.8756 µg/L	0.28889	-0.8756 ppb	0.28889 32.99%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	-4.9	-8.0173 µg/L	1.15037	-8.0173 ppb	1.15037 14.35%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	4.4	1.1495 µg/L	1.68366	1.1495 ppb	1.68366 146.47%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	-1.9	-5.9135 µg/L	9.44368	-5.9135 ppb	9.44368 159.70%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	5.3	4.7365 µg/L	5.17748	4.7365 ppb	5.17748 109.31%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-5.2	-4.8345 µg/L	3.90679	-4.8345 ppb	3.90679 80.81%
QC value within limits for Se 196.026 Recovery = Not calculated					
SiO2†	-34.0	-6.1334 µg/L	1.76283	-6.1334 ppb	1.76283 28.74%
QC value within limits for SiO2 Recovery = Not calculated					
Si 251.611†	0.2	0.0138 µg/L	0.11444	0.0138 ppb	0.11444 829.65%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	4.9	1.8970 µg/L	0.68105	1.8970 ppb	0.68105 35.90%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	-25.5	-0.1517 µg/L	0.04414	-0.1517 ppb	0.04414 29.10%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	90.1	0.2088 µg/L	0.06007	0.2088 ppb	0.06007 28.77%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	-0.9	-0.9038 µg/L	2.40286	-0.9038 ppb	2.40286 265.85%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	5.5	0.4943 µg/L	3.28796	0.4943 ppb	3.28796 665.14%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	-21.4	-0.2411 µg/L	0.17084	-0.2411 ppb	0.17084 70.87%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	-321.7	-7.4036 µg/L	0.22266	-7.4036 ppb	0.22266 3.01%
QC value within limits for Zn 213.857 Recovery = Not calculated					

All analyte(s) passed QC.

Sequence No.: 8

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 101

Date Collected: 3/16/2010 14:04:03

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99135.6	99135.6	102 %		14:04:34
1	Al 396.153Radial†	319.8	431.5	205.75 µg/L	205.75 ppb	14:04:34
1	Ca 317.933Radial†	976.8	568.4	206.83 µg/L	206.83 ppb	14:04:54
1	Fe 238.204 Radial†	19.8	7.4	87.080 µg/L	87.080 ppb	14:04:54
1	K 766.490 Radial†	804.0	299.6	139.83 µg/L	139.83 ppb	14:04:34
1	Mg 279.077 IEC†	31.9	23.2	305.37 µg/L	305.37 ppb	14:04:54
1	Na 589.592 Radial†	798.4	598.9	298.91 µg/L	298.91 ppb	14:04:34
1	Sr 421.552†	1004.2	841.0	4.9998 µg/L	4.9998 ppb	14:04:34
1	Sc 361.383	2092379.1	2092379.1	99.965 %		14:05:56
1	Y 371.029	1432026.5	1432026.5	99.941 %		14:05:56
1	Ag 328.068†	171.0	631.3	5.1099 µg/L	5.1099 ppb	14:06:02
1	As 188.979†	18.0	21.2	31.333 µg/L	31.333 ppb	14:06:22
1	B 249.677†	1373.0	1074.1	48.707 µg/L	48.707 ppb	14:06:22
1	Ba 233.527†	246.0	254.5	5.5747 µg/L	5.5747 ppb	14:06:22
1	Be 313.107†	7555.8	8717.3	5.1199 µg/L	5.1199 ppb	14:06:02
1	Cd 226.502†	42.2	212.8	5.0548 µg/L	5.0548 ppb	14:06:22
1	Co 228.616†	156.2	108.2	4.6480 µg/L	4.6480 ppb	14:06:22
1	Cr 267.716†	299.8	219.6	4.7801 µg/L	4.7801 ppb	14:06:22
1	Cu 324.752†	5988.3	1613.7	10.556 µg/L	10.556 ppb	14:06:02
1	Mn 257.610†	2771.2	3459.2	10.381 µg/L	10.381 ppb	14:06:22
1	Mo 202.031†	122.7	117.6	11.643 µg/L	11.643 ppb	14:06:22
1	Ni 231.604†	475.7	98.9	5.5441 µg/L	5.5441 ppb	14:06:22
1	P 214.914†	373.9	101.6	167.74 µg/L	167.74 ppb	14:06:22
1	Pb 220.353†	69.3	39.2	10.246 µg/L	10.246 ppb	14:06:22
1	S 181.975 Axial†	58.8	36.3	115.39 µg/L	115.39 ppb	14:06:22
1	Sb 206.836†	40.6	17.9	16.105 µg/L	16.105 ppb	14:06:22
1	Se 196.026†	56.2	28.9	27.211 µg/L	27.211 ppb	14:06:22
1	SiO2†	3946.4	1168.0	210.87 µg/L	210.87 ppb	14:06:02
1	Si 251.611†	1875.8	1452.4	98.739 µg/L	98.739 ppb	14:06:22
1	Sn 189.927†	22.1	29.6	11.534 µg/L	11.534 ppb	14:06:22
1	Ti 334.940†	1641.2	2219.0	5.1680 µg/L	5.1680 ppb	14:06:02
1	Tl 190.801†	-6.3	27.8	27.294 µg/L	27.294 ppb	14:06:22
1	U 409.014†	616.5	622.5	56.498 µg/L	56.498 ppb	14:06:02
1	V 292.402†	554.5	442.4	5.3704 µg/L	5.3704 ppb	14:06:02
1	Zn 213.857†	1334.7	326.3	7.4505 µg/L	7.4505 ppb	14:06:22
2	Sc RADIAL	99015.1	99015.1	102 %		14:05:00
2	Al 396.153Radial†	335.2	447.0	213.16 µg/L	213.16 ppb	14:05:00
2	Ca 317.933Radial†	968.2	561.2	204.22 µg/L	204.22 ppb	14:05:20
2	Fe 238.204 Radial†	18.1	5.7	68.037 µg/L	68.037 ppb	14:05:20
2	K 766.490 Radial†	782.7	279.7	130.55 µg/L	130.55 ppb	14:05:00
2	Mg 279.077 IEC†	34.3	25.5	336.87 µg/L	336.87 ppb	14:05:20
2	Na 589.592 Radial†	766.7	568.9	283.93 µg/L	283.93 ppb	14:05:00
2	Sr 421.552†	1007.8	845.7	5.0274 µg/L	5.0274 ppb	14:05:00
2	Sc 361.383	2103084.1	2103084.1	100.48 %		14:06:28
2	Y 371.029	1439658.8	1439658.8	100.47 %		14:06:28
2	Ag 328.068†	79.0	538.9	4.3590 µg/L	4.3590 ppb	14:06:34
2	As 188.979†	16.8	20.0	29.449 µg/L	29.449 ppb	14:06:54
2	B 249.677†	1371.9	1066.1	48.352 µg/L	48.352 ppb	14:06:54
2	Ba 233.527†	235.0	242.3	5.3067 µg/L	5.3067 ppb	14:06:54
2	Be 313.107†	7484.7	8608.0	5.0557 µg/L	5.0557 ppb	14:06:34
2	Cd 226.502†	32.0	202.4	4.8093 µg/L	4.8093 ppb	14:06:54
2	Co 228.616†	160.3	111.5	4.7870 µg/L	4.7870 ppb	14:06:54
2	Cr 267.716†	295.9	214.3	4.6625 µg/L	4.6625 ppb	14:06:54
2	Cu 324.752†	6013.7	1608.5	10.519 µg/L	10.519 ppb	14:06:34
2	Mn 257.610†	2763.7	3437.6	10.313 µg/L	10.313 ppb	14:06:54
2	Mo 202.031†	111.4	105.7	10.466 µg/L	10.466 ppb	14:06:54
2	Ni 231.604†	470.8	91.6	5.1355 µg/L	5.1355 ppb	14:06:54
2	P 214.914†	357.6	83.5	137.69 µg/L	137.69 ppb	14:06:54
2	Pb 220.353†	71.7	41.2	10.788 µg/L	10.788 ppb	14:06:54



2	S 181.975 Axial†	55.5	32.7	104.16 µg/L	104.16 ppb	14:06:54
2	Sb 206.836†	34.7	11.8	10.612 µg/L	10.612 ppb	14:06:54
2	Se 196.026†	61.9	34.3	32.143 µg/L	32.143 ppb	14:06:54
2	SiO2†	3980.4	1181.7	213.35 µg/L	213.35 ppb	14:06:34
2	Si 251.611†	1861.7	1428.7	97.131 µg/L	97.131 ppb	14:06:54
2	Sn 189.927†	22.6	30.0	11.687 µg/L	11.687 ppb	14:06:54
2	Ti 334.940†	1635.6	2205.1	5.1330 µg/L	5.1330 ppb	14:06:34
2	Tl 190.801†	-12.4	21.8	21.380 µg/L	21.380 ppb	14:06:54
2	U 409.014†	568.8	571.9	51.905 µg/L	51.905 ppb	14:06:34
2	V 292.402†	458.4	343.9	4.1959 µg/L	4.1959 ppb	14:06:34
2	Zn 213.857†	1347.2	331.9	7.5805 µg/L	7.5805 ppb	14:06:54
3	Sc RADIAL	98662.9	98662.9	102 %		14:05:25
3	Al 396.153Radial†	307.8	421.3	200.90 µg/L	200.90 ppb	14:05:25
3	Ca 317.933Radial†	966.0	562.4	204.66 µg/L	204.66 ppb	14:05:46
3	Fe 238.204 Radial†	21.0	8.7	102.55 µg/L	102.55 ppb	14:05:46
3	K 766.490 Radial†	794.6	294.2	137.28 µg/L	137.28 ppb	14:05:25
3	Mg 279.077 IEC†	33.5	24.9	328.04 µg/L	328.04 ppb	14:05:46
3	Na 589.592 Radial†	784.5	589.0	293.98 µg/L	293.98 ppb	14:05:25
3	Sr 421.552†	965.0	807.2	4.7989 µg/L	4.7989 ppb	14:05:25
3	Sc 361.383	2083397.0	2083397.0	99.536 %		14:07:00
3	Y 371.029	1425472.4	1425472.4	99.484 %		14:07:00
3	Ag 328.068†	101.2	561.8	4.5487 µg/L	4.5487 ppb	14:07:06
3	As 188.979†	17.7	21.0	31.021 µg/L	31.021 ppb	14:07:26
3	B 249.677†	1265.5	972.1	44.067 µg/L	44.067 ppb	14:07:26
3	Ba 233.527†	190.0	199.3	4.3663 µg/L	4.3663 ppb	14:07:26
3	Be 313.107†	6871.8	8062.7	4.7355 µg/L	4.7355 ppb	14:07:06
3	Cd 226.502†	12.3	182.9	4.3402 µg/L	4.3402 ppb	14:07:26
3	Co 228.616†	129.0	81.6	3.5039 µg/L	3.5039 ppb	14:07:26
3	Cr 267.716†	255.4	176.4	3.8390 µg/L	3.8390 ppb	14:07:26
3	Cu 324.752†	5895.5	1546.3	10.119 µg/L	10.119 ppb	14:07:06
3	Mn 257.610†	2245.9	2943.3	8.8301 µg/L	8.8301 ppb	14:07:26
3	Mo 202.031†	103.5	98.8	9.7817 µg/L	9.7817 ppb	14:07:26
3	Ni 231.604†	450.3	75.5	4.2322 µg/L	4.2322 ppb	14:07:26
3	P 214.914†	353.7	83.0	136.85 µg/L	136.85 ppb	14:07:26
3	Pb 220.353†	65.1	35.2	9.2083 µg/L	9.2083 ppb	14:07:26
3	S 181.975 Axial†	53.0	30.7	97.569 µg/L	97.569 ppb	14:07:26
3	Sb 206.836†	30.2	7.6	6.8898 µg/L	6.8898 ppb	14:07:26
3	Se 196.026†	58.3	31.2	29.401 µg/L	29.401 ppb	14:07:26
3	SiO2†	3940.6	1179.3	212.90 µg/L	212.90 ppb	14:07:06
3	Si 251.611†	1695.4	1279.3	86.969 µg/L	86.969 ppb	14:07:26
3	Sn 189.927†	19.8	27.3	10.646 µg/L	10.646 ppb	14:07:26
3	Ti 334.940†	1430.7	2014.6	4.6882 µg/L	4.6882 ppb	14:07:06
3	Tl 190.801†	-12.1	21.9	21.490 µg/L	21.490 ppb	14:07:26
3	U 409.014†	522.0	530.3	48.122 µg/L	48.122 ppb	14:07:06
3	V 292.402†	489.6	379.6	4.6018 µg/L	4.6018 ppb	14:07:06
3	Zn 213.857†	1250.7	247.7	5.6441 µg/L	5.6441 ppb	14:07:26

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2092953.4	99.993 %	0.4709			0.47%
Sc RADIAL	98937.8	102 %	0.3			0.25%
Y 371.029	1432385.9	99.966 %	0.4955			0.50%
Ag 328.068†	577.3	4.6725 µg/L	0.39048	4.6725 ppb	0.39048	8.36%
QC value within limits for Ag 328.068 Recovery = 93.45%						
Al 396.153Radial†	433.3	206.61 µg/L	6.174	206.61 ppb	6.174	2.99%
QC value within limits for Al 396.153Radial Recovery = 103.30%						
As 188.979†	20.7	30.601 µg/L	1.0098	30.601 ppb	1.0098	3.30%
QC value within limits for As 188.979 Recovery = 102.00%						
B 249.677†	1037.4	47.042 µg/L	2.5830	47.042 ppb	2.5830	5.49%
QC value within limits for B 249.677 Recovery = 94.08%						
Ba 233.527†	232.0	5.0826 µg/L	0.63463	5.0826 ppb	0.63463	12.49%
QC value within limits for Ba 233.527 Recovery = 101.65%						
Be 313.107†	8462.7	4.9704 µg/L	0.20593	4.9704 ppb	0.20593	4.14%
QC value within limits for Be 313.107 Recovery = 99.41%						
Ca 317.933Radial†	564.0	205.24 µg/L	1.399	205.24 ppb	1.399	0.68%
QC value within limits for Ca 317.933Radial Recovery = 102.62%						
Cd 226.502†	199.4	4.7347 µg/L	0.36306	4.7347 ppb	0.36306	7.67%
QC value within limits for Cd 226.502 Recovery = 94.69%						
Co 228.616†	100.4	4.3130 µg/L	0.70411	4.3130 ppb	0.70411	16.33%

QC value within limits for Co 228.616 Recovery = 86.26%						
Cr 267.716†	203.4	4.4272 µg/L	0.51280	4.4272 ppb	0.51280	11.58%
QC value within limits for Cr 267.716 Recovery = 88.54%						
Cu 324.752†	1589.5	10.398 µg/L	0.2423	10.398 ppb	0.2423	2.33%
QC value within limits for Cu 324.752 Recovery = 103.98%						
Fe 238.204 Radial†	7.3	85.888 µg/L	17.2853	85.888 ppb	17.2853	20.13%
QC value within limits for Fe 238.204 Radial Recovery = 85.89%						
K 766.490 Radial†	291.2	135.89 µg/L	4.794	135.89 ppb	4.794	3.53%
QC value within limits for K 766.490 Radial Recovery = 90.59%						
Mg 279.077 IEC†	24.5	323.43 µg/L	16.250	323.43 ppb	16.250	5.02%
QC value within limits for Mg 279.077 IEC Recovery = 107.81%						
Mn 257.610†	3280.0	9.8413 µg/L	0.87640	9.8413 ppb	0.87640	8.91%
QC value within limits for Mn 257.610 Recovery = 98.41%						
Mo 202.031†	107.4	10.630 µg/L	0.9415	10.630 ppb	0.9415	8.86%
QC value within limits for Mo 202.031 Recovery = 106.30%						
Na 589.592 Radial†	585.6	292.27 µg/L	7.636	292.27 ppb	7.636	2.61%
QC value within limits for Na 589.592 Radial Recovery = 97.42%						
Ni 231.604†	88.7	4.9706 µg/L	0.67133	4.9706 ppb	0.67133	13.51%
QC value within limits for Ni 231.604 Recovery = 99.41%						
P 214.914†	89.4	147.43 µg/L	17.599	147.43 ppb	17.599	11.94%
QC value within limits for P 214.914 Recovery = 98.29%						
Pb 220.353†	38.5	10.081 µg/L	0.8026	10.081 ppb	0.8026	7.96%
QC value within limits for Pb 220.353 Recovery = 100.81%						
S 181.975 Axial†	33.2	105.71 µg/L	9.013	105.71 ppb	9.013	8.53%
QC value within limits for S 181.975 Axial Recovery = 105.71%						
Sb 206.836†	12.4	11.202 µg/L	4.6357	11.202 ppb	4.6357	41.38%
QC value within limits for Sb 206.836 Recovery = 112.02%						
Se 196.026†	31.5	29.585 µg/L	2.4709	29.585 ppb	2.4709	8.35%
QC value within limits for Se 196.026 Recovery = 98.62%						
SiO2†	1176.3	212.37 µg/L	1.320	212.37 ppb	1.320	0.62%
QC value within limits for SiO2 Recovery = 99.70%						
Si 251.611†	1386.8	94.280 µg/L	6.3819	94.280 ppb	6.3819	6.77%
QC value within limits for Si 251.611 Recovery = 94.28%						
Sn 189.927†	28.9	11.289 µg/L	0.5618	11.289 ppb	0.5618	4.98%
QC value within limits for Sn 189.927 Recovery = 112.89%						
Sr 421.552†	831.3	4.9420 µg/L	0.12476	4.9420 ppb	0.12476	2.52%
QC value within limits for Sr 421.552 Recovery = 98.84%						
Ti 334.940†	2146.2	4.9964 µg/L	0.26749	4.9964 ppb	0.26749	5.35%
QC value within limits for Ti 334.940 Recovery = 99.93%						
Tl 190.801†	23.9	23.388 µg/L	3.3834	23.388 ppb	3.3834	14.47%
QC value within limits for Tl 190.801 Recovery = 116.94%						
U 409.014†	574.9	52.175 µg/L	4.1942	52.175 ppb	4.1942	8.04%
QC value within limits for U 409.014 Recovery = 104.35%						
V 292.402†	388.6	4.7227 µg/L	0.59653	4.7227 ppb	0.59653	12.63%
QC value within limits for V 292.402 Recovery = 94.45%						
Zn 213.857†	302.0	6.8917 µg/L	1.08243	6.8917 ppb	1.08243	15.71%
QC value less than the lower limit for Zn 213.857 Recovery = 68.92%						
QC Failed. Continue with analysis.						

Sequence No.: 9  
 Sample ID: ICSA  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 103  
 Date Collected: 3/16/2010 14:07:37  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95101.3	95101.3	98.3 %		14:08:15
1	Al 396.153Radial†	1068948.1	1088029.1	519390 µg/L	519390 ppb	14:08:10
1	Ca 317.933Radial†	1322895.4	1345976.5	489830 µg/L	489830 ppb	14:08:10
1	Fe 238.204 Radial†	15758.7	16026.3	189550 µg/L	189550 ppb	14:08:15
1	K 766.490 Radial†	183.6	-298.5	-139.29 µg/L	-139.29 ppb	14:08:15
1	Mg 279.077 IEC†	37323.7	37977.8	500470 µg/L	500470 ppb	14:08:15
1	Na 589.592 Radial†	173.3	-4.2	-2.1132 µg/L	-2.1132 ppb	14:08:15
1	Sr 421.552†	723.2	596.6	3.5466 µg/L	3.5466 ppb	14:08:15
1	Sc 361.383	1962419.5	1962419.5	93.756 %		14:08:51
1	Y 371.029	1328103.7	1328103.7	92.688 %		14:08:51
1	Ag 328.068†	-2109.5	-1789.7	0.3332 µg/L	0.3332 ppb	14:09:12
1	As 188.979†	26.5	31.5	-36.469 µg/L	-36.469 ppb	14:09:12
1	B 249.677†	1192.3	972.4	-54.785 µg/L	-54.785 ppb	14:08:51
1	Ba 233.527†	311.3	340.4	7.4797 µg/L	7.4797 ppb	14:09:12
1	Be 313.107†	-1694.4	-648.4	-0.3927 µg/L	-0.3927 ppb	14:08:51
1	Cd 226.502†	836.0	1062.3	3.8277 µg/L	3.8277 ppb	14:09:12
1	Co 228.616†	117.7	77.5	3.2585 µg/L	3.2585 ppb	14:09:12
1	Cr 267.716†	-8.7	-89.5	-1.9348 µg/L	-1.9348 ppb	14:09:12
1	Cu 324.752†	-794.8	-5224.4	1.5123 µg/L	1.5123 ppb	14:09:12
1	Mn 257.610†	6547.1	7670.0	0.5282 µg/L	0.5282 ppb	14:08:51
1	Mo 202.031†	-76.6	-86.9	-1.3920 µg/L	-1.3920 ppb	14:09:12
1	Ni 231.604†	290.1	-67.5	-1.3258 µg/L	-1.3258 ppb	14:09:12
1	P 214.914†	300.2	47.8	78.143 µg/L	78.143 ppb	14:09:12
1	Pb 220.353†	-135.1	-174.3	-3.5676 µg/L	-3.5676 ppb	14:09:12
1	S 181.975 Axial†	-17.9	-41.7	-132.62 µg/L	-132.62 ppb	14:09:12
1	Sb 206.836†	23.5	2.4	-5.3575 µg/L	-5.3575 ppb	14:09:12
1	Se 196.026†	-173.4	-212.3	-12.241 µg/L	-12.241 ppb	14:09:12
1	SiO2†	2437.2	-180.3	-32.546 µg/L	-32.546 ppb	14:09:12
1	Si 251.611†	451.7	57.7	3.9218 µg/L	3.9218 ppb	14:09:12
1	Sn 189.927†	-90.6	-89.2	15.477 µg/L	15.477 ppb	14:09:12
1	Ti 334.940†	11734.0	13092.7	-1.1982 µg/L	-1.1982 ppb	14:08:51
1	Tl 190.801†	-5.5	28.3	-40.482 µg/L	-40.482 ppb	14:09:12
1	U 409.014†	-85.6	-85.5	-63.991 µg/L	-63.991 ppb	14:08:51
1	V 292.402†	1637.5	1634.2	-4.8417 µg/L	-4.8417 ppb	14:09:12
1	Zn 213.857†	2250.2	1391.2	-5.2885 µg/L	-5.2885 ppb	14:09:12
2	Sc RADIAL	94743.4	94743.4	97.9 %		14:08:27
2	Al 396.153Radial†	1071081.9	1094319.4	522390 µg/L	522390 ppb	14:08:21
2	Ca 317.933Radial†	1325360.9	1353582.1	492600 µg/L	492600 ppb	14:08:21
2	Fe 238.204 Radial†	15661.2	15987.3	189090 µg/L	189090 ppb	14:08:27
2	K 766.490 Radial†	156.2	-325.8	-152.03 µg/L	-152.03 ppb	14:08:27
2	Mg 279.077 IEC†	37248.3	38044.3	501350 µg/L	501350 ppb	14:08:27
2	Na 589.592 Radial†	229.2	53.5	26.712 µg/L	26.712 ppb	14:08:27
2	Sr 421.552†	690.4	565.9	3.3641 µg/L	3.3641 ppb	14:08:27
2	Sc 361.383	1958596.1	1958596.1	93.574 %		14:09:20
2	Y 371.029	1328310.8	1328310.8	92.703 %		14:09:20
2	Ag 328.068†	-2099.7	-1783.7	0.3431 µg/L	0.3431 ppb	14:09:41
2	As 188.979†	19.8	24.4	-47.282 µg/L	-47.282 ppb	14:09:41
2	B 249.677†	1155.4	935.4	-56.223 µg/L	-56.223 ppb	14:09:20
2	Ba 233.527†	296.3	325.0	7.1421 µg/L	7.1421 ppb	14:09:41
2	Be 313.107†	-1675.4	-631.6	-0.3827 µg/L	-0.3827 ppb	14:09:20
2	Cd 226.502†	836.2	1064.2	3.9252 µg/L	3.9252 ppb	14:09:41
2	Co 228.616†	119.8	79.9	3.3643 µg/L	3.3643 ppb	14:09:41
2	Cr 267.716†	-14.4	-95.6	-2.0676 µg/L	-2.0676 ppb	14:09:41
2	Cu 324.752†	-833.5	-5267.5	1.1444 µg/L	1.1444 ppb	14:09:41
2	Mn 257.610†	6564.5	7702.4	0.5389 µg/L	0.5389 ppb	14:09:20
2	Mo 202.031†	-59.6	-68.9	0.3706 µg/L	0.3706 ppb	14:09:41
2	Ni 231.604†	281.1	-76.5	-1.8354 µg/L	-1.8354 ppb	14:09:41
2	P 214.914†	298.1	46.2	76.648 µg/L	76.648 ppb	14:09:41
2	Pb 220.353†	-119.4	-157.8	0.9868 µg/L	0.9868 ppb	14:09:41

2	S 181.975 Axial†	-36.9	-61.9	-197.09 µg/L	-197.09 ppb	14:09:41
2	Sb 206.836†	14.8	-6.9	-13.630 µg/L	-13.630 ppb	14:09:41
2	Se 196.026†	-170.9	-209.9	-12.396 µg/L	-12.396 ppb	14:09:41
2	SiO2†	2462.8	-147.8	-26.690 µg/L	-26.690 ppb	14:09:41
2	Si 251.611†	450.0	56.8	3.8591 µg/L	3.8591 ppb	14:09:41
2	Sn 189.927†	-95.2	-94.3	13.772 µg/L	13.772 ppb	14:09:41
2	Ti 334.940†	11708.0	13089.3	-1.2316 µg/L	-1.2316 ppb	14:09:20
2	Tl 190.801†	-0.2	33.9	-35.621 µg/L	-35.621 ppb	14:09:41
2	U 409.014†	-71.1	-70.2	-62.706 µg/L	-62.706 ppb	14:09:20
2	V 292.402†	1595.5	1592.7	-5.2578 µg/L	-5.2578 ppb	14:09:41
2	Zn 213.857†	2260.4	1406.8	-4.9565 µg/L	-4.9565 ppb	14:09:41
3	Sc RADIAL	94615.8	94615.8	97.8 %		14:08:39
3	Al 396.153Radial†	1070126.8	1094818.2	522630 µg/L	522630 ppb	14:08:33
3	Ca 317.933Radial†	1321933.3	1351902.1	491990 µg/L	491990 ppb	14:08:33
3	Fe 238.204 Radial†	15752.5	16102.2	190450 µg/L	190450 ppb	14:08:39
3	K 766.490 Radial†	346.7	-130.6	-60.965 µg/L	-60.965 ppb	14:08:39
3	Mg 279.077 IEC†	37295.7	38144.1	502660 µg/L	502660 ppb	14:08:39
3	Na 589.592 Radial†	176.8	0.2	0.1120 µg/L	0.1120 ppb	14:08:39
3	Sr 421.552†	727.4	604.7	3.5948 µg/L	3.5948 ppb	14:08:39
3	Sc 361.383	1957230.1	1957230.1	93.508 %		14:09:49
3	Y 371.029	1328849.1	1328849.1	92.740 %		14:09:49
3	Ag 328.068†	-2090.5	-1775.4	0.5143 µg/L	0.5143 ppb	14:10:09
3	As 188.979†	27.1	32.2	-35.852 µg/L	-35.852 ppb	14:10:09
3	B 249.677†	1079.8	855.5	-60.559 µg/L	-60.559 ppb	14:09:49
3	Ba 233.527†	289.5	318.0	6.9890 µg/L	6.9890 ppb	14:10:09
3	Be 313.107†	-1694.6	-653.4	-0.3956 µg/L	-0.3956 ppb	14:09:49
3	Cd 226.502†	841.7	1070.7	3.9264 µg/L	3.9264 ppb	14:10:09
3	Co 228.616†	97.9	56.7	2.3643 µg/L	2.3643 ppb	14:10:09
3	Cr 267.716†	-18.6	-100.1	-2.1662 µg/L	-2.1662 ppb	14:10:09
3	Cu 324.752†	-774.4	-5204.9	1.8089 µg/L	1.8089 ppb	14:10:09
3	Mn 257.610†	6613.9	7760.1	0.7041 µg/L	0.7041 ppb	14:09:49
3	Mo 202.031†	-53.8	-62.6	1.0417 µg/L	1.0417 ppb	14:10:09
3	Ni 231.604†	295.6	-60.8	-0.9382 µg/L	-0.9382 ppb	14:10:09
3	P 214.914†	309.6	58.6	96.340 µg/L	96.340 ppb	14:10:09
3	Pb 220.353†	-120.4	-159.0	0.7035 µg/L	0.7035 ppb	14:10:09
3	S 181.975 Axial†	-31.1	-55.8	-177.44 µg/L	-177.44 ppb	14:10:09
3	Sb 206.836†	23.5	2.4	-5.3232 µg/L	-5.3232 ppb	14:10:09
3	Se 196.026†	-197.2	-238.2	-35.579 µg/L	-35.579 ppb	14:10:09
3	SiO2†	2453.8	-155.6	-28.094 µg/L	-28.094 ppb	14:10:09
3	Si 251.611†	446.0	52.8	3.5919 µg/L	3.5919 ppb	14:10:09
3	Sn 189.927†	-86.3	-84.9	17.393 µg/L	17.393 ppb	14:10:09
3	Ti 334.940†	11750.2	13143.2	-1.2193 µg/L	-1.2193 ppb	14:09:49
3	Tl 190.801†	-4.4	29.4	-39.609 µg/L	-39.609 ppb	14:10:09
3	U 409.014†	-10.1	-5.0	-56.935 µg/L	-56.935 ppb	14:09:49
3	V 292.402†	1598.6	1597.3	-5.3658 µg/L	-5.3658 ppb	14:10:09
3	Zn 213.857†	2255.7	1403.5	-5.1752 µg/L	-5.1752 ppb	14:10:09

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1959415.2	93.613 %	0.1285			0.14%
Sc RADIAL	94820.2	98.0 %	0.26			0.27%
Y 371.029	1328421.2	92.711 %	0.0269			0.03%
Ag 328.068†	-1783.0	0.3969 µg/L	0.10183	0.3969 ppb	0.10183	25.66%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	1092388.9	521470 µg/L	1806.3	521470 ppb	1806.3	0.35%
QC value within limits for Al 396.153Radial Recovery = 104.29%						
As 188.979†	29.4	-39.868 µg/L	6.4283	-39.868 ppb	6.4283	16.12%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	921.1	-57.189 µg/L	3.0060	-57.189 ppb	3.0060	5.26%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	327.8	7.2036 µg/L	0.25105	7.2036 ppb	0.25105	3.49%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-644.5	-0.3903 µg/L	0.00673	-0.3903 ppb	0.00673	1.72%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1350486.9	491470 µg/L	1454.0	491470 ppb	1454.0	0.30%
QC value within limits for Ca 317.933Radial Recovery = 98.29%						
Cd 226.502†	1065.7	3.8931 µg/L	0.05662	3.8931 ppb	0.05662	1.45%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	71.4	2.9957 µg/L	0.54934	2.9957 ppb	0.54934	18.34%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-95.1	-2.0562 µg/L	0.11610	-2.0562 ppb	0.11610	5.65%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-5232.3	1.4885 µg/L	0.33291	1.4885 ppb	0.33291	22.37%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	16038.6	189700 µg/L	691.3	189700 ppb	691.3	0.36%	
QC value within limits for Fe 238.204 Radial Recovery = 94.85%							
K 766.490 Radial†	-251.6	-117.43 µg/L	49.312	-117.43 ppb	49.312	41.99%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	38055.4	501490 µg/L	1102.7	501490 ppb	1102.7	0.22%	
QC value within limits for Mg 279.077 IEC Recovery = 100.30%							
Mn 257.610†	7710.8	0.5904 µg/L	0.09865	0.5904 ppb	0.09865	16.71%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-72.8	0.0068 µg/L	1.25699	0.0068 ppb	1.25699	>999.9%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	16.5	8.2368 µg/L	16.03833	8.2368 ppb	16.03833	194.71%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-68.3	-1.3665 µg/L	0.44997	-1.3665 ppb	0.44997	32.93%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	50.9	83.710 µg/L	10.9632	83.710 ppb	10.9632	13.10%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-163.7	-0.6258 µg/L	2.55166	-0.6258 ppb	2.55166	407.75%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-53.1	-169.05 µg/L	33.044	-169.05 ppb	33.044	19.55%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-0.7	-8.1034 µg/L	4.78578	-8.1034 ppb	4.78578	59.06%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-220.2	-20.072 µg/L	13.4298	-20.072 ppb	13.4298	66.91%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-161.2	-29.110 µg/L	3.0573	-29.110 ppb	3.0573	10.50%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	55.8	3.7909 µg/L	0.17521	3.7909 ppb	0.17521	4.62%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-89.5	15.547 µg/L	1.8114	15.547 ppb	1.8114	11.65%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	589.0	3.5018 µg/L	0.12168	3.5018 ppb	0.12168	3.47%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	13108.4	-1.2163 µg/L	0.01687	-1.2163 ppb	0.01687	1.39%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	30.5	-38.571 µg/L	2.5916	-38.571 ppb	2.5916	6.72%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-53.6	-61.211 µg/L	3.7580	-61.211 ppb	3.7580	6.14%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	1608.1	-5.1551 µg/L	0.27672	-5.1551 ppb	0.27672	5.37%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	1400.5	-5.1401 µg/L	0.16878	-5.1401 ppb	0.16878	3.28%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: ICSAB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 104

Date Collected: 3/16/2010 14:10:20

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94053.1	94053.1	97.2 %		14:10:57
1	Al 396.153Radial†	1067713.2	1098883.6	524560 µg/L	524560 ppb	14:10:52
1	Ca 317.933Radial†	1313723.3	1351543.5	491860 µg/L	491860 ppb	14:10:52
1	Fe 238.204 Radial†	15574.9	16015.9	189440 µg/L	189440 ppb	14:10:57
1	K 766.490 Radial†	11413.8	11260.4	5255.0 µg/L	5255.0 ppb	14:10:57
1	Mg 279.077 IEC†	37024.0	38092.7	501990 µg/L	501990 ppb	14:10:57
1	Na 589.592 Radial†	10371.5	10492.5	5236.9 µg/L	5236.9 ppb	14:10:57
1	Sr 421.552†	84533.3	86852.3	516.33 µg/L	516.33 ppb	14:10:52
1	Sc 361.383	1945677.3	1945677.3	92.956 %		14:11:35
1	Y 371.029	1321275.4	1321275.4	92.212 %		14:11:35
1	Ag 328.068†	28537.8	31160.5	268.35 µg/L	268.35 ppb	14:11:35
1	As 188.979†	352.2	382.2	480.63 µg/L	480.63 ppb	14:11:56
1	B 249.677†	11895.7	12497.7	469.11 µg/L	469.11 ppb	14:11:35
1	Ba 233.527†	21530.7	23170.5	507.72 µg/L	507.72 ppb	14:11:56
1	Be 313.107†	391033.5	421822.4	247.64 µg/L	247.64 ppb	14:11:35
1	Cd 226.502†	19152.1	20773.9	472.85 µg/L	472.85 ppb	14:11:56
1	Co 228.616†	9873.1	10573.1	453.56 µg/L	453.56 ppb	14:11:56
1	Cr 267.716†	21065.8	22581.8	491.48 µg/L	491.48 ppb	14:11:56
1	Cu 324.752†	79293.3	80925.0	564.18 µg/L	564.18 ppb	14:11:35
1	Mn 257.610†	159425.0	172192.2	494.88 µg/L	494.88 ppb	14:11:35
1	Mo 202.031†	4814.2	5173.9	519.16 µg/L	519.16 ppb	14:11:56
1	Ni 231.604†	7809.6	8024.5	451.99 µg/L	451.99 ppb	14:11:56
1	P 214.914†	1791.6	1655.0	2696.6 µg/L	2696.6 ppb	14:11:56
1	Pb 220.353†	1636.8	1730.7	496.31 µg/L	496.31 ppb	14:11:56
1	S 181.975 Axial†	767.2	802.8	2555.0 µg/L	2555.0 ppb	14:11:56
1	Sb 206.836†	588.4	610.2	539.79 µg/L	539.79 ppb	14:11:56
1	Se 196.026†	2310.6	2458.3	2495.9 µg/L	2495.9 ppb	14:11:56
1	SiO2†	60072.3	61844.4	11165 µg/L	11165 ppb	14:11:35
1	Si 251.611†	71989.3	77020.1	5236.1 µg/L	5236.1 ppb	14:11:35
1	Sn 189.927†	1167.8	1263.7	542.42 µg/L	542.42 ppb	14:11:56
1	Ti 334.940†	217593.7	234658.8	516.82 µg/L	516.82 ppb	14:11:35
1	Tl 190.801†	446.3	514.2	439.15 µg/L	439.15 ppb	14:11:56
1	U 409.014†	5107.8	5500.6	443.11 µg/L	443.11 ppb	14:11:35
1	V 292.402†	42830.7	45963.8	524.13 µg/L	524.13 ppb	14:11:35
1	Zn 213.857†	21890.3	22540.2	478.65 µg/L	478.65 ppb	14:11:56
2	Sc RADIAL	93638.4	93638.4	96.7 %		14:11:09
2	Al 396.153Radial†	1069334.2	1105424.8	527690 µg/L	527690 ppb	14:11:03
2	Ca 317.933Radial†	1320981.3	1365032.5	496760 µg/L	496760 ppb	14:11:03
2	Fe 238.204 Radial†	15571.4	16083.3	190240 µg/L	190240 ppb	14:11:09
2	K 766.490 Radial†	11415.1	11313.8	5279.9 µg/L	5279.9 ppb	14:11:09
2	Mg 279.077 IEC†	37110.4	38350.8	505400 µg/L	505400 ppb	14:11:09
2	Na 589.592 Radial†	10420.1	10590.0	5285.5 µg/L	5285.5 ppb	14:11:09
2	Sr 421.552†	84800.8	87514.0	520.26 µg/L	520.26 ppb	14:11:03
2	Sc 361.383	1955393.4	1955393.4	93.421 %		14:12:05
2	Y 371.029	1326796.4	1326796.4	92.597 %		14:12:05
2	Ag 328.068†	28696.1	31177.3	268.53 µg/L	268.53 ppb	14:12:05
2	As 188.979†	357.9	386.3	486.04 µg/L	486.04 ppb	14:12:25
2	B 249.677†	11881.3	12418.7	465.10 µg/L	465.10 ppb	14:12:05
2	Ba 233.527†	21506.4	23029.4	504.63 µg/L	504.63 ppb	14:12:25
2	Be 313.107†	391632.1	420372.9	246.78 µg/L	246.78 ppb	14:12:05
2	Cd 226.502†	19130.2	20648.1	469.76 µg/L	469.76 ppb	14:12:25
2	Co 228.616†	9843.2	10488.4	449.92 µg/L	449.92 ppb	14:12:25
2	Cr 267.716†	21078.3	22482.6	489.32 µg/L	489.32 ppb	14:12:25
2	Cu 324.752†	79499.1	80721.4	563.00 µg/L	563.00 ppb	14:12:05
2	Mn 257.610†	159830.4	171773.9	493.44 µg/L	493.44 ppb	14:12:05
2	Mo 202.031†	4791.9	5124.3	514.28 µg/L	514.28 ppb	14:12:25
2	Ni 231.604†	7776.7	7947.5	447.69 µg/L	447.69 ppb	14:12:25
2	P 214.914†	1776.3	1629.0	2653.8 µg/L	2653.8 ppb	14:12:25
2	Pb 220.353†	1629.1	1713.6	492.08 µg/L	492.08 ppb	14:12:25

2	S 181.975 Axial†	761.6	792.7	2522.6 µg/L	2522.6 ppb	14:12:25
2	Sb 206.836†	574.0	591.7	523.15 µg/L	523.15 ppb	14:12:25
2	Se 196.026†	2291.8	2425.9	2465.0 µg/L	2465.0 ppb	14:12:25
2	SiO2†	60171.1	61629.1	11126 µg/L	11126 ppb	14:12:05
2	Si 251.611†	72027.3	76676.0	5212.7 µg/L	5212.7 ppb	14:12:05
2	Sn 189.927†	1166.0	1255.6	539.76 µg/L	539.76 ppb	14:12:25
2	Ti 334.940†	217901.4	233825.1	514.68 µg/L	514.68 ppb	14:12:05
2	Tl 190.801†	449.6	515.4	439.36 µg/L	439.36 ppb	14:12:25
2	U 409.014†	5127.6	5494.6	442.15 µg/L	442.15 ppb	14:12:05
2	V 292.402†	42839.5	45744.3	521.40 µg/L	521.40 ppb	14:12:05
2	Zn 213.857†	21866.3	22397.4	475.15 µg/L	475.15 ppb	14:12:25
3	Sc RADIAL	93917.0	93917.0	97.0 %		14:11:21
3	Al 396.153Radial†	1073322.7	1106256.3	528080 µg/L	528080 ppb	14:11:15
3	Ca 317.933Radial†	1326453.9	1366621.8	497340 µg/L	497340 ppb	14:11:15
3	Fe 238.204 Radial†	15607.0	16072.2	190110 µg/L	190110 ppb	14:11:21
3	K 766.490 Radial†	11611.4	11481.1	5358.0 µg/L	5358.0 ppb	14:11:21
3	Mg 279.077 IEC†	37262.6	38393.8	505960 µg/L	505960 ppb	14:11:21
3	Na 589.592 Radial†	10431.2	10569.6	5275.3 µg/L	5275.3 ppb	14:11:21
3	Sr 421.552†	85202.7	87668.1	521.18 µg/L	521.18 ppb	14:11:15
3	Sc 361.383	1947287.0	1947287.0	93.033 %		14:12:35
3	Y 371.029	1322583.6	1322583.6	92.303 %		14:12:35
3	Ag 328.068†	28534.1	31131.1	268.15 µg/L	268.15 ppb	14:12:35
3	As 188.979†	364.0	394.5	498.14 µg/L	498.14 ppb	14:12:55
3	B 249.677†	11968.2	12565.0	471.81 µg/L	471.81 ppb	14:12:35
3	Ba 233.527†	21563.0	23186.1	508.06 µg/L	508.06 ppb	14:12:55
3	Be 313.107†	389686.7	420026.9	246.58 µg/L	246.58 ppb	14:12:35
3	Cd 226.502†	19155.5	20760.5	472.45 µg/L	472.45 ppb	14:12:55
3	Co 228.616†	9854.9	10544.8	452.35 µg/L	452.35 ppb	14:12:55
3	Cr 267.716†	21056.0	22552.5	490.84 µg/L	490.84 ppb	14:12:55
3	Cu 324.752†	79207.3	80762.0	563.24 µg/L	563.24 ppb	14:12:35
3	Mn 257.610†	158800.3	171378.9	492.21 µg/L	492.21 ppb	14:12:35
3	Mo 202.031†	4816.0	5171.5	518.95 µg/L	518.95 ppb	14:12:55
3	Ni 231.604†	7822.5	8031.4	452.39 µg/L	452.39 ppb	14:12:55
3	P 214.914†	1783.0	1644.1	2679.1 µg/L	2679.1 ppb	14:12:55
3	Pb 220.353†	1652.3	1745.8	500.58 µg/L	500.58 ppb	14:12:55
3	S 181.975 Axial†	786.5	822.9	2618.9 µg/L	2618.9 ppb	14:12:55
3	Sb 206.836†	583.5	604.5	534.62 µg/L	534.62 ppb	14:12:55
3	Se 196.026†	2320.8	2467.3	2503.0 µg/L	2503.0 ppb	14:12:55
3	SiO2†	59865.2	61568.4	11115 µg/L	11115 ppb	14:12:35
3	Si 251.611†	71749.0	76697.7	5214.2 µg/L	5214.2 ppb	14:12:35
3	Sn 189.927†	1160.6	1254.9	539.57 µg/L	539.57 ppb	14:12:55
3	Ti 334.940†	217063.3	233895.2	514.81 µg/L	514.81 ppb	14:12:35
3	Tl 190.801†	464.1	532.9	456.36 µg/L	456.36 ppb	14:12:55
3	U 409.014†	4969.9	5347.9	428.82 µg/L	428.82 ppb	14:12:35
3	V 292.402†	42719.6	45806.3	522.17 µg/L	522.17 ppb	14:12:35
3	Zn 213.857†	21894.2	22524.9	478.04 µg/L	478.04 ppb	14:12:55

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Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1949452.6	93.137 %	0.2488			0.27%
Sc RADIAL	93869.5	97.0 %	0.22			0.23%
Y 371.029	1323551.8	92.371 %	0.2013			0.22%
Ag 328.068†	31156.3	268.35 µg/L	0.188	268.35 ppb	0.188	0.07%
QC value within limits for Ag 328.068 Recovery = 107.34%						
Al 396.153Radial†	1103521.6	526780 µg/L	1927.7	526780 ppb	1927.7	0.37%
QC value within limits for Al 396.153Radial Recovery = 105.36%						
As 188.979†	387.7	488.27 µg/L	8.962	488.27 ppb	8.962	1.84%
QC value within limits for As 188.979 Recovery = 97.65%						
B 249.677†	12493.8	468.67 µg/L	3.376	468.67 ppb	3.376	0.72%
QC value within limits for B 249.677 Recovery = 93.73%						
Ba 233.527†	23128.7	506.80 µg/L	1.889	506.80 ppb	1.889	0.37%
QC value within limits for Ba 233.527 Recovery = 101.36%						
Be 313.107†	420740.7	247.00 µg/L	0.559	247.00 ppb	0.559	0.23%
QC value within limits for Be 313.107 Recovery = 98.80%						
Ca 317.933Radial†	1361065.9	495320 µg/L	3015.0	495320 ppb	3015.0	0.61%
QC value within limits for Ca 317.933Radial Recovery = 99.06%						
Cd 226.502†	20727.5	471.69 µg/L	1.679	471.69 ppb	1.679	0.36%
QC value within limits for Cd 226.502 Recovery = 94.34%						
Co 228.616†	10535.4	451.94 µg/L	1.855	451.94 ppb	1.855	0.41%

QC value within limits for Co 228.616 Recovery = 90.39%				.		
Cr 267.716†	22538.9	490.55 µg/L	1.109	490.55 ppb	1.109	0.23%
QC value within limits for Cr 267.716 Recovery = 98.11%						
Cu 324.752†	80802.8	563.48 µg/L	0.623	563.48 ppb	0.623	0.11%
QC value within limits for Cu 324.752 Recovery = 112.70%						
Fe 238.204 Radial†	16057.1	189930 µg/L	427.6	189930 ppb	427.6	0.23%
QC value within limits for Fe 238.204 Radial Recovery = 94.96%						
K 766.490 Radial†	11351.7	5297.6 µg/L	53.73	5297.6 ppb	53.73	1.01%
QC value within limits for K 766.490 Radial Recovery = 105.95%						
Mg 279.077 IEC†	38279.1	504450 µg/L	2146.3	504450 ppb	2146.3	0.43%
QC value within limits for Mg 279.077 IEC Recovery = 100.89%						
Mn 257.610†	171781.7	493.51 µg/L	1.338	493.51 ppb	1.338	0.27%
QC value within limits for Mn 257.610 Recovery = 98.70%						
Mo 202.031†	5156.5	517.46 µg/L	2.757	517.46 ppb	2.757	0.53%
QC value within limits for Mo 202.031 Recovery = 103.49%						
Na 589.592 Radial†	10550.7	5265.9 µg/L	25.65	5265.9 ppb	25.65	0.49%
QC value within limits for Na 589.592 Radial Recovery = 105.32%						
Ni 231.604†	8001.1	450.69 µg/L	2.606	450.69 ppb	2.606	0.58%
QC value within limits for Ni 231.604 Recovery = 90.14%						
P 214.914†	1642.7	2676.5 µg/L	21.56	2676.5 ppb	21.56	0.81%
QC value within limits for P 214.914 Recovery = 107.06%						
Pb 220.353†	1730.0	496.32 µg/L	4.247	496.32 ppb	4.247	0.86%
QC value within limits for Pb 220.353 Recovery = 99.26%						
S 181.975 Axial†	806.1	2565.5 µg/L	48.98	2565.5 ppb	48.98	1.91%
QC value within limits for S 181.975 Axial Recovery = 102.62%						
Sb 206.836†	602.2	532.52 µg/L	8.516	532.52 ppb	8.516	1.60%
QC value within limits for Sb 206.836 Recovery = 106.50%						
Se 196.026†	2450.5	2488.0 µg/L	20.20	2488.0 ppb	20.20	0.81%
QC value within limits for Se 196.026 Recovery = 99.52%						
SiO2†	61680.7	11136 µg/L	26.2	11136 ppb	26.2	0.24%
QC value within limits for SiO2 Recovery = 104.12%						
Si 251.611†	76798.0	5221.0 µg/L	13.10	5221.0 ppb	13.10	0.25%
QC value within limits for Si 251.611 Recovery = 104.42%						
Sn 189.927†	1258.1	540.58 µg/L	1.593	540.58 ppb	1.593	0.29%
QC value within limits for Sn 189.927 Recovery = 108.12%						
Sr 421.552†	87344.8	519.25 µg/L	2.577	519.25 ppb	2.577	0.50%
QC value within limits for Sr 421.552 Recovery = 103.85%						
Ti 334.940†	234126.3	515.44 µg/L	1.201	515.44 ppb	1.201	0.23%
QC value within limits for Ti 334.940 Recovery = 103.09%						
Tl 190.801†	520.8	444.95 µg/L	9.875	444.95 ppb	9.875	2.22%
QC value within limits for Tl 190.801 Recovery = 88.99%						
U 409.014†	5447.7	438.03 µg/L	7.992	438.03 ppb	7.992	1.82%
QC value within limits for U 409.014 Recovery = 87.61%						
V 292.402†	45838.2	522.57 µg/L	1.410	522.57 ppb	1.410	0.27%
QC value within limits for V 292.402 Recovery = 104.51%						
Zn 213.857†	22487.5	477.28 µg/L	1.868	477.28 ppb	1.868	0.39%
QC value within limits for Zn 213.857 Recovery = 95.46%						

All analyte(s) passed QC.



Sequence No.: 11

Sample ID: LR1

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 105

Date Collected: 3/16/2010 14:13:05

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94671.6	94671.6	97.8 %		14:13:43
1	Al 396.153Radial†	1052553.7	1076206.9	513750 µg/L	513750 ppb	14:13:37
1	Ca 317.933Radial†	1303993.2	1332763.8	485020 µg/L	485020 ppb	14:13:37
1	Fe 238.204 Radial†	36882.6	37695.2	445850 µg/L	445850 ppb	14:13:43
1	K 766.490 Radial†	172.0	-309.5	-144.42 µg/L	-144.42 ppb	14:13:43
1	Mg 279.077 IEC†	36592.3	37402.5	492610 µg/L	492610 ppb	14:13:43
1	Na 589.592 Radial†	974327.3	995931.5	497070 µg/L	497070 ppb	14:13:37
1	Sr 421.552†	2085.8	1993.0	11.848 µg/L	11.848 ppb	14:13:43
1	Sc 361.383	1930212.6	1930212.6	92.218 %		14:14:20
1	Y 371.029	1301817.0	1301817.0	90.854 %		14:14:20
1	Ag 328.068†	-3823.3	-3685.8	4.9184 µg/L	4.9184 ppb	14:14:20
1	As 188.979†	17.9	22.7	-80.580 µg/L	-80.580 ppb	14:14:40
1	B 249.677†	1804.8	1657.7	-157.40 µg/L	-157.40 ppb	14:14:20
1	Ba 233.527†	678.1	743.8	16.329 µg/L	16.329 ppb	14:14:40
1	Be 313.107†	-8849.1	-8437.1	-4.9718 µg/L	-4.9718 ppb	14:14:20
1	Cd 226.502†	2127.4	2477.5	8.5043 µg/L	8.5043 ppb	14:14:40
1	Co 228.616†	261.1	235.0	10.000 µg/L	10.000 ppb	14:14:40
1	Cr 267.716†	320.3	267.1	5.8303 µg/L	5.8303 ppb	14:14:40
1	Cu 324.752†	-6537.4	-11465.8	8.9291 µg/L	8.9291 ppb	14:14:40
1	Mn 257.610†	7529.5	8852.0	19.764 µg/L	19.764 ppb	14:14:20
1	Mo 202.031†	-172.5	-192.2	-2.0792 µg/L	-2.0792 ppb	14:14:40
1	Ni 231.604†	236.0	-120.9	-0.9993 µg/L	-0.9993 ppb	14:14:40
1	P 214.914†	484.7	253.2	213.82 µg/L	213.82 ppb	14:14:40
1	Pb 220.353†	-37.2	-70.5	11.668 µg/L	11.668 ppb	14:14:40
1	S 181.975 Axial†	-37.7	-63.4	-201.85 µg/L	-201.85 ppb	14:14:40
1	Sb 206.836†	25.3	4.7	-3.4783 µg/L	-3.4783 ppb	14:14:40
1	Se 196.026†	-396.6	-457.4	578.46 µg/L	578.46 ppb	14:14:40
1	SiO2†	2429.0	-145.8	-26.319 µg/L	-26.319 ppb	14:14:40
1	Si 251.611†	-163.3	-601.2	-40.870 µg/L	-40.870 ppb	14:14:40
1	Sn 189.927†	-66.1	-64.2	23.478 µg/L	23.478 ppb	14:14:40
1	Ti 334.940†	14501.8	16302.9	6.8316 µg/L	6.8316 ppb	14:14:20
1	Tl 190.801†	-15.4	17.4	4.7966 µg/L	4.7966 ppb	14:14:40
1	U 409.014†	155144.5	168243.4	15185 µg/L	15185 ppb	14:14:20
1	V 292.402†	2802.0	2926.2	-6.2992 µg/L	-6.2992 ppb	14:14:40
1	Zn 213.857†	3662.1	2962.3	19.218 µg/L	19.218 ppb	14:14:40
2	Sc RADIAL	93000.2	93000.2	96.1 %		14:13:55
2	Al 396.153Radial†	1058319.8	1101546.9	525840 µg/L	525840 ppb	14:13:49
2	Ca 317.933Radial†	1303650.5	1356365.9	493610 µg/L	493610 ppb	14:13:49
2	Fe 238.204 Radial†	36394.2	37864.7	447850 µg/L	447850 ppb	14:13:55
2	K 766.490 Radial†	137.2	-342.5	-159.84 µg/L	-159.84 ppb	14:13:55
2	Mg 279.077 IEC†	35947.3	37403.5	492620 µg/L	492620 ppb	14:13:55
2	Na 589.592 Radial†	976667.6	1016269.0	507220 µg/L	507220 ppb	14:13:49
2	Sr 421.552†	2073.2	2018.2	11.998 µg/L	11.998 ppb	14:13:55
2	Sc 361.383	1922376.9	1922376.9	91.843 %		14:14:49
2	Y 371.029	1299994.3	1299994.3	90.727 %		14:14:49
2	Ag 328.068†	-3842.1	-3723.1	4.7666 µg/L	4.7666 ppb	14:14:49
2	As 188.979†	13.6	18.1	-88.665 µg/L	-88.665 ppb	14:15:10
2	B 249.677†	1879.9	1747.5	-154.37 µg/L	-154.37 ppb	14:14:49
2	Ba 233.527†	658.6	725.6	15.929 µg/L	15.929 ppb	14:15:10
2	Be 313.107†	-8932.7	-8567.2	-5.0479 µg/L	-5.0479 ppb	14:14:49
2	Cd 226.502†	2128.6	2488.2	8.5322 µg/L	8.5322 ppb	14:15:10
2	Co 228.616†	267.7	243.4	10.360 µg/L	10.360 ppb	14:15:10
2	Cr 267.716†	313.8	261.5	5.7077 µg/L	5.7077 ppb	14:15:10
2	Cu 324.752†	-6590.9	-11552.9	8.7371 µg/L	8.7371 ppb	14:15:10
2	Mn 257.610†	7522.4	8877.5	19.959 µg/L	19.959 ppb	14:14:49
2	Mo 202.031†	-173.5	-194.0	-2.1781 µg/L	-2.1781 ppb	14:15:10
2	Ni 231.604†	243.2	-112.1	-0.4755 µg/L	-0.4755 ppb	14:15:10
2	P 214.914†	482.4	252.9	215.24 µg/L	215.24 ppb	14:15:10
2	Pb 220.353†	-66.4	-102.5	4.2527 µg/L	4.2527 ppb	14:15:10

2	S 181.975 Axial†	-39.5	-65.5	-208.49 µg/L	-208.49 ppb	14:15:10
2	Sb 206.836†	23.1	2.4	-5.6216 µg/L	-5.6216 ppb	14:15:10
2	Se 196.026†	-399.3	-462.0	579.58 µg/L	579.58 ppb	14:15:10
2	SiO2†	2411.3	-154.3	-27.852 µg/L	-27.852 ppb	14:15:10
2	Si 251.611†	-170.8	-610.1	-41.477 µg/L	-41.477 ppb	14:15:10
2	Sn 189.927†	-70.6	-69.5	22.257 µg/L	22.257 ppb	14:15:10
2	Ti 334.940†	14098.6	15928.0	6.0897 µg/L	6.0897 ppb	14:14:49
2	Tl 190.801†	-9.8	23.5	9.3441 µg/L	9.3441 ppb	14:15:10
2	U 409.014†	154229.8	167933.2	15156 µg/L	15156 ppb	14:14:49
2	V 292.402†	2718.0	2847.1	-7.5184 µg/L	-7.5184 ppb	14:15:10
2	Zn 213.857†	3679.4	2997.4	19.928 µg/L	19.928 ppb	14:15:10
3	Sc RADIAL	93668.6	93668.6	96.8 %		14:14:07
3	Al 396.153Radial†	1029545.6	1063955.3	507900 µg/L	507900 ppb	14:14:01
3	Ca 317.933Radial†	1263359.0	1305051.6	474940 µg/L	474940 ppb	14:14:01
3	Fe 238.204 Radial†	36666.1	37875.4	447980 µg/L	447980 ppb	14:14:07
3	K 766.490 Radial†	271.0	-205.4	-95.841 µg/L	-95.841 ppb	14:14:07
3	Mg 279.077 IEC†	36314.2	37515.7	494100 µg/L	494100 ppb	14:14:07
3	Na 589.592 Radial†	954659.7	986275.4	492250 µg/L	492250 ppb	14:14:01
3	Sr 421.552†	2056.0	1985.1	11.801 µg/L	11.801 ppb	14:14:07
3	Sc 361.383	1929969.6	1929969.6	92.206 %		14:15:18
3	Y 371.029	1302939.9	1302939.9	90.932 %		14:15:18
3	Ag 328.068†	-3867.6	-3734.3	4.6914 µg/L	4.6914 ppb	14:15:18
3	As 188.979†	21.9	27.0	-73.269 µg/L	-73.269 ppb	14:15:39
3	B 249.677†	1873.9	1732.9	-155.10 µg/L	-155.10 ppb	14:15:18
3	Ba 233.527†	642.9	705.7	15.495 µg/L	15.495 ppb	14:15:39
3	Be 313.107†	-8935.8	-8532.2	-5.0272 µg/L	-5.0272 ppb	14:15:18
3	Cd 226.502†	2136.7	2487.8	8.5107 µg/L	8.5107 ppb	14:15:39
3	Co 228.616†	258.3	232.1	9.8760 µg/L	9.8760 ppb	14:15:39
3	Cr 267.716†	324.6	271.8	5.9341 µg/L	5.9341 ppb	14:15:39
3	Cu 324.752†	-6600.1	-11534.7	8.8800 µg/L	8.8800 ppb	14:15:39
3	Mn 257.610†	7518.4	8840.9	19.756 µg/L	19.756 ppb	14:15:18
3	Mo 202.031†	-176.5	-196.5	-2.4240 µg/L	-2.4240 ppb	14:15:39
3	Ni 231.604†	264.9	-89.6	0.7884 µg/L	0.7884 ppb	14:15:39
3	P 214.914†	473.2	240.8	189.98 µg/L	189.98 ppb	14:15:39
3	Pb 220.353†	-47.6	-81.8	8.3479 µg/L	8.3479 ppb	14:15:39
3	S 181.975 Axial†	-44.0	-70.3	-223.71 µg/L	-223.71 ppb	14:15:39
3	Sb 206.836†	29.1	8.8	0.3352 µg/L	0.3352 ppb	14:15:39
3	Se 196.026†	-420.9	-483.8	560.34 µg/L	560.34 ppb	14:15:39
3	SiO2†	2418.3	-157.0	-28.351 µg/L	-28.351 ppb	14:15:39
3	Si 251.611†	-177.1	-616.1	-41.886 µg/L	-41.886 ppb	14:15:39
3	Sn 189.927†	-59.9	-57.5	25.124 µg/L	25.124 ppb	14:15:39
3	Ti 334.940†	14000.3	15761.0	5.2872 µg/L	5.2872 ppb	14:15:18
3	Tl 190.801†	-11.8	21.3	10.939 µg/L	10.939 ppb	14:15:39
3	U 409.014†	154639.4	167716.8	15137 µg/L	15137 ppb	14:15:18
3	V 292.402†	2785.0	2908.1	-6.8359 µg/L	-6.8359 ppb	14:15:39
3	Zn 213.857†	3676.3	2978.2	19.393 µg/L	19.393 ppb	14:15:39

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1927519.7	92.089 %	0.2129			0.23%
Sc RADIAL	93780.1	96.9 %	0.87			0.90%
Y 371.029	1301583.7	90.838 %	0.1037			0.11%
Ag 328.068†	-3714.4	4.7921 µg/L	0.11566	4.7921 ppb	0.11566	2.41%
Al 396.153Radial†	1080569.7	515830 µg/L	9152.0	515830 ppb	9152.0	1.77%
QC value within limits for Al 396.153Radial Recovery = 103.17%						
As 188.979†	22.6	-80.838 µg/L	7.7012	-80.838 ppb	7.7012	9.53%
B 249.677†	1712.7	-155.63 µg/L	1.582	-155.63 ppb	1.582	1.02%
Ba 233.527†	725.0	15.918 µg/L	0.4170	15.918 ppb	0.4170	2.62%
Be 313.107†	-8512.2	-5.0156 µg/L	0.03934	-5.0156 ppb	0.03934	0.78%
Ca 317.933Radial†	1331393.7	484520 µg/L	9347.2	484520 ppb	9347.2	1.93%
QC value within limits for Ca 317.933Radial Recovery = 96.90%						
Cd 226.502†	2484.5	8.5158 µg/L	0.01463	8.5158 ppb	0.01463	0.17%
Co 228.616†	236.8	10.079 µg/L	0.2515	10.079 ppb	0.2515	2.50%
Cr 267.716†	266.8	5.8240 µg/L	0.11337	5.8240 ppb	0.11337	1.95%
Cu 324.752†	-11517.8	8.8487 µg/L	0.09973	8.8487 ppb	0.09973	1.13%
Fe 238.204 Radial†	37811.8	447230 µg/L	1195.1	447230 ppb	1195.1	0.27%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 89.45%						
K 766.490 Radial†	-285.8	-133.37 µg/L	33.401	-133.37 ppb	33.401	25.04%
Mg 279.077 IEC†	37440.6	493110 µg/L	856.8	493110 ppb	856.8	0.17%

QC value within limits for Mg 279.077 IEC Recovery = 98.62%							
Mn 257.610†	8856.8	19.826 µg/L	0.1146	19.826 ppb	0.1146	0.58%	
Mo 202.031†	-194.3	-2.2271 µg/L	0.17753	-2.2271 ppb	0.17753	7.97%	
Na 589.592 Radial†	999492.0	498850 µg/L	7641.5	498850 ppb	7641.5	1.53%	
QC value within limits for Na 589.592 Radial Recovery = 99.77%							
Ni 231.604†	-107.5	-0.2288 µg/L	0.91903	-0.2288 ppb	0.91903	401.61%	
P 214.914†	249.0	206.35 µg/L	14.190	206.35 ppb	14.190	6.88%	
Pb 220.353†	-84.9	8.0896 µg/L	3.71451	8.0896 ppb	3.71451	45.92%	
S 181.975 Axial†	-66.4	-211.35 µg/L	11.205	-211.35 ppb	11.205	5.30%	
Sb 206.836†	5.3	-2.9216 µg/L	3.01721	-2.9216 ppb	3.01721	103.27%	
Se 196.026†	-467.8	572.79 µg/L	10.799	572.79 ppb	10.799	1.89%	
SiO2†	-152.4	-27.508 µg/L	1.0586	-27.508 ppb	1.0586	3.85%	
Si 251.611†	-609.1	-41.411 µg/L	0.5110	-41.411 ppb	0.5110	1.23%	
Sn 189.927†	-63.7	23.619 µg/L	1.4387	23.619 ppb	1.4387	6.09%	
Sr 421.552†	1998.8	11.882 µg/L	0.1030	11.882 ppb	0.1030	0.87%	
Ti 334.940†	15997.3	6.0695 µg/L	0.77238	6.0695 ppb	0.77238	12.73%	
Tl 190.801†	20.7	8.3600 µg/L	3.18740	8.3600 ppb	3.18740	38.13%	
U 409.014†	167964.5	15159 µg/L	23.9	15159 ppb	23.9	0.16%	
QC value within limits for U 409.014 Recovery = 101.06%							
V 292.402†	2893.8	-6.8845 µg/L	0.61106	-6.8845 ppb	0.61106	8.88%	
Zn 213.857†	2979.3	19.513 µg/L	0.3701	19.513 ppb	0.3701	1.90%	
QC Failed. Continue with analysis.							

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 3/16/2010 14:15:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98681.8	98681.8	102 %		14:16:27
1	Al 396.153Radial†	791.1	895.2	209.10 µg/L	209.10 ppb	14:16:27
1	Ca 317.933Radial†	535.8	140.2	51.021 µg/L	51.021 ppb	14:16:48
1	Fe 238.204 Radial†	13.8	1.5	230.85 µg/L	230.85 ppb	14:16:48
1	K 766.490 Radial†	672389.6	659002.6	307540 µg/L	307540 ppb	14:16:22
1	Mg 279.077 IEC†	1.2	-6.8	89.344 µg/L	89.344 ppb	14:16:48
1	Na 589.592 Radial†	1192.9	989.4	493.81 µg/L	493.81 ppb	14:16:27
1	Sr 421.552†	1723920.8	1690703.1	10051 µg/L	10051 ppb	14:16:22
1	Sc 361.383	2094408.5	2094408.5	100.06 %		14:18:17
1	Y 371.029	1416408.2	1416408.2	98.851 %		14:18:17
1	Ag 328.068†	-7353.2	-6888.4	14.447 µg/L	14.447 ppb	14:18:22
1	As 188.979†	6782.6	6781.6	10004 µg/L	10004 ppb	14:18:22
1	B 249.677†	114492.3	114121.9	5220.5 µg/L	5220.5 ppb	14:18:17
1	Ba 233.527†	703458.1	703029.8	15394 µg/L	15394 ppb	14:18:17
1	Be 313.107†	5088373.7	5086373.9	2984.7 µg/L	2984.7 ppb	14:18:17
1	Cd 226.502†	428448.1	428352.7	10192 µg/L	10192 ppb	14:18:17
1	Co 228.616†	233468.5	233275.6	10010 µg/L	10010 ppb	14:18:17
1	Cr 267.716†	1192875.4	1192054.7	25933 µg/L	25933 ppb	14:18:17
1	Cu 324.752†	3276740.2	3270329.5	21360 µg/L	21360 ppb	14:18:17
1	Mn 257.610†	3337256.3	3335871.6	10026 µg/L	10026 ppb	14:18:17
1	Mo 202.031†	107438.2	107366.4	10624 µg/L	10624 ppb	14:18:17
1	Ni 231.604†	184095.1	183603.9	10286 µg/L	10286 ppb	14:18:17
1	P 214.914†	11782.2	11502.5	17003 µg/L	17003 ppb	14:18:22
1	Pb 220.353†	100441.1	100348.6	26306 µg/L	26306 ppb	14:18:17
1	S 181.975 Axial†	16785.8	16752.9	53316 µg/L	53316 ppb	14:18:22
1	Sb 206.836†	11913.2	11883.1	10481 µg/L	10481 ppb	14:18:22
1	Se 196.026†	10987.9	10953.8	10295 µg/L	10295 ppb	14:18:22
1	SiO2†	568840.9	565708.1	102130 µg/L	102130 ppb	14:18:17
1	Si 251.611†	700803.3	699944.2	47585 µg/L	47585 ppb	14:18:17
1	Sn 189.927†	27684.3	27674.6	10774 µg/L	10774 ppb	14:18:22
1	Ti 334.940†	4321206.8	4319101.7	10100 µg/L	10100 ppb	14:18:17
1	Tl 190.801†	10260.1	10287.9	10137 µg/L	10137 ppb	14:18:22
1	U 409.014†	-2540.8	-2533.4	-230.03 µg/L	-230.03 ppb	14:18:17
1	V 292.402†	896151.0	895482.4	10709 µg/L	10709 ppb	14:18:17
1	Zn 213.857†	669754.7	668330.1	15308 µg/L	15308 ppb	14:18:17
2	Sc RADIAL	99227.5	99227.5	103 %		14:16:59
2	Al 396.153Radial†	807.9	907.3	220.62 µg/L	220.62 ppb	14:16:59
2	Ca 317.933Radial†	550.5	151.7	55.210 µg/L	55.210 ppb	14:17:20
2	Fe 238.204 Radial†	12.3	0.1	207.63 µg/L	207.63 ppb	14:17:20
2	K 766.490 Radial†	672362.4	655349.3	305840 µg/L	305840 ppb	14:16:54
2	Mg 279.077 IEC†	3.5	-4.6	112.96 µg/L	112.96 ppb	14:17:20
2	Na 589.592 Radial†	953.1	749.0	373.85 µg/L	373.85 ppb	14:16:59
2	Sr 421.552†	1725788.1	1683225.9	10007 µg/L	10007 ppb	14:16:54
2	Sc 361.383	2089385.6	2089385.6	99.822 %		14:18:39
2	Y 371.029	1413119.1	1413119.1	98.622 %		14:18:39
2	Ag 328.068†	-7199.9	-6752.5	13.635 µg/L	13.635 ppb	14:18:44
2	As 188.979†	6777.4	6792.7	10020 µg/L	10020 ppb	14:18:44
2	B 249.677†	111616.5	111516.0	5101.0 µg/L	5101.0 ppb	14:18:39
2	Ba 233.527†	684041.7	685268.9	15005 µg/L	15005 ppb	14:18:39
2	Be 313.107†	4943607.3	4953574.4	2906.8 µg/L	2906.8 ppb	14:18:39
2	Cd 226.502†	415843.7	416755.2	9916.5 µg/L	9916.5 ppb	14:18:39
2	Co 228.616†	226279.8	226634.9	9725.4 µg/L	9725.4 ppb	14:18:39
2	Cr 267.716†	1154499.0	1156475.8	25159 µg/L	25159 ppb	14:18:39
2	Cu 324.752†	3189838.7	3191145.5	20843 µg/L	20843 ppb	14:18:39
2	Mn 257.610†	3244580.4	3251048.3	9770.9 µg/L	9770.9 ppb	14:18:39
2	Mo 202.031†	104357.4	104538.2	10344 µg/L	10344 ppb	14:18:39
2	Ni 231.604†	178790.3	178732.0	10013 µg/L	10013 ppb	14:18:39
2	P 214.914†	11635.4	11383.7	16857 µg/L	16857 ppb	14:18:44
2	Pb 220.353†	97684.4	97828.2	25645 µg/L	25645 ppb	14:18:39

2	S 181.975 Axial†	16765.1	16772.5	53378 µg/L	53378 ppb	14:18:44
2	Sb 206.836†	11775.4	11773.7	10387 µg/L	10387 ppb	14:18:44
2	Se 196.026†	10902.5	10894.6	10239 µg/L	10239 ppb	14:18:44
2	SiO2†	556612.3	554824.3	100170 µg/L	100170 ppb	14:18:39
2	Si 251.611†	685339.5	686136.5	46646 µg/L	46646 ppb	14:18:39
2	Sn 189.927†	27024.0	27079.5	10543 µg/L	10543 ppb	14:18:44
2	Ti 334.940†	4200749.2	4208811.1	9841.8 µg/L	9841.8 ppb	14:18:39
2	Tl 190.801†	10259.2	10311.6	10158 µg/L	10158 ppb	14:18:44
2	U 409.014†	-2647.1	-2646.0	-240.25 µg/L	-240.25 ppb	14:18:39
2	V 292.402†	869628.3	871065.4	10417 µg/L	10417 ppb	14:18:39
2	Zn 213.857†	651634.3	651786.5	14929 µg/L	14929 ppb	14:18:39
3	Sc RADIAL	99146.3	99146.3	102 %		14:17:31
3	Al 396.153Radial†	797.8	898.1	232.76 µg/L	232.76 ppb	14:17:31
3	Ca 317.933Radial†	569.3	170.5	62.044 µg/L	62.044 ppb	14:17:52
3	Fe 238.204 Radial†	9.5	-2.7	157.97 µg/L	157.97 ppb	14:17:52
3	K 766.490 Radial†	679640.4	662991.4	309410 µg/L	309410 ppb	14:17:26
3	Mg 279.077 IEC†	3.3	-4.8	97.740 µg/L	97.740 ppb	14:17:52
3	Na 589.592 Radial†	823.9	623.8	311.32 µg/L	311.32 ppb	14:17:31
3	Sr 421.552†	1744621.8	1702990.6	10124 µg/L	10124 ppb	14:17:26
3	Sc 361.383	2074927.8	2074927.8	99.131 %		14:19:01
3	Y 371.029	1405489.5	1405489.5	98.089 %		14:19:01
3	Ag 328.068†	-6195.3	-5789.4	15.820 µg/L	15.820 ppb	14:19:06
3	As 188.979†	5965.2	6020.7	8880.9 µg/L	8880.9 ppb	14:19:06
3	B 249.677†	105435.4	106059.9	4849.4 µg/L	4849.4 ppb	14:19:01
3	Ba 233.527†	631768.9	637312.9	13955 µg/L	13955 ppb	14:19:01
3	Be 313.107†	4524269.0	4565069.9	2678.8 µg/L	2678.8 ppb	14:19:01
3	Cd 226.502†	382998.0	386524.4	9197.1 µg/L	9197.1 ppb	14:19:01
3	Co 228.616†	206754.1	208517.6	8948.0 µg/L	8948.0 ppb	14:19:01
3	Cr 267.716†	1033219.0	1042191.9	22673 µg/L	22673 ppb	14:19:01
3	Cu 324.752†	2919414.1	2940617.5	19207 µg/L	19207 ppb	14:19:01
3	Mn 257.610†	2964203.2	2990862.7	8988.9 µg/L	8988.9 ppb	14:19:01
3	Mo 202.031†	95577.7	96410.0	9539.9 µg/L	9539.9 ppb	14:19:01
3	Ni 231.604†	163249.9	164303.4	9204.7 µg/L	9204.7 ppb	14:19:01
3	P 214.914†	10085.8	9901.8	14546 µg/L	14546 ppb	14:19:06
3	Pb 220.353†	91212.7	91981.7	24113 µg/L	24113 ppb	14:19:01
3	S 181.975 Axial†	14772.3	14879.2	47353 µg/L	47353 ppb	14:19:06
3	Sb 206.836†	10303.5	10371.1	9150.9 µg/L	9150.9 ppb	14:19:06
3	Se 196.026†	9625.3	9682.3	9099.5 µg/L	9099.5 ppb	14:19:06
3	SiO2†	522275.8	524072.2	94614 µg/L	94614 ppb	14:19:01
3	Si 251.611†	642711.8	647919.2	44048 µg/L	44048 ppb	14:19:01
3	Sn 189.927†	22954.8	23163.3	9018.1 µg/L	9018.1 ppb	14:19:06
3	Ti 334.940†	3845959.1	3880234.9	9073.5 µg/L	9073.5 ppb	14:19:01
3	Tl 190.801†	9385.1	9501.4	9359.7 µg/L	9359.7 ppb	14:19:06
3	U 409.014†	-2244.4	-2258.2	-205.04 µg/L	-205.04 ppb	14:19:01
3	V 292.402†	793039.4	799875.7	9565.0 µg/L	9565.0 ppb	14:19:01
3	Zn 213.857†	598338.9	602572.7	13802 µg/L	13802 ppb	14:19:01

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2086240.6	99.672 %	0.4832			0.48%
Sc RADIAL	99018.5	102 %	0.3			0.30%
Y 371.029	1411672.3	98.521 %	0.3909			0.40%
Ag 328.068†	-6476.8	14.634 µg/L	1.1045	14.634 ppb	1.1045	7.55%
Al 396.153Radial†	900.2	220.83 µg/L	11.829	220.83 ppb	11.829	5.36%
As 188.979†	6531.7	9635.0 µg/L	653.12	9635.0 ppb	653.12	6.78%
QC value within limits for As 188.979 Recovery = 96.35%						
B 249.677†	110565.9	5057.0 µg/L	189.40	5057.0 ppb	189.40	3.75%
QC value within limits for B 249.677 Recovery = 101.14%						
Ba 233.527†	675203.9	14785 µg/L	744.5	14785 ppb	744.5	5.04%
QC value within limits for Ba 233.527 Recovery = 98.57%						
Be 313.107†	4868339.3	2856.7 µg/L	158.97	2856.7 ppb	158.97	5.56%
QC value within limits for Be 313.107 Recovery = 95.22%						
Ca 317.933Radial†	154.1	56.092 µg/L	5.5643	56.092 ppb	5.5643	9.92%
Cd 226.502†	410544.1	9768.6 µg/L	513.88	9768.6 ppb	513.88	5.26%
QC value within limits for Cd 226.502 Recovery = 97.69%						
Co 228.616†	222809.4	9561.3 µg/L	549.94	9561.3 ppb	549.94	5.75%
QC value within limits for Co 228.616 Recovery = 95.61%						
Cr 267.716†	1130240.8	24588 µg/L	1703.3	24588 ppb	1703.3	6.93%
QC value within limits for Cr 267.716 Recovery = 98.35%						

Cu 324.752†	3134030.8	20470 µg/L	1124.2	20470 ppb	1124.2	5.49%
QC value within limits for Cu 324.752 Recovery = 102.35%						
Fe 238.204 Radial†	-0.4	198.81 µg/L	37.228	198.81 ppb	37.228	18.73%
K 766.490 Radial†	659114.4	307600 µg/L	1783.8	307600 ppb	1783.8	0.58%
QC value within limits for K 766.490 Radial Recovery = 102.53%						
Mg 279.077 IEC†	-5.4	100.01 µg/L	11.971	100.01 ppb	11.971	11.97%
Mn 257.610†	3192594.2	9595.2 µg/L	540.32	9595.2 ppb	540.32	5.63%
QC value within limits for Mn 257.610 Recovery = 95.95%						
Mo 202.031†	102771.5	10169 µg/L	562.8	10169 ppb	562.8	5.53%
QC value within limits for Mo 202.031 Recovery = 101.69%						
Na 589.592 Radial†	787.4	392.99 µg/L	92.737	392.99 ppb	92.737	23.60%
Ni 231.604†	175546.4	9834.5 µg/L	562.28	9834.5 ppb	562.28	5.72%
QC value within limits for Ni 231.604 Recovery = 98.35%						
P 214.914†	10929.3	16135 µg/L	1378.0	16135 ppb	1378.0	8.54%
QC value within limits for P 214.914 Recovery = 107.57%						
Pb 220.353†	96719.5	25355 µg/L	1125.2	25355 ppb	1125.2	4.44%
QC value within limits for Pb 220.353 Recovery = 101.42%						
S 181.975 Axial†	16134.8	51349 µg/L	3460.9	51349 ppb	3460.9	6.74%
QC value within limits for S 181.975 Axial Recovery = 102.70%						
Sb 206.836†	11342.6	10006 µg/L	742.2	10006 ppb	742.2	7.42%
QC value within limits for Sb 206.836 Recovery = 100.06%						
Se 196.026†	10510.2	9877.7 µg/L	674.53	9877.7 ppb	674.53	6.83%
QC value within limits for Se 196.026 Recovery = 98.78%						
SiO2†	548201.5	98970 µg/L	3898.4	98970 ppb	3898.4	3.94%
QC value within limits for SiO2 Recovery = 92.50%						
Si 251.611†	678000.0	46093 µg/L	1832.2	46093 ppb	1832.2	3.97%
QC value within limits for Si 251.611 Recovery = 92.19%						
Sn 189.927†	25972.5	10112 µg/L	954.2	10112 ppb	954.2	9.44%
QC value within limits for Sn 189.927 Recovery = 101.12%						
Sr 421.552†	1692306.5	10061 µg/L	59.3	10061 ppb	59.3	0.59%
QC value within limits for Sr 421.552 Recovery = 100.61%						
Ti 334.940†	4136049.2	9671.7 µg/L	533.86	9671.7 ppb	533.86	5.52%
QC value within limits for Ti 334.940 Recovery = 96.72%						
Tl 190.801†	10033.6	9884.8 µg/L	454.85	9884.8 ppb	454.85	4.60%
QC value within limits for Tl 190.801 Recovery = 98.85%						
U 409.014†	-2479.2	-225.11 µg/L	18.114	-225.11 ppb	18.114	8.05%
V 292.402†	855474.5	10230 µg/L	594.4	10230 ppb	594.4	5.81%
QC value within limits for V 292.402 Recovery = 102.30%						
Zn 213.857†	640896.4	14679 µg/L	783.2	14679 ppb	783.2	5.34%
QC value within limits for Zn 213.857 Recovery = 97.86%						
All analyte(s) passed QC.						

Sequence No.: 13  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 3/16/2010 14:19:16  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96143.7	96143.7	99.3 %		14:19:49
1	Al 396.153Radial†	11038.5	11231.8	5349.9 µg/L	5349.9 ppb	14:19:49
1	Ca 317.933Radial†	15099.4	14815.4	5391.6 µg/L	5391.6 ppb	14:19:49
1	Fe 238.204 Radial†	455.2	446.3	5290.4 µg/L	5290.4 ppb	14:20:10
1	K 766.490 Radial†	12866.8	12467.7	5818.5 µg/L	5818.5 ppb	14:19:49
1	Mg 279.077 IEC†	419.1	414.0	5461.4 µg/L	5461.4 ppb	14:20:10
1	Na 589.592 Radial†	21569.8	21533.9	10748 µg/L	10748 ppb	14:19:49
1	Sr 421.552†	89244.2	89703.2	533.27 µg/L	533.27 ppb	14:19:49
1	Sc 361.383	2053030.7	2053030.7	98.085 %		14:21:14
1	Y 371.029	1399252.1	1399252.1	97.654 %		14:21:14
1	Ag 328.068†	64579.1	66300.0	536.34 µg/L	536.34 ppb	14:21:19
1	As 188.979†	371.5	382.0	562.27 µg/L	562.27 ppb	14:21:40
1	B 249.677†	11993.7	11928.5	539.45 µg/L	539.45 ppb	14:21:19
1	Ba 233.527†	24289.8	24772.4	542.75 µg/L	542.75 ppb	14:21:19
1	Be 313.107†	899098.1	917808.5	539.06 µg/L	539.06 ppb	14:21:14
1	Cd 226.502†	22186.8	22790.5	541.69 µg/L	541.69 ppb	14:21:19
1	Co 228.616†	12490.1	12685.9	544.39 µg/L	544.39 ppb	14:21:19
1	Cr 267.716†	24782.3	25185.8	548.11 µg/L	548.11 ppb	14:21:19
1	Cu 324.752†	86511.5	83823.7	548.49 µg/L	548.49 ppb	14:21:19
1	Mn 257.610†	178314.2	182482.0	548.39 µg/L	548.39 ppb	14:21:14
1	Mo 202.031†	5731.9	5838.7	577.95 µg/L	577.95 ppb	14:21:40
1	Ni 231.604†	9929.4	9746.3	546.07 µg/L	546.07 ppb	14:21:19
1	P 214.914†	1912.6	1677.6	2733.3 µg/L	2733.3 ppb	14:21:40
1	Pb 220.353†	2093.4	2104.1	552.35 µg/L	552.35 ppb	14:21:40
1	S 181.975 Axial†	364.4	349.0	1110.7 µg/L	1110.7 ppb	14:21:40
1	Sb 206.836†	665.8	656.1	588.43 µg/L	588.43 ppb	14:21:40
1	Se 196.026†	607.4	592.0	568.59 µg/L	568.59 ppb	14:21:40
1	SiO2†	34121.9	32008.2	5778.6 µg/L	5778.6 ppb	14:21:19
1	Si 251.611†	39350.6	39694.7	2698.6 µg/L	2698.6 ppb	14:21:19
1	Sn 189.927†	1425.4	1460.6	569.20 µg/L	569.20 ppb	14:21:40
1	Ti 334.940†	227703.2	232725.5	543.86 µg/L	543.86 ppb	14:21:14
1	Tl 190.801†	508.3	552.3	544.65 µg/L	544.65 ppb	14:21:40
1	U 409.014†	5907.2	6028.3	546.30 µg/L	546.30 ppb	14:21:19
1	V 292.402†	45127.9	45896.5	547.38 µg/L	547.38 ppb	14:21:19
1	Zn 213.857†	24156.1	23618.8	539.94 µg/L	539.94 ppb	14:21:19
2	Sc RADIAL	96569.8	96569.8	99.8 %		14:20:15
2	Al 396.153Radial†	11040.4	11184.6	5327.7 µg/L	5327.7 ppb	14:20:15
2	Ca 317.933Radial†	15064.2	14713.0	5354.4 µg/L	5354.4 ppb	14:20:15
2	Fe 238.204 Radial†	461.5	450.6	5340.9 µg/L	5340.9 ppb	14:20:36
2	K 766.490 Radial†	12643.2	12186.5	5687.2 µg/L	5687.2 ppb	14:20:15
2	Mg 279.077 IEC†	414.4	407.3	5373.6 µg/L	5373.6 ppb	14:20:36
2	Na 589.592 Radial†	21432.8	21300.7	10631 µg/L	10631 ppb	14:20:15
2	Sr 421.552†	89037.8	89099.8	529.69 µg/L	529.69 ppb	14:20:15
2	Sc 361.383	2051314.7	2051314.7	98.003 %		14:21:47
2	Y 371.029	1399692.0	1399692.0	97.684 %		14:21:47
2	Ag 328.068†	64493.4	66267.6	536.08 µg/L	536.08 ppb	14:21:53
2	As 188.979†	361.4	372.1	547.55 µg/L	547.55 ppb	14:22:13
2	B 249.677†	11992.2	11937.2	539.83 µg/L	539.83 ppb	14:21:53
2	Ba 233.527†	24241.5	24743.9	542.13 µg/L	542.13 ppb	14:21:53
2	Be 313.107†	895057.8	914452.7	537.09 µg/L	537.09 ppb	14:21:47
2	Cd 226.502†	22230.1	22853.6	543.18 µg/L	543.18 ppb	14:21:53
2	Co 228.616†	12463.4	12669.3	543.67 µg/L	543.67 ppb	14:21:53
2	Cr 267.716†	24819.4	25244.8	549.40 µg/L	549.40 ppb	14:21:53
2	Cu 324.752†	86217.7	83597.6	547.03 µg/L	547.03 ppb	14:21:53
2	Mn 257.610†	177397.5	181698.8	546.04 µg/L	546.04 ppb	14:21:47
2	Mo 202.031†	5571.8	5680.2	562.26 µg/L	562.26 ppb	14:22:13
2	Ni 231.604†	9903.7	9728.6	545.07 µg/L	545.07 ppb	14:21:53
2	P 214.914†	1880.5	1646.4	2681.4 µg/L	2681.4 ppb	14:22:13
2	Pb 220.353†	2075.2	2087.3	547.91 µg/L	547.91 ppb	14:22:13

2	S 181.975 Axial†	349.3	333.9	1062.7 µg/L	1062.7 ppb	14:22:13
2	Sb 206.836†	645.6	636.1	570.30 µg/L	570.30 ppb	14:22:13
2	Se 196.026†	594.6	579.4	557.00 µg/L	557.00 ppb	14:22:13
2	SiO2†	34063.4	31977.6	5773.1 µg/L	5773.1 ppb	14:21:53
2	Si 251.611†	39209.6	39584.4	2691.1 µg/L	2691.1 ppb	14:21:53
2	Sn 189.927†	1393.7	1429.5	557.09 µg/L	557.09 ppb	14:22:13
2	Ti 334.940†	226609.6	231803.8	541.71 µg/L	541.71 ppb	14:21:47
2	Tl 190.801†	504.5	548.9	541.22 µg/L	541.22 ppb	14:22:13
2	U 409.014†	5811.7	5935.9	537.90 µg/L	537.90 ppb	14:21:53
2	V 292.402†	45121.8	45928.8	547.63 µg/L	547.63 ppb	14:21:53
2	Zn 213.857†	24028.2	23508.9	537.42 µg/L	537.42 ppb	14:21:53
3	Sc RADIAL	97410.2	97410.2	101 %		14:20:41
3	Al 396.153Radial†	11042.1	11090.9	5284.9 µg/L	5284.9 ppb	14:20:41
3	Ca 317.933Radial†	15109.2	14627.4	5323.2 µg/L	5323.2 ppb	14:20:41
3	Fe 238.204 Radial†	462.5	447.6	5304.2 µg/L	5304.2 ppb	14:21:02
3	K 766.490 Radial†	12592.5	12026.8	5612.7 µg/L	5612.7 ppb	14:20:41
3	Mg 279.077 IEC†	416.8	406.2	5356.8 µg/L	5356.8 ppb	14:21:02
3	Na 589.592 Radial†	21538.2	21220.1	10591 µg/L	10591 ppb	14:20:41
3	Sr 421.552†	89376.9	88666.9	527.11 µg/L	527.11 ppb	14:20:41
3	Sc 361.383	2042567.9	2042567.9	97.585 %		14:22:20
3	Y 371.029	1393710.7	1393710.7	97.267 %		14:22:20
3	Ag 328.068†	59730.4	61668.6	498.70 µg/L	498.70 ppb	14:22:26
3	As 188.979†	305.3	316.1	465.05 µg/L	465.05 ppb	14:22:46
3	B 249.677†	10934.0	10905.2	492.88 µg/L	492.88 ppb	14:22:26
3	Ba 233.527†	21624.9	22168.4	485.68 µg/L	485.68 ppb	14:22:26
3	Be 313.107†	811235.9	832467.7	488.94 µg/L	488.94 ppb	14:22:20
3	Cd 226.502†	19667.4	20324.6	483.01 µg/L	483.01 ppb	14:22:26
3	Co 228.616†	10934.2	11156.7	478.71 µg/L	478.71 ppb	14:22:26
3	Cr 267.716†	21207.3	21651.8	471.21 µg/L	471.21 ppb	14:22:26
3	Cu 324.752†	76779.2	74302.3	486.31 µg/L	486.31 ppb	14:22:26
3	Mn 257.610†	161636.4	166322.8	499.83 µg/L	499.83 ppb	14:22:20
3	Mo 202.031†	4590.3	4698.7	465.15 µg/L	465.15 ppb	14:22:46
3	Ni 231.604†	8743.8	8583.2	480.91 µg/L	480.91 ppb	14:22:26
3	P 214.914†	1613.1	1380.7	2245.1 µg/L	2245.1 ppb	14:22:46
3	Pb 220.353†	1753.3	1766.6	463.71 µg/L	463.71 ppb	14:22:46
3	S 181.975 Axial†	317.3	302.6	962.92 µg/L	962.92 ppb	14:22:46
3	Sb 206.836†	550.8	541.7	485.43 µg/L	485.43 ppb	14:22:46
3	Se 196.026†	520.5	506.0	487.94 µg/L	487.94 ppb	14:22:46
3	SiO2†	31146.8	29137.8	5260.4 µg/L	5260.4 ppb	14:22:26
3	Si 251.611†	35648.0	36105.9	2454.6 µg/L	2454.6 ppb	14:22:26
3	Sn 189.927†	1126.5	1161.8	452.85 µg/L	452.85 ppb	14:22:46
3	Ti 334.940†	203810.2	209430.5	489.39 µg/L	489.39 ppb	14:22:20
3	Tl 190.801†	446.2	491.4	484.60 µg/L	484.60 ppb	14:22:46
3	U 409.014†	5034.2	5164.6	467.88 µg/L	467.88 ppb	14:22:26
3	V 292.402†	39193.5	40051.0	477.25 µg/L	477.25 ppb	14:22:26
3	Zn 213.857†	21239.8	20756.5	474.43 µg/L	474.43 ppb	14:22:26

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2048971.1	97.891 %	0.2681			0.27%
Sc RADIAL	96707.9	99.9 %	0.67			0.67%
Y 371.029	1397551.6	97.535 %	0.2327			0.24%
Ag 328.068†	64745.4	523.71 µg/L	21.660	523.71 ppb	21.660	4.14%
QC value within limits for Ag 328.068 Recovery = 104.74%						
Al 396.153Radial†	11169.1	5320.8 µg/L	33.00	5320.8 ppb	33.00	0.62%
QC value within limits for Al 396.153Radial Recovery = 106.42%						
As 188.979†	356.7	524.95 µg/L	52.399	524.95 ppb	52.399	9.98%
QC value within limits for As 188.979 Recovery = 104.99%						
B 249.677†	11590.3	524.05 µg/L	26.996	524.05 ppb	26.996	5.15%
QC value within limits for B 249.677 Recovery = 104.81%						
Ba 233.527†	23894.9	523.52 µg/L	32.774	523.52 ppb	32.774	6.26%
QC value within limits for Ba 233.527 Recovery = 104.70%						
Be 313.107†	888242.9	521.69 µg/L	28.386	521.69 ppb	28.386	5.44%
QC value within limits for Be 313.107 Recovery = 104.34%						
Ca 317.933Radial†	14718.6	5356.4 µg/L	34.25	5356.4 ppb	34.25	0.64%
QC value within limits for Ca 317.933Radial Recovery = 107.13%						
Cd 226.502†	21989.6	522.63 µg/L	34.319	522.63 ppb	34.319	6.57%
QC value within limits for Cd 226.502 Recovery = 104.53%						
Co 228.616†	12170.6	522.26 µg/L	37.716	522.26 ppb	37.716	7.22%



Cr	267.716†	24027.5	522.91 µg/L	44.777	522.91 ppb	44.777	8.56%
	QC value within limits for Co 228.616 Recovery = 104.45%						
Cu	324.752†	80574.5	527.28 µg/L	35.488	527.28 ppb	35.488	6.73%
	QC value within limits for Cr 267.716 Recovery = 104.58%						
Fe	238.204 Radial†	448.2	5311.8 µg/L	26.14	5311.8 ppb	26.14	0.49%
	QC value within limits for Cu 324.752 Recovery = 105.46%						
K	766.490 Radial†	12227.0	5706.1 µg/L	104.19	5706.1 ppb	104.19	1.83%
	QC value within limits for Fe 238.204 Radial Recovery = 106.24%						
Mg	279.077 IEC†	409.1	5397.2 µg/L	56.20	5397.2 ppb	56.20	1.04%
	QC value greater than the upper limit for K 766.490 Radial Recovery = 114.12%						
Mn	257.610†	176834.5	531.42 µg/L	27.383	531.42 ppb	27.383	5.15%
	QC value within limits for Mg 279.077 IEC Recovery = 107.94%						
Mo	202.031†	5405.9	535.12 µg/L	61.102	535.12 ppb	61.102	11.42%
	QC value within limits for Mn 257.610 Recovery = 106.28%						
Na	589.592 Radial†	21351.5	10657 µg/L	81.3	10657 ppb	81.3	0.76%
	QC value within limits for Mo 202.031 Recovery = 107.02%						
Ni	231.604†	9352.7	524.02 µg/L	37.336	524.02 ppb	37.336	7.12%
	QC value within limits for Na 589.592 Radial Recovery = 106.57%						
P	214.914†	1568.2	2553.2 µg/L	268.15	2553.2 ppb	268.15	10.50%
	QC value within limits for Ni 231.604 Recovery = 104.80%						
Pb	220.353†	1986.0	521.32 µg/L	49.949	521.32 ppb	49.949	9.58%
	QC value within limits for P 214.914 Recovery = 102.13%						
S	181.975 Axial†	328.5	1045.4 µg/L	75.40	1045.4 ppb	75.40	7.21%
	QC value within limits for Pb 220.353 Recovery = 104.26%						
Sb	206.836†	611.3	548.05 µg/L	54.984	548.05 ppb	54.984	10.03%
	QC value within limits for S 181.975 Axial Recovery = 104.54%						
Se	196.026†	559.1	537.84 µg/L	43.605	537.84 ppb	43.605	8.11%
	QC value within limits for Sb 206.836 Recovery = 109.61%						
SiO2†		31041.2	5604.0 µg/L	297.61	5604.0 ppb	297.61	5.31%
	QC value within limits for Se 196.026 Recovery = 107.57%						
Si	251.611†	38461.7	2614.8 µg/L	138.75	2614.8 ppb	138.75	5.31%
	QC value within limits for SiO2 Recovery = 104.80%						
Sn	189.927†	1350.7	526.38 µg/L	63.967	526.38 ppb	63.967	12.15%
	QC value within limits for Si 251.611 Recovery = 104.59%						
Sr	421.552†	89156.6	530.02 µg/L	3.094	530.02 ppb	3.094	0.58%
	QC value within limits for Sn 189.927 Recovery = 105.28%						
Ti	334.940†	224653.3	524.98 µg/L	30.844	524.98 ppb	30.844	5.88%
	QC value within limits for Sr 421.552 Recovery = 106.00%						
Tl	190.801†	530.9	523.49 µg/L	33.721	523.49 ppb	33.721	6.44%
	QC value within limits for Ti 334.940 Recovery = 105.00%						
U	409.014†	5709.6	517.36 µg/L	43.060	517.36 ppb	43.060	8.32%
	QC value within limits for Tl 190.801 Recovery = 104.70%						
V	292.402†	43958.8	524.09 µg/L	40.562	524.09 ppb	40.562	7.74%
	QC value within limits for U 409.014 Recovery = 103.47%						
Zn	213.857†	22628.1	517.26 µg/L	37.115	517.26 ppb	37.115	7.18%
	QC value within limits for V 292.402 Recovery = 104.82%						
	QC value within limits for Zn 213.857 Recovery = 103.45%						

QC Failed. Continue with analysis.

Sequence No.: 14

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 14:22:56

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97273.1	97273.1	101 %		14:23:26
1	Al 396.153Radial†	-101.7	18.1	8.5498 µg/L	8.5498 ppb	14:23:26
1	Ca 317.933Radial†	432.4	44.9	16.346 µg/L	16.346 ppb	14:23:46
1	Fe 238.204 Radial†	11.5	-0.5	-5.6288 µg/L	-5.6288 ppb	14:23:46
1	K 766.490 Radial†	816.1	326.7	152.44 µg/L	152.44 ppb	14:23:26
1	Mg 279.077 IEC†	12.4	4.3	57.123 µg/L	57.123 ppb	14:23:46
1	Na 589.592 Radial†	313.3	131.1	65.452 µg/L	65.452 ppb	14:23:26
1	Sr 421.552†	162.5	22.3	0.1324 µg/L	0.1324 ppb	14:23:26
1	Sc 361.383	2069842.9	2069842.9	98.888 %		14:24:48
1	Y 371.029	1419836.3	1419836.3	99.090 %		14:24:48
1	Ag 328.068†	-462.4	-7.4	-0.0560 µg/L	-0.0560 ppb	14:24:54
1	As 188.979†	-0.2	3.1	4.5320 µg/L	4.5320 ppb	14:25:14
1	B 249.677†	367.1	71.8	3.2621 µg/L	3.2621 ppb	14:25:14
1	Ba 233.527†	4.6	13.1	0.2871 µg/L	0.2871 ppb	14:25:14
1	Be 313.107†	-978.6	169.3	0.0991 µg/L	0.0991 ppb	14:24:54
1	Cd 226.502†	-169.8	-1.1	-0.0254 µg/L	-0.0254 ppb	14:25:14
1	Co 228.616†	55.1	7.7	0.3318 µg/L	0.3318 ppb	14:25:14
1	Cr 267.716†	74.7	-4.7	-0.1022 µg/L	-0.1022 ppb	14:25:14
1	Cu 324.752†	5003.5	683.0	4.4603 µg/L	4.4603 ppb	14:24:54
1	Mn 257.610†	-619.9	60.1	0.1766 µg/L	0.1766 ppb	14:25:14
1	Mo 202.031†	46.8	42.2	4.1769 µg/L	4.1769 ppb	14:25:14
1	Ni 231.604†	374.3	1.6	0.0893 µg/L	0.0893 ppb	14:25:14
1	P 214.914†	275.9	6.7	10.632 µg/L	10.632 ppb	14:25:14
1	Pb 220.353†	39.3	9.5	2.5133 µg/L	2.5133 ppb	14:25:14
1	S 181.975 Axial†	29.8	7.6	24.165 µg/L	24.165 ppb	14:25:14
1	Sb 206.836†	30.3	8.0	7.1667 µg/L	7.1667 ppb	14:25:14
1	Se 196.026†	27.1	0.1	-0.0088 µg/L	-0.0088 ppb	14:25:14
1	SiO2†	2792.7	44.4	8.0127 µg/L	8.0127 ppb	14:25:14
1	Si 251.611†	510.6	92.3	6.2745 µg/L	6.2745 ppb	14:25:14
1	Sn 189.927†	1.9	9.4	3.6485 µg/L	3.6485 ppb	14:25:14
1	Ti 334.940†	-180.6	394.6	0.9185 µg/L	0.9185 ppb	14:24:54
1	Tl 190.801†	-36.9	-3.2	-3.1351 µg/L	-3.1351 ppb	14:25:14
1	U 409.014†	-56.9	-51.7	-4.6952 µg/L	-4.6952 ppb	14:24:54
1	V 292.402†	157.7	47.1	0.5842 µg/L	0.5842 ppb	14:24:54
1	Zn 213.857†	1062.1	65.2	1.4904 µg/L	1.4904 ppb	14:25:14
2	Sc RADIAL	97912.2	97912.2	101 %		14:23:52
2	Al 396.153Radial†	-81.2	39.0	18.545 µg/L	18.545 ppb	14:23:52
2	Ca 317.933Radial†	415.9	25.8	9.3918 µg/L	9.3918 ppb	14:24:12
2	Fe 238.204 Radial†	13.3	1.2	14.332 µg/L	14.332 ppb	14:24:12
2	K 766.490 Radial†	789.4	295.0	137.65 µg/L	137.65 ppb	14:23:52
2	Mg 279.077 IEC†	9.7	1.6	20.668 µg/L	20.668 ppb	14:24:12
2	Na 589.592 Radial†	331.3	146.9	73.326 µg/L	73.326 ppb	14:23:52
2	Sr 421.552†	155.8	14.6	0.0869 µg/L	0.0869 ppb	14:23:52
2	Sc 361.383	2090786.4	2090786.4	99.889 %		14:25:20
2	Y 371.029	1430220.1	1430220.1	99.815 %		14:25:20
2	Ag 328.068†	-437.2	22.5	0.1797 µg/L	0.1797 ppb	14:25:26
2	As 188.979†	0.5	3.7	5.5105 µg/L	5.5105 ppb	14:25:46
2	B 249.677†	371.6	72.6	3.2889 µg/L	3.2889 ppb	14:25:46
2	Ba 233.527†	11.2	19.7	0.4296 µg/L	0.4296 ppb	14:25:46
2	Be 313.107†	-971.7	186.1	0.1090 µg/L	0.1090 ppb	14:25:26
2	Cd 226.502†	-160.3	10.1	0.2390 µg/L	0.2390 ppb	14:25:46
2	Co 228.616†	45.3	-2.7	-0.1163 µg/L	-0.1163 ppb	14:25:46
2	Cr 267.716†	85.1	4.9	0.1065 µg/L	0.1065 ppb	14:25:46
2	Cu 324.752†	5008.9	637.8	4.1686 µg/L	4.1686 ppb	14:25:26
2	Mn 257.610†	-635.3	51.0	0.1526 µg/L	0.1526 ppb	14:25:46
2	Mo 202.031†	38.0	32.9	3.2610 µg/L	3.2610 ppb	14:25:46
2	Ni 231.604†	381.7	5.2	0.2911 µg/L	0.2911 ppb	14:25:46
2	P 214.914†	269.5	-2.6	-4.6575 µg/L	-4.6575 ppb	14:25:46
2	Pb 220.353†	32.6	2.5	0.6481 µg/L	0.6481 ppb	14:25:46

2	S 181.975 Axial†	17.3	-5.2	-16.519 µg/L	-16.519 ppb	14:25:46
2	Sb 206.836†	31.0	8.3	7.4915 µg/L	7.4915 ppb	14:25:46
2	Se 196.026†	21.9	-5.4	-5.0218 µg/L	-5.0218 ppb	14:25:46
2	SiO2†	2769.7	-6.9	-1.2541 µg/L	-1.2541 ppb	14:25:46
2	Si 251.611†	494.6	71.0	4.8282 µg/L	4.8282 ppb	14:25:46
2	Sn 189.927†	7.4	14.9	5.7926 µg/L	5.7926 ppb	14:25:46
2	Ti 334.940†	-231.1	345.9	0.8073 µg/L	0.8073 ppb	14:25:26
2	Tl 190.801†	-31.4	2.7	2.6514 µg/L	2.6514 ppb	14:25:46
2	U 409.014†	42.5	48.4	4.3917 µg/L	4.3917 ppb	14:25:26
2	V 292.402†	84.8	-27.4	-0.2952 µg/L	-0.2952 ppb	14:25:26
2	Zn 213.857†	1056.2	48.5	1.1062 µg/L	1.1062 ppb	14:25:46
3	Sc RADIAL	97435.2	97435.2	101 %		14:24:17
3	Al 396.153Radial†	-99.4	20.5	9.7343 µg/L	9.7343 ppb	14:24:17
3	Ca 317.933Radial†	401.3	13.3	4.8493 µg/L	4.8493 ppb	14:24:38
3	Fe 238.204 Radial†	13.0	1.0	11.319 µg/L	11.319 ppb	14:24:38
3	K 766.490 Radial†	688.4	198.5	92.631 µg/L	92.631 ppb	14:24:17
3	Mg 279.077 IEC†	11.9	3.8	50.715 µg/L	50.715 ppb	14:24:38
3	Na 589.592 Radial†	294.1	111.6	55.687 µg/L	55.687 ppb	14:24:17
3	Sr 421.552†	174.3	33.8	0.2007 µg/L	0.2007 ppb	14:24:17
3	Sc 361.383	2071400.8	2071400.8	98.963 %		14:25:52
3	Y 371.029	1416537.4	1416537.4	98.860 %		14:25:52
3	Ag 328.068†	-444.1	11.4	0.0932 µg/L	0.0932 ppb	14:25:58
3	As 188.979†	-2.4	0.8	1.1894 µg/L	1.1894 ppb	14:26:18
3	B 249.677†	365.9	70.4	3.1890 µg/L	3.1890 ppb	14:26:18
3	Ba 233.527†	2.1	10.6	0.2313 µg/L	0.2313 ppb	14:26:18
3	Be 313.107†	-1030.5	117.6	0.0687 µg/L	0.0687 ppb	14:25:58
3	Cd 226.502†	-157.9	11.0	0.2614 µg/L	0.2614 ppb	14:26:18
3	Co 228.616†	50.9	3.3	0.1439 µg/L	0.1439 ppb	14:26:18
3	Cr 267.716†	76.5	-3.0	-0.0650 µg/L	-0.0650 ppb	14:26:18
3	Cu 324.752†	4919.6	594.5	3.8852 µg/L	3.8852 ppb	14:25:58
3	Mn 257.610†	-644.3	35.9	0.1053 µg/L	0.1053 ppb	14:26:18
3	Mo 202.031†	37.4	32.7	3.2322 µg/L	3.2322 ppb	14:26:18
3	Ni 231.604†	386.9	14.1	0.7904 µg/L	0.7904 ppb	14:26:18
3	P 214.914†	277.9	8.5	13.623 µg/L	13.623 ppb	14:26:18
3	Pb 220.353†	33.0	3.2	0.8333 µg/L	0.8333 ppb	14:26:18
3	S 181.975 Axial†	26.5	4.2	13.428 µg/L	13.428 ppb	14:26:18
3	Sb 206.836†	32.7	10.3	9.2792 µg/L	9.2792 ppb	14:26:18
3	Se 196.026†	28.4	1.4	1.2992 µg/L	1.2992 ppb	14:26:18
3	SiO2†	2763.6	12.8	2.3082 µg/L	2.3082 ppb	14:26:18
3	Si 251.611†	513.6	94.9	6.4527 µg/L	6.4527 ppb	14:26:18
3	Sn 189.927†	-8.3	-0.9	-0.3688 µg/L	-0.3688 ppb	14:26:18
3	Ti 334.940†	-202.7	372.5	0.8670 µg/L	0.8670 ppb	14:25:58
3	Tl 190.801†	-36.0	-2.2	-2.1722 µg/L	-2.1722 ppb	14:26:18
3	U 409.014†	-32.6	-27.2	-2.4694 µg/L	-2.4694 ppb	14:25:58
3	V 292.402†	118.4	7.4	0.1078 µg/L	0.1078 ppb	14:25:58
3	Zn 213.857†	993.5	-4.9	-0.1263 µg/L	-0.1263 ppb	14:26:18

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2077343.3	99.247 %	0.5574			0.56%
Sc RADIAL	97540.2	101 %	0.3			0.34%
Y 371.029	1422197.9	99.255 %	0.4983			0.50%
Ag 328.068†	8.9	0.0723 µg/L	0.11925	0.0723 ppb	0.11925	164.95%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	25.9	12.276 µg/L	5.4612	12.276 ppb	5.4612	44.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.5	3.7439 µg/L	2.26578	3.7439 ppb	2.26578	60.52%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	71.6	3.2467 µg/L	0.05170	3.2467 ppb	0.05170	1.59%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	14.4	0.3160 µg/L	0.10224	0.3160 ppb	0.10224	32.36%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	157.6	0.0923 µg/L	0.02100	0.0923 ppb	0.02100	22.75%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	28.0	10.196 µg/L	5.7901	10.196 ppb	5.7901	56.79%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.7	0.1583 µg/L	0.15952	0.1583 ppb	0.15952	100.75%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.8	0.1198 µg/L	0.22502	0.1198 ppb	0.22502	187.84%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-0.9	-0.0202 µg/L	0.11133	-0.0202 ppb	0.11133 551.01%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	638.5	4.1714 µg/L	0.28755	4.1714 ppb	0.28755 6.89%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	0.6	6.6739 µg/L	10.76045	6.6739 ppb	10.76045 161.23%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	273.4	127.57 µg/L	31.154	127.57 ppb	31.154 24.42%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	3.2	42.835 µg/L	19.4630	42.835 ppb	19.4630 45.44%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	49.0	0.1448 µg/L	0.03630	0.1448 ppb	0.03630 25.06%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	35.9	3.5567 µg/L	0.53731	3.5567 ppb	0.53731 15.11%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	129.9	64.822 µg/L	8.8361	64.822 ppb	8.8361 13.63%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	7.0	0.3903 µg/L	0.36089	0.3903 ppb	0.36089 92.47%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	4.2	6.5325 µg/L	9.80561	6.5325 ppb	9.80561 150.10%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	5.1	1.3316 µg/L	1.02757	1.3316 ppb	1.02757 77.17%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	2.2	7.0248 µg/L	21.08394	7.0248 ppb	21.08394 300.14%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	8.9	7.9791 µg/L	1.13751	7.9791 ppb	1.13751 14.26%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-1.3	-1.2438 µg/L	3.33655	-1.2438 ppb	3.33655 268.25%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	16.7	3.0223 µg/L	4.67448	3.0223 ppb	4.67448 154.67%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	86.1	5.8518 µg/L	0.89093	5.8518 ppb	0.89093 15.22%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	7.8	3.0241 µg/L	3.12779	3.0241 ppb	3.12779 103.43%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	23.6	0.1400 µg/L	0.05727	0.1400 ppb	0.05727 40.91%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	371.0	0.8643 µg/L	0.05562	0.8643 ppb	0.05562 6.44%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	-0.9	-0.8853 µg/L	3.10051	-0.8853 ppb	3.10051 350.23%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-10.2	-0.9243 µg/L	4.73639	-0.9243 ppb	4.73639 512.45%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	9.0	0.1323 µg/L	0.44020	0.1323 ppb	0.44020 332.82%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	36.2	0.8234 µg/L	0.84465	0.8234 ppb	0.84465 102.58%
	QC value within limits for Zn 213.857 Recovery = Not calculated				

All analyte(s) passed QC.

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Analysis Begun

Start Time: 3/16/2010 14:35:59

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\031610A.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb  
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## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 3/16/2010 13:44:38

IEC File: 011510.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/16/2010 14:36:01

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98836.5	98836.5	102 %		14:36:33
1	Al 396.153Radial†	10370.2	10274.6	4894.1 µg/L	4894.1 ppb	14:36:33
1	Ca 317.933Radial†	14110.2	13432.5	4888.4 µg/L	4888.4 ppb	14:36:33
1	Fe 238.204 Radial†	427.7	406.9	4822.9 µg/L	4822.9 ppb	14:36:53

1	K 766.490 Radial†	11236.5	10518.3	4908.7 µg/L	4908.7 ppb	14:36:33
1	Mg 279.077 IEC†	393.9	377.7	4983.6 µg/L	4983.6 ppb	14:36:53
1	Na 589.592 Radial†	20216.7	19617.1	9791.0 µg/L	9791.0 ppb	14:36:33
1	Sr 421.552†	84297.6	82411.2	489.92 µg/L	489.92 ppb	14:36:33
1	Sc 361.383	2089081.4	2089081.4	99.808 %		14:37:57
1	Y 371.029	1424616.3	1424616.3	99.424 %		14:37:57
1	Ag 328.068†	60837.8	61415.2	496.82 µg/L	496.82 ppb	14:38:02
1	As 188.979†	349.2	353.1	519.79 µg/L	519.79 ppb	14:38:23
1	B 249.677†	11212.2	10934.5	494.52 µg/L	494.52 ppb	14:38:02
1	Ba 233.527†	22850.3	22902.8	501.79 µg/L	501.79 ppb	14:38:02
1	Be 313.107†	843840.3	846625.8	497.25 µg/L	497.25 ppb	14:37:57
1	Cd 226.502†	20866.2	21077.0	500.97 µg/L	500.97 ppb	14:38:02
1	Co 228.616†	11722.0	11696.6	501.94 µg/L	501.94 ppb	14:38:02
1	Cr 267.716†	23307.4	23272.1	506.47 µg/L	506.47 ppb	14:38:02
1	Cu 324.752†	81383.5	77163.7	504.91 µg/L	504.91 ppb	14:38:02
1	Mn 257.610†	166969.2	167978.1	504.80 µg/L	504.80 ppb	14:37:57
1	Mo 202.031†	5238.2	5243.2	519.00 µg/L	519.00 ppb	14:38:23
1	Ni 231.604†	9339.5	8980.6	503.16 µg/L	503.16 ppb	14:38:02
1	P 214.914†	1812.2	1543.3	2514.4 µg/L	2514.4 ppb	14:38:23
1	Pb 220.353†	1972.9	1946.5	510.93 µg/L	510.93 ppb	14:38:23
1	S 181.975 Axial†	339.5	317.6	1010.8 µg/L	1010.8 ppb	14:38:23
1	Sb 206.836†	591.8	570.3	511.38 µg/L	511.38 ppb	14:38:23
1	Se 196.026†	566.6	540.4	519.03 µg/L	519.03 ppb	14:38:23
1	SiO2†	32389.2	29671.9	5356.8 µg/L	5356.8 ppb	14:38:02
1	Si 251.611†	37313.5	36961.3	2512.8 µg/L	2512.8 ppb	14:38:02
1	Sn 189.927†	1324.3	1334.3	519.96 µg/L	519.96 ppb	14:38:23
1	Ti 334.940†	211841.7	212827.3	497.36 µg/L	497.36 ppb	14:37:57
1	Tl 190.801†	479.9	514.9	507.66 µg/L	507.66 ppb	14:38:23
1	U 409.014†	5584.2	5600.8	507.57 µg/L	507.57 ppb	14:38:02
1	V 292.402†	42568.2	42538.0	507.21 µg/L	507.21 ppb	14:38:02
1	Zn 213.857†	23034.8	22070.4	504.60 µg/L	504.60 ppb	14:38:02
2	Sc RADIAL	99004.5	99004.5	102 %		14:36:59
2	Al 396.153Radial†	10332.8	10220.8	4868.7 µg/L	4868.7 ppb	14:36:59
2	Ca 317.933Radial†	14124.8	13423.3	4885.0 µg/L	4885.0 ppb	14:36:59
2	Fe 238.204 Radial†	430.9	409.3	4852.1 µg/L	4852.1 ppb	14:37:19
2	K 766.490 Radial†	11178.3	10442.7	4873.4 µg/L	4873.4 ppb	14:36:59
2	Mg 279.077 IEC†	392.8	376.0	4959.9 µg/L	4959.9 ppb	14:37:19
2	Na 589.592 Radial†	20214.1	19581.1	9773.0 µg/L	9773.0 ppb	14:36:59
2	Sr 421.552†	84106.4	82084.3	487.98 µg/L	487.98 ppb	14:36:59
2	Sc 361.383	2095270.2	2095270.2	100.10 %		14:38:30
2	Y 371.029	1432014.3	1432014.3	99.940 %		14:38:30
2	Ag 328.068†	61109.5	61506.7	497.56 µg/L	497.56 ppb	14:38:36
2	As 188.979†	335.1	338.0	497.39 µg/L	497.39 ppb	14:38:56
2	B 249.677†	11269.5	10958.5	495.60 µg/L	495.60 ppb	14:38:36
2	Ba 233.527†	22977.1	22961.8	503.08 µg/L	503.08 ppb	14:38:36
2	Be 313.107†	847681.5	847965.7	498.04 µg/L	498.04 ppb	14:38:30
2	Cd 226.502†	20932.4	21081.4	501.07 µg/L	501.07 ppb	14:38:36
2	Co 228.616†	11803.2	11743.0	503.92 µg/L	503.92 ppb	14:38:36
2	Cr 267.716†	23403.4	23299.0	507.05 µg/L	507.05 ppb	14:38:36
2	Cu 324.752†	81650.8	77189.9	505.08 µg/L	505.08 ppb	14:38:36
2	Mn 257.610†	167972.1	168485.8	506.33 µg/L	506.33 ppb	14:38:30
2	Mo 202.031†	5137.7	5127.2	507.53 µg/L	507.53 ppb	14:38:56
2	Ni 231.604†	9421.1	9034.5	506.18 µg/L	506.18 ppb	14:38:36
2	P 214.914†	1789.5	1515.2	2467.6 µg/L	2467.6 ppb	14:38:56
2	Pb 220.353†	1960.4	1928.2	506.10 µg/L	506.10 ppb	14:38:56
2	S 181.975 Axial†	335.1	312.2	993.60 µg/L	993.60 ppb	14:38:56
2	Sb 206.836†	580.8	557.5	499.79 µg/L	499.79 ppb	14:38:56
2	Se 196.026†	560.9	533.0	512.16 µg/L	512.16 ppb	14:38:56
2	SiO2†	32706.0	29892.5	5396.7 µg/L	5396.7 ppb	14:38:36
2	Si 251.611†	37567.7	37104.9	2522.5 µg/L	2522.5 ppb	14:38:36
2	Sn 189.927†	1297.9	1304.0	508.18 µg/L	508.18 ppb	14:38:56
2	Ti 334.940†	212305.2	212663.4	496.97 µg/L	496.97 ppb	14:38:30
2	Tl 190.801†	480.5	514.1	506.84 µg/L	506.84 ppb	14:38:56
2	U 409.014†	5618.0	5618.0	509.13 µg/L	509.13 ppb	14:38:36
2	V 292.402†	42740.8	42584.4	507.67 µg/L	507.67 ppb	14:38:36
2	Zn 213.857†	23124.0	22091.3	505.07 µg/L	505.07 ppb	14:38:36
3	Sc RADIAL	98781.4	98781.4	102 %		14:37:25
3	Al 396.153Radial†	10333.9	10244.7	4881.7 µg/L	4881.7 ppb	14:37:25
3	Ca 317.933Radial†	14028.2	13359.8	4861.9 µg/L	4861.9 ppb	14:37:25
3	Fe 238.204 Radial†	433.0	412.3	4885.9 µg/L	4885.9 ppb	14:37:45
3	K 766.490 Radial†	11220.3	10508.6	4904.2 µg/L	4904.2 ppb	14:37:25

3	Mg 279.077 IEC†	390.2	374.4	4937.4 µg/L	4937.4 ppb	14:37:45
3	Na 589.592 Radial†	20249.0	19659.9	9812.3 µg/L	9812.3 ppb	14:37:25
3	Sr 421.552†	84112.1	82275.6	489.12 µg/L	489.12 ppb	14:37:25
3	Sc 361.383	2077745.8	2077745.8	99.266 %		14:39:03
3	Y 371.029	1419580.7	1419580.7	99.073 %		14:39:03
3	Ag 328.068†	56985.6	57867.2	467.99 µg/L	467.99 ppb	14:39:09
3	As 188.979†	288.1	293.5	431.85 µg/L	431.85 ppb	14:39:29
3	B 249.677†	10392.6	10170.1	459.70 µg/L	459.70 ppb	14:39:09
3	Ba 233.527†	20740.1	20901.9	457.94 µg/L	457.94 ppb	14:39:09
3	Be 313.107†	778168.7	785081.3	461.11 µg/L	461.11 ppb	14:39:03
3	Cd 226.502†	18814.6	19124.3	454.50 µg/L	454.50 ppb	14:39:09
3	Co 228.616†	10524.0	10553.8	452.84 µg/L	452.84 ppb	14:39:09
3	Cr 267.716†	20281.8	20351.5	442.91 µg/L	442.91 ppb	14:39:09
3	Cu 324.752†	73645.8	69813.7	456.91 µg/L	456.91 ppb	14:39:09
3	Mn 257.610†	154366.9	156195.3	469.39 µg/L	469.39 ppb	14:39:03
3	Mo 202.031†	4283.5	4310.1	426.67 µg/L	426.67 ppb	14:39:29
3	Ni 231.604†	8432.9	8118.4	454.86 µg/L	454.86 ppb	14:39:09
3	P 214.914†	1562.5	1301.7	2116.8 µg/L	2116.8 ppb	14:39:29
3	Pb 220.353†	1694.8	1677.2	440.20 µg/L	440.20 ppb	14:39:29
3	S 181.975 Axial†	296.7	276.3	879.44 µg/L	879.44 ppb	14:39:29
3	Sb 206.836†	510.0	491.1	439.96 µg/L	439.96 ppb	14:39:29
3	Se 196.026†	487.8	464.1	447.58 µg/L	447.58 ppb	14:39:29
3	SiO2†	30169.0	27612.4	4985.0 µg/L	4985.0 ppb	14:39:09
3	Si 251.611†	34426.0	34256.4	2328.9 µg/L	2328.9 ppb	14:39:09
3	Sn 189.927†	1057.3	1072.5	418.05 µg/L	418.05 ppb	14:39:29
3	Ti 334.940†	193739.2	195748.9	457.42 µg/L	457.42 ppb	14:39:03
3	Tl 190.801†	433.9	471.3	464.66 µg/L	464.66 ppb	14:39:29
3	U 409.014†	4890.2	4932.2	446.86 µg/L	446.86 ppb	14:39:09
3	V 292.402†	37965.7	38134.1	454.30 µg/L	454.30 ppb	14:39:09
3	Zn 213.857†	20728.0	19872.4	454.28 µg/L	454.28 ppb	14:39:09

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2087365.8	99.726 %	0.4246			0.43%
Sc RADIAL	98874.1	102 %	0.1			0.12%
Y 371.029	1425403.8	99.479 %	0.4365			0.44%
Ag 328.068†	60263.0	487.46 µg/L	16.861	487.46 ppb	16.861	3.46%
QC value within limits for Ag 328.068 Recovery = 97.49%						
Al 396.153Radial†	10246.7	4881.5 µg/L	12.71	4881.5 ppb	12.71	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.63%						
As 188.979†	328.2	483.01 µg/L	45.702	483.01 ppb	45.702	9.46%
QC value within limits for As 188.979 Recovery = 96.60%						
B 249.677†	10687.7	483.27 µg/L	20.423	483.27 ppb	20.423	4.23%
QC value within limits for B 249.677 Recovery = 96.65%						
Ba 233.527†	22255.5	487.60 µg/L	25.699	487.60 ppb	25.699	5.27%
QC value within limits for Ba 233.527 Recovery = 97.52%						
Be 313.107†	826557.6	485.46 µg/L	21.100	485.46 ppb	21.100	4.35%
QC value within limits for Be 313.107 Recovery = 97.09%						
Ca 317.933Radial†	13405.2	4878.4 µg/L	14.40	4878.4 ppb	14.40	0.30%
QC value within limits for Ca 317.933Radial Recovery = 97.57%						
Cd 226.502†	20427.6	485.51 µg/L	26.861	485.51 ppb	26.861	5.53%
QC value within limits for Cd 226.502 Recovery = 97.10%						
Co 228.616†	11331.1	486.23 µg/L	28.936	486.23 ppb	28.936	5.95%
QC value within limits for Co 228.616 Recovery = 97.25%						
Cr 267.716†	22307.6	485.48 µg/L	36.863	485.48 ppb	36.863	7.59%
QC value within limits for Cr 267.716 Recovery = 97.10%						
Cu 324.752†	74722.4	488.97 µg/L	27.761	488.97 ppb	27.761	5.68%
QC value within limits for Cu 324.752 Recovery = 97.79%						
Fe 238.204 Radial†	409.5	4853.7 µg/L	31.53	4853.7 ppb	31.53	0.65%
QC value within limits for Fe 238.204 Radial Recovery = 97.07%						
K 766.490 Radial†	10489.9	4895.4 µg/L	19.18	4895.4 ppb	19.18	0.39%
QC value within limits for K 766.490 Radial Recovery = 97.91%						
Mg 279.077 IEC†	376.0	4960.3 µg/L	23.09	4960.3 ppb	23.09	0.47%
QC value within limits for Mg 279.077 IEC Recovery = 99.21%						
Mn 257.610†	164219.7	493.51 µg/L	20.897	493.51 ppb	20.897	4.23%
QC value within limits for Mn 257.610 Recovery = 98.70%						
Mo 202.031†	4893.5	484.40 µg/L	50.323	484.40 ppb	50.323	10.39%
QC value within limits for Mo 202.031 Recovery = 96.88%						
Na 589.592 Radial†	19619.4	9792.1 µg/L	19.70	9792.1 ppb	19.70	0.20%

QC value within limits for Na 589.592 Radial Recovery = 97.92%

Ni 231.604†	8711.1	488.07 µg/L	28.798	488.07 ppb	28.798	5.90%
QC value within limits for Ni 231.604 Recovery = 97.61%						
P 214.914†	1453.4	2366.3 µg/L	217.34	2366.3 ppb	217.34	9.19%
QC value within limits for P 214.914 Recovery = 94.65%						
Pb 220.353†	1850.6	485.74 µg/L	39.516	485.74 ppb	39.516	8.14%
QC value within limits for Pb 220.353 Recovery = 97.15%						
S 181.975 Axial†	302.0	961.26 µg/L	71.383	961.26 ppb	71.383	7.43%
QC value within limits for S 181.975 Axial Recovery = 96.13%						
Sb 206.836†	539.6	483.71 µg/L	38.331	483.71 ppb	38.331	7.92%
QC value within limits for Sb 206.836 Recovery = 96.74%						
Se 196.026†	512.5	492.92 µg/L	39.421	492.92 ppb	39.421	8.00%
QC value within limits for Se 196.026 Recovery = 98.58%						
SiO2†	29058.9	5246.2 µg/L	227.04	5246.2 ppb	227.04	4.33%
QC value within limits for SiO2 Recovery = 98.11%						
Si 251.611†	36107.5	2454.7 µg/L	109.10	2454.7 ppb	109.10	4.44%
QC value within limits for Si 251.611 Recovery = 98.19%						
Sn 189.927†	1236.9	482.06 µg/L	55.747	482.06 ppb	55.747	11.56%
QC value within limits for Sn 189.927 Recovery = 96.41%						
Sr 421.552†	82257.0	489.01 µg/L	0.977	489.01 ppb	0.977	0.20%
QC value within limits for Sr 421.552 Recovery = 97.80%						
Ti 334.940†	207079.9	483.92 µg/L	22.946	483.92 ppb	22.946	4.74%
QC value within limits for Ti 334.940 Recovery = 96.78%						
Tl 190.801†	500.1	493.05 µg/L	24.593	493.05 ppb	24.593	4.99%
QC value within limits for Tl 190.801 Recovery = 98.61%						
U 409.014†	5383.6	487.86 µg/L	35.510	487.86 ppb	35.510	7.28%
QC value within limits for U 409.014 Recovery = 97.57%						
V 292.402†	41085.5	489.72 µg/L	30.682	489.72 ppb	30.682	6.27%
QC value within limits for V 292.402 Recovery = 97.94%						
Zn 213.857†	21344.7	487.98 µg/L	29.186	487.98 ppb	29.186	5.98%
QC value within limits for Zn 213.857 Recovery = 97.60%						

All analyte(s) passed QC.



Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 14:39:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97923.2	97923.2	101 %		14:40:10
1	Al 396.153Radial†	-127.0	-6.2	-3.0132 µg/L	-3.0132 ppb	14:40:10
1	Ca 317.933Radial†	379.5	-10.1	-3.6906 µg/L	-3.6906 ppb	14:40:30
1	Fe 238.204 Radial†	13.1	1.0	11.304 µg/L	11.304 ppb	14:40:30
1	K 766.490 Radial†	514.7	23.4	10.898 µg/L	10.898 ppb	14:40:10
1	Mg 279.077 IEC†	8.1	0.0	0.6110 µg/L	0.6110 ppb	14:40:30
1	Na 589.592 Radial†	236.0	52.7	26.312 µg/L	26.312 ppb	14:40:10
1	Sr 421.552†	124.6	-16.2	-0.0965 µg/L	-0.0965 ppb	14:40:10
1	Sc 361.383	2069830.8	2069830.8	98.888 %		14:41:32
1	Y 371.029	1415716.5	1415716.5	98.803 %		14:41:32
1	Ag 328.068†	-548.9	-94.9	-0.7650 µg/L	-0.7650 ppb	14:41:38
1	As 188.979†	-2.5	0.8	1.1284 µg/L	1.1284 ppb	14:41:58
1	B 249.677†	335.6	40.0	1.8096 µg/L	1.8096 ppb	14:41:38
1	Ba 233.527†	-7.7	0.7	0.0133 µg/L	0.0133 ppb	14:41:58
1	Be 313.107†	-1007.1	140.4	0.0824 µg/L	0.0824 ppb	14:41:38
1	Cd 226.502†	-156.5	12.4	0.2920 µg/L	0.2920 ppb	14:41:58
1	Co 228.616†	39.8	-7.8	-0.3333 µg/L	-0.3333 ppb	14:41:58
1	Cr 267.716†	101.8	22.7	0.4934 µg/L	0.4934 ppb	14:41:38
1	Cu 324.752†	4549.2	223.7	1.4630 µg/L	1.4630 ppb	14:41:38
1	Mn 257.610†	-612.1	68.0	0.2049 µg/L	0.2049 ppb	14:41:58
1	Mo 202.031†	29.0	24.2	2.3924 µg/L	2.3924 ppb	14:41:58
1	Ni 231.604†	365.0	-7.8	-0.4362 µg/L	-0.4362 ppb	14:41:58
1	P 214.914†	270.2	0.8	1.1901 µg/L	1.1901 ppb	14:41:58
1	Pb 220.353†	29.1	-0.8	-0.1964 µg/L	-0.1964 ppb	14:41:58
1	S 181.975 Axial†	24.6	2.3	7.3601 µg/L	7.3601 ppb	14:41:58
1	Sb 206.836†	28.1	5.7	5.0982 µg/L	5.0982 ppb	14:41:58
1	Se 196.026†	27.2	0.2	0.2537 µg/L	0.2537 ppb	14:41:58
1	SiO2†	2772.4	23.8	4.2969 µg/L	4.2969 ppb	14:41:38
1	Si 251.611†	434.7	15.5	1.0525 µg/L	1.0525 ppb	14:41:58
1	Sn 189.927†	-2.4	5.1	1.9690 µg/L	1.9690 ppb	14:41:58
1	Ti 334.940†	-488.9	82.8	0.1936 µg/L	0.1936 ppb	14:41:38
1	Tl 190.801†	-32.9	0.8	0.8120 µg/L	0.8120 ppb	14:41:58
1	U 409.014†	2.0	7.8	0.7080 µg/L	0.7080 ppb	14:41:38
1	V 292.402†	58.8	-52.9	-0.6052 µg/L	-0.6052 ppb	14:41:38
1	Zn 213.857†	683.6	-317.5	-7.3122 µg/L	-7.3122 ppb	14:41:58
2	Sc RADIAL	97416.1	97416.1	101 %		14:40:36
2	Al 396.153Radial†	-106.0	14.0	6.6472 µg/L	6.6472 ppb	14:40:36
2	Ca 317.933Radial†	385.8	-2.0	-0.7354 µg/L	-0.7354 ppb	14:40:56
2	Fe 238.204 Radial†	13.2	1.1	13.143 µg/L	13.143 ppb	14:40:56
2	K 766.490 Radial†	484.3	-4.2	-1.9398 µg/L	-1.9398 ppb	14:40:36
2	Mg 279.077 IEC†	10.3	2.2	29.081 µg/L	29.081 ppb	14:40:56
2	Na 589.592 Radial†	221.0	39.0	19.447 µg/L	19.447 ppb	14:40:36
2	Sr 421.552†	148.5	8.2	0.0485 µg/L	0.0485 ppb	14:40:36
2	Sc 361.383	2086144.2	2086144.2	99.667 %		14:42:04
2	Y 371.029	1426251.6	1426251.6	99.538 %		14:42:04
2	Ag 328.068†	-589.9	-131.6	-1.0551 µg/L	-1.0551 ppb	14:42:10
2	As 188.979†	-0.7	2.6	3.7661 µg/L	3.7661 ppb	14:42:30
2	B 249.677†	317.1	18.8	0.8456 µg/L	0.8456 ppb	14:42:10
2	Ba 233.527†	4.0	12.4	0.2722 µg/L	0.2722 ppb	14:42:30
2	Be 313.107†	-987.6	168.0	0.0985 µg/L	0.0985 ppb	14:42:10
2	Cd 226.502†	-171.4	-1.3	-0.0335 µg/L	-0.0335 ppb	14:42:30
2	Co 228.616†	39.2	-8.7	-0.3740 µg/L	-0.3740 ppb	14:42:30
2	Cr 267.716†	66.2	-13.8	-0.3010 µg/L	-0.3010 ppb	14:42:10
2	Cu 324.752†	4518.2	156.6	1.0254 µg/L	1.0254 ppb	14:42:10
2	Mn 257.610†	-612.2	72.7	0.2173 µg/L	0.2173 ppb	14:42:30
2	Mo 202.031†	29.8	24.8	2.4526 µg/L	2.4526 ppb	14:42:30
2	Ni 231.604†	375.3	-0.3	-0.0180 µg/L	-0.0180 ppb	14:42:30
2	P 214.914†	266.0	-5.5	-9.1845 µg/L	-9.1845 ppb	14:42:30
2	Pb 220.353†	33.3	3.3	0.8585 µg/L	0.8585 ppb	14:42:30

2	S 181.975 Axial†	19.4	-3.1	-9.8857 µg/L	-9.8857 ppb	14:42:30
2	Sb 206.836†	33.4	10.8	9.6809 µg/L	9.6809 ppb	14:42:30
2	Se 196.026†	27.2	-0.0	0.0113 µg/L	0.0113 ppb	14:42:30
2	SiO2†	2745.6	-25.0	-4.5104 µg/L	-4.5104 ppb	14:42:10
2	Si 251.611†	444.0	21.4	1.4568 µg/L	1.4568 ppb	14:42:30
2	Sn 189.927†	4.6	12.1	4.7090 µg/L	4.7090 ppb	14:42:30
2	Ti 334.940†	-380.1	195.9	0.4557 µg/L	0.4557 ppb	14:42:10
2	Tl 190.801†	-32.4	1.6	1.6129 µg/L	1.6129 ppb	14:42:30
2	U 409.014†	12.1	17.9	1.6267 µg/L	1.6267 ppb	14:42:10
2	V 292.402†	120.3	8.3	0.1168 µg/L	0.1168 ppb	14:42:10
2	Zn 213.857†	677.0	-329.6	-7.5918 µg/L	-7.5918 ppb	14:42:30
3	Sc RADIAL	98240.0	98240.0	101 %		14:41:01
3	Al 396.153Radial†	-164.8	-43.1	-20.609 µg/L	-20.609 ppb	14:41:01
3	Ca 317.933Radial†	390.4	-0.7	-0.2496 µg/L	-0.2496 ppb	14:41:22
3	Fe 238.204 Radial†	12.5	0.4	4.3734 µg/L	4.3734 ppb	14:41:22
3	K 766.490 Radial†	536.7	43.4	20.244 µg/L	20.244 ppb	14:41:01
3	Mg 279.077 IEC†	13.6	5.4	71.694 µg/L	71.694 ppb	14:41:22
3	Na 589.592 Radial†	220.9	37.1	18.494 µg/L	18.494 ppb	14:41:01
3	Sr 421.552†	125.8	-15.5	-0.0922 µg/L	-0.0922 ppb	14:41:01
3	Sc 361.383	2101049.5	2101049.5	100.38 %		14:42:36
3	Y 371.029	1437937.2	1437937.2	100.35 %		14:42:36
3	Ag 328.068†	-490.1	-28.1	-0.2276 µg/L	-0.2276 ppb	14:42:42
3	As 188.979†	-5.7	-2.4	-3.6107 µg/L	-3.6107 ppb	14:43:02
3	B 249.677†	304.1	3.6	0.1626 µg/L	0.1626 ppb	14:42:42
3	Ba 233.527†	-2.5	5.9	0.1291 µg/L	0.1291 ppb	14:43:02
3	Be 313.107†	-941.4	221.0	0.1297 µg/L	0.1297 ppb	14:42:42
3	Cd 226.502†	-161.4	9.8	0.2310 µg/L	0.2310 ppb	14:43:02
3	Co 228.616†	41.6	-6.6	-0.2822 µg/L	-0.2822 ppb	14:43:02
3	Cr 267.716†	72.6	-7.9	-0.1720 µg/L	-0.1720 ppb	14:42:42
3	Cu 324.752†	4566.2	172.3	1.1262 µg/L	1.1262 ppb	14:42:42
3	Mn 257.610†	-622.5	66.8	0.1962 µg/L	0.1962 ppb	14:43:02
3	Mo 202.031†	32.4	27.1	2.6860 µg/L	2.6860 ppb	14:43:02
3	Ni 231.604†	364.6	-13.7	-0.7696 µg/L	-0.7696 ppb	14:43:02
3	P 214.914†	267.4	-6.0	-10.051 µg/L	-10.051 ppb	14:43:02
3	Pb 220.353†	39.5	9.2	2.4200 µg/L	2.4200 ppb	14:43:02
3	S 181.975 Axial†	25.9	3.2	10.281 µg/L	10.281 ppb	14:43:02
3	Sb 206.836†	29.8	7.0	6.2789 µg/L	6.2789 ppb	14:43:02
3	Se 196.026†	22.4	-5.0	-4.7585 µg/L	-4.7585 ppb	14:43:02
3	SiO2†	2754.3	-35.9	-6.4746 µg/L	-6.4746 ppb	14:42:42
3	Si 251.611†	439.8	14.1	0.9571 µg/L	0.9571 ppb	14:43:02
3	Sn 189.927†	-3.2	4.3	1.6676 µg/L	1.6676 ppb	14:43:02
3	Ti 334.940†	-455.0	123.9	0.2842 µg/L	0.2842 ppb	14:42:42
3	Tl 190.801†	-40.6	-6.4	-6.2256 µg/L	-6.2256 ppb	14:43:02
3	U 409.014†	-34.9	-28.9	-2.6292 µg/L	-2.6292 ppb	14:42:42
3	V 292.402†	81.7	-31.0	-0.3486 µg/L	-0.3486 ppb	14:42:42
3	Zn 213.857†	667.7	-343.7	-7.9163 µg/L	-7.9163 ppb	14:43:02

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2085674.9	99.645 %	0.7460			0.75%
Sc RADIAL	97859.8	101 %	0.4			0.42%
Y 371.029	1426635.1	99.565 %	0.7757			0.78%
Ag 328.068†	-84.9	-0.6826 µg/L	0.41989	-0.6826 ppb	0.41989	61.52%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-11.7	-5.6584 µg/L	13.81945	-5.6584 ppb	13.81945	244.23%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.3	0.4279 µg/L	3.73797	0.4279 ppb	3.73797	873.49%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	20.8	0.9392 µg/L	0.82745	0.9392 ppb	0.82745	88.10%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	6.3	0.1382 µg/L	0.12965	0.1382 ppb	0.12965	93.81%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	176.5	0.1036 µg/L	0.02406	0.1036 ppb	0.02406	23.23%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-4.3	-1.5585 µg/L	1.86230	-1.5585 ppb	1.86230	119.49%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.9	0.1631 µg/L	0.17303	0.1631 ppb	0.17303	106.06%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-7.7	-0.3298 µg/L	0.04598	-0.3298 ppb	0.04598	13.94%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	0.3	0.0068 µg/L	0.42635 0.0068 ppb 0.42635 >999.9%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	184.2	1.2049 µg/L	0.22917 1.2049 ppb 0.22917 19.02%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	0.8	9.6067 µg/L	4.62456 9.6067 ppb 4.62456 48.14%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	20.9	9.7340 µg/L	11.13749 9.7340 ppb 11.13749 114.42%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	2.6	33.795 µg/L	35.7751 33.795 ppb 35.7751 105.86%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	69.2	0.2061 µg/L	0.01063 0.2061 ppb 0.01063 5.15%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	25.4	2.5103 µg/L	0.15511 2.5103 ppb 0.15511 6.18%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	42.9	21.418 µg/L	4.2653 21.418 ppb 4.2653 19.91%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-7.3	-0.4080 µg/L	0.37661 -0.4080 ppb 0.37661 92.32%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	-3.6	-6.0152 µg/L	6.25504 -6.0152 ppb 6.25504 103.99%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	3.9	1.0274 µg/L	1.31637 1.0274 ppb 1.31637 128.13%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	0.8	2.5852 µg/L	10.89844 2.5852 ppb 10.89844 421.57%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	7.8	7.0193 µg/L	2.37938 7.0193 ppb 2.37938 33.90%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-1.6	-1.4978 µg/L	2.82643 -1.4978 ppb 2.82643 188.70%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-12.3	-2.2294 µg/L	5.73660 -2.2294 ppb 5.73660 257.32%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	17.0	1.1555 µg/L	0.26528 1.1555 ppb 0.26528 22.96%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	7.1	2.7819 µg/L	1.67575 2.7819 ppb 1.67575 60.24%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	-7.9	-0.0467 µg/L	0.08252 -0.0467 ppb 0.08252 176.63%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	134.2	0.3111 µg/L	0.13313 0.3111 ppb 0.13313 42.79%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	-1.3	-1.2669 µg/L	4.31300 -1.2669 ppb 4.31300 340.44%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	-1.1	-0.0982 µg/L	2.23954 -0.0982 ppb 2.23954 >999.9%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	-25.2	-0.2790 µg/L	0.36598 -0.2790 ppb 0.36598 131.17%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-330.3	-7.6068 µg/L	0.30234 -7.6068 ppb 0.30234 3.97%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

Sequence No.: 3  
 Sample ID: LR1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 113  
 Date Collected: 3/16/2010 14:43:13  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98821.0	98821.0	102 %		14:43:44
1	Al 396.153Radial†	-178.8	-55.9	-26.396 µg/L	-26.396 ppb	14:43:44
1	Ca 317.933Radial†	535.2	138.9	50.535 µg/L	50.535 ppb	14:44:05
1	Fe 238.204 Radial†	32349.8	31672.5	374610 µg/L	374610 ppb	14:43:44
1	K 766.490 Radial†	215.1	-274.7	-128.19 µg/L	-128.19 ppb	14:43:44
1	Mg 279.077 IEC†	9.1	0.9	-389.76 µg/L	-389.76 ppb	14:44:05
1	Na 589.592 Radial†	195.1	10.5	5.2457 µg/L	5.2457 ppb	14:43:44
1	Sr 421.552†	172.3	29.3	0.1742 µg/L	0.1742 ppb	14:43:44
1	Sc 361.383	2084224.1	2084224.1	99.576 %		14:45:07
1	Y 371.029	1417107.9	1417107.9	98.900 %		14:45:07
1	Ag 328.068†	-3119.9	-2673.0	7.5909 µg/L	7.5909 ppb	14:45:13
1	As 188.979†	-20.0	-16.8	-71.152 µg/L	-71.152 ppb	14:45:33
1	B 249.677†	1596.3	1303.8	-136.31 µg/L	-136.31 ppb	14:45:13
1	Ba 233.527†	526.6	537.3	11.817 µg/L	11.817 ppb	14:45:33
1	Be 313.107†	-1203.6	-49.9	-0.0293 µg/L	-0.0293 ppb	14:45:13
1	Cd 226.502†	1807.9	1986.2	4.8780 µg/L	4.8780 ppb	14:45:13
1	Co 228.616†	498.4	452.5	19.428 µg/L	19.428 ppb	14:45:33
1	Cr 267.716†	-156.8	-237.7	-5.1458 µg/L	-5.1458 ppb	14:45:33
1	Cu 324.752†	-2661.5	-7049.5	24.382 µg/L	24.382 ppb	14:45:13
1	Mn 257.610†	394.3	1082.9	25.431 µg/L	25.431 ppb	14:45:07
1	Mo 202.031†	-126.9	-132.6	1.1124 µg/L	1.1124 ppb	14:45:13
1	Ni 231.604†	290.6	-85.0	0.0781 µg/L	0.0781 ppb	14:45:33
1	P 214.914†	490.7	220.3	66.605 µg/L	66.605 ppb	14:45:33
1	Pb 220.353†	31.1	1.1	6.5378 µg/L	6.5378 ppb	14:45:33
1	S 181.975 Axial†	-11.0	-33.5	-106.76 µg/L	-106.76 ppb	14:45:33
1	Sb 206.836†	30.4	7.8	6.8064 µg/L	6.8064 ppb	14:45:33
1	Se 196.026†	-313.0	-341.6	870.20 µg/L	870.20 ppb	14:45:33
1	SiO2†	2521.1	-247.9	-44.756 µg/L	-44.756 ppb	14:45:13
1	Si 251.611†	-335.5	-761.0	-51.735 µg/L	-51.735 ppb	14:45:13
1	Sn 189.927†	6.7	14.2	3.7517 µg/L	3.7517 ppb	14:45:33
1	Ti 334.940†	-586.1	-11.4	-0.0268 µg/L	-0.0268 ppb	14:45:13
1	Tl 190.801†	-48.3	-14.4	38.883 µg/L	38.883 ppb	14:45:33
1	U 409.014†	842.3	851.7	25.258 µg/L	25.258 ppb	14:45:13
1	V 292.402†	3256.1	3157.6	-10.295 µg/L	-10.295 ppb	14:45:13
1	Zn 213.857†	2607.2	1609.5	19.356 µg/L	19.356 ppb	14:45:33
2	Sc RADIAL	99842.3	99842.3	103 %		14:44:10
2	Al 396.153Radial†	-178.8	-54.0	-25.554 µg/L	-25.554 ppb	14:44:10
2	Ca 317.933Radial†	539.3	137.5	50.047 µg/L	50.047 ppb	14:44:30
2	Fe 238.204 Radial†	33033.7	32011.3	378620 µg/L	378620 ppb	14:44:10
2	K 766.490 Radial†	304.8	-189.9	-88.622 µg/L	-88.622 ppb	14:44:10
2	Mg 279.077 IEC†	7.6	-0.6	-414.47 µg/L	-414.47 ppb	14:44:30
2	Na 589.592 Radial†	164.4	-21.2	-10.605 µg/L	-10.605 ppb	14:44:10
2	Sr 421.552†	162.0	17.6	0.1049 µg/L	0.1049 ppb	14:44:10
2	Sc 361.383	2091219.4	2091219.4	99.910 %		14:45:40
2	Y 371.029	1421954.5	1421954.5	99.238 %		14:45:40
2	Ag 328.068†	-3184.1	-2726.8	7.4846 µg/L	7.4846 ppb	14:45:45
2	As 188.979†	-17.9	-14.7	-68.458 µg/L	-68.458 ppb	14:46:06
2	B 249.677†	1789.5	1491.7	-129.87 µg/L	-129.87 ppb	14:45:45
2	Ba 233.527†	513.2	522.1	11.491 µg/L	11.491 ppb	14:46:06
2	Be 313.107†	-1359.3	-201.7	-0.1185 µg/L	-0.1185 ppb	14:45:45
2	Cd 226.502†	1831.6	2003.9	4.8452 µg/L	4.8452 ppb	14:45:45
2	Co 228.616†	493.2	445.6	19.134 µg/L	19.134 ppb	14:46:06
2	Cr 267.716†	-134.5	-214.8	-4.6475 µg/L	-4.6475 ppb	14:46:06
2	Cu 324.752†	-2689.9	-7069.0	25.009 µg/L	25.009 ppb	14:45:45
2	Mn 257.610†	393.8	1081.1	25.664 µg/L	25.664 ppb	14:45:40
2	Mo 202.031†	-109.5	-114.7	3.0356 µg/L	3.0356 ppb	14:45:45
2	Ni 231.604†	306.4	-70.2	0.9606 µg/L	0.9606 ppb	14:46:06
2	P 214.914†	483.1	211.1	48.045 µg/L	48.045 ppb	14:46:06
2	Pb 220.353†	29.8	-0.4	6.2257 µg/L	6.2257 ppb	14:46:06

2	S 181.975 Axial†	-10.1	-32.6	-103.86 µg/L	-103.86 ppb	14:46:06
2	Sb 206.836†	27.2	4.5	3.8854 µg/L	3.8854 ppb	14:46:06
2	Se 196.026†	-283.9	-311.5	911.29 µg/L	911.29 ppb	14:46:06
2	SiO2†	2523.9	-253.6	-45.778 µg/L	-45.778 ppb	14:45:45
2	Si 251.611†	-329.6	-754.0	-51.259 µg/L	-51.259 ppb	14:45:45
2	Sn 189.927†	6.1	13.5	3.4694 µg/L	3.4694 ppb	14:46:06
2	Ti 334.940†	-618.7	-42.0	-0.0969 µg/L	-0.0969 ppb	14:45:45
2	Tl 190.801†	-37.2	-3.1	50.423 µg/L	50.423 ppb	14:46:06
2	U 409.014†	812.9	819.4	21.773 µg/L	21.773 ppb	14:45:45
2	V 292.402†	3490.7	3381.5	-8.1489 µg/L	-8.1489 ppb	14:45:45
2	Zn 213.857†	2565.2	1558.6	17.993 µg/L	17.993 ppb	14:46:06
3	Sc RADIAL	99677.7	99677.7	103 %		14:44:36
3	Al 396.153Radial†	-155.3	-31.5	-14.776 µg/L	-14.776 ppb	14:44:36
3	Ca 317.933Radial†	528.9	128.2	46.672 µg/L	46.672 ppb	14:44:56
3	Fe 238.204 Radial†	32875.1	31910.2	377420 µg/L	377420 ppb	14:44:36
3	K 766.490 Radial†	294.8	-199.0	-92.893 µg/L	-92.893 ppb	14:44:36
3	Mg 279.077 IEC†	7.7	-0.5	-412.23 µg/L	-412.23 ppb	14:44:56
3	Na 589.592 Radial†	161.9	-23.4	-11.685 µg/L	-11.685 ppb	14:44:36
3	Sr 421.552†	176.2	31.7	0.1884 µg/L	0.1884 ppb	14:44:36
3	Sc 361.383	2105079.9	2105079.9	100.57 %		14:46:12
3	Y 371.029	1432585.5	1432585.5	99.980 %		14:46:12
3	Ag 328.068†	-2786.9	-2310.8	10.699 µg/L	10.699 ppb	14:46:18
3	As 188.979†	-17.2	-13.9	-67.117 µg/L	-67.117 ppb	14:46:38
3	B 249.677†	1598.6	1290.2	-138.40 µg/L	-138.40 ppb	14:46:18
3	Ba 233.527†	433.9	439.9	9.6824 µg/L	9.6824 ppb	14:46:38
3	Be 313.107†	-1273.7	-107.6	-0.0633 µg/L	-0.0633 ppb	14:46:18
3	Cd 226.502†	1605.4	1766.9	-0.6542 µg/L	-0.6542 ppb	14:46:18
3	Co 228.616†	416.2	365.8	15.702 µg/L	15.702 ppb	14:46:38
3	Cr 267.716†	-104.3	-183.9	-3.9778 µg/L	-3.9778 ppb	14:46:38
3	Cu 324.752†	-1793.0	-6159.5	30.724 µg/L	30.724 ppb	14:46:18
3	Mn 257.610†	355.9	1040.9	25.472 µg/L	25.472 ppb	14:46:12
3	Mo 202.031†	-121.5	-125.9	1.8831 µg/L	1.8831 ppb	14:46:18
3	Ni 231.604†	295.1	-83.4	0.2080 µg/L	0.2080 ppb	14:46:38
3	P 214.914†	452.0	177.0	-8.1559 µg/L	-8.1559 ppb	14:46:38
3	Pb 220.353†	20.5	-9.8	3.7501 µg/L	3.7501 ppb	14:46:38
3	S 181.975 Axial†	-14.7	-37.1	-118.10 µg/L	-118.10 ppb	14:46:38
3	Sb 206.836†	25.2	2.4	1.9419 µg/L	1.9419 ppb	14:46:38
3	Se 196.026†	-243.8	-269.8	946.68 µg/L	946.68 ppb	14:46:38
3	SiO2†	2566.6	-227.8	-41.125 µg/L	-41.125 ppb	14:46:18
3	Si 251.611†	-232.9	-655.6	-44.573 µg/L	-44.573 ppb	14:46:18
3	Sn 189.927†	16.4	23.7	7.4439 µg/L	7.4439 ppb	14:46:38
3	Ti 334.940†	-491.8	88.3	0.2077 µg/L	0.2077 ppb	14:46:18
3	Tl 190.801†	-49.7	-15.3	38.380 µg/L	38.380 ppb	14:46:38
3	U 409.014†	646.8	648.9	6.4562 µg/L	6.4562 ppb	14:46:18
3	V 292.402†	3078.4	2948.6	-13.131 µg/L	-13.131 ppb	14:46:18
3	Zn 213.857†	2219.2	1197.7	9.7345 µg/L	9.7345 ppb	14:46:38

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Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2093507.8	100.02 %	%	0.507			0.51%
Sc RADIAL	99447.0	103 %	%	0.6			0.55%
Y 371.029	1423882.6	99.373 %	%	0.5525			0.56%
Ag 328.068†	-2570.2	8.5913 µg/L	µg/L	1.82565	8.5913 ppb	1.82565	21.25%
Al 396.153Radial†	-47.1	-22.242 µg/L	µg/L	6.4792	-22.242 ppb	6.4792	29.13%
As 188.979†	-15.1	-68.909 µg/L	µg/L	2.0548	-68.909 ppb	2.0548	2.98%
B 249.677†	1361.9	-134.86 µg/L	µg/L	4.443	-134.86 ppb	4.443	3.29%
Ba 233.527†	499.7	10.997 µg/L	µg/L	1.1498	10.997 ppb	1.1498	10.46%
Be 313.107†	-119.7	-0.0704 µg/L	µg/L	0.04500	-0.0704 ppb	0.04500	63.96%
Ca 317.933Radial†	134.9	49.085 µg/L	µg/L	2.1034	49.085 ppb	2.1034	4.29%
Cd 226.502†	1919.0	3.0230 µg/L	µg/L	3.18456	3.0230 ppb	3.18456	105.34%
Co 228.616†	421.3	18.088 µg/L	µg/L	2.0714	18.088 ppb	2.0714	11.45%
Cr 267.716†	-212.1	-4.5904 µg/L	µg/L	0.58607	-4.5904 ppb	0.58607	12.77%
Cu 324.752†	-6759.3	26.705 µg/L	µg/L	3.4949	26.705 ppb	3.4949	13.09%
Fe 238.204 Radial†	31864.6	376880 µg/L	µg/L	2057.4	376880 ppb	2057.4	0.55%
K 766.490 Radial†	-221.2	-103.24 µg/L	µg/L	21.719	-103.24 ppb	21.719	21.04%
Mg 279.077 IEC†	-0.1	-405.49 µg/L	µg/L	13.665	-405.49 ppb	13.665	3.37%
Mn 257.610†	1068.3	25.522 µg/L	µg/L	0.1245	25.522 ppb	0.1245	0.49%
Mo 202.031†	-124.4	2.0104 µg/L	µg/L	0.96787	2.0104 ppb	0.96787	48.14%
Na 589.592 Radial†	-11.4	-5.6815 µg/L	µg/L	9.47860	-5.6815 ppb	9.47860	166.83%

Ni 231.604†	-79.6	0.4156 µg/L	0.47650	0.4156 ppb	0.47650	114.66%
P 214.914†	202.8	35.498 µg/L	38.9276	35.498 ppb	38.9276	109.66%
Pb 220.353†	-3.0	5.5045 µg/L	1.52739	5.5045 ppb	1.52739	27.75%
S 181.975 Axial†	-34.4	-109.57 µg/L	7.528	-109.57 ppb	7.528	6.87%
Sb 206.836†	4.9	4.2112 µg/L	2.44856	4.2112 ppb	2.44856	58.14%
Se 196.026†	-307.6	909.39 µg/L	38.277	909.39 ppb	38.277	4.21%
SiO2†	-243.1	-43.886 µg/L	2.4454	-43.886 ppb	2.4454	5.57%
Si 251.611†	-723.5	-49.189 µg/L	4.0046	-49.189 ppb	4.0046	8.14%
Sn 189.927†	17.2	4.8883 µg/L	2.21766	4.8883 ppb	2.21766	45.37%
Sr 421.552†	26.2	0.1558 µg/L	0.04465	0.1558 ppb	0.04465	28.65%
Ti 334.940†	11.6	0.0280 µg/L	0.15950	0.0280 ppb	0.15950	569.88%
Tl 190.801†	-10.9	42.562 µg/L	6.8126	42.562 ppb	6.8126	16.01%
U 409.014†	773.4	17.829 µg/L	10.0021	17.829 ppb	10.0021	56.10%
V 292.402†	3162.6	-10.525 µg/L	2.4992	-10.525 ppb	2.4992	23.74%
Zn 213.857†	1455.3	15.695 µg/L	5.2065	15.695 ppb	5.2065	33.17%

Sequence No.: 4

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 14:46:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	100002.2	100002.2	103 %		14:47:20
1	Al 396.153Radial†	10332.5	10119.8	4820.0 µg/L	4820.0 ppb	14:47:20
1	Ca 317.933Radial†	14133.6	13294.1	4838.0 µg/L	4838.0 ppb	14:47:20
1	Fe 238.204 Radial†	442.3	416.2	4933.0 µg/L	4933.0 ppb	14:47:40
1	K 766.490 Radial†	11169.4	10325.1	4818.5 µg/L	4818.5 ppb	14:47:20
1	Mg 279.077 IEC†	391.4	370.8	4892.3 µg/L	4892.3 ppb	14:47:40
1	Na 589.592 Radial†	20261.8	19430.0	9697.6 µg/L	9697.6 ppb	14:47:20
1	Sr 421.552†	84170.7	81326.2	483.47 µg/L	483.47 ppb	14:47:20
1	Sc 361.383	2066641.5	2066641.5	98.736 %		14:48:44
1	Y 371.029	1412477.4	1412477.4	98.577 %		14:48:44
1	Ag 328.068†	61390.7	62637.1	506.69 µg/L	506.69 ppb	14:48:49
1	As 188.979†	349.1	356.8	525.22 µg/L	525.22 ppb	14:49:10
1	B 249.677†	11270.0	11115.0	502.67 µg/L	502.67 ppb	14:48:49
1	Ba 233.527†	23001.0	23304.0	510.58 µg/L	510.58 ppb	14:48:49
1	Be 313.107†	843291.4	855250.1	502.32 µg/L	502.32 ppb	14:48:44
1	Cd 226.502†	21022.1	21461.9	510.11 µg/L	510.11 ppb	14:48:49
1	Co 228.616†	11785.4	11888.3	510.17 µg/L	510.17 ppb	14:48:49
1	Cr 267.716†	23536.2	23757.4	517.03 µg/L	517.03 ppb	14:48:49
1	Cu 324.752†	81807.9	78478.9	513.52 µg/L	513.52 ppb	14:48:49
1	Mn 257.610†	167086.9	169913.7	510.63 µg/L	510.63 ppb	14:48:44
1	Mo 202.031†	5263.5	5325.8	527.18 µg/L	527.18 ppb	14:49:10
1	Ni 231.604†	9383.0	9126.2	511.32 µg/L	511.32 ppb	14:48:49
1	P 214.914†	1823.7	1574.6	2565.5 µg/L	2565.5 ppb	14:49:10
1	Pb 220.353†	1974.7	1969.8	517.04 µg/L	517.04 ppb	14:49:10
1	S 181.975 Axial†	336.2	318.0	1012.0 µg/L	1012.0 ppb	14:49:10
1	Sb 206.836†	588.1	572.9	513.78 µg/L	513.78 ppb	14:49:10
1	Se 196.026†	567.9	547.9	526.47 µg/L	526.47 ppb	14:49:10
1	SiO2†	32606.5	30244.3	5460.2 µg/L	5460.2 ppb	14:48:49
1	Si 251.611†	37492.2	37548.2	2552.7 µg/L	2552.7 ppb	14:48:49
1	Sn 189.927†	1323.2	1347.6	525.15 µg/L	525.15 ppb	14:49:10
1	Ti 334.940†	210964.0	214243.0	500.67 µg/L	500.67 ppb	14:48:44
1	Tl 190.801†	487.8	528.2	520.65 µg/L	520.65 ppb	14:49:10
1	U 409.014†	5653.2	5731.4	519.43 µg/L	519.43 ppb	14:48:49
1	V 292.402†	42793.6	43229.3	515.45 µg/L	515.45 ppb	14:48:49
1	Zn 213.857†	23185.4	22473.4	513.83 µg/L	513.83 ppb	14:48:49
2	Sc RADIAL	99966.1	99966.1	103 %		14:47:46
2	Al 396.153Radial†	10273.1	10065.8	4794.5 µg/L	4794.5 ppb	14:47:46
2	Ca 317.933Radial†	14142.8	13307.9	4843.0 µg/L	4843.0 ppb	14:47:46
2	Fe 238.204 Radial†	441.1	415.1	4920.8 µg/L	4920.8 ppb	14:48:06
2	K 766.490 Radial†	11149.8	10310.1	4811.5 µg/L	4811.5 ppb	14:47:46
2	Mg 279.077 IEC†	390.5	370.1	4882.2 µg/L	4882.2 ppb	14:48:06
2	Na 589.592 Radial†	20227.3	19403.8	9684.5 µg/L	9684.5 ppb	14:47:46
2	Sr 421.552†	84211.8	81395.4	483.89 µg/L	483.89 ppb	14:47:46
2	Sc 361.383	2071164.5	2071164.5	98.952 %		14:49:17
2	Y 371.029	1413074.0	1413074.0	98.618 %		14:49:17
2	Ag 328.068†	61209.6	62318.3	504.13 µg/L	504.13 ppb	14:49:23
2	As 188.979†	344.6	351.5	517.31 µg/L	517.31 ppb	14:49:43
2	B 249.677†	11263.6	11083.6	501.25 µg/L	501.25 ppb	14:49:23
2	Ba 233.527†	23001.4	23253.5	509.47 µg/L	509.47 ppb	14:49:23
2	Be 313.107†	843189.8	853282.2	501.16 µg/L	501.16 ppb	14:49:17
2	Cd 226.502†	21025.2	21418.5	509.08 µg/L	509.08 ppb	14:49:23
2	Co 228.616†	11793.6	11870.5	509.40 µg/L	509.40 ppb	14:49:23
2	Cr 267.716†	23441.7	23609.9	513.82 µg/L	513.82 ppb	14:49:23
2	Cu 324.752†	81544.7	78032.0	510.60 µg/L	510.60 ppb	14:49:23
2	Mn 257.610†	167292.2	169751.6	510.14 µg/L	510.14 ppb	14:49:17
2	Mo 202.031†	5156.4	5205.9	515.32 µg/L	515.32 ppb	14:49:43
2	Ni 231.604†	9416.1	9139.0	512.04 µg/L	512.04 ppb	14:49:23
2	P 214.914†	1805.9	1552.6	2529.1 µg/L	2529.1 ppb	14:49:43
2	Pb 220.353†	1972.7	1963.4	515.34 µg/L	515.34 ppb	14:49:43

2	S 181.975 Axial†	340.3	321.4	1022.7 µg/L	1022.7 ppb	14:49:43
2	Sb 206.836†	583.1	566.6	507.97 µg/L	507.97 ppb	14:49:43
2	Se 196.026†	561.1	539.7	518.78 µg/L	518.78 ppb	14:49:43
2	SiO2†	32606.6	30172.4	5447.2 µg/L	5447.2 ppb	14:49:23
2	Si 251.611†	37482.7	37455.7	2546.4 µg/L	2546.4 ppb	14:49:23
2	Sn 189.927†	1293.5	1314.7	512.31 µg/L	512.31 ppb	14:49:43
2	Ti 334.940†	211443.1	214260.5	500.71 µg/L	500.71 ppb	14:49:17
2	Tl 190.801†	482.8	522.0	514.64 µg/L	514.64 ppb	14:49:43
2	U 409.014†	5557.8	5622.5	509.53 µg/L	509.53 ppb	14:49:23
2	V 292.402†	42859.4	43201.1	515.02 µg/L	515.02 ppb	14:49:23
2	Zn 213.857†	23126.3	22362.5	511.28 µg/L	511.28 ppb	14:49:23
3	Sc RADIAL	99184.3	99184.3	102 %		14:48:12
3	Al 396.153Radial†	10349.2	10218.5	4869.3 µg/L	4869.3 ppb	14:48:12
3	Ca 317.933Radial†	14209.2	13480.7	4905.9 µg/L	4905.9 ppb	14:48:12
3	Fe 238.204 Radial†	440.6	418.0	4953.1 µg/L	4953.1 ppb	14:48:32
3	K 766.490 Radial†	11166.9	10411.8	4859.0 µg/L	4859.0 ppb	14:48:12
3	Mg 279.077 IEC†	390.8	373.4	4924.6 µg/L	4924.6 ppb	14:48:32
3	Na 589.592 Radial†	20383.4	19710.4	9837.5 µg/L	9837.5 ppb	14:48:12
3	Sr 421.552†	84696.1	82510.7	490.52 µg/L	490.52 ppb	14:48:12
3	Sc 361.383	2085274.6	2085274.6	99.626 %		14:49:50
3	Y 371.029	1422624.2	1422624.2	99.285 %		14:49:50
3	Ag 328.068†	56927.7	57601.8	465.85 µg/L	465.85 ppb	14:49:56
3	As 188.979†	286.7	291.0	428.11 µg/L	428.11 ppb	14:50:16
3	B 249.677†	10409.3	10149.1	458.70 µg/L	458.70 ppb	14:49:56
3	Ba 233.527†	20676.0	20762.1	454.87 µg/L	454.87 ppb	14:49:56
3	Be 313.107†	785177.0	789285.5	463.57 µg/L	463.57 ppb	14:49:50
3	Cd 226.502†	18801.8	19043.0	452.55 µg/L	452.55 ppb	14:49:56
3	Co 228.616†	10512.7	10504.1	450.70 µg/L	450.70 ppb	14:49:56
3	Cr 267.716†	20227.8	20223.6	440.13 µg/L	440.13 ppb	14:49:56
3	Cu 324.752†	73452.9	69352.1	453.91 µg/L	453.91 ppb	14:49:56
3	Mn 257.610†	156317.2	157591.4	473.60 µg/L	473.60 ppb	14:49:50
3	Mo 202.031†	4267.5	4278.4	423.54 µg/L	423.54 ppb	14:50:16
3	Ni 231.604†	8361.0	8015.5	449.09 µg/L	449.09 ppb	14:49:56
3	P 214.914†	1551.1	1284.5	2088.5 µg/L	2088.5 ppb	14:50:16
3	Pb 220.353†	1682.8	1658.9	435.40 µg/L	435.40 ppb	14:50:16
3	S 181.975 Axial†	290.8	269.4	857.37 µg/L	857.37 ppb	14:50:16
3	Sb 206.836†	500.3	479.5	429.59 µg/L	429.59 ppb	14:50:16
3	Se 196.026†	490.7	465.3	448.89 µg/L	448.89 ppb	14:50:16
3	SiO2†	29961.9	27294.8	4927.7 µg/L	4927.7 ppb	14:49:56
3	Si 251.611†	34218.1	33922.6	2306.2 µg/L	2306.2 ppb	14:49:56
3	Sn 189.927†	1056.3	1067.7	416.19 µg/L	416.19 ppb	14:50:16
3	Ti 334.940†	195556.5	196868.4	460.04 µg/L	460.04 ppb	14:49:50
3	Tl 190.801†	430.9	466.6	460.20 µg/L	460.20 ppb	14:50:16
3	U 409.014†	4887.2	4911.4	444.96 µg/L	444.96 ppb	14:49:56
3	V 292.402†	37901.0	37931.1	451.86 µg/L	451.86 ppb	14:49:56
3	Zn 213.857†	20722.2	19791.2	452.44 µg/L	452.44 ppb	14:49:56

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2074360.2	99.104 %	0.4643			0.47%
Sc RADIAL	99717.5	103 %	0.5			0.46%
Y 371.029	1416058.5	98.827 %	0.3974			0.40%
Ag 328.068†	60852.4	492.22 µg/L	22.876	492.22 ppb	22.876	4.65%
QC value within limits for Ag 328.068 Recovery = 98.44%						
Al 396.153Radial†	10134.7	4828.0 µg/L	38.01	4828.0 ppb	38.01	0.79%
QC value within limits for Al 396.153Radial Recovery = 96.56%						
As 188.979†	333.1	490.22 µg/L	53.930	490.22 ppb	53.930	11.00%
QC value within limits for As 188.979 Recovery = 98.04%						
B 249.677†	10782.6	487.54 µg/L	24.986	487.54 ppb	24.986	5.12%
QC value within limits for B 249.677 Recovery = 97.51%						
Ba 233.527†	22439.8	491.64 µg/L	31.846	491.64 ppb	31.846	6.48%
QC value within limits for Ba 233.527 Recovery = 98.33%						
Be 313.107†	832605.9	489.02 µg/L	22.042	489.02 ppb	22.042	4.51%
QC value within limits for Be 313.107 Recovery = 97.80%						
Ca 317.933Radial†	13360.9	4862.3 µg/L	37.84	4862.3 ppb	37.84	0.78%
QC value within limits for Ca 317.933Radial Recovery = 97.25%						
Cd 226.502†	20641.1	490.58 µg/L	32.941	490.58 ppb	32.941	6.71%
QC value within limits for Cd 226.502 Recovery = 98.12%						
Co 228.616†	11420.9	490.09 µg/L	34.117	490.09 ppb	34.117	6.96%



QC value within limits for Co 228.616	Recovery = 98.02%			
Cr 267.716†	22530.3	490.32 µg/L	43.500	8.87%
QC value within limits for Cr 267.716	Recovery = 98.06%			
Cu 324.752†	75287.7	492.67 µg/L	33.603	6.82%
QC value within limits for Cu 324.752	Recovery = 98.53%			
Fe 238.204 Radial†	416.4	4935.6 µg/L	16.29	0.33%
QC value within limits for Fe 238.204 Radial	Recovery = 98.71%			
K 766.490 Radial†	10349.0	4829.7 µg/L	25.64	0.53%
QC value within limits for K 766.490 Radial	Recovery = 96.59%			
Mg 279.077 IEC†	371.4	4899.7 µg/L	22.15	0.45%
QC value within limits for Mg 279.077 IEC	Recovery = 97.99%			
Mn 257.610†	165752.2	498.12 µg/L	21.243	4.26%
QC value within limits for Mn 257.610	Recovery = 99.62%			
Mo 202.031†	4936.7	488.68 µg/L	56.724	11.61%
QC value within limits for Mo 202.031	Recovery = 97.74%			
Na 589.592 Radial†	19514.7	9739.9 µg/L	84.83	0.87%
QC value within limits for Na 589.592 Radial	Recovery = 97.40%			
Ni 231.604†	8760.2	490.82 µg/L	36.136	7.36%
QC value within limits for Ni 231.604	Recovery = 98.16%			
P 214.914†	1470.6	2394.4 µg/L	265.52	11.09%
QC value within limits for P 214.914	Recovery = 95.77%			
Pb 220.353†	1864.1	489.26 µg/L	46.652	9.54%
QC value within limits for Pb 220.353	Recovery = 97.85%			
S 181.975 Axial†	302.9	964.03 µg/L	92.529	9.60%
QC value within limits for S 181.975 Axial	Recovery = 96.40%			
Sb 206.836†	539.7	483.78 µg/L	47.023	9.72%
QC value within limits for Sb 206.836	Recovery = 96.76%			
Se 196.026†	517.6	498.05 µg/L	42.745	8.58%
QC value within limits for Se 196.026	Recovery = 99.61%			
SiO2†	29237.1	5278.3 µg/L	303.76	5.75%
QC value within limits for SiO2	Recovery = 98.71%			
Si 251.611†	36308.8	2468.4 µg/L	140.53	5.69%
QC value within limits for Si 251.611	Recovery = 98.74%			
Sn 189.927†	1243.3	484.55 µg/L	59.551	12.29%
QC value within limits for Sn 189.927	Recovery = 96.91%			
Sr 421.552†	81744.1	485.96 µg/L	3.952	0.81%
QC value within limits for Sr 421.552	Recovery = 97.19%			
Ti 334.940†	208457.3	487.14 µg/L	23.470	4.82%
QC value within limits for Ti 334.940	Recovery = 97.43%			
Tl 190.801†	505.6	498.50 µg/L	33.301	6.68%
QC value within limits for Tl 190.801	Recovery = 99.70%			
U 409.014†	5421.8	491.31 µg/L	40.441	8.23%
QC value within limits for U 409.014	Recovery = 98.26%			
V 292.402†	41453.8	494.11 µg/L	36.590	7.41%
QC value within limits for V 292.402	Recovery = 98.82%			
Zn 213.857†	21542.4	492.51 µg/L	34.729	7.05%
QC value within limits for Zn 213.857	Recovery = 98.50%			

All analyte(s) passed QC.

Sequence No.: 5  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 14:50:26  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97547.7	97547.7	101 %		14:50:56
1	Al 396.153Radial†	-149.7	-29.2	-13.973 µg/L	-13.973 ppb	14:50:56
1	Ca 317.933Radial†	369.7	-18.5	-6.7321 µg/L	-6.7321 ppb	14:51:16
1	Fe 238.204 Radial†	13.5	1.4	16.924 µg/L	16.924 ppb	14:51:16
1	K 766.490 Radial†	498.1	8.9	4.1566 µg/L	4.1566 ppb	14:50:56
1	Mg 279.077 IEC†	11.8	3.8	49.563 µg/L	49.563 ppb	14:51:16
1	Na 589.592 Radial†	188.5	6.5	3.2264 µg/L	3.2264 ppb	14:50:56
1	Sr 421.552†	104.6	-35.7	-0.2120 µg/L	-0.2120 ppb	14:50:56
1	Sc 361.383	2086857.2	2086857.2	99.701 %		14:52:18
1	Y 371.029	1429226.5	1429226.5	99.746 %		14:52:18
1	Ag 328.068†	-536.8	-78.2	-0.6312 µg/L	-0.6312 ppb	14:52:24
1	As 188.979†	-1.4	1.9	2.7720 µg/L	2.7720 ppb	14:52:44
1	B 249.677†	300.3	1.8	0.0731 µg/L	0.0731 ppb	14:52:24
1	Ba 233.527†	1.3	9.8	0.2124 µg/L	0.2124 ppb	14:52:44
1	Be 313.107†	-1115.7	39.8	0.0233 µg/L	0.0233 ppb	14:52:24
1	Cd 226.502†	-174.2	-4.1	-0.1005 µg/L	-0.1005 ppb	14:52:44
1	Co 228.616†	51.4	3.5	0.1514 µg/L	0.1514 ppb	14:52:44
1	Cr 267.716†	70.7	-9.3	-0.2028 µg/L	-0.2028 ppb	14:52:24
1	Cu 324.752†	4402.6	39.1	0.2586 µg/L	0.2586 ppb	14:52:24
1	Mn 257.610†	-624.9	60.2	0.1786 µg/L	0.1786 ppb	14:52:44
1	Mo 202.031†	16.2	11.1	1.1017 µg/L	1.1017 ppb	14:52:44
1	Ni 231.604†	366.1	-9.7	-0.5435 µg/L	-0.5435 ppb	14:52:44
1	P 214.914†	267.2	-4.4	-7.3949 µg/L	-7.3949 ppb	14:52:44
1	Pb 220.353†	36.5	6.4	1.6946 µg/L	1.6946 ppb	14:52:44
1	S 181.975 Axial†	19.7	-2.8	-8.8508 µg/L	-8.8508 ppb	14:52:44
1	Sb 206.836†	27.9	5.2	4.6824 µg/L	4.6824 ppb	14:52:44
1	Se 196.026†	15.0	-12.3	-11.517 µg/L	-11.517 ppb	14:52:44
1	SiO2†	2691.1	-80.6	-14.546 µg/L	-14.546 ppb	14:52:24
1	Si 251.611†	417.6	-5.2	-0.3539 µg/L	-0.3539 ppb	14:52:44
1	Sn 189.927†	-2.8	4.6	1.8062 µg/L	1.8062 ppb	14:52:44
1	Ti 334.940†	-499.9	75.8	0.1733 µg/L	0.1733 ppb	14:52:24
1	Tl 190.801†	-29.6	4.4	4.2914 µg/L	4.2914 ppb	14:52:44
1	U 409.014†	-56.5	-50.9	-4.6213 µg/L	-4.6213 ppb	14:52:24
1	V 292.402†	51.2	-60.9	-0.7183 µg/L	-0.7183 ppb	14:52:24
1	Zn 213.857†	667.6	-339.3	-7.8125 µg/L	-7.8125 ppb	14:52:44
2	Sc RADIAL	97055.0	97055.0	100 %		14:51:22
2	Al 396.153Radial†	-121.6	-1.9	-0.9577 µg/L	-0.9577 ppb	14:51:22
2	Ca 317.933Radial†	380.0	-6.3	-2.2941 µg/L	-2.2941 ppb	14:51:42
2	Fe 238.204 Radial†	12.2	0.2	2.8206 µg/L	2.8206 ppb	14:51:42
2	K 766.490 Radial†	479.4	-7.3	-3.3854 µg/L	-3.3854 ppb	14:51:22
2	Mg 279.077 IEC†	4.7	-3.3	-43.939 µg/L	-43.939 ppb	14:51:42
2	Na 589.592 Radial†	181.4	0.3	0.1724 µg/L	0.1724 ppb	14:51:22
2	Sr 421.552†	140.8	1.0	0.0062 µg/L	0.0062 ppb	14:51:22
2	Sc 361.383	2077661.3	2077661.3	99.262 %		14:52:50
2	Y 371.029	1420720.2	1420720.2	99.152 %		14:52:50
2	Ag 328.068†	-539.7	-83.5	-0.6702 µg/L	-0.6702 ppb	14:52:56
2	As 188.979†	-4.4	-1.1	-1.6927 µg/L	-1.6927 ppb	14:53:16
2	B 249.677†	318.7	21.8	0.9863 µg/L	0.9863 ppb	14:52:56
2	Ba 233.527†	-0.8	7.6	0.1664 µg/L	0.1664 ppb	14:53:16
2	Be 313.107†	-1103.5	47.1	0.0276 µg/L	0.0276 ppb	14:52:56
2	Cd 226.502†	-174.3	-5.0	-0.1205 µg/L	-0.1205 ppb	14:53:16
2	Co 228.616†	39.5	-8.3	-0.3556 µg/L	-0.3556 ppb	14:53:16
2	Cr 267.716†	99.2	19.7	0.4278 µg/L	0.4278 ppb	14:52:56
2	Cu 324.752†	4429.3	85.6	0.5595 µg/L	0.5595 ppb	14:52:56
2	Mn 257.610†	-618.9	63.5	0.1939 µg/L	0.1939 ppb	14:53:16
2	Mo 202.031†	18.9	13.9	1.3776 µg/L	1.3776 ppb	14:53:16
2	Ni 231.604†	360.3	-14.0	-0.7820 µg/L	-0.7820 ppb	14:53:16
2	P 214.914†	269.9	-0.5	-0.8297 µg/L	-0.8297 ppb	14:53:16
2	Pb 220.353†	30.7	0.7	0.1922 µg/L	0.1922 ppb	14:53:16

2	S 181.975 Axial†	26.1	3.7	11.792 µg/L	11.792 ppb	14:53:16
2	Sb 206.836†	27.8	5.2	4.6869 µg/L	4.6869 ppb	14:53:16
2	Se 196.026†	19.4	-7.7	-7.2315 µg/L	-7.2315 ppb	14:53:16
2	SiO2†	2751.8	-7.5	-1.3548 µg/L	-1.3548 ppb	14:52:56
2	Si 251.611†	424.1	3.2	0.2163 µg/L	0.2163 ppb	14:53:16
2	Sn 189.927†	-8.0	-0.6	-0.2455 µg/L	-0.2455 ppb	14:53:16
2	Ti 334.940†	-505.5	68.0	0.1624 µg/L	0.1624 ppb	14:52:56
2	Tl 190.801†	-34.6	-0.7	-0.6733 µg/L	-0.6733 ppb	14:53:16
2	U 409.014†	49.2	55.3	5.0241 µg/L	5.0241 ppb	14:52:56
2	V 292.402†	116.8	5.3	0.0793 µg/L	0.0793 ppb	14:52:56
2	Zn 213.857†	675.8	-328.0	-7.5467 µg/L	-7.5467 ppb	14:53:16
3	Sc RADIAL	96786.0	96786.0	100.0 %		14:51:48
3	Al 396.153Radial†	-137.9	-18.6	-8.9198 µg/L	-8.9198 ppb	14:51:48
3	Ca 317.933Radial†	363.6	-21.7	-7.8937 µg/L	-7.8937 ppb	14:52:08
3	Fe 238.204 Radial†	12.5	0.5	6.4442 µg/L	6.4442 ppb	14:52:08
3	K 766.490 Radial†	483.8	-1.5	-0.7189 µg/L	-0.7189 ppb	14:51:48
3	Mg 279.077 IEC†	8.8	0.8	11.225 µg/L	11.225 ppb	14:52:08
3	Na 589.592 Radial†	196.1	15.5	7.7391 µg/L	7.7391 ppb	14:51:48
3	Sr 421.552†	118.2	-21.2	-0.1259 µg/L	-0.1259 ppb	14:51:48
3	Sc 361.383	2080927.0	2080927.0	99.418 %		14:53:22
3	Y 371.029	1422051.9	1422051.9	99.245 %		14:53:22
3	Ag 328.068†	-437.6	20.0	0.1568 µg/L	0.1568 ppb	14:53:28
3	As 188.979†	-1.2	2.1	3.0511 µg/L	3.0511 ppb	14:53:48
3	B 249.677†	334.6	37.2	1.6845 µg/L	1.6845 ppb	14:53:28
3	Ba 233.527†	-9.0	-0.6	-0.0141 µg/L	-0.0141 ppb	14:53:48
3	Be 313.107†	-996.4	156.6	0.0919 µg/L	0.0919 ppb	14:53:28
3	Cd 226.502†	-168.1	1.5	0.0357 µg/L	0.0357 ppb	14:53:48
3	Co 228.616†	44.1	-3.7	-0.1573 µg/L	-0.1573 ppb	14:53:48
3	Cr 267.716†	73.6	-6.2	-0.1347 µg/L	-0.1347 ppb	14:53:28
3	Cu 324.752†	4500.5	150.2	0.9823 µg/L	0.9823 ppb	14:53:28
3	Mn 257.610†	-632.9	50.3	0.1509 µg/L	0.1509 ppb	14:53:48
3	Mo 202.031†	21.3	16.3	1.6166 µg/L	1.6166 ppb	14:53:48
3	Ni 231.604†	368.0	-6.7	-0.3775 µg/L	-0.3775 ppb	14:53:48
3	P 214.914†	264.9	-5.9	-9.9023 µg/L	-9.9023 ppb	14:53:48
3	Pb 220.353†	40.1	10.2	2.6764 µg/L	2.6764 ppb	14:53:48
3	S 181.975 Axial†	23.2	0.8	2.5857 µg/L	2.5857 ppb	14:53:48
3	Sb 206.836†	27.2	4.6	4.1501 µg/L	4.1501 ppb	14:53:48
3	Se 196.026†	21.7	-5.5	-5.1181 µg/L	-5.1181 ppb	14:53:48
3	SiO2†	2703.6	-60.3	-10.883 µg/L	-10.883 ppb	14:53:28
3	Si 251.611†	427.3	5.7	0.3860 µg/L	0.3860 ppb	14:53:48
3	Sn 189.927†	-5.8	1.6	0.6373 µg/L	0.6373 ppb	14:53:48
3	Ti 334.940†	-460.4	114.2	0.2660 µg/L	0.2660 ppb	14:53:28
3	Tl 190.801†	-31.5	2.5	2.4208 µg/L	2.4208 ppb	14:53:48
3	U 409.014†	-18.3	-12.5	-1.1396 µg/L	-1.1396 ppb	14:53:28
3	V 292.402†	56.0	-56.0	-0.6512 µg/L	-0.6512 ppb	14:53:28
3	Zn 213.857†	676.9	-328.0	-7.5523 µg/L	-7.5523 ppb	14:53:48

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2081815.1	99.460 %	0.2227			0.22%
Sc RADIAL	97129.6	100 %	0.4			0.40%
Y 371.029	1423999.5	99.381 %	0.3193			0.32%
Ag 328.068†	-47.2	-0.3815 µg/L	0.46662	-0.3815 ppb	0.46662	122.31%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-16.6	-7.9500 µg/L	6.56148	-7.9500 ppb	6.56148	82.53%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.9	1.3768 µg/L	2.66191	1.3768 ppb	2.66191	193.35%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	20.3	0.9146 µg/L	0.80808	0.9146 ppb	0.80808	88.35%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.6	0.1216 µg/L	0.11974	0.1216 ppb	0.11974	98.48%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	81.2	0.0476 µg/L	0.03843	0.0476 ppb	0.03843	80.70%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-15.5	-5.6400 µg/L	2.95526	-5.6400 ppb	2.95526	52.40%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-2.5	-0.0618 µg/L	0.08498	-0.0618 ppb	0.08498	137.58%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.8	-0.1205 µg/L	0.25553	-0.1205 ppb	0.25553	212.04%

Cr	267.716†	1.4	0.0301 µg/L	0.34613	0.0301 ppb	0.34613	>999.9%
				QC value within limits for Co 228.616 Recovery = Not calculated			
Cu	324.752†	91.6	0.6002 µg/L	0.36356	0.6002 ppb	0.36356	60.58%
				QC value within limits for Cu 324.752 Recovery = Not calculated			
Fe	238.204 Radial†	0.7	8.7296 µg/L	7.32427	8.7296 ppb	7.32427	83.90%
				QC value within limits for Fe 238.204 Radial Recovery = Not calculated			
K	766.490 Radial†	0.0	0.0174 µg/L	3.82453	0.0174 ppb	3.82453	>999.9%
				QC value within limits for K 766.490 Radial Recovery = Not calculated			
Mg	279.077 IEC†	0.4	5.6161 µg/L	47.00261	5.6161 ppb	47.00261	836.93%
				QC value within limits for Mg 279.077 IEC Recovery = Not calculated			
Mn	257.610†	58.0	0.1745 µg/L	0.02178	0.1745 ppb	0.02178	12.48%
				QC value within limits for Mn 257.610 Recovery = Not calculated			
Mo	202.031†	13.8	1.3653 µg/L	0.25767	1.3653 ppb	0.25767	18.87%
				QC value within limits for Mo 202.031 Recovery = Not calculated			
Na	589.592 Radial†	7.4	3.7126 µg/L	3.80675	3.7126 ppb	3.80675	102.53%
				QC value within limits for Na 589.592 Radial Recovery = Not calculated			
Ni	231.604†	-10.1	-0.5677 µg/L	0.20335	-0.5677 ppb	0.20335	35.82%
				QC value within limits for Ni 231.604 Recovery = Not calculated			
P	214.914†	-3.6	-6.0423 µg/L	4.68511	-6.0423 ppb	4.68511	77.54%
				QC value within limits for P 214.914 Recovery = Not calculated			
Pb	220.353†	5.8	1.5211 µg/L	1.25115	1.5211 ppb	1.25115	82.25%
				QC value within limits for Pb 220.353 Recovery = Not calculated			
S	181.975 Axial†	0.6	1.8421 µg/L	10.34123	1.8421 ppb	10.34123	561.37%
				QC value within limits for S 181.975 Axial Recovery = Not calculated			
Sb	206.836†	5.0	4.5065 µg/L	0.30863	4.5065 ppb	0.30863	6.85%
				QC value within limits for Sb 206.836 Recovery = Not calculated			
Se	196.026†	-8.5	-7.9556 µg/L	3.26035	-7.9556 ppb	3.26035	40.98%
				QC value within limits for Se 196.026 Recovery = Not calculated			
SiO2†		-49.5	-8.9278 µg/L	6.80936	-8.9278 ppb	6.80936	76.27%
				QC value within limits for SiO2 Recovery = Not calculated			
Si	251.611†	1.2	0.0828 µg/L	0.38757	0.0828 ppb	0.38757	468.24%
				QC value within limits for Si 251.611 Recovery = Not calculated			
Sn	189.927†	1.9	0.7327 µg/L	1.02917	0.7327 ppb	1.02917	140.47%
				QC value within limits for Sn 189.927 Recovery = Not calculated			
Sr	421.552†	-18.6	-0.1106 µg/L	0.10987	-0.1106 ppb	0.10987	99.38%
				QC value within limits for Sr 421.552 Recovery = Not calculated			
Ti	334.940†	86.0	0.2006 µg/L	0.05693	0.2006 ppb	0.05693	28.38%
				QC value within limits for Ti 334.940 Recovery = Not calculated			
Tl	190.801†	2.1	2.0129 µg/L	2.50739	2.0129 ppb	2.50739	124.56%
				QC value within limits for Tl 190.801 Recovery = Not calculated			
U	409.014†	-2.7	-0.2456 µg/L	4.88446	-0.2456 ppb	4.88446	>999.9%
				QC value within limits for U 409.014 Recovery = Not calculated			
V	292.402†	-37.2	-0.4301 µg/L	0.44240	-0.4301 ppb	0.44240	102.87%
				QC value within limits for V 292.402 Recovery = Not calculated			
Zn	213.857†	-331.7	-7.6372 µg/L	0.15187	-7.6372 ppb	0.15187	1.99%
				QC value within limits for Zn 213.857 Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 15:15:22

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99922.9	99922.9	103 %		15:15:55
1	Al 396.153Radial†	10271.4	10068.4	4795.9 µg/L	4795.9 ppb	15:15:55
1	Ca 317.933Radial†	14072.7	13245.9	4820.5 µg/L	4820.5 ppb	15:15:55
1	Fe 238.204 Radial†	433.2	407.6	4831.8 µg/L	4831.8 ppb	15:16:16
1	K 766.490 Radial†	11078.1	10245.2	4781.3 µg/L	4781.3 ppb	15:15:55
1	Mg 279.077 IEC†	387.5	367.4	4846.7 µg/L	4846.7 ppb	15:16:16
1	Na 589.592 Radial†	20537.0	19712.2	9838.4 µg/L	9838.4 ppb	15:15:55
1	Sr 421.552†	84636.8	81842.3	486.54 µg/L	486.54 ppb	15:15:55
1	Sc 361.383	2120503.0	2120503.0	101.31 %		15:17:20
1	Y 371.029	1447741.8	1447741.8	101.04 %		15:17:20
1	Ag 328.068†	60931.6	60604.7	490.26 µg/L	490.26 ppb	15:17:25
1	As 188.979†	348.5	347.3	511.11 µg/L	511.11 ppb	15:17:46
1	B 249.677†	11168.5	10724.8	484.99 µg/L	484.99 ppb	15:17:25
1	Ba 233.527†	22741.8	22456.5	492.01 µg/L	492.01 ppb	15:17:25
1	Be 313.107†	845424.2	835661.0	490.81 µg/L	490.81 ppb	15:17:20
1	Cd 226.502†	20831.1	20732.6	492.77 µg/L	492.77 ppb	15:17:25
1	Co 228.616†	11718.9	11519.5	494.34 µg/L	494.34 ppb	15:17:25
1	Cr 267.716†	23264.3	22883.5	498.01 µg/L	498.01 ppb	15:17:25
1	Cu 324.752†	81115.9	75691.3	495.29 µg/L	495.29 ppb	15:17:25
1	Mn 257.610†	167386.2	165910.8	498.60 µg/L	498.60 ppb	15:17:20
1	Mo 202.031†	5221.9	5149.3	509.71 µg/L	509.71 ppb	15:17:46
1	Ni 231.604†	9272.9	8776.2	491.71 µg/L	491.71 ppb	15:17:25
1	P 214.914†	1818.2	1522.3	2480.3 µg/L	2480.3 ppb	15:17:46
1	Pb 220.353†	1967.3	1911.7	501.81 µg/L	501.81 ppb	15:17:46
1	S 181.975 Axial†	336.4	309.5	984.90 µg/L	984.90 ppb	15:17:46
1	Sb 206.836†	587.1	556.8	499.36 µg/L	499.36 ppb	15:17:46
1	Se 196.026†	563.2	528.6	508.06 µg/L	508.06 ppb	15:17:46
1	SiO2†	32357.2	29159.5	5264.3 µg/L	5264.3 ppb	15:17:25
1	Si 251.611†	37104.2	36200.8	2461.1 µg/L	2461.1 ppb	15:17:25
1	Sn 189.927†	1306.7	1297.3	505.54 µg/L	505.54 ppb	15:17:46
1	Ti 334.940†	211614.7	209458.2	489.49 µg/L	489.49 ppb	15:17:20
1	Tl 190.801†	486.2	514.0	506.73 µg/L	506.73 ppb	15:17:46
1	U 409.014†	5546.0	5480.2	496.63 µg/L	496.63 ppb	15:17:25
1	V 292.402†	42541.4	41879.5	499.33 µg/L	499.33 ppb	15:17:25
1	Zn 213.857†	22910.7	21605.9	493.98 µg/L	493.98 ppb	15:17:25
2	Sc RADIAL	100127.6	100127.6	103 %		15:16:21
2	Al 396.153Radial†	10275.5	10052.1	4788.2 µg/L	4788.2 ppb	15:16:21
2	Ca 317.933Radial†	14104.7	13249.0	4821.6 µg/L	4821.6 ppb	15:16:21
2	Fe 238.204 Radial†	438.1	411.5	4877.7 µg/L	4877.7 ppb	15:16:42
2	K 766.490 Radial†	11126.3	10269.9	4792.8 µg/L	4792.8 ppb	15:16:21
2	Mg 279.077 IEC†	394.9	373.8	4930.9 µg/L	4930.9 ppb	15:16:42
2	Na 589.592 Radial†	20578.8	19711.9	9838.3 µg/L	9838.3 ppb	15:16:21
2	Sr 421.552†	84624.1	81662.5	485.47 µg/L	485.47 ppb	15:16:21
2	Sc 361.383	2096292.7	2096292.7	100.15 %		15:17:53
2	Y 371.029	1430240.6	1430240.6	99.816 %		15:17:53
2	Ag 328.068†	61186.5	61553.8	497.93 µg/L	497.93 ppb	15:17:59
2	As 188.979†	339.7	342.4	503.96 µg/L	503.96 ppb	15:18:19
2	B 249.677†	11194.1	10877.7	491.92 µg/L	491.92 ppb	15:17:59
2	Ba 233.527†	22805.4	22779.2	499.09 µg/L	499.09 ppb	15:17:59
2	Be 313.107†	838460.9	838346.1	492.39 µg/L	492.39 ppb	15:17:53
2	Cd 226.502†	20927.3	21066.1	500.70 µg/L	500.70 ppb	15:17:59
2	Co 228.616†	11703.4	11637.5	499.40 µg/L	499.40 ppb	15:17:59
2	Cr 267.716†	23345.7	23230.0	505.55 µg/L	505.55 ppb	15:17:59
2	Cu 324.752†	81302.6	76802.4	502.56 µg/L	502.56 ppb	15:17:59
2	Mn 257.610†	166032.9	166467.7	500.27 µg/L	500.27 ppb	15:17:53
2	Mo 202.031†	5132.8	5119.9	506.81 µg/L	506.81 ppb	15:18:19
2	Ni 231.604†	9311.1	8920.1	499.77 µg/L	499.77 ppb	15:17:59
2	P 214.914†	1778.1	1503.0	2447.5 µg/L	2447.5 ppb	15:18:19
2	Pb 220.353†	1953.8	1920.7	504.13 µg/L	504.13 ppb	15:18:19

2	S 181.975 Axial†	334.2	311.1	990.09 µg/L	990.09 ppb	15:18:19
2	Sb 206.836†	578.6	555.0	497.54 µg/L	497.54 ppb	15:18:19
2	Se 196.026†	560.8	532.6	511.91 µg/L	511.91 ppb	15:18:19
2	SiO2†	32338.5	29509.6	5327.5 µg/L	5327.5 ppb	15:17:59
2	Si 251.611†	37284.9	36804.2	2502.1 µg/L	2502.1 ppb	15:17:59
2	Sn 189.927†	1294.0	1299.4	506.38 µg/L	506.38 ppb	15:18:19
2	Ti 334.940†	210114.0	210372.0	491.62 µg/L	491.62 ppb	15:17:53
2	Tl 190.801†	476.2	509.6	502.42 µg/L	502.42 ppb	15:18:19
2	U 409.014†	5554.5	5551.9	503.13 µg/L	503.13 ppb	15:17:59
2	V 292.402†	42704.3	42527.1	506.97 µg/L	506.97 ppb	15:17:59
2	Zn 213.857†	23020.3	21976.5	502.46 µg/L	502.46 ppb	15:17:59
3	Sc RADIAL	100973.8	100973.8	104 %		15:16:47
3	Al 396.153Radial†	10356.6	10046.6	4787.3 µg/L	4787.3 ppb	15:16:47
3	Ca 317.933Radial†	14208.5	13234.3	4816.2 µg/L	4816.2 ppb	15:16:47
3	Fe 238.204 Radial†	438.6	408.5	4840.9 µg/L	4840.9 ppb	15:17:08
3	K 766.490 Radial†	11175.0	10226.4	4772.5 µg/L	4772.5 ppb	15:16:47
3	Mg 279.077 IEC†	389.2	365.1	4815.1 µg/L	4815.1 ppb	15:17:08
3	Na 589.592 Radial†	20628.4	19592.7	9778.8 µg/L	9778.8 ppb	15:16:47
3	Sr 421.552†	85323.4	81647.2	485.38 µg/L	485.38 ppb	15:16:47
3	Sc 361.383	2099637.5	2099637.5	100.31 %		15:18:26
3	Y 371.029	1433165.2	1433165.2	100.02 %		15:18:26
3	Ag 328.068†	57070.6	57353.3	463.83 µg/L	463.83 ppb	15:18:32
3	As 188.979†	288.6	291.0	428.09 µg/L	428.09 ppb	15:18:52
3	B 249.677†	10398.9	10067.2	455.04 µg/L	455.04 ppb	15:18:32
3	Ba 233.527†	20731.1	20675.1	452.97 µg/L	452.97 ppb	15:18:32
3	Be 313.107†	776465.5	775209.8	455.31 µg/L	455.31 ppb	15:18:26
3	Cd 226.502†	18808.1	18920.2	449.64 µg/L	449.64 ppb	15:18:32
3	Co 228.616†	10500.5	10419.8	447.09 µg/L	447.09 ppb	15:18:32
3	Cr 267.716†	20224.9	20081.7	437.04 µg/L	437.04 ppb	15:18:32
3	Cu 324.752†	73337.0	68732.2	449.84 µg/L	449.84 ppb	15:18:32
3	Mn 257.610†	154562.0	154768.3	465.11 µg/L	465.11 ppb	15:18:26
3	Mo 202.031†	4257.3	4238.9	419.63 µg/L	419.63 ppb	15:18:52
3	Ni 231.604†	8367.4	7964.5	446.24 µg/L	446.24 ppb	15:18:32
3	P 214.914†	1549.8	1272.6	2069.1 µg/L	2069.1 ppb	15:18:52
3	Pb 220.353†	1683.8	1648.4	432.63 µg/L	432.63 ppb	15:18:52
3	S 181.975 Axial†	292.8	269.4	857.23 µg/L	857.23 ppb	15:18:52
3	Sb 206.836†	506.9	482.6	432.38 µg/L	432.38 ppb	15:18:52
3	Se 196.026†	491.5	462.6	446.15 µg/L	446.15 ppb	15:18:52
3	SiO2†	29973.8	27100.9	4892.7 µg/L	4892.7 ppb	15:18:32
3	Si 251.611†	34271.6	33741.0	2293.8 µg/L	2293.8 ppb	15:18:32
3	Sn 189.927†	1060.9	1065.0	415.11 µg/L	415.11 ppb	15:18:52
3	Ti 334.940†	193256.2	193232.5	451.55 µg/L	451.55 ppb	15:18:26
3	Tl 190.801†	431.7	464.5	457.99 µg/L	457.99 ppb	15:18:52
3	U 409.014†	4922.7	4913.2	445.14 µg/L	445.14 ppb	15:18:32
3	V 292.402†	37916.3	37686.1	448.95 µg/L	448.95 ppb	15:18:32
3	Zn 213.857†	20707.4	19634.2	448.86 µg/L	448.86 ppb	15:18:32

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2105477.7	100.59 %	0.627			0.62%
Sc RADIAL	100341.4	104 %	0.6			0.56%
Y 371.029	1437049.2	100.29 %	0.654			0.65%
Ag 328.068†	59837.3	484.01 µg/L	17.893	484.01 ppb	17.893	3.70%
QC value within limits for Ag 328.068 Recovery = 96.80%						
Al 396.153Radial†	10055.7	4790.5 µg/L	4.72	4790.5 ppb	4.72	0.10%
QC value within limits for Al 396.153Radial Recovery = 95.81%						
As 188.979†	326.9	481.06 µg/L	46.007	481.06 ppb	46.007	9.56%
QC value within limits for As 188.979 Recovery = 96.21%						
B 249.677†	10556.6	477.32 µg/L	19.597	477.32 ppb	19.597	4.11%
QC value within limits for B 249.677 Recovery = 95.46%						
Ba 233.527†	21970.3	481.36 µg/L	24.839	481.36 ppb	24.839	5.16%
QC value within limits for Ba 233.527 Recovery = 96.27%						
Be 313.107†	816405.7	479.50 µg/L	20.968	479.50 ppb	20.968	4.37%
QC value within limits for Be 313.107 Recovery = 95.90%						
Ca 317.933Radial†	13243.1	4819.4 µg/L	2.83	4819.4 ppb	2.83	0.06%
QC value within limits for Ca 317.933Radial Recovery = 96.39%						
Cd 226.502†	20239.6	481.04 µg/L	27.477	481.04 ppb	27.477	5.71%
QC value within limits for Cd 226.502 Recovery = 96.21%						
Co 228.616†	11192.3	480.28 µg/L	28.851	480.28 ppb	28.851	6.01%

Cr	267.716†	22065.1	480.20 µg/L	37.566	480.20 ppb	37.566	7.82%
Cu	324.752†	73742.0	482.56 µg/L	28.571	482.56 ppb	28.571	5.92%
Fe	238.204 Radial†	409.2	4850.1 µg/L	24.30	4850.1 ppb	24.30	0.50%
K	766.490 Radial†	10247.2	4782.2 µg/L	10.17	4782.2 ppb	10.17	0.21%
Mg	279.077 IEC†	368.8	4864.2 µg/L	59.81	4864.2 ppb	59.81	1.23%
Mn	257.610†	162382.3	487.99 µg/L	19.833	487.99 ppb	19.833	4.06%
Mo	202.031†	4836.0	478.72 µg/L	51.190	478.72 ppb	51.190	10.69%
Na	589.592 Radial†	19672.3	9818.5 µg/L	34.38	9818.5 ppb	34.38	0.35%
Ni	231.604†	8553.6	479.24 µg/L	28.864	479.24 ppb	28.864	6.02%
P	214.914†	1432.6	2332.3 µg/L	228.52	2332.3 ppb	228.52	9.80%
Pb	220.353†	1826.9	479.52 µg/L	40.628	479.52 ppb	40.628	8.47%
S	181.975 Axial†	296.6	944.08 µg/L	75.252	944.08 ppb	75.252	7.97%
Sb	206.836†	531.5	476.43 µg/L	38.155	476.43 ppb	38.155	8.01%
Se	196.026†	507.9	488.71 µg/L	36.909	488.71 ppb	36.909	7.55%
SiO2†		28590.0	5161.5 µg/L	234.95	5161.5 ppb	234.95	4.55%
Si	251.611†	35582.0	2419.0 µg/L	110.31	2419.0 ppb	110.31	4.56%
Sn	189.927†	1220.6	475.68 µg/L	52.454	475.68 ppb	52.454	11.03%
Sr	421.552†	81717.3	485.80 µg/L	0.645	485.80 ppb	0.645	0.13%
Ti	334.940†	204354.2	477.55 µg/L	22.545	477.55 ppb	22.545	4.72%
Tl	190.801†	496.0	489.05 µg/L	26.983	489.05 ppb	26.983	5.52%
U	409.014†	5315.1	481.63 µg/L	31.768	481.63 ppb	31.768	6.60%
V	292.402†	40697.6	485.08 µg/L	31.529	485.08 ppb	31.529	6.50%
Zn	213.857†	21072.2	481.76 µg/L	28.812	481.76 ppb	28.812	5.98%

QC value within limits for Co 228.616 Recovery = 96.06%

QC value within limits for Cr 267.716 Recovery = 96.04%

QC value within limits for Cu 324.752 Recovery = 96.51%

QC value within limits for Fe 238.204 Radial Recovery = 97.00%

QC value within limits for K 766.490 Radial Recovery = 95.64%

QC value within limits for Mg 279.077 IEC Recovery = 97.28%

QC value within limits for Mn 257.610 Recovery = 97.60%

QC value within limits for Mo 202.031 Recovery = 95.74%

QC value within limits for Na 589.592 Radial Recovery = 98.19%

QC value within limits for Ni 231.604 Recovery = 95.85%

QC value within limits for P 214.914 Recovery = 93.29%

QC value within limits for Pb 220.353 Recovery = 95.90%

QC value within limits for S 181.975 Axial Recovery = 94.41%

QC value within limits for Sb 206.836 Recovery = 95.29%

QC value within limits for Se 196.026 Recovery = 97.74%

QC value within limits for SiO2 Recovery = 96.52%

QC value within limits for Si 251.611 Recovery = 96.76%

QC value within limits for Sn 189.927 Recovery = 95.14%

QC value within limits for Sr 421.552 Recovery = 97.16%

QC value within limits for Ti 334.940 Recovery = 95.51%

QC value within limits for Tl 190.801 Recovery = 97.81%

QC value within limits for U 409.014 Recovery = 96.33%

QC value within limits for V 292.402 Recovery = 97.02%

QC value within limits for Zn 213.857 Recovery = 96.35%

All analyte(s) passed QC.

Sequence No.: 13

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 15:19:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Conc. Units	Sample	Analysis Time
1	Sc RADIAL	101273.1	101273.1	105 %				15:19:32
1	Al 396.153Radial†	-125.9	-1.0	-0.5166 µg/L		-0.5166 ppb		15:19:32
1	Ca 317.933Radial†	379.9	-22.2	-8.0940 µg/L		-8.0940 ppb		15:19:52
1	Fe 238.204 Radial†	14.2	1.6	19.469 µg/L		19.469 ppb		15:19:52
1	K 766.490 Radial†	435.5	-69.2	-32.277 µg/L		-32.277 ppb		15:19:32
1	Mg 279.077 IEC†	6.0	-2.2	-29.120 µg/L		-29.120 ppb		15:19:52
1	Na 589.592 Radial†	241.5	50.2	25.063 µg/L		25.063 ppb		15:19:32
1	Sr 421.552†	102.6	-41.3	-0.2457 µg/L		-0.2457 ppb		15:19:32
1	Sc 361.383	2096378.6	2096378.6	100.16 %				15:20:54
1	Y 371.029	1434737.4	1434737.4	100.13 %				15:20:54
1	Ag 328.068†	-497.8	-36.8	-0.2981 µg/L		-0.2981 ppb		15:21:00
1	As 188.979†	1.7	4.9	7.2616 µg/L		7.2616 ppb		15:21:20
1	B 249.677†	328.7	28.8	1.2969 µg/L		1.2969 ppb		15:21:00
1	Ba 233.527†	-3.8	4.6	0.0990 µg/L		0.0990 ppb		15:21:20
1	Be 313.107†	-1021.6	138.8	0.0815 µg/L		0.0815 ppb		15:21:00
1	Cd 226.502†	-154.7	16.1	0.3799 µg/L		0.3799 ppb		15:21:20
1	Co 228.616†	40.4	-7.7	-0.3309 µg/L		-0.3309 ppb		15:21:20
1	Cr 267.716†	47.8	-32.5	-0.7074 µg/L		-0.7074 ppb		15:21:00
1	Cu 324.752†	4345.1	-38.3	-0.2466 µg/L		-0.2466 ppb		15:21:00
1	Mn 257.610†	-618.7	69.2	0.2112 µg/L		0.2112 ppb		15:21:20
1	Mo 202.031†	23.5	18.4	1.8197 µg/L		1.8197 ppb		15:21:20
1	Ni 231.604†	365.5	-11.9	-0.6687 µg/L		-0.6687 ppb		15:21:20
1	P 214.914†	264.3	-8.5	-14.144 µg/L		-14.144 ppb		15:21:20
1	Pb 220.353†	21.5	-8.7	-2.2740 µg/L		-2.2740 ppb		15:21:20
1	S 181.975 Axial†	22.8	0.2	0.6761 µg/L		0.6761 ppb		15:21:20
1	Sb 206.836†	30.6	7.9	7.0486 µg/L		7.0486 ppb		15:21:20
1	Se 196.026†	19.1	-8.3	-7.6821 µg/L		-7.6821 ppb		15:21:20
1	SiO2†	2666.6	-117.3	-21.170 µg/L		-21.170 ppb		15:21:00
1	Si 251.611†	415.9	-8.9	-0.6040 µg/L		-0.6040 ppb		15:21:20
1	Sn 189.927†	-7.6	-0.1	-0.0414 µg/L		-0.0414 ppb		15:21:20
1	Ti 334.940†	-440.8	137.1	0.3229 µg/L		0.3229 ppb		15:21:00
1	Tl 190.801†	-28.8	5.4	5.2646 µg/L		5.2646 ppb		15:21:20
1	U 409.014†	4.8	10.6	0.9567 µg/L		0.9567 ppb		15:21:00
1	V 292.402†	56.0	-56.4	-0.6551 µg/L		-0.6551 ppb		15:21:00
1	Zn 213.857†	672.9	-337.0	-7.7546 µg/L		-7.7546 ppb		15:21:20
2	Sc RADIAL	101341.2	101341.2	105 %				15:19:58
2	Al 396.153Radial†	-134.2	-8.9	-4.2893 µg/L		-4.2893 ppb		15:19:58
2	Ca 317.933Radial†	384.4	-18.1	-6.5959 µg/L		-6.5959 ppb		15:20:18
2	Fe 238.204 Radial†	13.9	1.3	15.131 µg/L		15.131 ppb		15:20:18
2	K 766.490 Radial†	481.8	-25.2	-11.744 µg/L		-11.744 ppb		15:19:58
2	Mg 279.077 IEC†	7.4	-1.0	-12.637 µg/L		-12.637 ppb		15:20:18
2	Na 589.592 Radial†	221.7	31.2	15.568 µg/L		15.568 ppb		15:19:58
2	Sr 421.552†	147.5	1.4	0.0085 µg/L		0.0085 ppb		15:19:58
2	Sc 361.383	2085947.6	2085947.6	99.658 %				15:21:26
2	Y 371.029	1427335.5	1427335.5	99.614 %				15:21:26
2	Ag 328.068†	-489.2	-30.7	-0.2478 µg/L		-0.2478 ppb		15:21:32
2	As 188.979†	-4.9	-1.7	-2.4564 µg/L		-2.4564 ppb		15:21:52
2	B 249.677†	288.7	-9.7	-0.4478 µg/L		-0.4478 ppb		15:21:32
2	Ba 233.527†	-5.8	2.6	0.0562 µg/L		0.0562 ppb		15:21:52
2	Be 313.107†	-1022.7	132.7	0.0778 µg/L		0.0778 ppb		15:21:32
2	Cd 226.502†	-172.3	-2.3	-0.0572 µg/L		-0.0572 ppb		15:21:52
2	Co 228.616†	37.6	-10.3	-0.4409 µg/L		-0.4409 ppb		15:21:52
2	Cr 267.716†	69.3	-10.7	-0.2328 µg/L		-0.2328 ppb		15:21:32
2	Cu 324.752†	4425.1	63.6	0.4185 µg/L		0.4185 ppb		15:21:32
2	Mn 257.610†	-630.2	54.6	0.1658 µg/L		0.1658 ppb		15:21:52
2	Mo 202.031†	24.7	19.7	1.9466 µg/L		1.9466 ppb		15:21:52
2	Ni 231.604†	356.3	-19.4	-1.0864 µg/L		-1.0864 ppb		15:21:52
2	P 214.914†	269.3	-2.2	-3.5731 µg/L		-3.5731 ppb		15:21:52
2	Pb 220.353†	38.4	8.4	2.1901 µg/L		2.1901 ppb		15:21:52



2	S 181.975 Axial†	22.4	-0.0	-0.0824 µg/L	-0.0824 ppb	15:21:52
2	Sb 206.836†	30.5	7.8	7.0283 µg/L	7.0283 ppb	15:21:52
2	Se 196.026†	19.8	-7.5	-6.9805 µg/L	-6.9805 ppb	15:21:52
2	SiO2†	2718.0	-52.4	-9.4558 µg/L	-9.4558 ppb	15:21:32
2	Si 251.611†	411.4	-11.3	-0.7694 µg/L	-0.7694 ppb	15:21:52
2	Sn 189.927†	2.3	9.7	3.7860 µg/L	3.7860 ppb	15:21:52
2	Ti 334.940†	-454.3	121.4	0.2847 µg/L	0.2847 ppb	15:21:32
2	Tl 190.801†	-23.9	10.1	9.8677 µg/L	9.8677 ppb	15:21:52
2	U 409.014†	59.2	65.2	5.9166 µg/L	5.9166 ppb	15:21:32
2	V 292.402†	81.9	-30.1	-0.3365 µg/L	-0.3365 ppb	15:21:32
2	Zn 213.857†	665.2	-341.4	-7.8561 µg/L	-7.8561 ppb	15:21:52
3	Sc RADIAL	101508.0	101508.0	105 %		15:20:24
3	Al 396.153Radial†	-131.2	-5.8	-2.8214 µg/L	-2.8214 ppb	15:20:24
3	Ca 317.933Radial†	393.8	-9.8	-3.5524 µg/L	-3.5524 ppb	15:20:44
3	Fe 238.204 Radial†	12.7	0.1	1.4170 µg/L	1.4170 ppb	15:20:44
3	K 766.490 Radial†	458.1	-48.5	-22.647 µg/L	-22.647 ppb	15:20:24
3	Mg 279.077 IEC†	4.2	-4.0	-52.777 µg/L	-52.777 ppb	15:20:44
3	Na 589.592 Radial†	218.2	27.5	13.707 µg/L	13.707 ppb	15:20:24
3	Sr 421.552†	139.5	-6.4	-0.0380 µg/L	-0.0380 ppb	15:20:24
3	Sc 361.383	2118833.1	2118833.1	101.23 %		15:21:58
3	Y 371.029	1449748.8	1449748.8	101.18 %		15:21:58
3	Ag 328.068†	-508.4	-42.0	-0.3404 µg/L	-0.3404 ppb	15:22:04
3	As 188.979†	-0.9	2.3	3.4165 µg/L	3.4165 ppb	15:22:25
3	B 249.677†	297.9	-5.1	-0.2316 µg/L	-0.2316 ppb	15:22:04
3	Ba 233.527†	-8.0	0.5	0.0094 µg/L	0.0094 ppb	15:22:25
3	Be 313.107†	-1075.9	96.0	0.0563 µg/L	0.0563 ppb	15:22:04
3	Cd 226.502†	-165.6	7.0	0.1662 µg/L	0.1662 ppb	15:22:25
3	Co 228.616†	42.1	-6.5	-0.2757 µg/L	-0.2757 ppb	15:22:25
3	Cr 267.716†	67.6	-13.5	-0.2930 µg/L	-0.2930 ppb	15:22:04
3	Cu 324.752†	4436.8	6.3	0.0412 µg/L	0.0412 ppb	15:22:04
3	Mn 257.610†	-622.1	72.4	0.2213 µg/L	0.2213 ppb	15:22:25
3	Mo 202.031†	30.3	24.8	2.4526 µg/L	2.4526 ppb	15:22:25
3	Ni 231.604†	373.3	-8.1	-0.4541 µg/L	-0.4541 ppb	15:22:25
3	P 214.914†	266.3	-9.3	-15.478 µg/L	-15.478 ppb	15:22:25
3	Pb 220.353†	25.2	-5.3	-1.3747 µg/L	-1.3747 ppb	15:22:25
3	S 181.975 Axial†	21.8	-1.0	-3.1695 µg/L	-3.1695 ppb	15:22:25
3	Sb 206.836†	27.9	4.8	4.3400 µg/L	4.3400 ppb	15:22:25
3	Se 196.026†	20.6	-7.0	-6.5418 µg/L	-6.5418 ppb	15:22:25
3	SiO2†	2720.2	-92.6	-16.710 µg/L	-16.710 ppb	15:22:04
3	Si 251.611†	417.1	-12.0	-0.8170 µg/L	-0.8170 ppb	15:22:25
3	Sn 189.927†	1.4	8.8	3.4358 µg/L	3.4358 ppb	15:22:25
3	Ti 334.940†	-427.2	155.2	0.3670 µg/L	0.3670 ppb	15:22:04
3	Tl 190.801†	-33.0	1.6	1.5267 µg/L	1.5267 ppb	15:22:25
3	U 409.014†	-5.9	-0.0	-0.0033 µg/L	-0.0033 ppb	15:22:04
3	V 292.402†	72.8	-40.4	-0.4587 µg/L	-0.4587 ppb	15:22:04
3	Zn 213.857†	670.0	-347.0	-7.9848 µg/L	-7.9848 ppb	15:22:25

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2100386.5	100.35 %	0.803			0.80%
Sc RADIAL	101374.1	105 %	0.1			0.12%
Y 371.029	1437273.9	100.31 %	0.797			0.79%
Ag 328.068†	-36.5	-0.2954 µg/L	0.04633	-0.2954 ppb	0.04633	15.68%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-5.2	-2.5424 µg/L	1.90175	-2.5424 ppb	1.90175	74.80%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.9	2.7406 µg/L	4.89412	2.7406 ppb	4.89412	178.58%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	4.7	0.2058 µg/L	0.95107	0.2058 ppb	0.95107	462.06%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.6	0.0549 µg/L	0.04482	0.0549 ppb	0.04482	81.65%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	122.5	0.0719 µg/L	0.01362	0.0719 ppb	0.01362	18.95%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-16.7	-6.0808 µg/L	2.31421	-6.0808 ppb	2.31421	38.06%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.9	0.1630 µg/L	0.21855	0.1630 ppb	0.21855	134.08%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-8.2	-0.3492 µg/L	0.08411	-0.3492 ppb	0.08411	24.09%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-18.9	-0.4111 µg/L	0.25842	-0.4111 ppb	0.25842 62.87%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	10.5	0.0710 µg/L	0.33355	0.0710 ppb	0.33355 469.64%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	1.0	12.006 µg/L	9.4229	12.006 ppb	9.4229 78.49%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-47.6	-22.223 µg/L	10.2730	-22.223 ppb	10.2730 46.23%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	-2.4	-31.511 µg/L	20.1763	-31.511 ppb	20.1763 64.03%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	65.4	0.1994 µg/L	0.02954	0.1994 ppb	0.02954 14.81%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	20.9	2.0730 µg/L	0.33488	2.0730 ppb	0.33488 16.15%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	36.3	18.113 µg/L	6.0908	18.113 ppb	6.0908 33.63%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	-13.1	-0.7364 µg/L	0.32155	-0.7364 ppb	0.32155 43.67%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	-6.7	-11.065 µg/L	6.5221	-11.065 ppb	6.5221 58.95%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	-1.9	-0.4862 µg/L	2.36099	-0.4862 ppb	2.36099 485.62%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-0.3	-0.8586 µg/L	2.03688	-0.8586 ppb	2.03688 237.23%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	6.8	6.1390 µg/L	1.55796	6.1390 ppb	1.55796 25.38%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-7.6	-7.0681 µg/L	0.57517	-7.0681 ppb	0.57517 8.14%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	-87.4	-15.779 µg/L	5.9126	-15.779 ppb	5.9126 37.47%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	-10.7	-0.7302 µg/L	0.11179	-0.7302 ppb	0.11179 15.31%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	6.1	2.3935 µg/L	2.11591	2.3935 ppb	2.11591 88.40%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	-15.4	-0.0917 µg/L	0.13537	-0.0917 ppb	0.13537 147.58%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	137.9	0.3249 µg/L	0.04121	0.3249 ppb	0.04121 12.68%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	5.7	5.5530 µg/L	4.17795	5.5530 ppb	4.17795 75.24%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	25.2	2.2900 µg/L	3.17718	2.2900 ppb	3.17718 138.74%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-42.3	-0.4834 µg/L	0.16071	-0.4834 ppb	0.16071 33.24%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-341.8	-7.8652 µg/L	0.11537	-7.8652 ppb	0.11537 1.47%
	QC value within limits for Zn 213.857 Recovery = Not calculated				

All analyte(s) passed QC.

Sequence No.: 23

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 15:54:30

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97233.7	97233.7	100 %			15:55:03
1	Al 396.153Radial†	10457.9	10529.3	5015.3 µg/L		5015.3 ppb	15:55:03
1	Ca 317.933Radial†	14215.3	13764.9	5009.3 µg/L		5009.3 ppb	15:55:03
1	Fe 238.204 Radial†	439.0	425.0	5038.1 µg/L		5038.1 ppb	15:55:24
1	K 766.490 Radial†	11244.9	10708.0	4997.2 µg/L		4997.2 ppb	15:55:03
1	Mg 279.077 IEC†	394.5	384.7	5075.6 µg/L		5075.6 ppb	15:55:24
1	Na 589.592 Radial†	20511.4	20236.9	10100 µg/L		10100 ppb	15:55:03
1	Sr 421.552†	85322.8	84792.6	504.08 µg/L		504.08 ppb	15:55:03
1	Sc 361.383	2055099.7	2055099.7	98.184 %			15:56:27
1	Y 371.029	1401561.2	1401561.2	97.815 %			15:56:27
1	Ag 328.068†	62103.0	63711.8	515.39 µg/L		515.39 ppb	15:56:33
1	As 188.979†	353.6	363.4	534.92 µg/L		534.92 ppb	15:56:53
1	B 249.677†	11382.2	11293.3	510.72 µg/L		510.72 ppb	15:56:33
1	Ba 233.527†	23239.1	23677.3	518.76 µg/L		518.76 ppb	15:56:33
1	Be 313.107†	856861.3	873867.6	513.25 µg/L		513.25 ppb	15:56:27
1	Cd 226.502†	21188.5	21750.9	516.98 µg/L		516.98 ppb	15:56:33
1	Co 228.616†	11950.9	12123.8	520.27 µg/L		520.27 ppb	15:56:33
1	Cr 267.716†	23739.8	24098.6	524.45 µg/L		524.45 ppb	15:56:33
1	Cu 324.752†	82644.9	79796.7	522.14 µg/L		522.14 ppb	15:56:33
1	Mn 257.610†	169604.6	173428.4	521.19 µg/L		521.19 ppb	15:56:27
1	Mo 202.031†	5324.4	5417.7	536.28 µg/L		536.28 ppb	15:56:53
1	Ni 231.604†	9497.3	9296.0	520.83 µg/L		520.83 ppb	15:56:33
1	P 214.914†	1840.9	1602.5	2611.1 µg/L		2611.1 ppb	15:56:53
1	Pb 220.353†	2016.8	2024.0	531.25 µg/L		531.25 ppb	15:56:53
1	S 181.975 Axial†	346.5	330.4	1051.5 µg/L		1051.5 ppb	15:56:53
1	Sb 206.836†	603.7	592.1	530.98 µg/L		530.98 ppb	15:56:53
1	Se 196.026†	582.4	565.8	543.53 µg/L		543.53 ppb	15:56:53
1	SiO2†	32900.3	30729.0	5547.7 µg/L		5547.7 ppb	15:56:33
1	Si 251.611†	37899.4	38176.2	2595.4 µg/L		2595.4 ppb	15:56:33
1	Sn 189.927†	1346.2	1378.5	537.18 µg/L		537.18 ppb	15:56:53
1	Ti 334.940†	214841.1	219391.8	512.70 µg/L		512.70 ppb	15:56:27
1	Tl 190.801†	491.8	535.0	527.40 µg/L		527.40 ppb	15:56:53
1	U 409.014†	5685.9	5796.8	525.34 µg/L		525.34 ppb	15:56:33
1	V 292.402†	43268.9	43956.9	524.12 µg/L		524.12 ppb	15:56:33
1	Zn 213.857†	23380.3	22803.9	521.36 µg/L		521.36 ppb	15:56:33
2	Sc RADIAL	97535.2	97535.2	101 %			15:55:29
2	Al 396.153Radial†	10452.8	10492.0	4997.7 µg/L		4997.7 ppb	15:55:29
2	Ca 317.933Radial†	14265.7	13771.2	5011.6 µg/L		5011.6 ppb	15:55:29
2	Fe 238.204 Radial†	437.9	422.6	5009.5 µg/L		5009.5 ppb	15:55:50
2	K 766.490 Radial†	11246.9	10675.4	4982.0 µg/L		4982.0 ppb	15:55:29
2	Mg 279.077 IEC†	397.2	386.2	5095.0 µg/L		5095.0 ppb	15:55:50
2	Na 589.592 Radial†	20557.7	20219.7	10092 µg/L		10092 ppb	15:55:29
2	Sr 421.552†	85474.7	84680.8	503.42 µg/L		503.42 ppb	15:55:29
2	Sc 361.383	2062290.9	2062290.9	98.528 %			15:57:00
2	Y 371.029	1405199.3	1405199.3	98.069 %			15:57:00
2	Ag 328.068†	62454.5	63848.0	516.48 µg/L		516.48 ppb	15:57:06
2	As 188.979†	349.5	358.0	526.92 µg/L		526.92 ppb	15:57:26
2	B 249.677†	11457.7	11329.5	512.38 µg/L		512.38 ppb	15:57:06
2	Ba 233.527†	23369.2	23726.8	519.84 µg/L		519.84 ppb	15:57:06
2	Be 313.107†	859786.7	873793.6	513.21 µg/L		513.21 ppb	15:57:00
2	Cd 226.502†	21394.2	21884.5	520.16 µg/L		520.16 ppb	15:57:06
2	Co 228.616†	12018.7	12150.2	521.40 µg/L		521.40 ppb	15:57:06
2	Cr 267.716†	23889.7	24166.4	525.93 µg/L		525.93 ppb	15:57:06
2	Cu 324.752†	83171.0	80037.1	523.71 µg/L		523.71 ppb	15:57:06
2	Mn 257.610†	170523.3	173758.5	522.18 µg/L		522.18 ppb	15:57:00
2	Mo 202.031†	5253.3	5326.7	527.27 µg/L		527.27 ppb	15:57:26
2	Ni 231.604†	9598.2	9364.8	524.69 µg/L		524.69 ppb	15:57:06
2	P 214.914†	1823.4	1578.3	2570.5 µg/L		2570.5 ppb	15:57:26
2	Pb 220.353†	1995.9	1995.5	523.78 µg/L		523.78 ppb	15:57:26

2	S 181.975 Axial†	339.8	322.3	1025.8 µg/L	1025.8 ppb	15:57:26
2	Sb 206.836†	595.8	581.9	521.72 µg/L	521.72 ppb	15:57:26
2	Se 196.026†	572.0	553.2	531.60 µg/L	531.60 ppb	15:57:26
2	SiO2†	33130.5	30845.8	5568.8 µg/L	5568.8 ppb	15:57:06
2	Si 251.611†	38151.0	38297.0	2603.6 µg/L	2603.6 ppb	15:57:06
2	Sn 189.927†	1320.9	1348.1	525.33 µg/L	525.33 ppb	15:57:26
2	Ti 334.940†	215471.4	219268.5	512.41 µg/L	512.41 ppb	15:57:00
2	Tl 190.801†	488.8	530.2	522.76 µg/L	522.76 ppb	15:57:26
2	U 409.014†	5630.4	5720.4	518.40 µg/L	518.40 ppb	15:57:06
2	V 292.402†	43490.2	44027.8	524.89 µg/L	524.89 ppb	15:57:06
2	Zn 213.857†	23579.7	22923.2	524.09 µg/L	524.09 ppb	15:57:06
3	Sc RADIAL	97298.9	97298.9	101 %		15:55:55
3	Al 396.153Radial†	10465.2	10529.6	5017.6 µg/L	5017.6 ppb	15:55:55
3	Ca 317.933Radial†	14270.5	13810.4	5025.9 µg/L	5025.9 ppb	15:55:55
3	Fe 238.204 Radial†	442.3	428.0	5071.9 µg/L	5071.9 ppb	15:56:16
3	K 766.490 Radial†	11242.5	10698.2	4992.6 µg/L	4992.6 ppb	15:55:55
3	Mg 279.077 IEC†	398.7	388.6	5125.2 µg/L	5125.2 ppb	15:56:16
3	Na 589.592 Radial†	20533.7	20245.4	10105 µg/L	10105 ppb	15:55:55
3	Sr 421.552†	85316.6	84729.4	503.71 µg/L	503.71 ppb	15:55:55
3	Sc 361.383	2061146.1	2061146.1	98.473 %		15:57:34
3	Y 371.029	1407044.7	1407044.7	98.198 %		15:57:34
3	Ag 328.068†	57832.1	59189.1	478.68 µg/L	478.68 ppb	15:57:39
3	As 188.979†	294.5	302.3	444.72 µg/L	444.72 ppb	15:58:00
3	B 249.677†	10574.9	10439.5	471.84 µg/L	471.84 ppb	15:57:39
3	Ba 233.527†	21133.5	21469.6	470.37 µg/L	470.37 ppb	15:57:39
3	Be 313.107†	799146.3	812697.5	477.33 µg/L	477.33 ppb	15:57:34
3	Cd 226.502†	19167.6	19635.4	466.63 µg/L	466.63 ppb	15:57:39
3	Co 228.616†	10669.2	10786.6	462.82 µg/L	462.82 ppb	15:57:39
3	Cr 267.716†	20573.1	20811.9	452.93 µg/L	452.93 ppb	15:57:39
3	Cu 324.752†	74555.8	71335.3	466.88 µg/L	466.88 ppb	15:57:39
3	Mn 257.610†	158734.8	161883.3	486.49 µg/L	486.49 ppb	15:57:34
3	Mo 202.031†	4347.8	4410.1	436.58 µg/L	436.58 ppb	15:58:00
3	Ni 231.604†	8515.2	8270.3	463.37 µg/L	463.37 ppb	15:57:39
3	P 214.914†	1582.1	1334.3	2169.9 µg/L	2169.9 ppb	15:58:00
3	Pb 220.353†	1698.9	1695.0	444.89 µg/L	444.89 ppb	15:58:00
3	S 181.975 Axial†	295.3	277.4	882.66 µg/L	882.66 ppb	15:58:00
3	Sb 206.836†	513.4	498.6	446.76 µg/L	446.76 ppb	15:58:00
3	Se 196.026†	504.7	485.3	467.89 µg/L	467.89 ppb	15:58:00
3	SiO2†	30494.3	28187.4	5088.8 µg/L	5088.8 ppb	15:57:39
3	Si 251.611†	34842.2	34958.4	2376.6 µg/L	2376.6 ppb	15:57:39
3	Sn 189.927†	1074.5	1098.6	428.22 µg/L	428.22 ppb	15:58:00
3	Ti 334.940†	198697.1	202355.5	472.86 µg/L	472.86 ppb	15:57:34
3	Tl 190.801†	438.0	478.9	472.31 µg/L	472.31 ppb	15:58:00
3	U 409.014†	4922.9	5005.1	453.44 µg/L	453.44 ppb	15:57:39
3	V 292.402†	38466.3	38950.5	464.02 µg/L	464.02 ppb	15:57:39
3	Zn 213.857†	21054.9	20372.5	465.72 µg/L	465.72 ppb	15:57:39

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2059512.2	98.395 %	0.1846			0.19%
Sc RADIAL	97355.9	101 %	0.2			0.16%
Y 371.029	1404601.7	98.027 %	0.1947			0.20%
Ag 328.068†	62249.6	503.52 µg/L	21.514	503.52 ppb	21.514	4.27%
QC value within limits for Ag 328.068 Recovery = 100.70%						
Al 396.153Radial†	10517.0	5010.2 µg/L	10.85	5010.2 ppb	10.85	0.22%
QC value within limits for Al 396.153Radial Recovery = 100.20%						
As 188.979†	341.2	502.19 µg/L	49.925	502.19 ppb	49.925	9.94%
QC value within limits for As 188.979 Recovery = 100.44%						
B 249.677†	11020.8	498.32 µg/L	22.941	498.32 ppb	22.941	4.60%
QC value within limits for B 249.677 Recovery = 99.66%						
Ba 233.527†	22957.9	502.99 µg/L	28.255	502.99 ppb	28.255	5.62%
QC value within limits for Ba 233.527 Recovery = 100.60%						
Be 313.107†	853452.9	501.26 µg/L	20.729	501.26 ppb	20.729	4.14%
QC value within limits for Be 313.107 Recovery = 100.25%						
Ca 317.933Radial†	13782.1	5015.6 µg/L	8.97	5015.6 ppb	8.97	0.18%
QC value within limits for Ca 317.933Radial Recovery = 100.31%						
Cd 226.502†	21090.3	501.26 µg/L	30.030	501.26 ppb	30.030	5.99%
QC value within limits for Cd 226.502 Recovery = 100.25%						
Co 228.616†	11686.9	501.50 µg/L	33.503	501.50 ppb	33.503	6.68%

QC value within limits for Co 228.616 Recovery = 100.30%							
Cr 267.716†	23025.7	501.11 µg/L	41.725	501.11 ppb	41.725	8.33%	
QC value within limits for Cr 267.716 Recovery = 100.22%							
Cu 324.752†	77056.4	504.25 µg/L	32.366	504.25 ppb	32.366	6.42%	
QC value within limits for Cu 324.752 Recovery = 100.85%							
Fe 238.204 Radial†	425.2	5039.8 µg/L	31.24	5039.8 ppb	31.24	0.62%	
QC value within limits for Fe 238.204 Radial Recovery = 100.80%							
K 766.490 Radial†	10693.9	4990.6 µg/L	7.81	4990.6 ppb	7.81	0.16%	
QC value within limits for K 766.490 Radial Recovery = 99.81%							
Mg 279.077 IEC†	386.5	5098.6 µg/L	25.00	5098.6 ppb	25.00	0.49%	
QC value within limits for Mg 279.077 IEC Recovery = 101.97%							
Mn 257.610†	169690.0	509.95 µg/L	20.325	509.95 ppb	20.325	3.99%	
QC value within limits for Mn 257.610 Recovery = 101.99%							
Mo 202.031†	5051.5	500.05 µg/L	55.145	500.05 ppb	55.145	11.03%	
QC value within limits for Mo 202.031 Recovery = 100.01%							
Na 589.592 Radial†	20234.0	10099 µg/L	6.5	10099 ppb	6.5	0.06%	
QC value within limits for Na 589.592 Radial Recovery = 100.99%							
Ni 231.604†	8977.0	502.97 µg/L	34.341	502.97 ppb	34.341	6.83%	
QC value within limits for Ni 231.604 Recovery = 100.59%							
P 214.914†	1505.0	2450.5 µg/L	243.85	2450.5 ppb	243.85	9.95%	
QC value within limits for P 214.914 Recovery = 98.02%							
Pb 220.353†	1904.8	499.97 µg/L	47.850	499.97 ppb	47.850	9.57%	
QC value within limits for Pb 220.353 Recovery = 99.99%							
S 181.975 Axial†	310.0	986.65 µg/L	90.964	986.65 ppb	90.964	9.22%	
QC value within limits for S 181.975 Axial Recovery = 98.67%							
Sb 206.836†	557.6	499.82 µg/L	46.182	499.82 ppb	46.182	9.24%	
QC value within limits for Sb 206.836 Recovery = 99.96%							
Se 196.026†	534.8	514.34 µg/L	40.667	514.34 ppb	40.667	7.91%	
QC value within limits for Se 196.026 Recovery = 102.87%							
SiO2†	29920.8	5401.8 µg/L	271.21	5401.8 ppb	271.21	5.02%	
QC value within limits for SiO2 Recovery = 101.01%							
Si 251.611†	37143.9	2525.2 µg/L	128.74	2525.2 ppb	128.74	5.10%	
QC value within limits for Si 251.611 Recovery = 101.01%							
Sn 189.927†	1275.0	496.91 µg/L	59.785	496.91 ppb	59.785	12.03%	
QC value within limits for Sn 189.927 Recovery = 99.38%							
Sr 421.552†	84734.2	503.73 µg/L	0.333	503.73 ppb	0.333	0.07%	
QC value within limits for Sr 421.552 Recovery = 100.75%							
Ti 334.940†	213671.9	499.32 µg/L	22.919	499.32 ppb	22.919	4.59%	
QC value within limits for Ti 334.940 Recovery = 99.86%							
Tl 190.801†	514.7	507.49 µg/L	30.557	507.49 ppb	30.557	6.02%	
QC value within limits for Tl 190.801 Recovery = 101.50%							
U 409.014†	5507.4	499.06 µg/L	39.658	499.06 ppb	39.658	7.95%	
QC value within limits for U 409.014 Recovery = 99.81%							
V 292.402†	42311.7	504.34 µg/L	34.926	504.34 ppb	34.926	6.93%	
QC value within limits for V 292.402 Recovery = 100.87%							
Zn 213.857†	22033.2	503.73 µg/L	32.940	503.73 ppb	32.940	6.54%	
QC value within limits for Zn 213.857 Recovery = 100.75%							

All analyte(s) passed QC.

Sequence No.: 24

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 15:58:09

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98998.7	98998.7	102 %		15:58:40
1	Al 396.153Radial†	-144.1	-21.6	-10.340 µg/L	-10.340 ppb	15:58:40
1	Ca 317.933Radial†	372.0	-21.6	-7.8617 µg/L	-7.8617 ppb	15:59:00
1	Fe 238.204 Radial†	13.5	1.2	14.689 µg/L	14.689 ppb	15:59:00
1	K 766.490 Radial†	357.6	-135.7	-63.342 µg/L	-63.342 ppb	15:58:40
1	Mg 279.077 IEC†	8.6	0.4	5.1501 µg/L	5.1501 ppb	15:59:00
1	Na 589.592 Radial†	210.2	24.9	12.437 µg/L	12.437 ppb	15:58:40
1	Sr 421.552†	130.4	-11.9	-0.0710 µg/L	-0.0710 ppb	15:58:40
1	Sc 361.383	2084090.4	2084090.4	99.569 %		16:00:02
1	Y 371.029	1427133.0	1427133.0	99.600 %		16:00:02
1	Ag 328.068†	-567.0	-109.3	-0.8805 µg/L	-0.8805 ppb	16:00:08
1	As 188.979†	-0.6	2.6	3.8737 µg/L	3.8737 ppb	16:00:28
1	B 249.677†	298.1	0.0	-0.0072 µg/L	-0.0072 ppb	16:00:08
1	Ba 233.527†	-9.7	-1.3	-0.0292 µg/L	-0.0292 ppb	16:00:28
1	Be 313.107†	-1099.9	54.1	0.0317 µg/L	0.0317 ppb	16:00:08
1	Cd 226.502†	-167.7	2.1	0.0492 µg/L	0.0492 ppb	16:00:28
1	Co 228.616†	45.5	-2.4	-0.1018 µg/L	-0.1018 ppb	16:00:28
1	Cr 267.716†	49.5	-30.5	-0.6642 µg/L	-0.6642 ppb	16:00:08
1	Cu 324.752†	4460.4	103.0	0.6756 µg/L	0.6756 ppb	16:00:08
1	Mn 257.610†	-640.6	43.6	0.1317 µg/L	0.1317 ppb	16:00:28
1	Mo 202.031†	25.6	20.6	2.0397 µg/L	2.0397 ppb	16:00:28
1	Ni 231.604†	370.7	-4.6	-0.2555 µg/L	-0.2555 ppb	16:00:28
1	P 214.914†	271.7	0.5	0.7804 µg/L	0.7804 ppb	16:00:28
1	Pb 220.353†	37.8	7.8	2.0551 µg/L	2.0551 ppb	16:00:28
1	S 181.975 Axial†	27.3	4.9	15.660 µg/L	15.660 ppb	16:00:28
1	Sb 206.836†	27.1	4.5	4.0557 µg/L	4.0557 ppb	16:00:28
1	Se 196.026†	20.2	-7.0	-6.5765 µg/L	-6.5765 ppb	16:00:28
1	SiO2†	2752.8	-15.1	-2.7188 µg/L	-2.7188 ppb	16:00:08
1	Si 251.611†	407.7	-14.6	-0.9945 µg/L	-0.9945 ppb	16:00:28
1	Sn 189.927†	1.2	8.6	3.3584 µg/L	3.3584 ppb	16:00:28
1	Ti 334.940†	-426.6	148.8	0.3474 µg/L	0.3474 ppb	16:00:08
1	Tl 190.801†	-39.4	-5.5	-5.3488 µg/L	-5.3488 ppb	16:00:28
1	U 409.014†	-65.2	-59.7	-5.4240 µg/L	-5.4240 ppb	16:00:08
1	V 292.402†	56.3	-55.8	-0.6514 µg/L	-0.6514 ppb	16:00:08
1	Zn 213.857†	663.7	-342.2	-7.8807 µg/L	-7.8807 ppb	16:00:28
2	Sc RADIAL	98732.8	98732.8	102 %		15:59:06
2	Al 396.153Radial†	-122.3	-0.6	-0.3409 µg/L	-0.3409 ppb	15:59:06
2	Ca 317.933Radial†	381.9	-10.9	-3.9829 µg/L	-3.9829 ppb	15:59:26
2	Fe 238.204 Radial†	12.5	0.3	3.8232 µg/L	3.8232 ppb	15:59:26
2	K 766.490 Radial†	355.5	-136.8	-63.843 µg/L	-63.843 ppb	15:59:06
2	Mg 279.077 IEC†	9.9	1.7	22.168 µg/L	22.168 ppb	15:59:26
2	Na 589.592 Radial†	188.7	4.4	2.1910 µg/L	2.1910 ppb	15:59:06
2	Sr 421.552†	118.7	-23.1	-0.1374 µg/L	-0.1374 ppb	15:59:06
2	Sc 361.383	2080595.7	2080595.7	99.402 %		16:00:34
2	Y 371.029	1425280.7	1425280.7	99.470 %		16:00:34
2	Ag 328.068†	-503.6	-46.4	-0.3761 µg/L	-0.3761 ppb	16:00:40
2	As 188.979†	-0.4	2.8	4.1966 µg/L	4.1966 ppb	16:01:00
2	B 249.677†	319.3	21.9	0.9922 µg/L	0.9922 ppb	16:00:40
2	Ba 233.527†	-8.5	-0.1	-0.0042 µg/L	-0.0042 ppb	16:01:00
2	Be 313.107†	-1105.1	47.1	0.0276 µg/L	0.0276 ppb	16:00:40
2	Cd 226.502†	-177.0	-7.5	-0.1788 µg/L	-0.1788 ppb	16:01:00
2	Co 228.616†	51.2	3.4	0.1474 µg/L	0.1474 ppb	16:01:00
2	Cr 267.716†	92.5	12.8	0.2779 µg/L	0.2779 ppb	16:00:40
2	Cu 324.752†	4414.9	64.8	0.4240 µg/L	0.4240 ppb	16:00:40
2	Mn 257.610†	-633.7	49.5	0.1474 µg/L	0.1474 ppb	16:01:00
2	Mo 202.031†	23.6	18.6	1.8392 µg/L	1.8392 ppb	16:01:00
2	Ni 231.604†	363.7	-11.1	-0.6205 µg/L	-0.6205 ppb	16:01:00
2	P 214.914†	266.2	-4.6	-7.6776 µg/L	-7.6776 ppb	16:01:00
2	Pb 220.353†	32.2	2.2	0.5786 µg/L	0.5786 ppb	16:01:00

2	S 181.975 Axial†	22.0	-0.5	-1.4458 µg/L	-1.4458 ppb	16:01:00
2	Sb 206.836†	25.6	3.0	2.7103 µg/L	2.7103 ppb	16:01:00
2	Se 196.026†	28.2	1.0	0.9682 µg/L	0.9682 ppb	16:01:00
2	SiO2†	2771.3	8.2	1.4780 µg/L	1.4780 ppb	16:00:40
2	Si 251.611†	424.5	2.9	0.2005 µg/L	0.2005 ppb	16:01:00
2	Sn 189.927†	1.3	8.8	3.4074 µg/L	3.4074 ppb	16:01:00
2	Ti 334.940†	-497.2	77.1	0.1785 µg/L	0.1785 ppb	16:00:40
2	Tl 190.801†	-32.9	1.0	1.0276 µg/L	1.0276 ppb	16:01:00
2	U 409.014†	50.0	56.1	5.0918 µg/L	5.0918 ppb	16:00:40
2	V 292.402†	62.9	-49.0	-0.5595 µg/L	-0.5595 ppb	16:00:40
2	Zn 213.857†	650.1	-354.8	-8.1684 µg/L	-8.1684 ppb	16:01:00
3	Sc RADIAL	99400.2	99400.2	103 %		15:59:32
3	Al 396.153Radial†	-154.7	-31.3	-14.980 µg/L	-14.980 ppb	15:59:32
3	Ca 317.933Radial†	375.9	-19.3	-7.0192 µg/L	-7.0192 ppb	15:59:52
3	Fe 238.204 Radial†	14.7	2.3	27.612 µg/L	27.612 ppb	15:59:52
3	K 766.490 Radial†	441.9	-55.0	-25.691 µg/L	-25.691 ppb	15:59:32
3	Mg 279.077 IEC†	8.5	0.3	4.2157 µg/L	4.2157 ppb	15:59:52
3	Na 589.592 Radial†	213.0	26.8	13.364 µg/L	13.364 ppb	15:59:32
3	Sr 421.552†	137.9	-5.1	-0.0305 µg/L	-0.0305 ppb	15:59:32
3	Sc 361.383	2079208.6	2079208.6	99.336 %		16:01:06
3	Y 371.029	1423599.6	1423599.6	99.353 %		16:01:06
3	Ag 328.068†	-486.2	-29.3	-0.2325 µg/L	-0.2325 ppb	16:01:12
3	As 188.979†	-4.8	-1.6	-2.3249 µg/L	-2.3249 ppb	16:01:33
3	B 249.677†	302.5	5.2	0.2204 µg/L	0.2204 ppb	16:01:12
3	Ba 233.527†	-13.5	-5.2	-0.1138 µg/L	-0.1138 ppb	16:01:33
3	Be 313.107†	-1003.6	148.5	0.0872 µg/L	0.0872 ppb	16:01:12
3	Cd 226.502†	-161.6	7.9	0.1825 µg/L	0.1825 ppb	16:01:33
3	Co 228.616†	33.2	-14.7	-0.6304 µg/L	-0.6304 ppb	16:01:33
3	Cr 267.716†	81.1	1.4	0.0310 µg/L	0.0310 ppb	16:01:12
3	Cu 324.752†	4374.2	26.8	0.1801 µg/L	0.1801 ppb	16:01:12
3	Mn 257.610†	-643.0	39.6	0.1205 µg/L	0.1205 ppb	16:01:33
3	Mo 202.031†	16.5	11.4	1.1335 µg/L	1.1335 ppb	16:01:33
3	Ni 231.604†	351.0	-23.5	-1.3176 µg/L	-1.3176 ppb	16:01:33
3	P 214.914†	264.8	-5.8	-9.6970 µg/L	-9.6970 ppb	16:01:33
3	Pb 220.353†	27.1	-2.9	-0.7598 µg/L	-0.7598 ppb	16:01:33
3	S 181.975 Axial†	25.2	2.8	9.0515 µg/L	9.0515 ppb	16:01:33
3	Sb 206.836†	28.5	6.0	5.3697 µg/L	5.3697 ppb	16:01:33
3	Se 196.026†	21.4	-5.8	-5.3362 µg/L	-5.3362 ppb	16:01:33
3	SiO2†	2740.2	-21.2	-3.8277 µg/L	-3.8277 ppb	16:01:12
3	Si 251.611†	431.4	10.2	0.6932 µg/L	0.6932 ppb	16:01:33
3	Sn 189.927†	1.3	8.7	3.3979 µg/L	3.3979 ppb	16:01:33
3	Ti 334.940†	-488.7	85.3	0.1990 µg/L	0.1990 ppb	16:01:12
3	Tl 190.801†	-34.7	-0.9	-0.8375 µg/L	-0.8375 ppb	16:01:33
3	U 409.014†	-78.4	-73.1	-6.6428 µg/L	-6.6428 ppb	16:01:12
3	V 292.402†	117.5	6.0	0.0688 µg/L	0.0688 ppb	16:01:12
3	Zn 213.857†	679.9	-324.5	-7.4662 µg/L	-7.4662 ppb	16:01:33

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2081298.2	99.436 %	0.1202			0.12%
Sc RADIAL	99043.9	102 %	0.3			0.34%
Y 371.029	1425337.8	99.474 %	0.1233			0.12%
Ag 328.068†	-61.6	-0.4964 µg/L	0.34034	-0.4964 ppb	0.34034	68.57%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-17.8	-8.5536 µg/L	7.48128	-8.5536 ppb	7.48128	87.46%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.3	1.9151 µg/L	3.67554	1.9151 ppb	3.67554	191.92%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	9.0	0.4018 µg/L	0.52379	0.4018 ppb	0.52379	130.36%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.2	-0.0491 µg/L	0.05742	-0.0491 ppb	0.05742	116.99%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	83.3	0.0488 µg/L	0.03329	0.0488 ppb	0.03329	68.17%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-17.3	-6.2880 µg/L	2.04017	-6.2880 ppb	2.04017	32.45%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	0.8	0.0176 µg/L	0.18274	0.0176 ppb	0.18274	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.6	-0.1949 µg/L	0.39722	-0.1949 ppb	0.39722	203.77%

QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	-5.4	-0.1184 µg/L	0.48849	-0.1184 ppb	0.48849 412.58%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	64.9	0.4266 µg/L	0.24775	0.4266 ppb	0.24775 58.08%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	1.3	15.374 µg/L	11.9090	15.374 ppb	11.9090 77.46%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	-109.2	-50.959 µg/L	21.8842	-50.959 ppb	21.8842 42.95%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	0.8	10.511 µg/L	10.1056	10.511 ppb	10.1056 96.14%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	44.3	0.1332 µg/L	0.01355	0.1332 ppb	0.01355 10.17%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	16.9	1.6708 µg/L	0.47599	1.6708 ppb	0.47599 28.49%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	18.7	9.3308 µg/L	6.20056	9.3308 ppb	6.20056 66.45%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-13.0	-0.7312 µg/L	0.53962	-0.7312 ppb	0.53962 73.80%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	-3.3	-5.5314 µg/L	5.55868	-5.5314 ppb	5.55868 100.49%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	2.4	0.6246 µg/L	1.40804	0.6246 ppb	1.40804 225.42%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	2.4	7.7553 µg/L	8.62636	7.7553 ppb	8.62636 111.23%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	4.5	4.0452 µg/L	1.32969	4.0452 ppb	1.32969 32.87%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-3.9	-3.6482 µg/L	4.04566	-3.6482 ppb	4.04566 110.90%
QC value within limits for Se 196.026 Recovery = Not calculated					
SiO2†	-9.4	-1.6895 µg/L	2.79862	-1.6895 ppb	2.79862 165.65%
QC value within limits for SiO2 Recovery = Not calculated					
Si 251.611†	-0.5	-0.0336 µg/L	0.86789	-0.0336 ppb	0.86789 >999.9%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	8.7	3.3879 µg/L	0.02602	3.3879 ppb	0.02602 0.77%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	-13.4	-0.0796 µg/L	0.05397	-0.0796 ppb	0.05397 67.80%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	103.7	0.2416 µg/L	0.09219	0.2416 ppb	0.09219 38.16%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	-1.8	-1.7196 µg/L	3.27847	-1.7196 ppb	3.27847 190.66%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	-25.6	-2.3250 µg/L	6.45195	-2.3250 ppb	6.45195 277.51%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	-32.9	-0.3807 µg/L	0.39202	-0.3807 ppb	0.39202 102.97%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	-340.5	-7.8384 µg/L	0.35304	-7.8384 ppb	0.35304 4.50%
QC value within limits for Zn 213.857 Recovery = Not calculated					

All analyte(s) passed QC.



Sequence No.: 34

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 16:34:19

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99660.6	99660.6	103 %		16:34:52
1	Al 396.153Radial†	10461.6	10279.4	4896.3 µg/L	4896.3 ppb	16:34:52
1	Ca 317.933Radial†	14240.4	13444.7	4892.8 µg/L	4892.8 ppb	16:34:52
1	Fe 238.204 Radial†	444.1	419.3	4970.6 µg/L	4970.6 ppb	16:35:12
1	K 766.490 Radial†	11162.8	10355.8	4832.8 µg/L	4832.8 ppb	16:34:52
1	Mg 279.077 IEC†	390.9	371.7	4903.2 µg/L	4903.2 ppb	16:35:12
1	Na 589.592 Radial†	20820.6	20039.9	10002 µg/L	10002 ppb	16:34:52
1	Sr 421.552†	85992.2	83374.4	495.65 µg/L	495.65 ppb	16:34:52
1	Sc 361.383	2099020.8	2099020.8	100.28 %		16:36:16
1	Y 371.029	1433236.4	1433236.4	100.03 %		16:36:16
1	Ag 328.068†	61653.1	61939.7	501.06 µg/L	501.06 ppb	16:36:21
1	As 188.979†	346.8	349.1	513.79 µg/L	513.79 ppb	16:36:42
1	B 249.677†	11291.5	10960.3	495.62 µg/L	495.62 ppb	16:36:21
1	Ba 233.527†	22929.8	22873.7	501.16 µg/L	501.16 ppb	16:36:21
1	Be 313.107†	852361.9	851119.9	499.89 µg/L	499.89 ppb	16:36:16
1	Cd 226.502†	21018.9	21130.3	502.22 µg/L	502.22 ppb	16:36:21
1	Co 228.616†	11809.3	11728.0	503.28 µg/L	503.28 ppb	16:36:21
1	Cr 267.716†	23554.6	23408.0	509.42 µg/L	509.42 ppb	16:36:21
1	Cu 324.752†	82180.1	77571.9	507.60 µg/L	507.60 ppb	16:36:21
1	Mn 257.610†	168944.6	169155.7	508.35 µg/L	508.35 ppb	16:36:16
1	Mo 202.031†	5299.1	5279.1	522.56 µg/L	522.56 ppb	16:36:42
1	Ni 231.604†	9372.3	8969.0	502.51 µg/L	502.51 ppb	16:36:21
1	P 214.914†	1830.8	1553.2	2530.5 µg/L	2530.5 ppb	16:36:42
1	Pb 220.353†	2004.9	1969.1	516.87 µg/L	516.87 ppb	16:36:42
1	S 181.975 Axial†	345.5	322.0	1024.7 µg/L	1024.7 ppb	16:36:42
1	Sb 206.836†	605.2	580.8	520.78 µg/L	520.78 ppb	16:36:42
1	Se 196.026†	585.7	556.8	534.94 µg/L	534.94 ppb	16:36:42
1	SiO2†	33025.3	30152.5	5443.6 µg/L	5443.6 ppb	16:36:21
1	Si 251.611†	37949.1	37418.1	2543.8 µg/L	2543.8 ppb	16:36:21
1	Sn 189.927†	1333.4	1337.1	521.05 µg/L	521.05 ppb	16:36:42
1	Ti 334.940†	214373.2	214346.6	500.91 µg/L	500.91 ppb	16:36:16
1	Tl 190.801†	487.5	520.2	512.89 µg/L	512.89 ppb	16:36:42
1	U 409.014†	5642.5	5632.4	510.43 µg/L	510.43 ppb	16:36:21
1	V 292.402†	42955.2	42721.9	509.40 µg/L	509.40 ppb	16:36:21
1	Zn 213.857†	23164.3	22090.2	505.05 µg/L	505.05 ppb	16:36:21
2	Sc RADIAL	99554.0	99554.0	103 %		16:35:18
2	Al 396.153Radial†	10430.9	10260.4	4887.4 µg/L	4887.4 ppb	16:35:18
2	Ca 317.933Radial†	14198.0	13418.3	4883.2 µg/L	4883.2 ppb	16:35:18
2	Fe 238.204 Radial†	446.6	422.2	5004.8 µg/L	5004.8 ppb	16:35:38
2	K 766.490 Radial†	11246.7	10448.9	4876.3 µg/L	4876.3 ppb	16:35:18
2	Mg 279.077 IEC†	393.6	374.7	4942.9 µg/L	4942.9 ppb	16:35:38
2	Na 589.592 Radial†	20817.2	20058.2	10011 µg/L	10011 ppb	16:35:18
2	Sr 421.552†	85780.1	83257.7	494.96 µg/L	494.96 ppb	16:35:18
2	Sc 361.383	2090568.1	2090568.1	99.879 %		16:36:49
2	Y 371.029	1428136.0	1428136.0	99.670 %		16:36:49
2	Ag 328.068†	61761.0	62296.3	503.93 µg/L	503.93 ppb	16:36:55
2	As 188.979†	338.1	341.8	503.03 µg/L	503.03 ppb	16:37:15
2	B 249.677†	11290.4	11004.8	497.62 µg/L	497.62 ppb	16:36:55
2	Ba 233.527†	23038.5	23074.9	505.56 µg/L	505.56 ppb	16:36:55
2	Be 313.107†	849211.0	851401.7	500.06 µg/L	500.06 ppb	16:36:49
2	Cd 226.502†	21029.2	21225.3	504.48 µg/L	504.48 ppb	16:36:55
2	Co 228.616†	11845.7	11812.1	506.89 µg/L	506.89 ppb	16:36:55
2	Cr 267.716†	23563.5	23511.9	511.68 µg/L	511.68 ppb	16:36:55
2	Cu 324.752†	82398.1	78121.5	511.20 µg/L	511.20 ppb	16:36:55
2	Mn 257.610†	168501.6	169393.4	509.07 µg/L	509.07 ppb	16:36:49
2	Mo 202.031†	5200.0	5201.2	514.86 µg/L	514.86 ppb	16:37:15
2	Ni 231.604†	9465.4	9100.0	509.86 µg/L	509.86 ppb	16:36:55
2	P 214.914†	1803.2	1532.9	2496.3 µg/L	2496.3 ppb	16:37:15
2	Pb 220.353†	1968.9	1941.2	509.51 µg/L	509.51 ppb	16:37:15

2	S 181.975 Axial†	339.1	317.0	1008.8 µg/L	1008.8 ppb	16:37:15
2	Sb 206.836†	593.6	571.6	512.44 µg/L	512.44 ppb	16:37:15
2	Se 196.026†	551.1	524.4	504.63 µg/L	504.63 ppb	16:37:15
2	SiO2†	33212.2	30472.8	5501.4 µg/L	5501.4 ppb	16:36:55
2	Si 251.611†	38173.5	37795.8	2569.5 µg/L	2569.5 ppb	16:36:55
2	Sn 189.927†	1300.9	1310.0	510.49 µg/L	510.49 ppb	16:37:15
2	Ti 334.940†	213632.3	214469.1	501.20 µg/L	501.20 ppb	16:36:49
2	Tl 190.801†	478.5	513.1	506.00 µg/L	506.00 ppb	16:37:15
2	U 409.014†	5634.9	5647.6	511.80 µg/L	511.80 ppb	16:36:55
2	V 292.402†	42928.8	42868.7	511.07 µg/L	511.07 ppb	16:36:55
2	Zn 213.857†	23276.3	22295.7	509.74 µg/L	509.74 ppb	16:36:55
3	Sc RADIAL	99732.5	99732.5	103 %		16:35:44
3	Al 396.153Radial†	10453.2	10264.0	4891.0 µg/L	4891.0 ppb	16:35:44
3	Ca 317.933Radial†	14218.7	13413.6	4881.5 µg/L	4881.5 ppb	16:35:44
3	Fe 238.204 Radial†	442.8	417.7	4950.6 µg/L	4950.6 ppb	16:36:04
3	K 766.490 Radial†	11162.5	10347.6	4829.0 µg/L	4829.0 ppb	16:35:44
3	Mg 279.077 IEC†	393.1	373.5	4926.5 µg/L	4926.5 ppb	16:36:04
3	Na 589.592 Radial†	20859.9	20063.5	10014 µg/L	10014 ppb	16:35:44
3	Sr 421.552†	85956.2	83279.3	495.09 µg/L	495.09 ppb	16:35:44
3	Sc 361.383	2099490.1	2099490.1	100.30 %		16:37:22
3	Y 371.029	1434677.3	1434677.3	100.13 %		16:37:22
3	Ag 328.068†	58080.3	58363.9	472.01 µg/L	472.01 ppb	16:37:28
3	As 188.979†	294.3	296.7	436.49 µg/L	436.49 ppb	16:37:49
3	B 249.677†	10598.9	10267.3	464.08 µg/L	464.08 ppb	16:37:28
3	Ba 233.527†	20999.6	20944.2	458.87 µg/L	458.87 ppb	16:37:28
3	Be 313.107†	790967.7	789722.3	463.83 µg/L	463.83 ppb	16:37:22
3	Cd 226.502†	19155.5	19267.9	457.90 µg/L	457.90 ppb	16:37:28
3	Co 228.616†	10649.4	10568.9	453.48 µg/L	453.48 ppb	16:37:28
3	Cr 267.716†	20624.0	20481.1	445.73 µg/L	445.73 ppb	16:37:28
3	Cu 324.752†	74692.2	70088.5	458.72 µg/L	458.72 ppb	16:37:28
3	Mn 257.610†	157122.5	157331.9	472.82 µg/L	472.82 ppb	16:37:22
3	Mo 202.031†	4320.0	4301.7	425.85 µg/L	425.85 ppb	16:37:49
3	Ni 231.604†	8484.9	8082.2	452.83 µg/L	452.83 ppb	16:37:28
3	P 214.914†	1583.0	1305.8	2123.3 µg/L	2123.3 ppb	16:37:49
3	Pb 220.353†	1711.3	1675.9	439.85 µg/L	439.85 ppb	16:37:49
3	S 181.975 Axial†	296.6	273.1	869.18 µg/L	869.18 ppb	16:37:49
3	Sb 206.836†	509.5	485.3	434.72 µg/L	434.72 ppb	16:37:49
3	Se 196.026†	507.9	479.0	461.78 µg/L	461.78 ppb	16:37:49
3	SiO2†	30880.0	28006.4	5056.2 µg/L	5056.2 ppb	16:37:28
3	Si 251.611†	35312.7	34781.3	2364.6 µg/L	2364.6 ppb	16:37:28
3	Sn 189.927†	1070.3	1074.5	418.81 µg/L	418.81 ppb	16:37:49
3	Ti 334.940†	197220.6	197198.3	460.81 µg/L	460.81 ppb	16:37:22
3	Tl 190.801†	436.6	469.4	462.85 µg/L	462.85 ppb	16:37:49
3	U 409.014†	4962.5	4953.3	448.76 µg/L	448.76 ppb	16:37:28
3	V 292.402†	38667.9	38438.0	457.88 µg/L	457.88 ppb	16:37:28
3	Zn 213.857†	20969.9	19897.3	454.86 µg/L	454.86 ppb	16:37:28

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2096359.7	100.16 %	0.240			0.24%
Sc RADIAL	99649.0	103 %	0.1			0.09%
Y 371.029	1432016.6	99.940 %	0.2399			0.24%
Ag 328.068†	60866.6	492.33 µg/L	17.659	492.33 ppb	17.659	3.59%
QC value within limits for Ag 328.068 Recovery = 98.47%						
Al 396.153Radial†	10267.9	4891.6 µg/L	4.48	4891.6 ppb	4.48	0.09%
QC value within limits for Al 396.153Radial Recovery = 97.83%						
As 188.979†	329.2	484.44 µg/L	41.874	484.44 ppb	41.874	8.64%
QC value within limits for As 188.979 Recovery = 96.89%						
B 249.677†	10744.2	485.78 µg/L	18.815	485.78 ppb	18.815	3.87%
QC value within limits for B 249.677 Recovery = 97.16%						
Ba 233.527†	22297.6	488.53 µg/L	25.781	488.53 ppb	25.781	5.28%
QC value within limits for Ba 233.527 Recovery = 97.71%						
Be 313.107†	830747.9	487.93 µg/L	20.867	487.93 ppb	20.867	4.28%
QC value within limits for Be 313.107 Recovery = 97.59%						
Ca 317.933Radial†	13425.5	4885.8 µg/L	6.09	4885.8 ppb	6.09	0.12%
QC value within limits for Ca 317.933Radial Recovery = 97.72%						
Cd 226.502†	20541.2	488.20 µg/L	26.265	488.20 ppb	26.265	5.38%
QC value within limits for Cd 226.502 Recovery = 97.64%						
Co 228.616†	11369.7	487.88 µg/L	29.847	487.88 ppb	29.847	6.12%

Cr	267.716†	22467.0	488.95 µg/L	37.441	488.95 ppb	37.441	7.66%
Cu	324.752†	75260.7	492.51 µg/L	29.316	492.51 ppb	29.316	5.95%
Fe	238.204 Radial†	419.8	4975.3 µg/L	27.43	4975.3 ppb	27.43	0.55%
K	766.490 Radial†	10384.1	4846.1 µg/L	26.25	4846.1 ppb	26.25	0.54%
Mg	279.077 IEC†	373.3	4924.2 µg/L	19.94	4924.2 ppb	19.94	0.40%
Mn	257.610†	165293.7	496.75 µg/L	20.727	496.75 ppb	20.727	4.17%
Mo	202.031†	4927.3	487.76 µg/L	53.749	487.76 ppb	53.749	11.02%
Na	589.592 Radial†	20053.9	10009 µg/L	6.2	10009 ppb	6.2	0.06%
Ni	231.604†	8717.1	488.40 µg/L	31.020	488.40 ppb	31.020	6.35%
P	214.914†	1464.0	2383.4 µg/L	225.87	2383.4 ppb	225.87	9.48%
Pb	220.353†	1862.1	488.74 µg/L	42.501	488.74 ppb	42.501	8.70%
S	181.975 Axial†	304.0	967.55 µg/L	85.564	967.55 ppb	85.564	8.84%
Sb	206.836†	545.9	489.31 µg/L	47.462	489.31 ppb	47.462	9.70%
Se	196.026†	520.1	500.45 µg/L	36.757	500.45 ppb	36.757	7.34%
SiO2†		29543.9	5333.7 µg/L	242.12	5333.7 ppb	242.12	4.54%
Si	251.611†	36665.1	2492.6 µg/L	111.65	2492.6 ppb	111.65	4.48%
Sn	189.927†	1240.5	483.45 µg/L	56.230	483.45 ppb	56.230	11.63%
Sr	421.552†	83303.8	495.23 µg/L	0.369	495.23 ppb	0.369	0.07%
Ti	334.940†	208671.4	487.64 µg/L	23.235	487.64 ppb	23.235	4.76%
Tl	190.801†	500.9	493.91 µg/L	27.121	493.91 ppb	27.121	5.49%
U	409.014†	5411.1	490.33 µg/L	36.004	490.33 ppb	36.004	7.34%
V	292.402†	41342.9	492.78 µg/L	30.240	492.78 ppb	30.240	6.14%
Zn	213.857†	21427.7	489.88 µg/L	30.422	489.88 ppb	30.422	6.21%

QC value within limits for Co 228.616 Recovery = 97.58%

QC value within limits for Cr 267.716 Recovery = 97.79%

QC value within limits for Cu 324.752 Recovery = 98.50%

QC value within limits for Fe 238.204 Radial Recovery = 99.51%

QC value within limits for K 766.490 Radial Recovery = 96.92%

QC value within limits for Mg 279.077 IEC Recovery = 98.48%

QC value within limits for Mn 257.610 Recovery = 99.35%

QC value within limits for Mo 202.031 Recovery = 97.55%

QC value within limits for Na 589.592 Radial Recovery = 100.09%

QC value within limits for Ni 231.604 Recovery = 97.68%

QC value within limits for P 214.914 Recovery = 95.33%

QC value within limits for Pb 220.353 Recovery = 97.75%

QC value within limits for S 181.975 Axial Recovery = 96.76%

QC value within limits for Sb 206.836 Recovery = 97.86%

QC value within limits for Se 196.026 Recovery = 100.09%

QC value within limits for SiO2 Recovery = 99.74%

QC value within limits for Si 251.611 Recovery = 99.71%

QC value within limits for Sn 189.927 Recovery = 96.69%

QC value within limits for Sr 421.552 Recovery = 99.05%

QC value within limits for Ti 334.940 Recovery = 97.53%

QC value within limits for Tl 190.801 Recovery = 98.78%

QC value within limits for U 409.014 Recovery = 98.07%

QC value within limits for V 292.402 Recovery = 98.56%

QC value within limits for Zn 213.857 Recovery = 97.98%

All analyte(s) passed QC.

Sequence No.: 35

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 16:37:59

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98363.6	98363.6	102 %		16:38:29
1	Al 396.153Radial†	-105.7	15.2	7.2381 µg/L	7.2381 ppb	16:38:29
1	Ca 317.933Radial†	374.8	-16.5	-6.0091 µg/L	-6.0091 ppb	16:38:50
1	Fe 238.204 Radial†	14.0	1.8	21.832 µg/L	21.832 ppb	16:38:50
1	K 766.490 Radial†	484.0	-9.1	-4.2312 µg/L	-4.2312 ppb	16:38:29
1	Mg 279.077 IEC†	9.0	0.9	11.273 µg/L	11.273 ppb	16:38:50
1	Na 589.592 Radial†	197.0	13.3	6.6198 µg/L	6.6198 ppb	16:38:29
1	Sr 421.552†	120.0	-21.4	-0.1271 µg/L	-0.1271 ppb	16:38:29
1	Sc 361.383	2092382.4	2092382.4	99.965 %		16:39:52
1	Y 371.029	1433417.4	1433417.4	100.04 %		16:39:52
1	Ag 328.068†	-480.8	-20.8	-0.1662 µg/L	-0.1662 ppb	16:39:57
1	As 188.979†	-3.2	0.0	0.0655 µg/L	0.0655 ppb	16:40:18
1	B 249.677†	288.1	-11.2	-0.5192 µg/L	-0.5192 ppb	16:39:57
1	Ba 233.527†	-3.4	5.1	0.1102 µg/L	0.1102 ppb	16:40:18
1	Be 313.107†	-1061.5	96.9	0.0568 µg/L	0.0568 ppb	16:39:57
1	Cd 226.502†	-165.6	4.9	0.1126 µg/L	0.1126 ppb	16:40:18
1	Co 228.616†	43.1	-5.0	-0.2117 µg/L	-0.2117 ppb	16:40:18
1	Cr 267.716†	86.5	6.3	0.1371 µg/L	0.1371 ppb	16:39:57
1	Cu 324.752†	4355.4	-19.8	-0.1249 µg/L	-0.1249 ppb	16:39:57
1	Mn 257.610†	-624.7	62.1	0.1870 µg/L	0.1870 ppb	16:40:18
1	Mo 202.031†	24.2	19.1	1.8925 µg/L	1.8925 ppb	16:40:18
1	Ni 231.604†	357.9	-18.8	-1.0559 µg/L	-1.0559 ppb	16:40:18
1	P 214.914†	261.6	-10.7	-17.702 µg/L	-17.702 ppb	16:40:18
1	Pb 220.353†	40.8	10.6	2.8001 µg/L	2.8001 ppb	16:40:18
1	S 181.975 Axial†	20.4	-2.1	-6.6487 µg/L	-6.6487 ppb	16:40:18
1	Sb 206.836†	24.5	1.8	1.6023 µg/L	1.6023 ppb	16:40:18
1	Se 196.026†	22.6	-4.7	-4.3480 µg/L	-4.3480 ppb	16:40:18
1	SiO2†	2774.2	-4.6	-0.8290 µg/L	-0.8290 ppb	16:39:57
1	Si 251.611†	461.6	37.7	2.5604 µg/L	2.5604 ppb	16:40:18
1	Sn 189.927†	-3.0	4.5	1.7371 µg/L	1.7371 ppb	16:40:18
1	Ti 334.940†	-459.7	117.4	0.2735 µg/L	0.2735 ppb	16:39:57
1	Tl 190.801†	-35.2	-1.1	-1.0652 µg/L	-1.0652 ppb	16:40:18
1	U 409.014†	-76.5	-70.7	-6.4262 µg/L	-6.4262 ppb	16:39:57
1	V 292.402†	96.1	-16.1	-0.1851 µg/L	-0.1851 ppb	16:39:57
1	Zn 213.857†	813.8	-194.8	-4.4824 µg/L	-4.4824 ppb	16:40:18
2	Sc RADIAL	97612.6	97612.6	101 %		16:38:55
2	Al 396.153Radial†	-126.0	-5.6	-2.7157 µg/L	-2.7157 ppb	16:38:55
2	Ca 317.933Radial†	379.8	-8.7	-3.1749 µg/L	-3.1749 ppb	16:39:16
2	Fe 238.204 Radial†	15.2	3.1	36.274 µg/L	36.274 ppb	16:39:16
2	K 766.490 Radial†	515.9	26.2	12.207 µg/L	12.207 ppb	16:38:55
2	Mg 279.077 IEC†	10.0	1.9	25.334 µg/L	25.334 ppb	16:39:16
2	Na 589.592 Radial†	212.6	30.2	15.070 µg/L	15.070 ppb	16:38:55
2	Sr 421.552†	123.5	-17.0	-0.1010 µg/L	-0.1010 ppb	16:38:55
2	Sc 361.383	2083907.7	2083907.7	99.560 %		16:40:24
2	Y 371.029	1424831.2	1424831.2	99.439 %		16:40:24
2	Ag 328.068†	-502.3	-44.3	-0.3566 µg/L	-0.3566 ppb	16:40:29
2	As 188.979†	-1.3	2.0	2.8773 µg/L	2.8773 ppb	16:40:50
2	B 249.677†	274.7	-23.4	-1.0819 µg/L	-1.0819 ppb	16:40:29
2	Ba 233.527†	-7.0	1.4	0.0305 µg/L	0.0305 ppb	16:40:50
2	Be 313.107†	-1000.4	154.0	0.0904 µg/L	0.0904 ppb	16:40:29
2	Cd 226.502†	-181.7	-11.9	-0.2882 µg/L	-0.2882 ppb	16:40:50
2	Co 228.616†	41.9	-6.0	-0.2553 µg/L	-0.2553 ppb	16:40:50
2	Cr 267.716†	49.3	-30.7	-0.6688 µg/L	-0.6688 ppb	16:40:29
2	Cu 324.752†	4410.5	53.3	0.3549 µg/L	0.3549 ppb	16:40:29
2	Mn 257.610†	-624.6	59.6	0.1797 µg/L	0.1797 ppb	16:40:50
2	Mo 202.031†	17.3	12.2	1.2095 µg/L	1.2095 ppb	16:40:50
2	Ni 231.604†	372.2	-3.1	-0.1712 µg/L	-0.1712 ppb	16:40:50
2	P 214.914†	268.0	-3.2	-5.3953 µg/L	-5.3953 ppb	16:40:50
2	Pb 220.353†	42.8	12.9	3.3683 µg/L	3.3683 ppb	16:40:50

2	S 181.975 Axial†	24.7	2.3	7.2053 µg/L	7.2053 ppb	16:40:50
2	Sb 206.836†	28.2	5.6	5.0149 µg/L	5.0149 ppb	16:40:50
2	Se 196.026†	22.4	-4.9	-4.4759 µg/L	-4.4759 ppb	16:40:50
2	SiO2†	2791.9	24.4	4.4127 µg/L	4.4127 ppb	16:40:29
2	Si 251.611†	453.2	31.1	2.1172 µg/L	2.1172 ppb	16:40:50
2	Sn 189.927†	-2.9	4.5	1.7593 µg/L	1.7593 ppb	16:40:50
2	Ti 334.940†	-476.6	98.5	0.2283 µg/L	0.2283 ppb	16:40:29
2	Tl 190.801†	-27.4	6.6	6.4769 µg/L	6.4769 ppb	16:40:50
2	U 409.014†	50.4	56.5	5.1239 µg/L	5.1239 ppb	16:40:29
2	V 292.402†	68.0	-44.0	-0.5112 µg/L	-0.5112 ppb	16:40:29
2	Zn 213.857†	819.3	-185.9	-4.2838 µg/L	-4.2838 ppb	16:40:50
3	Sc RADIAL	97907.1	97907.1	101 %		16:39:21
3	Al 396.153Radial†	-123.5	-2.8	-1.3736 µg/L	-1.3736 ppb	16:39:21
3	Ca 317.933Radial†	381.9	-7.7	-2.8109 µg/L	-2.8109 ppb	16:39:41
3	Fe 238.204 Radial†	13.1	1.0	11.809 µg/L	11.809 ppb	16:39:41
3	K 766.490 Radial†	380.4	-109.2	-50.984 µg/L	-50.984 ppb	16:39:21
3	Mg 279.077 IEC†	9.7	1.6	21.439 µg/L	21.439 ppb	16:39:41
3	Na 589.592 Radial†	207.8	24.9	12.413 µg/L	12.413 ppb	16:39:21
3	Sr 421.552†	115.6	-25.1	-0.1494 µg/L	-0.1494 ppb	16:39:21
3	Sc 361.383	2080516.0	2080516.0	99.398 %		16:40:56
3	Y 371.029	1423803.6	1423803.6	99.367 %		16:40:56
3	Ag 328.068†	-422.1	35.6	0.2830 µg/L	0.2830 ppb	16:41:01
3	As 188.979†	3.7	7.0	10.367 µg/L	10.367 ppb	16:41:22
3	B 249.677†	285.2	-12.4	-0.5701 µg/L	-0.5701 ppb	16:41:01
3	Ba 233.527†	-11.9	-3.5	-0.0781 µg/L	-0.0781 ppb	16:41:22
3	Be 313.107†	-1005.9	146.9	0.0861 µg/L	0.0861 ppb	16:41:01
3	Cd 226.502†	-167.9	1.7	0.0380 µg/L	0.0380 ppb	16:41:22
3	Co 228.616†	45.9	-1.8	-0.0788 µg/L	-0.0788 ppb	16:41:22
3	Cr 267.716†	53.2	-26.7	-0.5810 µg/L	-0.5810 ppb	16:41:01
3	Cu 324.752†	4402.8	52.7	0.3466 µg/L	0.3466 ppb	16:41:01
3	Mn 257.610†	-636.5	46.6	0.1393 µg/L	0.1393 ppb	16:41:22
3	Mo 202.031†	20.8	15.8	1.5638 µg/L	1.5638 ppb	16:41:22
3	Ni 231.604†	369.1	-5.6	-0.3129 µg/L	-0.3129 ppb	16:41:22
3	P 214.914†	270.3	-0.5	-0.8733 µg/L	-0.8733 ppb	16:41:22
3	Pb 220.353†	35.7	5.7	1.5107 µg/L	1.5107 ppb	16:41:22
3	S 181.975 Axial†	18.3	-4.1	-12.987 µg/L	-12.987 ppb	16:41:22
3	Sb 206.836†	29.7	7.2	6.4578 µg/L	6.4578 ppb	16:41:22
3	Se 196.026†	21.5	-5.7	-5.2981 µg/L	-5.2981 ppb	16:41:22
3	SiO2†	2767.6	4.6	0.8269 µg/L	0.8269 ppb	16:41:01
3	Si 251.611†	455.1	33.8	2.2978 µg/L	2.2978 ppb	16:41:22
3	Sn 189.927†	-8.5	-1.1	-0.4470 µg/L	-0.4470 ppb	16:41:22
3	Ti 334.940†	-388.1	186.8	0.4350 µg/L	0.4350 ppb	16:41:01
3	Tl 190.801†	-31.8	2.1	2.0668 µg/L	2.0668 ppb	16:41:22
3	U 409.014†	-10.1	-4.3	-0.3946 µg/L	-0.3946 ppb	16:41:01
3	V 292.402†	64.4	-47.5	-0.5524 µg/L	-0.5524 ppb	16:41:01
3	Zn 213.857†	804.8	-199.2	-4.5871 µg/L	-4.5871 ppb	16:41:22

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2085602.1	99.641 %	0.2920			0.29%
Sc RADIAL	97961.1	101 %	0.4			0.39%
Y 371.029	1427350.7	99.615 %	0.3684			0.37%
Ag 328.068†	-9.8	-0.0799 µg/L	0.32841	-0.0799 ppb	0.32841	410.82%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	2.3	1.0496 µg/L	5.40124	1.0496 ppb	5.40124	514.59%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.0	4.4365 µg/L	5.32477	4.4365 ppb	5.32477	120.02%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-15.7	-0.7237 µg/L	0.31123	-0.7237 ppb	0.31123	43.00%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	1.0	0.0209 µg/L	0.09455	0.0209 ppb	0.09455	453.46%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	132.6	0.0778 µg/L	0.01826	0.0778 ppb	0.01826	23.47%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-11.0	-3.9983 µg/L	1.75090	-3.9983 ppb	1.75090	43.79%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-1.8	-0.0459 µg/L	0.21320	-0.0459 ppb	0.21320	464.89%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.3	-0.1819 µg/L	0.09193	-0.1819 ppb	0.09193	50.54%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-17.0	-0.3709 µg/L	0.44213	-0.3709 ppb	0.44213 119.20%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	28.8	0.1922 µg/L	0.27464	0.1922 ppb	0.27464 142.90%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	2.0	23.305 µg/L	12.2989	23.305 ppb	12.2989 52.77%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-30.7	-14.336 µg/L	32.7849	-14.336 ppb	32.7849 228.69%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	1.5	19.349 µg/L	7.2600	19.349 ppb	7.2600 37.52%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	56.1	0.1687 µg/L	0.02570	0.1687 ppb	0.02570 15.23%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	15.7	1.5553 µg/L	0.34158	1.5553 ppb	0.34158 21.96%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	22.8	11.368 µg/L	4.3212	11.368 ppb	4.3212 38.01%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	-9.2	-0.5133 µg/L	0.47518	-0.5133 ppb	0.47518 92.56%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	-4.8	-7.9902 µg/L	8.70931	-7.9902 ppb	8.70931 109.00%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	9.7	2.5597 µg/L	0.95189	2.5597 ppb	0.95189 37.19%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-1.3	-4.1435 µg/L	10.32666	-4.1435 ppb	10.32666 249.23%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	4.9	4.3583 µg/L	2.49343	4.3583 ppb	2.49343 57.21%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-5.1	-4.7073 µg/L	0.51562	-4.7073 ppb	0.51562 10.95%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	8.1	1.4702 µg/L	2.67944	1.4702 ppb	2.67944 182.25%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	34.2	2.3251 µg/L	0.22289	2.3251 ppb	0.22289 9.59%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	2.6	1.0164 µg/L	1.26744	1.0164 ppb	1.26744 124.69%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	-21.2	-0.1258 µg/L	0.02420	-0.1258 ppb	0.02420 19.24%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	134.2	0.3123 µg/L	0.10866	0.3123 ppb	0.10866 34.79%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	2.5	2.4928 µg/L	3.78908	2.4928 ppb	3.78908 152.00%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-6.2	-0.5656 µg/L	5.77693	-0.5656 ppb	5.77693 >999.9%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-35.9	-0.4162 µg/L	0.20120	-0.4162 ppb	0.20120 48.34%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-193.3	-4.4511 µg/L	0.15404	-4.4511 ppb	0.15404 3.46%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 45

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 17:14:08

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99699.6	99699.6	103 %		17:14:42
1	Al 396.153Radial†	10646.7	10455.1	4980.3 µg/L	4980.3 ppb	17:14:42
1	Ca 317.933Radial†	14570.5	13759.8	5007.5 µg/L	5007.5 ppb	17:14:42
1	Fe 238.204 Radial†	455.2	430.0	5096.3 µg/L	5096.3 ppb	17:15:02
1	K 766.490 Radial†	11422.9	10604.1	4948.7 µg/L	4948.7 ppb	17:14:42
1	Mg 279.077 IEC†	393.8	374.3	4937.8 µg/L	4937.8 ppb	17:15:02
1	Na 589.592 Radial†	21228.3	20427.8	10196 µg/L	10196 ppb	17:14:42
1	Sr 421.552†	87559.1	84863.0	504.50 µg/L	504.50 ppb	17:14:42
1	Sc 361.383	2103243.2	2103243.2	100.48 %		17:16:06
1	Y 371.029	1434697.9	1434697.9	100.13 %		17:16:06
1	Ag 328.068†	61396.5	61560.9	498.01 µg/L	498.01 ppb	17:16:12
1	As 188.979†	344.3	345.9	509.05 µg/L	509.05 ppb	17:16:32
1	B 249.677†	11255.9	10902.3	492.92 µg/L	492.92 ppb	17:16:12
1	Ba 233.527†	22931.0	22828.9	500.17 µg/L	500.17 ppb	17:16:12
1	Be 313.107†	850963.7	848022.0	498.07 µg/L	498.07 ppb	17:16:06
1	Cd 226.502†	20962.6	21032.2	499.87 µg/L	499.87 ppb	17:16:12
1	Co 228.616†	11754.1	11649.4	499.91 µg/L	499.91 ppb	17:16:12
1	Cr 267.716†	23550.8	23357.0	508.31 µg/L	508.31 ppb	17:16:12
1	Cu 324.752†	81642.6	76872.5	503.06 µg/L	503.06 ppb	17:16:12
1	Mn 257.610†	168838.0	168711.4	507.02 µg/L	507.02 ppb	17:16:06
1	Mo 202.031†	5278.6	5248.1	519.50 µg/L	519.50 ppb	17:16:32
1	Ni 231.604†	9380.9	8958.8	501.94 µg/L	501.94 ppb	17:16:12
1	P 214.914†	1812.0	1530.9	2493.8 µg/L	2493.8 ppb	17:16:32
1	Pb 220.353†	1996.7	1956.9	513.69 µg/L	513.69 ppb	17:16:32
1	S 181.975 Axial†	343.1	318.9	1014.9 µg/L	1014.9 ppb	17:16:32
1	Sb 206.836†	597.3	571.7	512.68 µg/L	512.68 ppb	17:16:32
1	Se 196.026†	572.3	542.2	521.65 µg/L	521.65 ppb	17:16:32
1	SiO2†	32875.0	29936.8	5404.7 µg/L	5404.7 ppb	17:16:12
1	Si 251.611†	37835.1	37228.7	2530.9 µg/L	2530.9 ppb	17:16:12
1	Sn 189.927†	1328.2	1329.3	518.02 µg/L	518.02 ppb	17:16:32
1	Ti 334.940†	213929.0	213475.4	498.88 µg/L	498.88 ppb	17:16:06
1	Tl 190.801†	488.5	520.2	512.87 µg/L	512.87 ppb	17:16:32
1	U 409.014†	5530.6	5509.7	499.26 µg/L	499.26 ppb	17:16:12
1	V 292.402†	42820.7	42502.0	506.75 µg/L	506.75 ppb	17:16:12
1	Zn 213.857†	23177.0	22056.5	504.28 µg/L	504.28 ppb	17:16:12
2	Sc RADIAL	98794.8	98794.8	102 %		17:15:08
2	Al 396.153Radial†	10585.9	10490.2	4997.2 µg/L	4997.2 ppb	17:15:08
2	Ca 317.933Radial†	14448.8	13770.0	5011.2 µg/L	5011.2 ppb	17:15:08
2	Fe 238.204 Radial†	456.3	435.0	5156.1 µg/L	5156.1 ppb	17:15:28
2	K 766.490 Radial†	11419.5	10702.3	4994.6 µg/L	4994.6 ppb	17:15:08
2	Mg 279.077 IEC†	395.1	379.1	5001.3 µg/L	5001.3 ppb	17:15:28
2	Na 589.592 Radial†	21023.5	20415.9	10190 µg/L	10190 ppb	17:15:08
2	Sr 421.552†	86928.9	85023.9	505.46 µg/L	505.46 ppb	17:15:08
2	Sc 361.383	2102403.6	2102403.6	100.44 %		17:16:39
2	Y 371.029	1436022.9	1436022.9	100.22 %		17:16:39
2	Ag 328.068†	61886.1	62072.7	502.15 µg/L	502.15 ppb	17:16:45
2	As 188.979†	347.3	349.0	513.70 µg/L	513.70 ppb	17:17:05
2	B 249.677†	11311.7	10962.3	495.62 µg/L	495.62 ppb	17:16:45
2	Ba 233.527†	23137.9	23044.0	504.89 µg/L	504.89 ppb	17:16:45
2	Be 313.107†	851813.7	849206.5	498.77 µg/L	498.77 ppb	17:16:39
2	Cd 226.502†	21112.4	21189.7	503.61 µg/L	503.61 ppb	17:16:45
2	Co 228.616†	11865.1	11764.6	504.85 µg/L	504.85 ppb	17:16:45
2	Cr 267.716†	23710.9	23525.9	511.99 µg/L	511.99 ppb	17:16:45
2	Cu 324.752†	82316.3	77575.7	507.66 µg/L	507.66 ppb	17:16:45
2	Mn 257.610†	168870.3	168810.6	507.32 µg/L	507.32 ppb	17:16:39
2	Mo 202.031†	5182.9	5154.9	510.28 µg/L	510.28 ppb	17:17:05
2	Ni 231.604†	9430.8	9012.2	504.93 µg/L	504.93 ppb	17:16:45
2	P 214.914†	1810.3	1529.9	2491.5 µg/L	2491.5 ppb	17:17:05
2	Pb 220.353†	1978.9	1940.0	509.21 µg/L	509.21 ppb	17:17:05

2	S 181.975 Axial†	338.9	314.9	1002.1 µg/L	1002.1 ppb	17:17:05
2	Sb 206.836†	590.1	564.8	506.28 µg/L	506.28 ppb	17:17:05
2	Se 196.026†	556.4	526.7	507.17 µg/L	507.17 ppb	17:17:05
2	SiO2†	33245.9	30319.1	5473.7 µg/L	5473.7 ppb	17:16:45
2	Si 251.611†	38258.8	37665.6	2560.7 µg/L	2560.7 ppb	17:16:45
2	Sn 189.927†	1305.1	1306.8	509.26 µg/L	509.26 ppb	17:17:05
2	Ti 334.940†	213802.3	213434.2	498.78 µg/L	498.78 ppb	17:16:39
2	Tl 190.801†	484.9	516.8	509.56 µg/L	509.56 ppb	17:17:05
2	U 409.014†	5668.0	5648.7	511.87 µg/L	511.87 ppb	17:16:45
2	V 292.402†	43197.9	42894.6	511.33 µg/L	511.33 ppb	17:16:45
2	Zn 213.857†	23334.4	22222.4	508.07 µg/L	508.07 ppb	17:16:45
3	Sc RADIAL	99477.8	99477.8	103 %		17:15:34
3	Al 396.153Radial†	10697.2	10527.2	5016.6 µg/L	5016.6 ppb	17:15:34
3	Ca 317.933Radial†	14564.6	13785.5	5016.9 µg/L	5016.9 ppb	17:15:34
3	Fe 238.204 Radial†	451.4	427.2	5062.3 µg/L	5062.3 ppb	17:15:54
3	K 766.490 Radial†	11502.0	10705.7	4996.1 µg/L	4996.1 ppb	17:15:34
3	Mg 279.077 IEC†	393.7	375.1	4946.8 µg/L	4946.8 ppb	17:15:54
3	Na 589.592 Radial†	21267.0	20511.4	10237 µg/L	10237 ppb	17:15:34
3	Sr 421.552†	87710.2	85199.4	506.50 µg/L	506.50 ppb	17:15:34
3	Sc 361.383	2096602.1	2096602.1	100.17 %		17:17:12
3	Y 371.029	1431243.1	1431243.1	99.886 %		17:17:12
3	Ag 328.068†	57697.4	58061.4	469.55 µg/L	469.55 ppb	17:17:18
3	As 188.979†	290.6	293.4	431.58 µg/L	431.58 ppb	17:17:39
3	B 249.677†	10449.2	10132.4	457.90 µg/L	457.90 ppb	17:17:18
3	Ba 233.527†	20904.9	20878.4	457.42 µg/L	457.42 ppb	17:17:18
3	Be 313.107†	783620.7	783473.8	460.16 µg/L	460.16 ppb	17:17:12
3	Cd 226.502†	18959.0	19098.0	453.85 µg/L	453.85 ppb	17:17:18
3	Co 228.616†	10570.8	10505.1	450.75 µg/L	450.75 ppb	17:17:18
3	Cr 267.716†	20422.4	20308.1	441.97 µg/L	441.97 ppb	17:17:18
3	Cu 324.752†	74087.6	69587.5	455.47 µg/L	455.47 ppb	17:17:18
3	Mn 257.610†	155808.4	156235.8	469.53 µg/L	469.53 ppb	17:17:12
3	Mo 202.031†	4333.1	4320.8	427.74 µg/L	427.74 ppb	17:17:39
3	Ni 231.604†	8469.4	8078.4	452.62 µg/L	452.62 ppb	17:17:18
3	P 214.914†	1579.7	1304.7	2121.8 µg/L	2121.8 ppb	17:17:39
3	Pb 220.353†	1705.5	1672.5	438.99 µg/L	438.99 ppb	17:17:39
3	S 181.975 Axial†	296.8	273.8	871.33 µg/L	871.33 ppb	17:17:39
3	Sb 206.836†	510.6	487.1	436.41 µg/L	436.41 ppb	17:17:39
3	Se 196.026†	506.3	478.1	461.30 µg/L	461.30 ppb	17:17:39
3	SiO2†	30762.2	27931.2	5042.6 µg/L	5042.6 ppb	17:17:18
3	Si 251.611†	35094.9	34612.3	2353.1 µg/L	2353.1 ppb	17:17:18
3	Sn 189.927†	1075.2	1080.8	421.30 µg/L	421.30 ppb	17:17:39
3	Ti 334.940†	195583.2	195834.5	457.62 µg/L	457.62 ppb	17:17:12
3	Tl 190.801†	422.2	455.6	449.41 µg/L	449.41 ppb	17:17:39
3	U 409.014†	4905.3	4903.0	444.17 µg/L	444.17 ppb	17:17:18
3	V 292.402†	38175.8	37999.8	452.69 µg/L	452.69 ppb	17:17:18
3	Zn 213.857†	20929.6	19885.9	454.60 µg/L	454.60 ppb	17:17:18

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2100749.6	100.37 %	0.173			0.17%
Sc RADIAL	99324.1	103 %	0.5			0.47%
Y 371.029	1433988.0	100.08 %	0.172			0.17%
Ag 328.068†	60565.0	489.90 µg/L	17.745	489.90 ppb	17.745	3.62%
QC value within limits for Ag 328.068 Recovery = 97.98%						
Al 396.153Radial†	10490.9	4998.0 µg/L	18.17	4998.0 ppb	18.17	0.36%
QC value within limits for Al 396.153Radial Recovery = 99.96%						
As 188.979†	329.4	484.78 µg/L	46.125	484.78 ppb	46.125	9.51%
QC value within limits for As 188.979 Recovery = 96.96%						
B 249.677†	10665.7	482.15 µg/L	21.045	482.15 ppb	21.045	4.36%
QC value within limits for B 249.677 Recovery = 96.43%						
Ba 233.527†	22250.5	487.49 µg/L	26.150	487.49 ppb	26.150	5.36%
QC value within limits for Ba 233.527 Recovery = 97.50%						
Be 313.107†	826900.8	485.67 µg/L	22.091	485.67 ppb	22.091	4.55%
QC value within limits for Be 313.107 Recovery = 97.13%						
Ca 317.933Radial†	13771.8	5011.8 µg/L	4.72	5011.8 ppb	4.72	0.09%
QC value within limits for Ca 317.933Radial Recovery = 100.24%						
Cd 226.502†	20440.0	485.78 µg/L	27.713	485.78 ppb	27.713	5.70%
QC value within limits for Cd 226.502 Recovery = 97.16%						
Co 228.616†	11306.4	485.17 µg/L	29.909	485.17 ppb	29.909	6.16%



Cr	267.716†	22397.0	487.42 µg/L	39.408	487.42 ppb	39.408	8.08%
Cu	324.752†	74678.6	488.73 µg/L	28.897	488.73 ppb	28.897	5.91%
Fe	238.204 Radial†	430.7	5104.9 µg/L	47.46	5104.9 ppb	47.46	0.93%
K	766.490 Radial†	10670.7	4979.8 µg/L	26.93	4979.8 ppb	26.93	0.54%
Mg	279.077 IEC†	376.2	4962.0 µg/L	34.33	4962.0 ppb	34.33	0.69%
Mn	257.610†	164585.9	494.62 µg/L	21.736	494.62 ppb	21.736	4.39%
Mo	202.031†	4907.9	485.84 µg/L	50.525	485.84 ppb	50.525	10.40%
Na	589.592 Radial†	20451.7	10208 µg/L	26.0	10208 ppb	26.0	0.25%
Ni	231.604†	8683.1	486.50 µg/L	29.377	486.50 ppb	29.377	6.04%
P	214.914†	1455.2	2369.1 µg/L	214.12	2369.1 ppb	214.12	9.04%
Pb	220.353†	1856.5	487.29 µg/L	41.895	487.29 ppb	41.895	8.60%
S	181.975 Axial†	302.5	962.79 µg/L	79.461	962.79 ppb	79.461	8.25%
Sb	206.836†	541.2	485.12 µg/L	42.307	485.12 ppb	42.307	8.72%
Se	196.026†	515.7	496.70 µg/L	31.507	496.70 ppb	31.507	6.34%
SiO2†		29395.7	5307.0 µg/L	231.56	5307.0 ppb	231.56	4.36%
Si	251.611†	36502.2	2481.6 µg/L	112.26	2481.6 ppb	112.26	4.52%
Sn	189.927†	1239.0	482.86 µg/L	53.492	482.86 ppb	53.492	11.08%
Sr	421.552†	85028.8	505.49 µg/L	1.000	505.49 ppb	1.000	0.20%
Ti	334.940†	207581.4	485.09 µg/L	23.788	485.09 ppb	23.788	4.90%
Tl	190.801†	497.6	490.61 µg/L	35.722	490.61 ppb	35.722	7.28%
U	409.014†	5353.8	485.10 µg/L	36.002	485.10 ppb	36.002	7.42%
V	292.402†	41132.2	490.26 µg/L	32.611	490.26 ppb	32.611	6.65%
Zn	213.857†	21388.2	488.98 µg/L	29.837	488.98 ppb	29.837	6.10%

QC value within limits for Co 228.616 Recovery = 97.03%

QC value within limits for Cr 267.716 Recovery = 97.48%

QC value within limits for Cu 324.752 Recovery = 97.75%

QC value within limits for Fe 238.204 Radial Recovery = 102.10%

QC value within limits for K 766.490 Radial Recovery = 99.60%

QC value within limits for Mg 279.077 IEC Recovery = 99.24%

QC value within limits for Mn 257.610 Recovery = 98.92%

QC value within limits for Mo 202.031 Recovery = 97.17%

QC value within limits for Na 589.592 Radial Recovery = 102.08%

QC value within limits for Ni 231.604 Recovery = 97.30%

QC value within limits for P 214.914 Recovery = 94.76%

QC value within limits for Pb 220.353 Recovery = 97.46%

QC value within limits for S 181.975 Axial Recovery = 96.28%

QC value within limits for Sb 206.836 Recovery = 97.02%

QC value within limits for Se 196.026 Recovery = 99.34%

QC value within limits for SiO2 Recovery = 99.24%

QC value within limits for Si 251.611 Recovery = 99.26%

QC value within limits for Sn 189.927 Recovery = 96.57%

QC value within limits for Sr 421.552 Recovery = 101.10%

QC value within limits for Ti 334.940 Recovery = 97.02%

QC value within limits for Tl 190.801 Recovery = 98.12%

QC value within limits for U 409.014 Recovery = 97.02%

QC value within limits for V 292.402 Recovery = 98.05%

QC value within limits for Zn 213.857 Recovery = 97.80%

All analyte(s) passed QC.

Sequence No.: 46

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 17:17:49

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	99131.9	99131.9	102 %		17:18:19
1	Al 396.153Radial†	-135.7	-13.2	-6.3547 µg/L	-6.3547 ppb	17:18:19
1	Ca 317.933Radial†	379.3	-15.0	-5.4550 µg/L	-5.4550 ppb	17:18:40
1	Fe 238.204 Radial†	14.4	2.1	25.334 µg/L	25.334 ppb	17:18:40
1	K 766.490 Radial†	519.2	21.6	10.080 µg/L	10.080 ppb	17:18:19
1	Mg 279.077 IEC†	6.9	-1.3	-16.855 µg/L	-16.855 ppb	17:18:40
1	Na 589.592 Radial†	173.8	-10.9	-5.4574 µg/L	-5.4574 ppb	17:18:19
1	Sr 421.552†	157.6	14.4	0.0857 µg/L	0.0857 ppb	17:18:19
1	Sc 361.383	2095501.3	2095501.3	100.11 %		17:19:41
1	Y 371.029	1434074.7	1434074.7	100.08 %		17:19:41
1	Ag 328.068†	-462.7	-2.0	-0.0133 µg/L	-0.0133 ppb	17:19:47
1	As 188.979†	-3.9	-0.7	-0.9721 µg/L	-0.9721 ppb	17:20:08
1	B 249.677†	290.5	-9.2	-0.4320 µg/L	-0.4320 ppb	17:20:08
1	Ba 233.527†	0.9	9.3	0.2035 µg/L	0.2035 ppb	17:20:08
1	Be 313.107†	-1001.6	158.4	0.0929 µg/L	0.0929 ppb	17:19:47
1	Cd 226.502†	-164.9	5.8	0.1360 µg/L	0.1360 ppb	17:20:08
1	Co 228.616†	41.4	-6.7	-0.2888 µg/L	-0.2888 ppb	17:20:08
1	Cr 267.716†	69.6	-10.7	-0.2334 µg/L	-0.2334 ppb	17:20:08
1	Cu 324.752†	4302.1	-79.5	-0.5147 µg/L	-0.5147 ppb	17:19:47
1	Mn 257.610†	-643.7	44.0	0.1349 µg/L	0.1349 ppb	17:20:08
1	Mo 202.031†	23.3	18.2	1.8011 µg/L	1.8011 ppb	17:20:08
1	Ni 231.604†	376.7	-0.6	-0.0341 µg/L	-0.0341 ppb	17:20:08
1	P 214.914†	274.1	1.4	2.3013 µg/L	2.3013 ppb	17:20:08
1	Pb 220.353†	29.9	-0.3	-0.0637 µg/L	-0.0637 ppb	17:20:08
1	S 181.975 Axial†	21.5	-1.1	-3.4098 µg/L	-3.4098 ppb	17:20:08
1	Sb 206.836†	29.9	7.1	6.4030 µg/L	6.4030 ppb	17:20:08
1	Se 196.026†	19.1	-8.3	-7.6904 µg/L	-7.6904 ppb	17:20:08
1	SiO2†	2725.6	-57.3	-10.339 µg/L	-10.339 ppb	17:20:08
1	Si 251.611†	503.9	79.3	5.3890 µg/L	5.3890 ppb	17:20:08
1	Sn 189.927†	-5.7	1.7	0.6724 µg/L	0.6724 ppb	17:20:08
1	Ti 334.940†	-395.9	181.8	0.4263 µg/L	0.4263 ppb	17:19:47
1	Tl 190.801†	-28.4	5.8	5.6547 µg/L	5.6547 ppb	17:20:08
1	U 409.014†	-30.4	-24.6	-2.2328 µg/L	-2.2328 ppb	17:19:47
1	V 292.402†	121.7	9.2	0.1167 µg/L	0.1167 ppb	17:19:47
1	Zn 213.857†	828.1	-181.7	-4.1818 µg/L	-4.1818 ppb	17:20:08
2	Sc RADIAL	98733.7	98733.7	102 %		17:18:45
2	Al 396.153Radial†	-119.2	2.4	1.1093 µg/L	1.1093 ppb	17:18:45
2	Ca 317.933Radial†	379.2	-13.6	-4.9427 µg/L	-4.9427 ppb	17:19:05
2	Fe 238.204 Radial†	14.6	2.3	27.631 µg/L	27.631 ppb	17:19:05
2	K 766.490 Radial†	433.8	-60.1	-28.058 µg/L	-28.058 ppb	17:18:45
2	Mg 279.077 IEC†	9.3	1.2	15.264 µg/L	15.264 ppb	17:19:05
2	Na 589.592 Radial†	188.0	3.7	1.8359 µg/L	1.8359 ppb	17:18:45
2	Sr 421.552†	123.5	-18.4	-0.1094 µg/L	-0.1094 ppb	17:18:45
2	Sc 361.383	2085772.6	2085772.6	99.650 %		17:20:14
2	Y 371.029	1427894.6	1427894.6	99.653 %		17:20:14
2	Ag 328.068†	-462.3	-3.7	-0.0273 µg/L	-0.0273 ppb	17:20:19
2	As 188.979†	-3.4	-0.1	-0.2087 µg/L	-0.2087 ppb	17:20:40
2	B 249.677†	285.5	-12.9	-0.5990 µg/L	-0.5990 ppb	17:20:40
2	Ba 233.527†	-5.0	3.4	0.0737 µg/L	0.0737 ppb	17:20:40
2	Be 313.107†	-994.6	160.8	0.0944 µg/L	0.0944 ppb	17:20:19
2	Cd 226.502†	-164.5	5.5	0.1274 µg/L	0.1274 ppb	17:20:40
2	Co 228.616†	42.6	-5.3	-0.2262 µg/L	-0.2262 ppb	17:20:40
2	Cr 267.716†	57.6	-22.4	-0.4881 µg/L	-0.4881 ppb	17:20:40
2	Cu 324.752†	4396.5	35.2	0.2354 µg/L	0.2354 ppb	17:20:19
2	Mn 257.610†	-649.5	35.2	0.1065 µg/L	0.1065 ppb	17:20:40
2	Mo 202.031†	25.9	20.9	2.0643 µg/L	2.0643 ppb	17:20:40
2	Ni 231.604†	354.3	-21.3	-1.1962 µg/L	-1.1962 ppb	17:20:40
2	P 214.914†	279.0	7.6	12.684 µg/L	12.684 ppb	17:20:40
2	Pb 220.353†	36.0	6.0	1.5744 µg/L	1.5744 ppb	17:20:40

2	S 181.975 Axial†	28.3	5.8	18.606 µg/L	18.606 ppb	17:20:40
2	Sb 206.836†	26.6	3.9	3.5463 µg/L	3.5463 ppb	17:20:40
2	Se 196.026†	18.0	-9.3	-8.6207 µg/L	-8.6207 ppb	17:20:40
2	SiO2†	2737.2	-33.0	-5.9504 µg/L	-5.9504 ppb	17:20:40
2	Si 251.611†	481.7	59.3	4.0341 µg/L	4.0341 ppb	17:20:40
2	Sn 189.927†	3.8	11.3	4.3962 µg/L	4.3962 ppb	17:20:40
2	Ti 334.940†	-535.6	39.8	0.0918 µg/L	0.0918 ppb	17:20:19
2	Tl 190.801†	-31.2	2.8	2.7031 µg/L	2.7031 ppb	17:20:40
2	U 409.014†	42.8	48.8	4.4274 µg/L	4.4274 ppb	17:20:19
2	V 292.402†	118.4	6.5	0.0924 µg/L	0.0924 ppb	17:20:19
2	Zn 213.857†	826.7	-179.3	-4.1250 µg/L	-4.1250 ppb	17:20:40
3	Sc RADIAL	97950.1	97950.1	101 %		17:19:11
3	Al 396.153Radial†	-72.4	47.8	22.775 µg/L	22.775 ppb	17:19:11
3	Ca 317.933Radial†	380.9	-8.9	-3.2373 µg/L	-3.2373 ppb	17:19:31
3	Fe 238.204 Radial†	14.5	2.3	27.707 µg/L	27.707 ppb	17:19:31
3	K 766.490 Radial†	398.9	-91.2	-42.557 µg/L	-42.557 ppb	17:19:11
3	Mg 279.077 IEC†	11.9	3.7	49.144 µg/L	49.144 ppb	17:19:31
3	Na 589.592 Radial†	160.7	-21.8	-10.877 µg/L	-10.877 ppb	17:19:11
3	Sr 421.552†	147.0	5.8	0.0345 µg/L	0.0345 ppb	17:19:11
3	Sc 361.383	2074480.3	2074480.3	99.110 %		17:20:46
3	Y 371.029	1418991.9	1418991.9	99.031 %		17:20:46
3	Ag 328.068†	-491.9	-36.1	-0.2879 µg/L	-0.2879 ppb	17:20:51
3	As 188.979†	-2.1	1.2	1.7165 µg/L	1.7165 ppb	17:21:12
3	B 249.677†	289.9	-6.8	-0.3245 µg/L	-0.3245 ppb	17:21:12
3	Ba 233.527†	-7.1	1.2	0.0270 µg/L	0.0270 ppb	17:21:12
3	Be 313.107†	-1070.0	79.2	0.0465 µg/L	0.0465 ppb	17:20:51
3	Cd 226.502†	-171.8	-2.7	-0.0681 µg/L	-0.0681 ppb	17:21:12
3	Co 228.616†	45.6	-2.0	-0.0848 µg/L	-0.0848 ppb	17:21:12
3	Cr 267.716†	77.2	-2.3	-0.0505 µg/L	-0.0505 ppb	17:21:12
3	Cu 324.752†	4405.4	68.3	0.4513 µg/L	0.4513 ppb	17:20:51
3	Mn 257.610†	-649.3	31.9	0.0941 µg/L	0.0941 ppb	17:21:12
3	Mo 202.031†	25.7	20.8	2.0571 µg/L	2.0571 ppb	17:21:12
3	Ni 231.604†	368.2	-5.4	-0.3000 µg/L	-0.3000 ppb	17:21:12
3	P 214.914†	274.3	4.4	7.2075 µg/L	7.2075 ppb	17:21:12
3	Pb 220.353†	34.9	5.1	1.3355 µg/L	1.3355 ppb	17:21:12
3	S 181.975 Axial†	20.1	-2.3	-7.2423 µg/L	-7.2423 ppb	17:21:12
3	Sb 206.836†	28.5	6.0	5.4056 µg/L	5.4056 ppb	17:21:12
3	Se 196.026†	15.6	-11.5	-10.788 µg/L	-10.788 ppb	17:21:12
3	SiO2†	2738.9	-16.2	-2.9319 µg/L	-2.9319 ppb	17:21:12
3	Si 251.611†	508.1	88.6	6.0220 µg/L	6.0220 ppb	17:21:12
3	Sn 189.927†	-1.0	6.4	2.4966 µg/L	2.4966 ppb	17:21:12
3	Ti 334.940†	-492.1	80.7	0.1848 µg/L	0.1848 ppb	17:20:51
3	Tl 190.801†	-30.9	3.0	2.9021 µg/L	2.9021 ppb	17:21:12
3	U 409.014†	-21.9	-16.3	-1.4795 µg/L	-1.4795 ppb	17:20:51
3	V 292.402†	109.3	-2.0	-0.0133 µg/L	-0.0133 ppb	17:20:51
3	Zn 213.857†	806.2	-195.4	-4.5034 µg/L	-4.5034 ppb	17:21:12

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2085251.4	99.625 %	0.5026			0.50%
Sc RADIAL	98605.2	102 %	0.6			0.61%
Y 371.029	1426987.1	99.589 %	0.5292			0.53%
Ag 328.068†	-13.9	-0.1095 µg/L	0.15468	-0.1095 ppb	0.15468	141.29%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	12.3	5.8433 µg/L	15.13111	5.8433 ppb	15.13111	258.95%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.1	0.1786 µg/L	1.38549	0.1786 ppb	1.38549	775.76%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-9.6	-0.4518 µg/L	0.13834	-0.4518 ppb	0.13834	30.62%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	4.6	0.1014 µg/L	0.09147	0.1014 ppb	0.09147	90.21%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	132.8	0.0779 µg/L	0.02725	0.0779 ppb	0.02725	34.96%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-12.5	-4.5450 µg/L	1.16112	-4.5450 ppb	1.16112	25.55%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	2.9	0.0651 µg/L	0.11547	0.0651 ppb	0.11547	177.36%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.7	-0.1999 µg/L	0.10449	-0.1999 ppb	0.10449	52.27%

Cr	267.716†	-11.8	-0.2573 µg/L	0.21975	-0.2573 ppb	0.21975	85.40%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cu	324.752†	8.0	0.0573 µg/L	0.50702	0.0573 ppb	0.50702	884.58%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Fe	238.204 Radial†	2.3	26.891 µg/L	1.3486	26.891 ppb	1.3486	5.02%
QC value within limits for Cu 324.752 Recovery = Not calculated							
K	766.490 Radial†	-43.2	-20.178 µg/L	27.1890	-20.178 ppb	27.1890	134.75%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.2	15.851 µg/L	33.0036	15.851 ppb	33.0036	208.21%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mn	257.610†	37.0	0.1119 µg/L	0.02090	0.1119 ppb	0.02090	18.68%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mo	202.031†	19.9	1.9742 µg/L	0.14994	1.9742 ppb	0.14994	7.59%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Na	589.592 Radial†	-9.7	-4.8329 µg/L	6.37947	-4.8329 ppb	6.37947	132.00%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Ni	231.604†	-9.1	-0.5101 µg/L	0.60884	-0.5101 ppb	0.60884	119.35%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
P	214.914†	4.4	7.3975 µg/L	5.19373	7.3975 ppb	5.19373	70.21%
QC value within limits for Ni 231.604 Recovery = Not calculated							
Pb	220.353†	3.6	0.9488 µg/L	0.88489	0.9488 ppb	0.88489	93.27%
QC value within limits for P 214.914 Recovery = Not calculated							
S	181.975 Axial†	0.8	2.6512 µg/L	13.94925	2.6512 ppb	13.94925	526.14%
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb	206.836†	5.7	5.1183 µg/L	1.44981	5.1183 ppb	1.44981	28.33%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Se	196.026†	-9.7	-9.0329 µg/L	1.58930	-9.0329 ppb	1.58930	17.59%
QC value within limits for Sb 206.836 Recovery = Not calculated							
SiO2†		-35.5	-6.4072 µg/L	3.72476	-6.4072 ppb	3.72476	58.13%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	75.7	5.1484 µg/L	1.01555	5.1484 ppb	1.01555	19.73%
QC value within limits for SiO2 Recovery = Not calculated							
Sn	189.927†	6.5	2.5217 µg/L	1.86204	2.5217 ppb	1.86204	73.84%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sr	421.552†	0.6	0.0036 µg/L	0.10119	0.0036 ppb	0.10119	>999.9%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Ti	334.940†	100.8	0.2343 µg/L	0.17265	0.2343 ppb	0.17265	73.69%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Tl	190.801†	3.8	3.7533 µg/L	1.64968	3.7533 ppb	1.64968	43.95%
QC value within limits for Ti 334.940 Recovery = Not calculated							
U	409.014†	2.7	0.2384 µg/L	3.64731	0.2384 ppb	3.64731	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated							
V	292.402†	4.6	0.0653 µg/L	0.06911	0.0653 ppb	0.06911	105.85%
QC value within limits for U 409.014 Recovery = Not calculated							
Zn	213.857†	-185.5	-4.2701 µg/L	0.20406	-4.2701 ppb	0.20406	4.78%
QC value within limits for V 292.402 Recovery = Not calculated							
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 17:38:22

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98560.2	98560.2	102 %		17:38:54
1	Al 396.153Radial†	10323.6	10257.3	4885.8 µg/L	4885.8 ppb	17:38:54
1	Ca 317.933Radial†	14126.5	13487.2	4908.3 µg/L	4908.3 ppb	17:38:54
1	Fe 238.204 Radial†	438.9	419.1	4967.3 µg/L	4967.3 ppb	17:39:15
1	K 766.490 Radial†	11117.9	10432.7	4868.8 µg/L	4868.8 ppb	17:38:54
1	Mg 279.077 IEC†	390.9	375.9	4958.9 µg/L	4958.9 ppb	17:39:15
1	Na 589.592 Radial†	20516.6	19967.1	9965.7 µg/L	9965.7 ppb	17:38:54
1	Sr 421.552†	84560.8	82901.2	492.84 µg/L	492.84 ppb	17:38:54
1	Sc 361.383	2088467.0	2088467.0	99.778 %		17:40:18
1	Y 371.029	1427832.8	1427832.8	99.648 %		17:40:18
1	Ag 328.068†	60935.5	61531.2	497.76 µg/L	497.76 ppb	17:40:24
1	As 188.979†	344.1	348.1	512.39 µg/L	512.39 ppb	17:40:44
1	B 249.677†	11148.2	10873.6	491.68 µg/L	491.68 ppb	17:40:24
1	Ba 233.527†	22801.9	22861.0	500.88 µg/L	500.88 ppb	17:40:24
1	Be 313.107†	848615.5	851660.3	500.21 µg/L	500.21 ppb	17:40:18
1	Cd 226.502†	20732.3	20949.0	497.91 µg/L	497.91 ppb	17:40:24
1	Co 228.616†	11730.6	11708.6	502.45 µg/L	502.45 ppb	17:40:24
1	Cr 267.716†	23334.6	23306.2	507.21 µg/L	507.21 ppb	17:40:24
1	Cu 324.752†	81183.0	76986.7	503.78 µg/L	503.78 ppb	17:40:24
1	Mn 257.610†	168257.0	169317.9	508.84 µg/L	508.84 ppb	17:40:18
1	Mo 202.031†	5247.3	5253.9	520.07 µg/L	520.07 ppb	17:40:44
1	Ni 231.604†	9355.9	8999.8	504.24 µg/L	504.24 ppb	17:40:24
1	P 214.914†	1819.7	1551.3	2527.8 µg/L	2527.8 ppb	17:40:44
1	Pb 220.353†	1973.6	1947.8	511.28 µg/L	511.28 ppb	17:40:44
1	S 181.975 Axial†	341.8	320.1	1018.6 µg/L	1018.6 ppb	17:40:44
1	Sb 206.836†	590.8	569.4	510.59 µg/L	510.59 ppb	17:40:44
1	Se 196.026†	571.2	545.2	524.01 µg/L	524.01 ppb	17:40:44
1	SiO2†	32456.1	29748.5	5370.7 µg/L	5370.7 ppb	17:40:24
1	Si 251.611†	37307.6	36966.4	2513.1 µg/L	2513.1 ppb	17:40:24
1	Sn 189.927†	1329.8	1340.2	522.27 µg/L	522.27 ppb	17:40:44
1	Ti 334.940†	212810.7	213860.9	499.77 µg/L	499.77 ppb	17:40:18
1	Tl 190.801†	490.6	525.8	518.37 µg/L	518.37 ppb	17:40:44
1	U 409.014†	5565.1	5583.3	505.96 µg/L	505.96 ppb	17:40:24
1	V 292.402†	42558.8	42541.0	507.23 µg/L	507.23 ppb	17:40:24
1	Zn 213.857†	23004.5	22046.7	504.05 µg/L	504.05 ppb	17:40:24
2	Sc RADIAL	99785.3	99785.3	103 %		17:39:20
2	Al 396.153Radial†	10435.2	10241.1	4878.3 µg/L	4878.3 ppb	17:39:20
2	Ca 317.933Radial†	14262.7	13449.1	4894.4 µg/L	4894.4 ppb	17:39:20
2	Fe 238.204 Radial†	441.8	416.6	4938.0 µg/L	4938.0 ppb	17:39:40
2	K 766.490 Radial†	11201.3	10379.5	4843.9 µg/L	4843.9 ppb	17:39:20
2	Mg 279.077 IEC†	389.5	369.8	4878.5 µg/L	4878.5 ppb	17:39:40
2	Na 589.592 Radial†	20739.8	19936.3	9950.3 µg/L	9950.3 ppb	17:39:20
2	Sr 421.552†	85751.7	83036.8	493.64 µg/L	493.64 ppb	17:39:20
2	Sc 361.383	2085278.6	2085278.6	99.626 %		17:40:51
2	Y 371.029	1422666.4	1422666.4	99.288 %		17:40:51
2	Ag 328.068†	61052.3	61741.8	499.46 µg/L	499.46 ppb	17:40:57
2	As 188.979†	341.6	346.1	509.43 µg/L	509.43 ppb	17:41:17
2	B 249.677†	11132.2	10874.7	491.75 µg/L	491.75 ppb	17:40:57
2	Ba 233.527†	22759.4	22853.3	500.71 µg/L	500.71 ppb	17:40:57
2	Be 313.107†	846322.9	850659.5	499.62 µg/L	499.62 ppb	17:40:51
2	Cd 226.502†	20810.5	21059.2	500.53 µg/L	500.53 ppb	17:40:57
2	Co 228.616†	11695.1	11691.0	501.68 µg/L	501.68 ppb	17:40:57
2	Cr 267.716†	23307.5	23314.8	507.40 µg/L	507.40 ppb	17:40:57
2	Cu 324.752†	81061.6	76989.2	503.79 µg/L	503.79 ppb	17:40:57
2	Mn 257.610†	167744.9	169061.7	508.07 µg/L	508.07 ppb	17:40:51
2	Mo 202.031†	5147.6	5161.8	510.96 µg/L	510.96 ppb	17:41:17
2	Ni 231.604†	9243.6	8901.4	498.72 µg/L	498.72 ppb	17:40:57
2	P 214.914†	1795.9	1530.2	2492.5 µg/L	2492.5 ppb	17:41:17
2	Pb 220.353†	1952.7	1929.9	506.55 µg/L	506.55 ppb	17:41:17

2	S 181.975 Axial†	341.5	320.3	1019.2 µg/L	1019.2 ppb	17:41:17
2	Sb 206.836†	581.7	561.1	503.09 µg/L	503.09 ppb	17:41:17
2	Se 196.026†	570.8	545.6	524.39 µg/L	524.39 ppb	17:41:17
2	SiO2†	32575.1	29917.6	5401.2 µg/L	5401.2 ppb	17:40:57
2	Si 251.611†	37431.4	37147.9	2525.5 µg/L	2525.5 ppb	17:40:57
2	Sn 189.927†	1288.6	1300.9	506.97 µg/L	506.97 ppb	17:41:17
2	Ti 334.940†	212627.8	214003.4	500.11 µg/L	500.11 ppb	17:40:51
2	Tl 190.801†	484.7	520.6	513.25 µg/L	513.25 ppb	17:41:17
2	U 409.014†	5540.7	5567.3	504.52 µg/L	504.52 ppb	17:40:57
2	V 292.402†	42620.5	42668.2	508.67 µg/L	508.67 ppb	17:40:57
2	Zn 213.857†	22937.2	22014.5	503.33 µg/L	503.33 ppb	17:40:57
3	Sc RADIAL	99523.8	99523.8	103 %		17:39:46
3	Al 396.153Radial†	10443.6	10275.8	4896.6 µg/L	4896.6 ppb	17:39:46
3	Ca 317.933Radial†	14222.6	13446.4	4893.4 µg/L	4893.4 ppb	17:39:46
3	Fe 238.204 Radial†	439.1	415.1	4918.9 µg/L	4918.9 ppb	17:40:06
3	K 766.490 Radial†	11205.0	10411.7	4858.9 µg/L	4858.9 ppb	17:39:46
3	Mg 279.077 IEC†	394.6	375.7	4955.5 µg/L	4955.5 ppb	17:40:06
3	Na 589.592 Radial†	20694.8	19945.4	9954.8 µg/L	9954.8 ppb	17:39:46
3	Sr 421.552†	85364.7	82878.9	492.71 µg/L	492.71 ppb	17:39:46
3	Sc 361.383	2081579.5	2081579.5	99.449 %		17:41:25
3	Y 371.029	1419655.0	1419655.0	99.078 %		17:41:25
3	Ag 328.068†	57300.1	58077.7	469.68 µg/L	469.68 ppb	17:41:30
3	As 188.979†	291.9	296.8	436.70 µg/L	436.70 ppb	17:41:51
3	B 249.677†	10452.2	10210.8	461.53 µg/L	461.53 ppb	17:41:30
3	Ba 233.527†	20831.4	20955.2	459.10 µg/L	459.10 ppb	17:41:30
3	Be 313.107†	781755.1	787243.7	462.37 µg/L	462.37 ppb	17:41:25
3	Cd 226.502†	18909.2	19184.5	455.93 µg/L	455.93 ppb	17:41:30
3	Co 228.616†	10513.9	10524.1	451.56 µg/L	451.56 ppb	17:41:30
3	Cr 267.716†	20326.8	20359.1	443.08 µg/L	443.08 ppb	17:41:30
3	Cu 324.752†	73691.6	69723.0	456.33 µg/L	456.33 ppb	17:41:30
3	Mn 257.610†	155316.1	156863.3	471.40 µg/L	471.40 ppb	17:41:25
3	Mo 202.031†	4298.8	4317.4	427.41 µg/L	427.41 ppb	17:41:51
3	Ni 231.604†	8486.5	8156.6	457.01 µg/L	457.01 ppb	17:41:30
3	P 214.914†	1564.2	1300.5	2114.8 µg/L	2114.8 ppb	17:41:51
3	Pb 220.353†	1687.7	1666.9	437.49 µg/L	437.49 ppb	17:41:51
3	S 181.975 Axial†	300.5	279.6	889.76 µg/L	889.76 ppb	17:41:51
3	Sb 206.836†	507.4	487.5	436.78 µg/L	436.78 ppb	17:41:51
3	Se 196.026†	490.0	465.4	448.90 µg/L	448.90 ppb	17:41:51
3	SiO2†	30263.9	27651.8	4992.1 µg/L	4992.1 ppb	17:41:30
3	Si 251.611†	34571.3	34338.7	2334.5 µg/L	2334.5 ppb	17:41:30
3	Sn 189.927†	1047.0	1060.2	413.27 µg/L	413.27 ppb	17:41:51
3	Ti 334.940†	195236.6	196895.2	460.10 µg/L	460.10 ppb	17:41:25
3	Tl 190.801†	423.9	460.3	454.03 µg/L	454.03 ppb	17:41:51
3	U 409.014†	4937.4	4970.5	450.34 µg/L	450.34 ppb	17:41:30
3	V 292.402†	38033.6	38131.9	454.28 µg/L	454.28 ppb	17:41:30
3	Zn 213.857†	20833.2	19939.8	455.82 µg/L	455.82 ppb	17:41:30

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2085108.4	99.618 %	0.1647			0.17%
Sc RADIAL	99289.7	103 %	0.7			0.65%
Y 371.029	1423384.7	99.338 %	0.2886			0.29%
Ag 328.068†	60450.2	488.97 µg/L	16.722	488.97 ppb	16.722	3.42%
QC value within limits for Ag 328.068 Recovery = 97.79%						
Al 396.153Radial†	10258.1	4886.9 µg/L	9.20	4886.9 ppb	9.20	0.19%
QC value within limits for Al 396.153Radial Recovery = 97.74%						
As 188.979†	330.4	486.17 µg/L	42.869	486.17 ppb	42.869	8.82%
QC value within limits for As 188.979 Recovery = 97.23%						
B 249.677†	10653.0	481.65 µg/L	17.430	481.65 ppb	17.430	3.62%
QC value within limits for B 249.677 Recovery = 96.33%						
Ba 233.527†	22223.2	486.90 µg/L	24.071	486.90 ppb	24.071	4.94%
QC value within limits for Ba 233.527 Recovery = 97.38%						
Be 313.107†	829854.5	487.40 µg/L	21.675	487.40 ppb	21.675	4.45%
QC value within limits for Be 313.107 Recovery = 97.48%						
Ca 317.933Radial†	13460.9	4898.7 µg/L	8.32	4898.7 ppb	8.32	0.17%
QC value within limits for Ca 317.933Radial Recovery = 97.97%						
Cd 226.502†	20397.6	484.79 µg/L	25.029	484.79 ppb	25.029	5.16%
QC value within limits for Cd 226.502 Recovery = 96.96%						
Co 228.616†	11307.9	485.23 µg/L	29.162	485.23 ppb	29.162	6.01%

QC value within limits for Co 228.616	Recovery = 97.05%			
Cr 267.716†	22326.7	485.89 µg/L	37.079	485.89 ppb 37.079 7.63%
QC value within limits for Cr 267.716	Recovery = 97.18%			
Cu 324.752†	74566.3	487.96 µg/L	27.400	487.96 ppb 27.400 5.62%
QC value within limits for Cu 324.752	Recovery = 97.59%			
Fe 238.204 Radial†	416.9	4941.4 µg/L	24.34	4941.4 ppb 24.34 0.49%
QC value within limits for Fe 238.204 Radial	Recovery = 98.83%			
K 766.490 Radial†	10408.0	4857.2 µg/L	12.51	4857.2 ppb 12.51 0.26%
QC value within limits for K 766.490 Radial	Recovery = 97.14%			
Mg 279.077 IEC†	373.8	4931.0 µg/L	45.46	4931.0 ppb 45.46 0.92%
QC value within limits for Mg 279.077 IEC	Recovery = 98.62%			
Mn 257.610†	165081.0	496.10 µg/L	21.395	496.10 ppb 21.395 4.31%
QC value within limits for Mn 257.610	Recovery = 99.22%			
Mo 202.031†	4911.0	486.14 µg/L	51.072	486.14 ppb 51.072 10.51%
QC value within limits for Mo 202.031	Recovery = 97.23%			
Na 589.592 Radial†	19949.6	9956.9 µg/L	7.91	9956.9 ppb 7.91 0.08%
QC value within limits for Na 589.592 Radial	Recovery = 99.57%			
Ni 231.604†	8685.9	486.66 µg/L	25.823	486.66 ppb 25.823 5.31%
QC value within limits for Ni 231.604	Recovery = 97.33%			
P 214.914†	1460.7	2378.4 µg/L	228.95	2378.4 ppb 228.95 9.63%
QC value within limits for P 214.914	Recovery = 95.13%			
Pb 220.353†	1848.2	485.11 µg/L	41.307	485.11 ppb 41.307 8.52%
QC value within limits for Pb 220.353	Recovery = 97.02%			
S 181.975 Axial†	306.6	975.86 µg/L	74.566	975.86 ppb 74.566 7.64%
QC value within limits for S 181.975 Axial	Recovery = 97.59%			
Sb 206.836†	539.3	483.49 µg/L	40.623	483.49 ppb 40.623 8.40%
QC value within limits for Sb 206.836	Recovery = 96.70%			
Se 196.026†	518.7	499.10 µg/L	43.474	499.10 ppb 43.474 8.71%
QC value within limits for Se 196.026	Recovery = 99.82%			
SiO2†	29106.0	5254.7 µg/L	227.87	5254.7 ppb 227.87 4.34%
QC value within limits for SiO2	Recovery = 98.26%			
Si 251.611†	36151.0	2457.7 µg/L	106.88	2457.7 ppb 106.88 4.35%
QC value within limits for Si 251.611	Recovery = 98.31%			
Sn 189.927†	1233.8	480.84 µg/L	59.015	480.84 ppb 59.015 12.27%
QC value within limits for Sn 189.927	Recovery = 96.17%			
Sr 421.552†	82939.0	493.06 µg/L	0.508	493.06 ppb 0.508 0.10%
QC value within limits for Sr 421.552	Recovery = 98.61%			
Ti 334.940†	208253.2	486.66 µg/L	23.003	486.66 ppb 23.003 4.73%
QC value within limits for Ti 334.940	Recovery = 97.33%			
Tl 190.801†	502.3	495.22 µg/L	35.762	495.22 ppb 35.762 7.22%
QC value within limits for Tl 190.801	Recovery = 99.04%			
U 409.014†	5373.7	486.94 µg/L	31.707	486.94 ppb 31.707 6.51%
QC value within limits for U 409.014	Recovery = 97.39%			
V 292.402†	41113.7	490.06 µg/L	30.997	490.06 ppb 30.997 6.33%
QC value within limits for V 292.402	Recovery = 98.01%			
Zn 213.857†	21333.7	487.73 µg/L	27.638	487.73 ppb 27.638 5.67%
QC value within limits for Zn 213.857	Recovery = 97.55%			

All analyte(s) passed QC.

Sequence No.: 3  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 17:42:01  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96746.5	96746.5	100.0 %		17:42:31
1	Al 396.153Radial†	-105.8	13.5	6.4160 µg/L	6.4160 ppb	17:42:31
1	Ca 317.933Radial†	365.9	-19.3	-7.0115 µg/L	-7.0115 ppb	17:42:51
1	Fe 238.204 Radial†	14.1	2.2	25.623 µg/L	25.623 ppb	17:42:51
1	K 766.490 Radial†	529.0	43.9	20.494 µg/L	20.494 ppb	17:42:31
1	Mg 279.077 IEC†	11.1	3.1	41.205 µg/L	41.205 ppb	17:42:51
1	Na 589.592 Radial†	173.3	-7.3	-3.6232 µg/L	-3.6232 ppb	17:42:31
1	Sr 421.552†	134.7	-4.7	-0.0278 µg/L	-0.0278 ppb	17:42:31
1	Sc 361.383	2070509.5	2070509.5	98.920 %		17:43:53
1	Y 371.029	1416252.3	1416252.3	98.840 %		17:43:53
1	Ag 328.068†	-523.2	-68.7	-0.5518 µg/L	-0.5518 ppb	17:43:59
1	As 188.979†	-1.8	1.5	2.1561 µg/L	2.1561 ppb	17:44:19
1	B 249.677†	295.7	-0.4	-0.0329 µg/L	-0.0329 ppb	17:43:59
1	Ba 233.527†	1.4	9.8	0.2134 µg/L	0.2134 ppb	17:44:19
1	Be 313.107†	-986.0	162.1	0.0952 µg/L	0.0952 ppb	17:43:59
1	Cd 226.502†	-166.5	2.3	0.0507 µg/L	0.0507 ppb	17:44:19
1	Co 228.616†	36.3	-11.4	-0.4877 µg/L	-0.4877 ppb	17:44:19
1	Cr 267.716†	62.5	-17.1	-0.3723 µg/L	-0.3723 ppb	17:43:59
1	Cu 324.752†	4338.7	9.4	0.0663 µg/L	0.0663 ppb	17:43:59
1	Mn 257.610†	-669.7	10.0	0.0286 µg/L	0.0286 ppb	17:44:19
1	Mo 202.031†	19.4	14.5	1.4330 µg/L	1.4330 ppb	17:44:19
1	Ni 231.604†	372.7	-0.1	-0.0067 µg/L	-0.0067 ppb	17:44:19
1	P 214.914†	270.1	0.7	1.0902 µg/L	1.0902 ppb	17:44:19
1	Pb 220.353†	38.8	9.1	2.3959 µg/L	2.3959 ppb	17:44:19
1	S 181.975 Axial†	19.5	-2.9	-9.1235 µg/L	-9.1235 ppb	17:44:19
1	Sb 206.836†	28.1	5.7	5.1171 µg/L	5.1171 ppb	17:44:19
1	Se 196.026†	24.7	-2.4	-2.1650 µg/L	-2.1650 ppb	17:44:19
1	SiO2†	2714.1	-36.0	-6.4944 µg/L	-6.4944 ppb	17:43:59
1	Si 251.611†	421.4	1.9	0.1284 µg/L	0.1284 ppb	17:44:19
1	Sn 189.927†	-4.4	3.0	1.1522 µg/L	1.1522 ppb	17:44:19
1	Ti 334.940†	-478.4	93.6	0.2156 µg/L	0.2156 ppb	17:43:59
1	Tl 190.801†	-35.6	-1.9	-1.8308 µg/L	-1.8308 ppb	17:44:19
1	U 409.014†	-54.6	-49.4	-4.4868 µg/L	-4.4868 ppb	17:43:59
1	V 292.402†	80.1	-31.3	-0.3675 µg/L	-0.3675 ppb	17:43:59
1	Zn 213.857†	847.5	-152.1	-3.5059 µg/L	-3.5059 ppb	17:44:19
2	Sc RADIAL	96174.0	96174.0	99.4 %		17:42:57
2	Al 396.153Radial†	-95.3	23.4	11.123 µg/L	11.123 ppb	17:42:57
2	Ca 317.933Radial†	366.9	-16.0	-5.8229 µg/L	-5.8229 ppb	17:43:17
2	Fe 238.204 Radial†	15.5	3.6	43.125 µg/L	43.125 ppb	17:43:17
2	K 766.490 Radial†	465.8	-16.6	-7.7282 µg/L	-7.7282 ppb	17:42:57
2	Mg 279.077 IEC†	9.5	1.5	20.056 µg/L	20.056 ppb	17:43:17
2	Na 589.592 Radial†	185.9	6.5	3.2471 µg/L	3.2471 ppb	17:42:57
2	Sr 421.552†	134.4	-4.1	-0.0246 µg/L	-0.0246 ppb	17:42:57
2	Sc 361.383	2067507.0	2067507.0	98.777 %		17:44:25
2	Y 371.029	1417548.2	1417548.2	98.931 %		17:44:25
2	Ag 328.068†	-506.0	-52.0	-0.4179 µg/L	-0.4179 ppb	17:44:31
2	As 188.979†	-0.3	2.9	4.2968 µg/L	4.2968 ppb	17:44:51
2	B 249.677†	292.5	-3.2	-0.1672 µg/L	-0.1672 ppb	17:44:31
2	Ba 233.527†	2.7	11.1	0.2425 µg/L	0.2425 ppb	17:44:51
2	Be 313.107†	-1119.4	25.6	0.0149 µg/L	0.0149 ppb	17:44:31
2	Cd 226.502†	-172.8	-4.4	-0.1079 µg/L	-0.1079 ppb	17:44:51
2	Co 228.616†	45.3	-2.2	-0.0952 µg/L	-0.0952 ppb	17:44:51
2	Cr 267.716†	91.3	12.2	0.2658 µg/L	0.2658 ppb	17:44:31
2	Cu 324.752†	4313.5	-9.8	-0.0557 µg/L	-0.0557 ppb	17:44:31
2	Mn 257.610†	-662.2	16.5	0.0509 µg/L	0.0509 ppb	17:44:51
2	Mo 202.031†	26.8	22.0	2.1788 µg/L	2.1788 ppb	17:44:51
2	Ni 231.604†	379.0	6.8	0.3815 µg/L	0.3815 ppb	17:44:51
2	P 214.914†	271.5	2.5	4.0512 µg/L	4.0512 ppb	17:44:51
2	Pb 220.353†	27.6	-2.2	-0.5695 µg/L	-0.5695 ppb	17:44:51



2	S 181.975 Axial†	16.7	-5.7	-17.998 µg/L	-17.998 ppb	17:44:51
2	Sb 206.836†	25.7	3.3	2.9519 µg/L	2.9519 ppb	17:44:51
2	Se 196.026†	23.8	-3.2	-2.8744 µg/L	-2.8744 ppb	17:44:51
2	SiO2†	2721.0	-25.0	-4.5155 µg/L	-4.5155 ppb	17:44:31
2	Si 251.611†	420.5	1.6	0.1066 µg/L	0.1066 ppb	17:44:51
2	Sn 189.927†	-8.1	-0.8	-0.3015 µg/L	-0.3015 ppb	17:44:51
2	Ti 334.940†	-458.2	113.3	0.2633 µg/L	0.2633 ppb	17:44:31
2	Tl 190.801†	-35.1	-1.5	-1.4171 µg/L	-1.4171 ppb	17:44:51
2	U 409.014†	-4.7	1.1	0.0931 µg/L	0.0931 ppb	17:44:31
2	V 292.402†	67.1	-44.4	-0.5121 µg/L	-0.5121 ppb	17:44:31
2	Zn 213.857†	838.0	-160.5	-3.6990 µg/L	-3.6990 ppb	17:44:51
3	Sc RADIAL	96145.3	96145.3	99.3 %		17:43:23
3	Al 396.153Radial†	-125.0	-6.5	-3.1388 µg/L	-3.1388 ppb	17:43:23
3	Ca 317.933Radial†	367.0	-15.8	-5.7540 µg/L	-5.7540 ppb	17:43:43
3	Fe 238.204 Radial†	15.1	3.3	38.869 µg/L	38.869 ppb	17:43:43
3	K 766.490 Radial†	475.7	-6.4	-3.0086 µg/L	-3.0086 ppb	17:43:23
3	Mg 279.077 IEC†	4.6	-3.4	-44.311 µg/L	-44.311 ppb	17:43:43
3	Na 589.592 Radial†	151.8	-27.8	-13.872 µg/L	-13.872 ppb	17:43:23
3	Sr 421.552†	133.0	-5.5	-0.0329 µg/L	-0.0329 ppb	17:43:23
3	Sc 361.383	2060340.5	2060340.5	98.434 %		17:44:57
3	Y 371.029	1410460.6	1410460.6	98.436 %		17:44:57
3	Ag 328.068†	-537.2	-85.5	-0.6875 µg/L	-0.6875 ppb	17:45:03
3	As 188.979†	-3.4	-0.2	-0.2609 µg/L	-0.2609 ppb	17:45:23
3	B 249.677†	296.7	2.1	0.0732 µg/L	0.0732 ppb	17:45:03
3	Ba 233.527†	-13.3	-5.1	-0.1119 µg/L	-0.1119 ppb	17:45:23
3	Be 313.107†	-1029.2	113.2	0.0665 µg/L	0.0665 ppb	17:45:03
3	Cd 226.502†	-162.1	5.9	0.1347 µg/L	0.1347 ppb	17:45:23
3	Co 228.616†	42.2	-5.2	-0.2220 µg/L	-0.2220 ppb	17:45:23
3	Cr 267.716†	68.1	-11.1	-0.2409 µg/L	-0.2409 ppb	17:45:03
3	Cu 324.752†	4311.8	3.7	0.0313 µg/L	0.0313 ppb	17:45:03
3	Mn 257.610†	-664.1	12.3	0.0422 µg/L	0.0422 ppb	17:45:23
3	Mo 202.031†	20.9	16.1	1.5913 µg/L	1.5913 ppb	17:45:23
3	Ni 231.604†	368.7	-2.3	-0.1278 µg/L	-0.1278 ppb	17:45:23
3	P 214.914†	274.7	6.7	11.113 µg/L	11.113 ppb	17:45:23
3	Pb 220.353†	41.8	12.3	3.2380 µg/L	3.2380 ppb	17:45:23
3	S 181.975 Axial†	20.2	-2.0	-6.3552 µg/L	-6.3552 ppb	17:45:23
3	Sb 206.836†	31.1	8.8	7.9080 µg/L	7.9080 ppb	17:45:23
3	Se 196.026†	21.6	-5.4	-4.9090 µg/L	-4.9090 ppb	17:45:23
3	SiO2†	2719.4	-17.1	-3.0912 µg/L	-3.0912 ppb	17:45:03
3	Si 251.611†	432.2	15.0	1.0175 µg/L	1.0175 ppb	17:45:23
3	Sn 189.927†	-0.4	7.1	2.7474 µg/L	2.7474 ppb	17:45:23
3	Ti 334.940†	-487.6	81.8	0.1948 µg/L	0.1948 ppb	17:45:03
3	Tl 190.801†	-33.3	0.3	0.2592 µg/L	0.2592 ppb	17:45:23
3	U 409.014†	26.8	33.0	2.9956 µg/L	2.9956 ppb	17:45:03
3	V 292.402†	61.3	-50.0	-0.5807 µg/L	-0.5807 ppb	17:45:03
3	Zn 213.857†	812.5	-183.5	-4.2232 µg/L	-4.2232 ppb	17:45:23

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2066119.0	98.711 %	0.2496			0.25%
Sc RADIAL	96355.3	99.6 %	0.35			0.35%
Y 371.029	1414753.7	98.736 %	0.2634			0.27%
Ag 328.068†	-68.7	-0.5524 µg/L	0.13482	-0.5524 ppb	0.13482	24.41%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	10.1	4.8000 µg/L	7.26694	4.8000 ppb	7.26694	151.39%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.4	2.0640 µg/L	2.28021	2.0640 ppb	2.28021	110.48%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-0.5	-0.0423 µg/L	0.12046	-0.0423 ppb	0.12046	284.72%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.3	0.1147 µg/L	0.19674	0.1147 ppb	0.19674	171.53%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	100.3	0.0588 µg/L	0.04066	0.0588 ppb	0.04066	69.10%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-17.0	-6.1961 µg/L	0.70698	-6.1961 ppb	0.70698	11.41%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.3	0.0259 µg/L	0.12323	0.0259 ppb	0.12323	476.70%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-6.3	-0.2683 µg/L	0.20033	-0.2683 ppb	0.20033	74.67%

Cr	267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
		-5.3	-0.1158 µg/L	0.33690	-0.1158 ppb	0.33690 290.96%
		QC value within limits for Cr 267.716	Recovery = Not calculated			
Cu	324.752†	1.1	0.0140 µg/L	0.06283	0.0140 ppb	0.06283 449.74%
		QC value within limits for Cu 324.752	Recovery = Not calculated			
Fe	238.204 Radial†	3.0	35.872 µg/L	9.1276	35.872 ppb	9.1276 25.44%
		QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
K	766.490 Radial†	7.0	3.2525 µg/L	15.11721	3.2525 ppb	15.11721 464.79%
		QC value within limits for K 766.490 Radial	Recovery = Not calculated			
Mg	279.077 IEC†	0.4	5.6501 µg/L	44.54113	5.6501 ppb	44.54113 788.32%
		QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
Mn	257.610†	12.9	0.0406 µg/L	0.01121	0.0406 ppb	0.01121 27.62%
		QC value within limits for Mn 257.610	Recovery = Not calculated			
Mo	202.031†	17.5	1.7344 µg/L	0.39295	1.7344 ppb	0.39295 22.66%
		QC value within limits for Mo 202.031	Recovery = Not calculated			
Na	589.592 Radial†	-9.5	-4.7495 µg/L	8.61511	-4.7495 ppb	8.61511 181.39%
		QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
Ni	231.604†	1.5	0.0823 µg/L	0.26603	0.0823 ppb	0.26603 323.13%
		QC value within limits for Ni 231.604	Recovery = Not calculated			
P	214.914†	3.3	5.4183 µg/L	5.14949	5.4183 ppb	5.14949 95.04%
		QC value within limits for P 214.914	Recovery = Not calculated			
Pb	220.353†	6.4	1.6881 µg/L	2.00001	1.6881 ppb	2.00001 118.47%
		QC value within limits for Pb 220.353	Recovery = Not calculated			
S	181.975 Axial†	-3.5	-11.159 µg/L	6.0826	-11.159 ppb	6.0826 54.51%
		QC value within limits for S 181.975 Axial	Recovery = Not calculated			
Sb	206.836†	5.9	5.3257 µg/L	2.48459	5.3257 ppb	2.48459 46.65%
		QC value within limits for Sb 206.836	Recovery = Not calculated			
Se	196.026†	-3.6	-3.3161 µg/L	1.42432	-3.3161 ppb	1.42432 42.95%
		QC value within limits for Se 196.026	Recovery = Not calculated			
SiO2†		-26.0	-4.7004 µg/L	1.70911	-4.7004 ppb	1.70911 36.36%
		QC value within limits for SiO2	Recovery = Not calculated			
Si	251.611†	6.1	0.4175 µg/L	0.51976	0.4175 ppb	0.51976 124.49%
		QC value within limits for Si 251.611	Recovery = Not calculated			
Sn	189.927†	3.1	1.1994 µg/L	1.52496	1.1994 ppb	1.52496 127.15%
		QC value within limits for Sn 189.927	Recovery = Not calculated			
Sr	421.552†	-4.8	-0.0284 µg/L	0.00417	-0.0284 ppb	0.00417 14.67%
		QC value within limits for Sr 421.552	Recovery = Not calculated			
Ti	334.940†	96.3	0.2246 µg/L	0.03514	0.2246 ppb	0.03514 15.65%
		QC value within limits for Ti 334.940	Recovery = Not calculated			
Tl	190.801†	-1.0	-0.9962 µg/L	1.10674	-0.9962 ppb	1.10674 111.09%
		QC value within limits for Tl 190.801	Recovery = Not calculated			
U	409.014†	-5.1	-0.4660 µg/L	3.77243	-0.4660 ppb	3.77243 809.49%
		QC value within limits for U 409.014	Recovery = Not calculated			
V	292.402†	-41.9	-0.4868 µg/L	0.10884	-0.4868 ppb	0.10884 22.36%
		QC value within limits for V 292.402	Recovery = Not calculated			
Zn	213.857†	-165.3	-3.8093 µg/L	0.37115	-3.8093 ppb	0.37115 9.74%
		QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 8  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 3/16/2010 18:24:37  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95712.2	95712.2	98.9 %		18:25:11
1	Al 396.153Radial†	10687.2	10926.7	5204.8 µg/L	5204.8 ppb	18:25:11
1	Ca 317.933Radial†	14561.1	14339.6	5218.5 µg/L	5218.5 ppb	18:25:11
1	Fe 238.204 Radial†	458.7	451.9	5356.7 µg/L	5356.7 ppb	18:25:31
1	K 766.490 Radial†	11280.2	10921.7	5096.9 µg/L	5096.9 ppb	18:25:11
1	Mg 279.077 IEC†	405.0	401.5	5297.1 µg/L	5297.1 ppb	18:25:31
1	Na 589.592 Radial†	21474.5	21535.4	10748 µg/L	10748 ppb	18:25:11
1	Sr 421.552†	88185.3	89037.4	529.32 µg/L	529.32 ppb	18:25:11
1	Sc 361.383	2023235.3	2023235.3	96.662 %		18:26:35
1	Y 371.029	1383166.8	1383166.8	96.531 %		18:26:35
1	Ag 328.068†	62600.7	65222.8	527.63 µg/L	527.63 ppb	18:26:40
1	As 188.979†	357.3	372.9	548.84 µg/L	548.84 ppb	18:27:01
1	B 249.677†	11413.1	11507.9	520.31 µg/L	520.31 ppb	18:26:40
1	Ba 233.527†	23359.4	24174.5	529.66 µg/L	529.66 ppb	18:26:40
1	Be 313.107†	869551.5	900740.6	529.03 µg/L	529.03 ppb	18:26:35
1	Cd 226.502†	21304.1	22210.4	527.88 µg/L	527.88 ppb	18:26:40
1	Co 228.616†	11976.3	12341.8	529.62 µg/L	529.62 ppb	18:26:40
1	Cr 267.716†	23898.8	24643.9	536.32 µg/L	536.32 ppb	18:26:40
1	Cu 324.752†	83031.5	81522.4	533.48 µg/L	533.48 ppb	18:26:40
1	Mn 257.610†	172139.4	178771.3	537.25 µg/L	537.25 ppb	18:26:35
1	Mo 202.031†	5373.0	5553.5	549.73 µg/L	549.73 ppb	18:27:01
1	Ni 231.604†	9493.0	9443.9	529.12 µg/L	529.12 ppb	18:26:40
1	P 214.914†	1859.6	1651.4	2691.1 µg/L	2691.1 ppb	18:27:01
1	Pb 220.353†	2021.2	2060.8	540.95 µg/L	540.95 ppb	18:27:01
1	S 181.975 Axial†	348.1	337.6	1074.3 µg/L	1074.3 ppb	18:27:01
1	Sb 206.836†	611.4	609.8	546.82 µg/L	546.82 ppb	18:27:01
1	Se 196.026†	589.5	582.6	560.11 µg/L	560.11 ppb	18:27:01
1	SiO2†	33092.9	31456.0	5678.9 µg/L	5678.9 ppb	18:26:40
1	Si 251.611†	38191.1	39086.0	2657.2 µg/L	2657.2 ppb	18:26:40
1	Sn 189.927†	1363.0	1417.5	552.39 µg/L	552.39 ppb	18:27:01
1	Ti 334.940†	217926.7	226030.1	528.21 µg/L	528.21 ppb	18:26:35
1	Tl 190.801†	504.0	555.5	547.67 µg/L	547.67 ppb	18:27:01
1	U 409.014†	5741.3	5945.4	538.77 µg/L	538.77 ppb	18:26:40
1	V 292.402†	43623.2	45017.5	536.75 µg/L	536.75 ppb	18:26:40
1	Zn 213.857†	23532.1	23336.0	533.53 µg/L	533.53 ppb	18:26:40
2	Sc RADIAL	94733.3	94733.3	97.9 %		18:25:37
2	Al 396.153Radial†	10520.7	10868.2	5177.3 µg/L	5177.3 ppb	18:25:37
2	Ca 317.933Radial†	14457.4	14385.7	5235.3 µg/L	5235.3 ppb	18:25:37
2	Fe 238.204 Radial†	465.1	463.2	5489.5 µg/L	5489.5 ppb	18:25:57
2	K 766.490 Radial†	11237.2	10995.6	5131.4 µg/L	5131.4 ppb	18:25:37
2	Mg 279.077 IEC†	405.6	406.4	5360.8 µg/L	5360.8 ppb	18:25:57
2	Na 589.592 Radial†	21284.9	21566.0	10764 µg/L	10764 ppb	18:25:37
2	Sr 421.552†	87215.3	88967.8	528.90 µg/L	528.90 ppb	18:25:37
2	Sc 361.383	2043498.0	2043498.0	97.630 %		18:27:08
2	Y 371.029	1393824.3	1393824.3	97.275 %		18:27:08
2	Ag 328.068†	62535.4	64513.8	521.90 µg/L	521.90 ppb	18:27:14
2	As 188.979†	343.2	354.8	522.11 µg/L	522.11 ppb	18:27:34
2	B 249.677†	11414.5	11392.3	514.99 µg/L	514.99 ppb	18:27:14
2	Ba 233.527†	23313.2	23887.6	523.37 µg/L	523.37 ppb	18:27:14
2	Be 313.107†	865866.1	888045.8	521.58 µg/L	521.58 ppb	18:27:08
2	Cd 226.502†	21324.0	22012.3	523.15 µg/L	523.15 ppb	18:27:14
2	Co 228.616†	11979.1	12221.9	524.46 µg/L	524.46 ppb	18:27:14
2	Cr 267.716†	23925.3	24425.9	531.58 µg/L	531.58 ppb	18:27:14
2	Cu 324.752†	82868.2	80503.3	526.84 µg/L	526.84 ppb	18:27:14
2	Mn 257.610†	171830.8	176689.3	531.00 µg/L	531.00 ppb	18:27:08
2	Mo 202.031†	5240.3	5362.4	530.82 µg/L	530.82 ppb	18:27:34
2	Ni 231.604†	9553.2	9408.2	527.13 µg/L	527.13 ppb	18:27:14
2	P 214.914†	1824.5	1596.4	2599.9 µg/L	2599.9 ppb	18:27:34
2	Pb 220.353†	1989.8	2008.0	527.06 µg/L	527.06 ppb	18:27:34

2	S 181.975 Axial†	342.9	328.7	1045.9 µg/L	1045.9 ppb	18:27:34
2	Sb 206.836†	599.9	591.7	530.41 µg/L	530.41 ppb	18:27:34
2	Se 196.026†	570.3	556.8	536.26 µg/L	536.26 ppb	18:27:34
2	SiO2†	33178.8	31204.5	5633.5 µg/L	5633.5 ppb	18:27:14
2	Si 251.611†	38179.0	38681.8	2629.7 µg/L	2629.7 ppb	18:27:14
2	Sn 189.927†	1320.3	1359.8	529.94 µg/L	529.94 ppb	18:27:34
2	Ti 334.940†	217011.9	222857.5	520.79 µg/L	520.79 ppb	18:27:08
2	Tl 190.801†	491.3	537.3	529.80 µg/L	529.80 ppb	18:27:34
2	U 409.014†	5681.2	5824.9	527.81 µg/L	527.81 ppb	18:27:14
2	V 292.402†	43520.3	44464.6	530.04 µg/L	530.04 ppb	18:27:14
2	Zn 213.857†	23486.4	23047.7	526.91 µg/L	526.91 ppb	18:27:14
3	Sc RADIAL	95584.4	95584.4	98.8 %		18:26:03
3	Al 396.153Radial†	10638.2	10891.5	5190.2 µg/L	5190.2 ppb	18:26:03
3	Ca 317.933Radial†	14586.2	14384.7	5234.9 µg/L	5234.9 ppb	18:26:03
3	Fe 238.204 Radial†	457.4	451.2	5346.6 µg/L	5346.6 ppb	18:26:23
3	K 766.490 Radial†	11287.3	10944.1	5107.4 µg/L	5107.4 ppb	18:26:03
3	Mg 279.077 IEC†	404.7	401.8	5299.3 µg/L	5299.3 ppb	18:26:23
3	Na 589.592 Radial†	21495.7	21585.8	10774 µg/L	10774 ppb	18:26:03
3	Sr 421.552†	87925.7	88893.7	528.46 µg/L	528.46 ppb	18:26:03
3	Sc 361.383	2042382.0	2042382.0	97.577 %		18:27:41
3	Y 371.029	1396162.8	1396162.8	97.438 %		18:27:41
3	Ag 328.068†	58742.4	60661.5	490.59 µg/L	490.59 ppb	18:27:47
3	As 188.979†	295.0	305.6	449.51 µg/L	449.51 ppb	18:28:08
3	B 249.677†	10629.1	10593.7	478.71 µg/L	478.71 ppb	18:27:47
3	Ba 233.527†	21161.3	21695.3	475.32 µg/L	475.32 ppb	18:27:47
3	Be 313.107†	802269.1	823353.8	483.58 µg/L	483.58 ppb	18:27:41
3	Cd 226.502†	19285.5	19935.1	473.73 µg/L	473.73 ppb	18:27:47
3	Co 228.616†	10688.1	10905.5	467.92 µg/L	467.92 ppb	18:27:47
3	Cr 267.716†	20782.0	21217.9	461.77 µg/L	461.77 ppb	18:27:47
3	Cu 324.752†	75001.9	72488.0	474.47 µg/L	474.47 ppb	18:27:47
3	Mn 257.610†	159676.1	164328.9	493.84 µg/L	493.84 ppb	18:27:41
3	Mo 202.031†	4373.4	4476.9	443.20 µg/L	443.20 ppb	18:28:08
3	Ni 231.604†	8560.2	8395.9	470.42 µg/L	470.42 ppb	18:27:47
3	P 214.914†	1591.9	1359.0	2210.1 µg/L	2210.1 ppb	18:28:08
3	Pb 220.353†	1716.0	1728.5	453.67 µg/L	453.67 ppb	18:28:08
3	S 181.975 Axial†	296.6	281.4	895.61 µg/L	895.61 ppb	18:28:08
3	Sb 206.836†	516.2	506.3	453.59 µg/L	453.59 ppb	18:28:08
3	Se 196.026†	501.8	486.9	470.17 µg/L	470.17 ppb	18:28:08
3	SiO2†	30704.9	28687.7	5179.2 µg/L	5179.2 ppb	18:27:47
3	Si 251.611†	35115.1	35563.1	2417.7 µg/L	2417.7 ppb	18:27:47
3	Sn 189.927†	1075.8	1110.0	432.66 µg/L	432.66 ppb	18:28:08
3	Ti 334.940†	199638.1	205173.8	479.44 µg/L	479.44 ppb	18:27:41
3	Tl 190.801†	433.2	478.1	471.56 µg/L	471.56 ppb	18:28:08
3	U 409.014†	5042.6	5173.7	468.70 µg/L	468.70 ppb	18:27:47
3	V 292.402†	38945.3	39800.3	474.10 µg/L	474.10 ppb	18:27:47
3	Zn 213.857†	21165.1	20681.9	472.78 µg/L	472.78 ppb	18:27:47

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2036371.8	97.289 %	0.5442			0.56%
Sc RADIAL	95343.3	98.5 %	0.55			0.56%
Y 371.029	1391051.3	97.081 %	0.4835			0.50%
Ag 328.068†	63466.1	513.37 µg/L	19.934	513.37 ppb	19.934	3.88%
QC value within limits for Ag 328.068 Recovery = 102.67%						
Al 396.153Radial†	10895.5	5190.7 µg/L	13.77	5190.7 ppb	13.77	0.27%
QC value within limits for Al 396.153Radial Recovery = 103.81%						
As 188.979†	344.4	506.82 µg/L	51.401	506.82 ppb	51.401	10.14%
QC value within limits for As 188.979 Recovery = 101.36%						
B 249.677†	11164.6	504.67 µg/L	22.638	504.67 ppb	22.638	4.49%
QC value within limits for B 249.677 Recovery = 100.93%						
Ba 233.527†	23252.5	509.45 µg/L	29.720	509.45 ppb	29.720	5.83%
QC value within limits for Ba 233.527 Recovery = 101.89%						
Be 313.107†	870713.4	511.40 µg/L	24.375	511.40 ppb	24.375	4.77%
QC value within limits for Be 313.107 Recovery = 102.28%						
Ca 317.933Radial†	14370.0	5229.5 µg/L	9.59	5229.5 ppb	9.59	0.18%
QC value within limits for Ca 317.933Radial Recovery = 104.59%						
Cd 226.502†	21385.9	508.25 µg/L	29.989	508.25 ppb	29.989	5.90%
QC value within limits for Cd 226.502 Recovery = 101.65%						
Co 228.616†	11823.0	507.33 µg/L	34.233	507.33 ppb	34.233	6.75%

Cr	267.716†	23429.2	509.89 µg/L	41.740	509.89 ppb	41.740	8.19%
Cu	324.752†	78171.2	511.60 µg/L	32.326	511.60 ppb	32.326	6.32%
Fe	238.204 Radial†	455.4	5397.6 µg/L	79.72	5397.6 ppb	79.72	1.48%
K	766.490 Radial†	10953.8	5111.9 µg/L	17.69	5111.9 ppb	17.69	0.35%
Mg	279.077 IEC†	403.3	5319.1 µg/L	36.15	5319.1 ppb	36.15	0.68%
Mn	257.610†	173263.2	520.70 µg/L	23.465	520.70 ppb	23.465	4.51%
Mo	202.031†	5130.9	507.92 µg/L	56.841	507.92 ppb	56.841	11.19%
Na	589.592 Radial†	21562.4	10762 µg/L	12.7	10762 ppb	12.7	0.12%
Ni	231.604†	9082.7	508.89 µg/L	33.334	508.89 ppb	33.334	6.55%
P	214.914†	1535.6	2500.4 µg/L	255.48	2500.4 ppb	255.48	10.22%
Pb	220.353†	1932.4	507.23 µg/L	46.896	507.23 ppb	46.896	9.25%
S	181.975 Axial†	315.9	1005.3 µg/L	96.03	1005.3 ppb	96.03	9.55%
Sb	206.836†	569.3	510.27 µg/L	49.770	510.27 ppb	49.770	9.75%
Se	196.026†	542.1	522.18 µg/L	46.594	522.18 ppb	46.594	8.92%
SiO2†		30449.4	5497.2 µg/L	276.37	5497.2 ppb	276.37	5.03%
Si	251.611†	37777.0	2568.2 µg/L	131.06	2568.2 ppb	131.06	5.10%
Sn	189.927†	1295.8	505.00 µg/L	63.646	505.00 ppb	63.646	12.60%
Sr	421.552†	88966.3	528.89 µg/L	0.427	528.89 ppb	0.427	0.08%
Ti	334.940†	218020.5	509.48 µg/L	26.278	509.48 ppb	26.278	5.16%
Tl	190.801†	523.6	516.35 µg/L	39.799	516.35 ppb	39.799	7.71%
U	409.014†	5648.0	511.76 µg/L	37.693	511.76 ppb	37.693	7.37%
V	292.402†	43094.1	513.63 µg/L	34.396	513.63 ppb	34.396	6.70%
Zn	213.857†	22355.2	511.07 µg/L	33.327	511.07 ppb	33.327	6.52%

QC value within limits for Co 228.616 Recovery = 101.47%

QC value within limits for Cr 267.716 Recovery = 101.98%

QC value within limits for Cu 324.752 Recovery = 102.32%

QC value within limits for Fe 238.204 Radial Recovery = 107.95%

QC value within limits for K 766.490 Radial Recovery = 102.24%

QC value within limits for Mg 279.077 IEC Recovery = 106.38%

QC value within limits for Mn 257.610 Recovery = 104.14%

QC value within limits for Mo 202.031 Recovery = 101.58%

QC value within limits for Na 589.592 Radial Recovery = 107.62%

QC value within limits for Ni 231.604 Recovery = 101.78%

QC value within limits for P 214.914 Recovery = 100.01%

QC value within limits for Pb 220.353 Recovery = 101.45%

QC value within limits for S 181.975 Axial Recovery = 100.53%

QC value within limits for Sb 206.836 Recovery = 102.05%

QC value within limits for Se 196.026 Recovery = 104.44%

QC value within limits for SiO2 Recovery = 102.80%

QC value within limits for Si 251.611 Recovery = 102.73%

QC value within limits for Sn 189.927 Recovery = 101.00%

QC value within limits for Sr 421.552 Recovery = 105.78%

QC value within limits for Ti 334.940 Recovery = 101.90%

QC value within limits for Tl 190.801 Recovery = 103.27%

QC value within limits for U 409.014 Recovery = 102.35%

QC value within limits for V 292.402 Recovery = 102.73%

QC value within limits for Zn 213.857 Recovery = 102.21%

All analyte(s) passed QC.

Sequence No.: 9  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 18:28:18  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95962.4	95962.4	99.1 %		18:28:48
1	Al 396.153Radial†	-131.1	-12.9	-6.2181 µg/L	-6.2181 ppb	18:28:48
1	Ca 317.933Radial†	372.1	-10.0	-3.6372 µg/L	-3.6372 ppb	18:29:09
1	Fe 238.204 Radial†	14.8	3.0	35.562 µg/L	35.562 ppb	18:29:09
1	K 766.490 Radial†	356.8	-125.5	-58.574 µg/L	-58.574 ppb	18:28:48
1	Mg 279.077 IEC†	8.9	1.0	13.525 µg/L	13.525 ppb	18:29:09
1	Na 589.592 Radial†	232.2	53.6	26.758 µg/L	26.758 ppb	18:28:48
1	Sr 421.552†	160.6	22.6	0.1341 µg/L	0.1341 ppb	18:28:48
1	Sc 361.383	2018729.8	2018729.8	96.447 %		18:30:11
1	Y 371.029	1383991.6	1383991.6	96.589 %		18:30:11
1	Ag 328.068†	-470.7	-27.8	-0.2208 µg/L	-0.2208 ppb	18:30:16
1	As 188.979†	0.8	4.1	6.0208 µg/L	6.0208 ppb	18:30:37
1	B 249.677†	263.8	-25.8	-1.1911 µg/L	-1.1911 ppb	18:30:16
1	Ba 233.527†	-12.5	-4.5	-0.0987 µg/L	-0.0987 ppb	18:30:37
1	Be 313.107†	-1091.5	27.1	0.0159 µg/L	0.0159 ppb	18:30:16
1	Cd 226.502†	-167.0	-2.6	-0.0645 µg/L	-0.0645 ppb	18:30:37
1	Co 228.616†	33.5	-13.3	-0.5714 µg/L	-0.5714 ppb	18:30:37
1	Cr 267.716†	56.7	-21.4	-0.4662 µg/L	-0.4662 ppb	18:30:16
1	Cu 324.752†	4292.7	74.1	0.4910 µg/L	0.4910 ppb	18:30:16
1	Mn 257.610†	-678.3	-16.3	-0.0478 µg/L	-0.0478 ppb	18:30:16
1	Mo 202.031†	23.7	19.4	1.9252 µg/L	1.9252 ppb	18:30:37
1	Ni 231.604†	366.8	3.4	0.1920 µg/L	0.1920 ppb	18:30:37
1	P 214.914†	279.4	17.3	28.673 µg/L	28.673 ppb	18:30:37
1	Pb 220.353†	30.7	1.7	0.4371 µg/L	0.4371 ppb	18:30:37
1	S 181.975 Axial†	21.1	-0.7	-2.1808 µg/L	-2.1808 ppb	18:30:37
1	Sb 206.836†	29.7	8.1	7.2695 µg/L	7.2695 ppb	18:30:37
1	Se 196.026†	25.9	-0.4	-0.2961 µg/L	-0.2961 ppb	18:30:37
1	SiO2†	2738.9	60.1	10.842 µg/L	10.842 ppb	18:30:16
1	Si 251.611†	417.4	8.7	0.5924 µg/L	0.5924 ppb	18:30:37
1	Sn 189.927†	-2.0	5.4	2.1022 µg/L	2.1022 ppb	18:30:37
1	Ti 334.940†	-474.3	85.5	0.1987 µg/L	0.1987 ppb	18:30:16
1	Tl 190.801†	-31.5	1.4	1.3886 µg/L	1.3886 ppb	18:30:37
1	U 409.014†	2.6	8.5	0.7683 µg/L	0.7683 ppb	18:30:16
1	V 292.402†	104.1	-4.3	-0.0411 µg/L	-0.0411 ppb	18:30:16
1	Zn 213.857†	859.5	-117.7	-2.7130 µg/L	-2.7130 ppb	18:30:37
2	Sc RADIAL	96122.7	96122.7	99.3 %		18:29:14
2	Al 396.153Radial†	-131.1	-12.7	-6.0884 µg/L	-6.0884 ppb	18:29:14
2	Ca 317.933Radial†	374.6	-8.1	-2.9537 µg/L	-2.9537 ppb	18:29:34
2	Fe 238.204 Radial†	13.6	1.8	20.694 µg/L	20.694 ppb	18:29:34
2	K 766.490 Radial†	467.3	-14.8	-6.9240 µg/L	-6.9240 ppb	18:29:14
2	Mg 279.077 IEC†	7.7	-0.3	-3.5924 µg/L	-3.5924 ppb	18:29:34
2	Na 589.592 Radial†	195.9	16.7	8.3400 µg/L	8.3400 ppb	18:29:14
2	Sr 421.552†	94.9	-43.9	-0.2608 µg/L	-0.2608 ppb	18:29:14
2	Sc 361.383	2030816.2	2030816.2	97.024 %		18:30:43
2	Y 371.029	1390630.3	1390630.3	97.052 %		18:30:43
2	Ag 328.068†	-523.7	-79.5	-0.6410 µg/L	-0.6410 ppb	18:30:48
2	As 188.979†	-0.2	3.0	4.4938 µg/L	4.4938 ppb	18:31:09
2	B 249.677†	280.4	-10.3	-0.4800 µg/L	-0.4800 ppb	18:30:48
2	Ba 233.527†	-3.6	4.7	0.1008 µg/L	0.1008 ppb	18:31:09
2	Be 313.107†	-1037.5	89.5	0.0525 µg/L	0.0525 ppb	18:30:48
2	Cd 226.502†	-172.4	-7.1	-0.1705 µg/L	-0.1705 ppb	18:31:09
2	Co 228.616†	35.5	-11.5	-0.4922 µg/L	-0.4922 ppb	18:31:09
2	Cr 267.716†	84.8	7.1	0.1551 µg/L	0.1551 ppb	18:30:48
2	Cu 324.752†	4283.7	38.4	0.2546 µg/L	0.2546 ppb	18:30:48
2	Mn 257.610†	-677.0	-10.8	-0.0310 µg/L	-0.0310 ppb	18:30:48
2	Mo 202.031†	25.0	20.6	2.0438 µg/L	2.0438 ppb	18:31:09
2	Ni 231.604†	368.3	2.7	0.1542 µg/L	0.1542 ppb	18:31:09
2	P 214.914†	277.2	13.3	22.018 µg/L	22.018 ppb	18:31:09
2	Pb 220.353†	26.0	-3.4	-0.8811 µg/L	-0.8811 ppb	18:31:09

2	S 181.975 Axial†	22.3	0.5	1.4530 µg/L	1.4530 ppb	18:31:09
2	Sb 206.836†	31.3	9.5	8.5137 µg/L	8.5137 ppb	18:31:09
2	Se 196.026†	21.6	-5.0	-4.6585 µg/L	-4.6585 ppb	18:31:09
2	SiO2†	2706.8	10.1	1.8288 µg/L	1.8288 ppb	18:30:48
2	Si 251.611†	419.1	7.9	0.5375 µg/L	0.5375 ppb	18:31:09
2	Sn 189.927†	1.8	9.2	3.5999 µg/L	3.5999 ppb	18:31:09
2	Ti 334.940†	-495.9	66.1	0.1548 µg/L	0.1548 ppb	18:30:48
2	Tl 190.801†	-24.8	8.6	8.3718 µg/L	8.3718 ppb	18:31:09
2	U 409.014†	29.7	36.4	3.3034 µg/L	3.3034 ppb	18:30:48
2	V 292.402†	60.2	-50.3	-0.5766 µg/L	-0.5766 ppb	18:30:48
2	Zn 213.857†	864.6	-117.7	-2.7127 µg/L	-2.7127 ppb	18:31:09
3	Sc RADIAL	96068.2	96068.2	99.3 %		18:29:40
3	Al 396.153Radial†	-87.8	30.9	14.697 µg/L	14.697 ppb	18:29:40
3	Ca 317.933Radial†	369.5	-13.0	-4.7296 µg/L	-4.7296 ppb	18:30:00
3	Fe 238.204 Radial†	14.1	2.2	26.365 µg/L	26.365 ppb	18:30:00
3	K 766.490 Radial†	464.2	-17.7	-8.2620 µg/L	-8.2620 ppb	18:29:40
3	Mg 279.077 IEC†	8.3	0.4	5.2180 µg/L	5.2180 ppb	18:30:00
3	Na 589.592 Radial†	188.7	9.6	4.7795 µg/L	4.7795 ppb	18:29:40
3	Sr 421.552†	136.6	-1.8	-0.0109 µg/L	-0.0109 ppb	18:29:40
3	Sc 361.383	2022018.8	2022018.8	96.604 %		18:31:15
3	Y 371.029	1384364.4	1384364.4	96.615 %		18:31:15
3	Ag 328.068†	-494.9	-52.1	-0.4197 µg/L	-0.4197 ppb	18:31:20
3	As 188.979†	-0.1	3.1	4.5876 µg/L	4.5876 ppb	18:31:41
3	B 249.677†	271.5	-18.3	-0.8462 µg/L	-0.8462 ppb	18:31:20
3	Ba 233.527†	-13.9	-6.0	-0.1323 µg/L	-0.1323 ppb	18:31:41
3	Be 313.107†	-1113.3	6.4	0.0038 µg/L	0.0038 ppb	18:31:20
3	Cd 226.502†	-163.5	1.3	0.0290 µg/L	0.0290 ppb	18:31:41
3	Co 228.616†	42.7	-3.9	-0.1649 µg/L	-0.1649 ppb	18:31:41
3	Cr 267.716†	66.1	-11.8	-0.2573 µg/L	-0.2573 ppb	18:31:20
3	Cu 324.752†	4311.2	86.1	0.5674 µg/L	0.5674 ppb	18:31:20
3	Mn 257.610†	-674.9	-11.6	-0.0338 µg/L	-0.0338 ppb	18:31:20
3	Mo 202.031†	22.3	17.9	1.7760 µg/L	1.7760 ppb	18:31:41
3	Ni 231.604†	377.3	13.7	0.7689 µg/L	0.7689 ppb	18:31:41
3	P 214.914†	268.2	5.2	8.6706 µg/L	8.6706 ppb	18:31:41
3	Pb 220.353†	27.0	-2.3	-0.5913 µg/L	-0.5913 ppb	18:31:41
3	S 181.975 Axial†	20.7	-1.2	-3.6820 µg/L	-3.6820 ppb	18:31:41
3	Sb 206.836†	30.3	8.6	7.7272 µg/L	7.7272 ppb	18:31:41
3	Se 196.026†	16.5	-10.2	-9.5147 µg/L	-9.5147 ppb	18:31:41
3	SiO2†	2719.8	35.7	6.4472 µg/L	6.4472 ppb	18:31:20
3	Si 251.611†	404.2	-5.7	-0.3876 µg/L	-0.3876 ppb	18:31:41
3	Sn 189.927†	-0.4	7.0	2.7189 µg/L	2.7189 ppb	18:31:41
3	Ti 334.940†	-584.8	-28.2	-0.0663 µg/L	-0.0663 ppb	18:31:20
3	Tl 190.801†	-37.5	-4.7	-4.6240 µg/L	-4.6240 ppb	18:31:41
3	U 409.014†	15.9	22.2	2.0166 µg/L	2.0166 ppb	18:31:20
3	V 292.402†	67.1	-42.9	-0.4946 µg/L	-0.4946 ppb	18:31:20
3	Zn 213.857†	829.7	-149.9	-3.4582 µg/L	-3.4582 ppb	18:31:41

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2023854.9	96.691 %	0.2985			0.31%
Sc RADIAL	96051.1	99.2 %	0.08			0.08%
Y 371.029	1386328.8	96.752 %	0.2603			0.27%
Ag 328.068†	-53.1	-0.4271 µg/L	0.21018	-0.4271 ppb	0.21018	49.21%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	1.8	0.7969 µg/L	12.03809	0.7969 ppb	12.03809	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.4	5.0341 µg/L	0.85583	5.0341 ppb	0.85583	17.00%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-18.2	-0.8391 µg/L	0.35558	-0.8391 ppb	0.35558	42.38%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.0	-0.0434 µg/L	0.12598	-0.0434 ppb	0.12598	290.47%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	41.0	0.0241 µg/L	0.02538	0.0241 ppb	0.02538	105.46%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-10.4	-3.7735 µg/L	0.89573	-3.7735 ppb	0.89573	23.74%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-2.8	-0.0687 µg/L	0.09984	-0.0687 ppb	0.09984	145.41%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-9.6	-0.4095 µg/L	0.21547	-0.4095 ppb	0.21547	52.62%

Cr	267.716†	-8.7	-0.1895 µg/L	0.31612	-0.1895 ppb	0.31612	166.85%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	66.2	0.4377 µg/L	0.16307	0.4377 ppb	0.16307	37.26%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	2.3	27.540 µg/L	7.5031	27.540 ppb	7.5031	27.24%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-52.7	-24.587 µg/L	29.4416	-24.587 ppb	29.4416	119.75%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	0.4	5.0501 µg/L	8.55983	5.0501 ppb	8.55983	169.50%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	-12.9	-0.0376 µg/L	0.00901	-0.0376 ppb	0.00901	23.99%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	19.3	1.9150 µg/L	0.13419	1.9150 ppb	0.13419	7.01%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	26.6	13.293 µg/L	11.7966	13.293 ppb	11.7966	88.75%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	6.6	0.3717 µg/L	0.34450	0.3717 ppb	0.34450	92.69%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	11.9	19.787 µg/L	10.1860	19.787 ppb	10.1860	51.48%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-1.3	-0.3451 µg/L	0.69273	-0.3451 ppb	0.69273	200.72%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-0.5	-1.4700 µg/L	2.64025	-1.4700 ppb	2.64025	179.62%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	8.7	7.8368 µg/L	0.62932	7.8368 ppb	0.62932	8.03%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-5.2	-4.8231 µg/L	4.61150	-4.8231 ppb	4.61150	95.61%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		35.3	6.3728 µg/L	4.50723	6.3728 ppb	4.50723	70.73%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	3.6	0.2474 µg/L	0.55064	0.2474 ppb	0.55064	222.54%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	7.2	2.8070 µg/L	0.75277	2.8070 ppb	0.75277	26.82%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-7.7	-0.0459 µg/L	0.19978	-0.0459 ppb	0.19978	435.57%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	41.1	0.0958 µg/L	0.14207	0.0958 ppb	0.14207	148.37%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	1.7	1.7121 µg/L	6.50392	1.7121 ppb	6.50392	379.88%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	22.4	2.0295 µg/L	1.26757	2.0295 ppb	1.26757	62.46%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-32.5	-0.3708 µg/L	0.28845	-0.3708 ppb	0.28845	77.79%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-128.4	-2.9613 µg/L	0.43030	-2.9613 ppb	0.43030	14.53%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.



Sequence No.: 14

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 18:46:40

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96722.7	96722.7	99.9 %		18:47:13
1	Al 396.153Radial†	10556.6	10683.0	5088.6 µg/L	5088.6 ppb	18:47:13
1	Ca 317.933Radial†	14283.9	13908.3	5061.5 µg/L	5061.5 ppb	18:47:13
1	Fe 238.204 Radial†	446.2	434.5	5150.4 µg/L	5150.4 ppb	18:47:34
1	K 766.490 Radial†	11217.1	10739.3	5011.9 µg/L	5011.9 ppb	18:47:13
1	Mg 279.077 IEC†	395.7	388.0	5118.3 µg/L	5118.3 ppb	18:47:34
1	Na 589.592 Radial†	20936.6	20770.2	10367 µg/L	10367 ppb	18:47:13
1	Sr 421.552†	86230.1	86149.1	512.15 µg/L	512.15 ppb	18:47:13
1	Sc 361.383	2039867.0	2039867.0	97.456 %		18:48:37
1	Y 371.029	1392516.8	1392516.8	97.184 %		18:48:37
1	Ag 328.068†	62585.9	64679.6	523.22 µg/L	523.22 ppb	18:48:43
1	As 188.979†	345.3	357.6	526.29 µg/L	526.29 ppb	18:49:04
1	B 249.677†	11380.9	11378.6	514.55 µg/L	514.55 ppb	18:48:43
1	Ba 233.527†	23305.7	23922.4	524.13 µg/L	524.13 ppb	18:48:43
1	Be 313.107†	859349.5	882937.7	518.58 µg/L	518.58 ppb	18:48:37
1	Cd 226.502†	21225.5	21950.1	521.70 µg/L	521.70 ppb	18:48:43
1	Co 228.616†	11968.3	12232.6	524.94 µg/L	524.94 ppb	18:48:43
1	Cr 267.716†	23842.3	24384.3	530.67 µg/L	530.67 ppb	18:48:43
1	Cu 324.752†	83077.0	80868.6	529.17 µg/L	529.17 ppb	18:48:43
1	Mn 257.610†	170830.0	175975.7	528.85 µg/L	528.85 ppb	18:48:37
1	Mo 202.031†	5329.4	5463.3	540.80 µg/L	540.80 ppb	18:49:04
1	Ni 231.604†	9460.3	9330.4	522.76 µg/L	522.76 ppb	18:48:43
1	P 214.914†	1836.6	1612.1	2626.1 µg/L	2626.1 ppb	18:49:04
1	Pb 220.353†	2001.3	2023.3	531.10 µg/L	531.10 ppb	18:49:04
1	S 181.975 Axial†	339.5	325.8	1036.8 µg/L	1036.8 ppb	18:49:04
1	Sb 206.836†	606.1	599.2	537.29 µg/L	537.29 ppb	18:49:04
1	Se 196.026†	570.4	558.0	536.49 µg/L	536.49 ppb	18:49:04
1	SiO2†	33069.6	31153.0	5624.2 µg/L	5624.2 ppb	18:48:43
1	Si 251.611†	38081.4	38651.2	2627.7 µg/L	2627.7 ppb	18:48:43
1	Sn 189.927†	1338.1	1380.5	537.96 µg/L	537.96 ppb	18:49:04
1	Ti 334.940†	215703.7	221910.9	518.59 µg/L	518.59 ppb	18:48:37
1	Tl 190.801†	491.9	538.9	531.26 µg/L	531.26 ppb	18:49:04
1	U 409.014†	5630.8	5783.6	524.12 µg/L	524.12 ppb	18:48:43
1	V 292.402†	43602.3	44628.0	532.08 µg/L	532.08 ppb	18:48:43
1	Zn 213.857†	23484.8	23088.9	527.90 µg/L	527.90 ppb	18:48:43
2	Sc RADIAL	96376.6	96376.6	99.6 %		18:47:39
2	Al 396.153Radial†	10485.6	10649.7	5073.0 µg/L	5073.0 ppb	18:47:39
2	Ca 317.933Radial†	14254.3	13929.9	5069.4 µg/L	5069.4 ppb	18:47:39
2	Fe 238.204 Radial†	452.6	442.6	5245.5 µg/L	5245.5 ppb	18:48:00
2	K 766.490 Radial†	11237.9	10800.6	5040.4 µg/L	5040.4 ppb	18:47:39
2	Mg 279.077 IEC†	393.9	387.5	5112.5 µg/L	5112.5 ppb	18:48:00
2	Na 589.592 Radial†	20908.7	20817.4	10390 µg/L	10390 ppb	18:47:39
2	Sr 421.552†	85983.0	86210.9	512.51 µg/L	512.51 ppb	18:47:39
2	Sc 361.383	2036886.3	2036886.3	97.314 %		18:49:11
2	Y 371.029	1390862.0	1390862.0	97.068 %		18:49:11
2	Ag 328.068†	62277.0	64456.2	521.42 µg/L	521.42 ppb	18:49:16
2	As 188.979†	350.2	363.1	534.41 µg/L	534.41 ppb	18:49:37
2	B 249.677†	11361.8	11376.0	514.38 µg/L	514.38 ppb	18:49:16
2	Ba 233.527†	23208.6	23857.6	522.71 µg/L	522.71 ppb	18:49:16
2	Be 313.107†	861174.3	886103.2	520.44 µg/L	520.44 ppb	18:49:11
2	Cd 226.502†	21159.0	21913.6	520.83 µg/L	520.83 ppb	18:49:16
2	Co 228.616†	11921.0	12202.0	523.61 µg/L	523.61 ppb	18:49:16
2	Cr 267.716†	23763.0	24338.7	529.68 µg/L	529.68 ppb	18:49:16
2	Cu 324.752†	82694.1	80599.9	527.43 µg/L	527.43 ppb	18:49:16
2	Mn 257.610†	170934.5	176339.6	529.95 µg/L	529.95 ppb	18:49:11
2	Mo 202.031†	5218.4	5357.3	530.32 µg/L	530.32 ppb	18:49:37
2	Ni 231.604†	9457.4	9341.5	523.39 µg/L	523.39 ppb	18:49:16
2	P 214.914†	1802.1	1579.4	2571.9 µg/L	2571.9 ppb	18:49:37
2	Pb 220.353†	1971.3	1995.6	523.78 µg/L	523.78 ppb	18:49:37

2	S 181.975 Axial†	338.2	325.0	1034.4 µg/L	1034.4 ppb	18:49:37
2	Sb 206.836†	599.0	592.8	531.40 µg/L	531.40 ppb	18:49:37
2	Se 196.026†	562.6	550.8	530.08 µg/L	530.08 ppb	18:49:37
2	SiO2†	32967.0	31097.2	5614.2 µg/L	5614.2 ppb	18:49:16
2	Si 251.611†	37959.3	38583.0	2623.0 µg/L	2623.0 ppb	18:49:16
2	Sn 189.927†	1311.8	1355.5	528.23 µg/L	528.23 ppb	18:49:37
2	Ti 334.940†	215835.5	222370.2	519.66 µg/L	519.66 ppb	18:49:11
2	Tl 190.801†	490.7	538.4	530.86 µg/L	530.86 ppb	18:49:37
2	U 409.014†	5698.2	5861.3	531.16 µg/L	531.16 ppb	18:49:16
2	V 292.402†	43403.1	44488.8	530.35 µg/L	530.35 ppb	18:49:16
2	Zn 213.857†	23409.3	23046.5	526.92 µg/L	526.92 ppb	18:49:16
3	Sc RADIAL	96961.3	96961.3	100 %		18:48:05
3	Al 396.153Radial†	10510.2	10610.7	5056.1 µg/L	5056.1 ppb	18:48:05
3	Ca 317.933Radial†	14346.7	13935.8	5071.5 µg/L	5071.5 ppb	18:48:05
3	Fe 238.204 Radial†	446.5	433.8	5140.6 µg/L	5140.6 ppb	18:48:26
3	K 766.490 Radial†	11312.6	10807.1	5043.5 µg/L	5043.5 ppb	18:48:05
3	Mg 279.077 IEC†	391.1	382.4	5043.2 µg/L	5043.2 ppb	18:48:26
3	Na 589.592 Radial†	21059.5	20841.4	10402 µg/L	10402 ppb	18:48:05
3	Sr 421.552†	86519.2	86225.3	512.60 µg/L	512.60 ppb	18:48:05
3	Sc 361.383	2029515.5	2029515.5	96.962 %		18:49:44
3	Y 371.029	1385729.1	1385729.1	96.710 %		18:49:44
3	Ag 328.068†	58430.6	60721.6	491.06 µg/L	491.06 ppb	18:49:50
3	As 188.979†	295.5	308.0	453.19 µg/L	453.19 ppb	18:50:10
3	B 249.677†	10566.2	10597.9	479.01 µg/L	479.01 ppb	18:49:50
3	Ba 233.527†	21129.9	21800.4	477.62 µg/L	477.62 ppb	18:49:50
3	Be 313.107†	794825.7	820889.6	482.14 µg/L	482.14 ppb	18:49:44
3	Cd 226.502†	19140.0	19910.3	473.17 µg/L	473.17 ppb	18:49:50
3	Co 228.616†	10696.7	10983.8	471.28 µg/L	471.28 ppb	18:49:50
3	Cr 267.716†	20703.1	21271.6	462.94 µg/L	462.94 ppb	18:49:50
3	Cu 324.752†	75108.7	73085.5	478.33 µg/L	478.33 ppb	18:49:50
3	Mn 257.610†	157948.4	163584.5	491.61 µg/L	491.61 ppb	18:49:44
3	Mo 202.031†	4362.2	4493.7	444.86 µg/L	444.86 ppb	18:50:10
3	Ni 231.604†	8548.2	8439.2	472.84 µg/L	472.84 ppb	18:49:50
3	P 214.914†	1584.6	1361.8	2214.4 µg/L	2214.4 ppb	18:50:10
3	Pb 220.353†	1712.5	1735.9	455.61 µg/L	455.61 ppb	18:50:10
3	S 181.975 Axial†	303.5	290.5	924.55 µg/L	924.55 ppb	18:50:10
3	Sb 206.836†	518.2	511.7	458.42 µg/L	458.42 ppb	18:50:10
3	Se 196.026†	499.3	487.6	470.37 µg/L	470.37 ppb	18:50:10
3	SiO2†	30593.1	28771.9	5194.4 µg/L	5194.4 ppb	18:49:50
3	Si 251.611†	35056.1	35730.4	2429.1 µg/L	2429.1 ppb	18:49:50
3	Sn 189.927†	1072.9	1114.0	434.20 µg/L	434.20 ppb	18:50:10
3	Ti 334.940†	198284.9	205075.2	479.23 µg/L	479.23 ppb	18:49:44
3	Tl 190.801†	433.4	481.1	474.54 µg/L	474.54 ppb	18:50:10
3	U 409.014†	5012.4	5175.3	468.88 µg/L	468.88 ppb	18:49:50
3	V 292.402†	38709.5	39810.2	474.26 µg/L	474.26 ppb	18:49:50
3	Zn 213.857†	21112.9	20765.6	474.71 µg/L	474.71 ppb	18:49:50

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2035422.9	97.244 %	0.2546			0.26%
Sc RADIAL	96686.9	99.9 %	0.30			0.30%
Y 371.029	1389702.7	96.987 %	0.2470			0.25%
Ag 328.068†	63285.8	511.90 µg/L	18.069	511.90 ppb	18.069	3.53%
QC value within limits for Ag 328.068 Recovery = 102.38%						
Al 396.153Radial†	10647.8	5072.6 µg/L	16.27	5072.6 ppb	16.27	0.32%
QC value within limits for Al 396.153Radial Recovery = 101.45%						
As 188.979†	342.9	504.63 µg/L	44.734	504.63 ppb	44.734	8.86%
QC value within limits for As 188.979 Recovery = 100.93%						
B 249.677†	11117.5	502.64 µg/L	20.467	502.64 ppb	20.467	4.07%
QC value within limits for B 249.677 Recovery = 100.53%						
Ba 233.527†	23193.5	508.16 µg/L	26.452	508.16 ppb	26.452	5.21%
QC value within limits for Ba 233.527 Recovery = 101.63%						
Be 313.107†	863310.2	507.05 µg/L	21.596	507.05 ppb	21.596	4.26%
QC value within limits for Be 313.107 Recovery = 101.41%						
Ca 317.933Radial†	13924.7	5067.5 µg/L	5.27	5067.5 ppb	5.27	0.10%
QC value within limits for Ca 317.933Radial Recovery = 101.35%						
Cd 226.502†	21258.0	505.23 µg/L	27.771	505.23 ppb	27.771	5.50%
QC value within limits for Cd 226.502 Recovery = 101.05%						
Co 228.616†	11806.1	506.61 µg/L	30.602	506.61 ppb	30.602	6.04%

QC value within limits for Co	228.616	Recovery = 101.32%			
Cr 267.716†	23331.5	507.76 µg/L	38.823	507.76 ppb	7.65%
QC value within limits for Cr	267.716	Recovery = 101.55%			
Cu 324.752†	78184.7	511.64 µg/L	28.863	511.64 ppb	5.64%
QC value within limits for Cu	324.752	Recovery = 102.33%			
Fe 238.204 Radial†	436.9	5178.8 µg/L	57.91	5178.8 ppb	1.12%
QC value within limits for Fe	238.204 Radial	Recovery = 103.58%			
K 766.490 Radial†	10782.3	5031.9 µg/L	17.44	5031.9 ppb	0.35%
QC value within limits for K	766.490 Radial	Recovery = 100.64%			
Mg 279.077 IEC†	386.0	5091.3 µg/L	41.78	5091.3 ppb	0.82%
QC value within limits for Mg	279.077 IEC	Recovery = 101.83%			
Mn 257.610†	171966.6	516.80 µg/L	21.823	516.80 ppb	4.22%
QC value within limits for Mn	257.610	Recovery = 103.36%			
Mo 202.031†	5104.8	505.33 µg/L	52.627	505.33 ppb	10.41%
QC value within limits for Mo	202.031	Recovery = 101.07%			
Na 589.592 Radial†	20809.7	10386 µg/L	18.1	10386 ppb	0.17%
QC value within limits for Na	589.592 Radial	Recovery = 103.86%			
Ni 231.604†	9037.0	506.33 µg/L	29.004	506.33 ppb	5.73%
QC value within limits for Ni	231.604	Recovery = 101.27%			
P 214.914†	1517.8	2470.8 µg/L	223.70	2470.8 ppb	9.05%
QC value within limits for P	214.914	Recovery = 98.83%			
Pb 220.353†	1918.3	503.50 µg/L	41.632	503.50 ppb	8.27%
QC value within limits for Pb	220.353	Recovery = 100.70%			
S 181.975 Axial†	313.8	998.59 µg/L	64.127	998.59 ppb	6.42%
QC value within limits for S	181.975 Axial	Recovery = 99.86%			
Sb 206.836†	567.9	509.04 µg/L	43.932	509.04 ppb	8.63%
QC value within limits for Sb	206.836	Recovery = 101.81%			
Se 196.026†	532.1	512.31 µg/L	36.464	512.31 ppb	7.12%
QC value within limits for Se	196.026	Recovery = 102.46%			
SiO2†	30340.7	5477.6 µg/L	245.32	5477.6 ppb	4.48%
QC value within limits for SiO2		Recovery = 102.43%			
Si 251.611†	37654.9	2559.9 µg/L	113.33	2559.9 ppb	4.43%
QC value within limits for Si	251.611	Recovery = 102.40%			
Sn 189.927†	1283.3	500.13 µg/L	57.304	500.13 ppb	11.46%
QC value within limits for Sn	189.927	Recovery = 100.03%			
Sr 421.552†	86195.1	512.42 µg/L	0.241	512.42 ppb	0.05%
QC value within limits for Sr	421.552	Recovery = 102.48%			
Ti 334.940†	216452.1	505.83 µg/L	23.042	505.83 ppb	4.56%
QC value within limits for Ti	334.940	Recovery = 101.17%			
Tl 190.801†	519.5	512.22 µg/L	32.633	512.22 ppb	6.37%
QC value within limits for Tl	190.801	Recovery = 102.44%			
U 409.014†	5606.7	508.05 µg/L	34.106	508.05 ppb	6.71%
QC value within limits for U	409.014	Recovery = 101.61%			
V 292.402†	42975.7	512.23 µg/L	32.895	512.23 ppb	6.42%
QC value within limits for V	292.402	Recovery = 102.45%			
Zn 213.857†	22300.4	509.85 µg/L	30.428	509.85 ppb	5.97%
QC value within limits for Zn	213.857	Recovery = 101.97%			

All analyte(s) passed QC.

Sequence No.: 15  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 18:50:19  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94841.3	94841.3	98.0 %		18:50:50
1	Al 396.153Radial†	-95.8	21.5	10.222 µg/L	10.222 ppb	18:50:50
1	Ca 317.933Radial†	358.2	-19.7	-7.1658 µg/L	-7.1658 ppb	18:51:10
1	Fe 238.204 Radial†	14.5	2.9	33.718 µg/L	33.718 ppb	18:51:10
1	K 766.490 Radial†	426.2	-50.4	-23.510 µg/L	-23.510 ppb	18:50:50
1	Mg 279.077 IEC†	10.1	2.3	29.973 µg/L	29.973 ppb	18:51:10
1	Na 589.592 Radial†	166.9	-10.3	-5.1286 µg/L	-5.1286 ppb	18:50:50
1	Sr 421.552†	137.5	0.9	0.0051 µg/L	0.0051 ppb	18:50:50
1	Sc 361.383	2044309.8	2044309.8	97.669 %		18:52:12
1	Y 371.029	1401997.0	1401997.0	97.845 %		18:52:12
1	Ag 328.068†	-538.7	-91.4	-0.7337 µg/L	-0.7337 ppb	18:52:18
1	As 188.979†	-2.5	0.7	1.0208 µg/L	1.0208 ppb	18:52:38
1	B 249.677†	289.0	-3.5	-0.1751 µg/L	-0.1751 ppb	18:52:38
1	Ba 233.527†	-6.7	1.5	0.0323 µg/L	0.0323 ppb	18:52:38
1	Be 313.107†	-997.7	137.3	0.0806 µg/L	0.0806 ppb	18:52:18
1	Cd 226.502†	-178.2	-11.8	-0.2852 µg/L	-0.2852 ppb	18:52:38
1	Co 228.616†	41.5	-5.6	-0.2388 µg/L	-0.2388 ppb	18:52:38
1	Cr 267.716†	72.1	-6.4	-0.1389 µg/L	-0.1389 ppb	18:52:38
1	Cu 324.752†	4309.9	36.1	0.2420 µg/L	0.2420 ppb	18:52:18
1	Mn 257.610†	-647.7	23.8	0.0715 µg/L	0.0715 ppb	18:52:38
1	Mo 202.031†	24.1	19.6	1.9386 µg/L	1.9386 ppb	18:52:38
1	Ni 231.604†	366.2	-2.0	-0.1093 µg/L	-0.1093 ppb	18:52:38
1	P 214.914†	268.9	2.9	4.8237 µg/L	4.8237 ppb	18:52:38
1	Pb 220.353†	26.1	-3.4	-0.8890 µg/L	-0.8890 ppb	18:52:38
1	S 181.975 Axial†	24.8	2.8	8.9497 µg/L	8.9497 ppb	18:52:38
1	Sb 206.836†	29.9	7.9	7.0509 µg/L	7.0509 ppb	18:52:38
1	Se 196.026†	16.9	-10.1	-9.3620 µg/L	-9.3620 ppb	18:52:38
1	SiO2†	2679.3	-36.5	-6.5834 µg/L	-6.5834 ppb	18:52:38
1	Si 251.611†	410.5	-3.8	-0.2552 µg/L	-0.2552 ppb	18:52:38
1	Sn 189.927†	-6.9	0.3	0.1250 µg/L	0.1250 ppb	18:52:38
1	Ti 334.940†	-514.5	50.5	0.1156 µg/L	0.1156 ppb	18:52:18
1	Tl 190.801†	-31.5	1.8	1.7774 µg/L	1.7774 ppb	18:52:38
1	U 409.014†	-3.2	2.6	0.2301 µg/L	0.2301 ppb	18:52:18
1	V 292.402†	75.9	-34.6	-0.3980 µg/L	-0.3980 ppb	18:52:18
1	Zn 213.857†	861.7	-126.6	-2.9174 µg/L	-2.9174 ppb	18:52:38
2	Sc RADIAL	95710.0	95710.0	98.9 %		18:51:15
2	Al 396.153Radial†	-122.1	-4.2	-2.0262 µg/L	-2.0262 ppb	18:51:15
2	Ca 317.933Radial†	370.2	-10.9	-3.9805 µg/L	-3.9805 ppb	18:51:36
2	Fe 238.204 Radial†	15.7	3.9	46.555 µg/L	46.555 ppb	18:51:36
2	K 766.490 Radial†	356.7	-124.6	-58.144 µg/L	-58.144 ppb	18:51:15
2	Mg 279.077 IEC†	8.0	0.1	1.4314 µg/L	1.4314 ppb	18:51:36
2	Na 589.592 Radial†	168.5	-10.2	-5.0814 µg/L	-5.0814 ppb	18:51:15
2	Sr 421.552†	96.1	-42.3	-0.2512 µg/L	-0.2512 ppb	18:51:15
2	Sc 361.383	2048876.3	2048876.3	97.887 %		18:52:44
2	Y 371.029	1402389.8	1402389.8	97.873 %		18:52:44
2	Ag 328.068†	-551.4	-103.1	-0.8306 µg/L	-0.8306 ppb	18:52:50
2	As 188.979†	-6.2	-3.1	-4.5399 µg/L	-4.5399 ppb	18:53:10
2	B 249.677†	280.3	-13.0	-0.6152 µg/L	-0.6152 ppb	18:53:10
2	Ba 233.527†	-6.8	1.5	0.0311 µg/L	0.0311 ppb	18:53:10
2	Be 313.107†	-1021.7	115.1	0.0676 µg/L	0.0676 ppb	18:52:50
2	Cd 226.502†	-172.7	-5.8	-0.1433 µg/L	-0.1433 ppb	18:53:10
2	Co 228.616†	46.3	-0.8	-0.0309 µg/L	-0.0309 ppb	18:53:10
2	Cr 267.716†	67.0	-11.8	-0.2564 µg/L	-0.2564 ppb	18:53:10
2	Cu 324.752†	4381.0	98.9	0.6544 µg/L	0.6544 ppb	18:52:50
2	Mn 257.610†	-651.2	21.7	0.0678 µg/L	0.0678 ppb	18:53:10
2	Mo 202.031†	25.2	20.7	2.0468 µg/L	2.0468 ppb	18:53:10
2	Ni 231.604†	370.0	1.1	0.0607 µg/L	0.0607 ppb	18:53:10
2	P 214.914†	273.4	6.9	11.422 µg/L	11.422 ppb	18:53:10
2	Pb 220.353†	31.8	2.3	0.5977 µg/L	0.5977 ppb	18:53:10

2	S 181.975 Axial†	21.6	-0.5	-1.4487 µg/L	-1.4487 ppb	18:53:10
2	Sb 206.836†	26.5	4.3	3.8754 µg/L	3.8754 ppb	18:53:10
2	Se 196.026†	26.1	-0.6	-0.4409 µg/L	-0.4409 ppb	18:53:10
2	SiO2†	2682.4	-39.4	-7.1218 µg/L	-7.1218 ppb	18:53:10
2	Si 251.611†	420.7	5.7	0.3846 µg/L	0.3846 ppb	18:53:10
2	Sn 189.927†	-7.9	-0.6	-0.2467 µg/L	-0.2467 ppb	18:53:10
2	Ti 334.940†	-513.7	52.4	0.1224 µg/L	0.1224 ppb	18:52:50
2	Tl 190.801†	-32.4	1.0	1.0239 µg/L	1.0239 ppb	18:53:10
2	U 409.014†	11.5	17.6	1.5895 µg/L	1.5895 ppb	18:52:50
2	V 292.402†	28.5	-83.2	-0.9715 µg/L	-0.9715 ppb	18:52:50
2	Zn 213.857†	858.0	-132.4	-3.0514 µg/L	-3.0514 ppb	18:53:10
3	Sc RADIAL	95661.0	95661.0	98.8 %		18:51:41
3	Al 396.153Radial†	-101.4	16.7	7.9488 µg/L	7.9488 ppb	18:51:41
3	Ca 317.933Radial†	366.3	-14.7	-5.3462 µg/L	-5.3462 ppb	18:52:02
3	Fe 238.204 Radial†	11.0	-0.8	-9.6570 µg/L	-9.6570 ppb	18:52:02
3	K 766.490 Radial†	363.2	-117.9	-55.012 µg/L	-55.012 ppb	18:51:41
3	Mg 279.077 IEC†	7.1	-0.8	-10.695 µg/L	-10.695 ppb	18:52:02
3	Na 589.592 Radial†	144.4	-34.5	-17.207 µg/L	-17.207 ppb	18:51:41
3	Sr 421.552†	105.4	-32.8	-0.1950 µg/L	-0.1950 ppb	18:51:41
3	Sc 361.383	2059738.4	2059738.4	98.406 %		18:53:17
3	Y 371.029	1410128.4	1410128.4	98.413 %		18:53:17
3	Ag 328.068†	-637.2	-187.3	-1.5056 µg/L	-1.5056 ppb	18:53:22
3	As 188.979†	-3.2	0.0	0.0404 µg/L	0.0404 ppb	18:53:43
3	B 249.677†	282.7	-12.1	-0.5433 µg/L	-0.5433 ppb	18:53:43
3	Ba 233.527†	-11.1	-2.8	-0.0622 µg/L	-0.0622 ppb	18:53:43
3	Be 313.107†	-1003.3	139.3	0.0818 µg/L	0.0818 ppb	18:53:22
3	Cd 226.502†	-162.1	5.8	0.1392 µg/L	0.1392 ppb	18:53:43
3	Co 228.616†	51.1	3.9	0.1692 µg/L	0.1692 ppb	18:53:43
3	Cr 267.716†	73.3	-5.8	-0.1252 µg/L	-0.1252 ppb	18:53:43
3	Cu 324.752†	4309.8	2.9	0.0172 µg/L	0.0172 ppb	18:53:22
3	Mn 257.610†	-665.1	11.1	0.0336 µg/L	0.0336 ppb	18:53:43
3	Mo 202.031†	22.5	17.8	1.7576 µg/L	1.7576 ppb	18:53:43
3	Ni 231.604†	368.0	-2.9	-0.1626 µg/L	-0.1626 ppb	18:53:43
3	P 214.914†	269.8	1.8	2.9734 µg/L	2.9734 ppb	18:53:43
3	Pb 220.353†	26.9	-2.9	-0.7474 µg/L	-0.7474 ppb	18:53:43
3	S 181.975 Axial†	26.6	4.5	14.447 µg/L	14.447 ppb	18:53:43
3	Sb 206.836†	26.4	4.1	3.6906 µg/L	3.6906 ppb	18:53:43
3	Se 196.026†	17.1	-9.9	-9.3519 µg/L	-9.3519 ppb	18:53:43
3	SiO2†	2703.2	-32.8	-5.9143 µg/L	-5.9143 ppb	18:53:43
3	Si 251.611†	412.4	-5.0	-0.3390 µg/L	-0.3390 ppb	18:53:43
3	Sn 189.927†	-3.8	3.5	1.3774 µg/L	1.3774 ppb	18:53:43
3	Ti 334.940†	-540.7	27.8	0.0658 µg/L	0.0658 ppb	18:53:22
3	Tl 190.801†	-37.4	-3.9	-3.7654 µg/L	-3.7654 ppb	18:53:43
3	U 409.014†	-14.2	-8.6	-0.7778 µg/L	-0.7778 ppb	18:53:22
3	V 292.402†	98.6	-12.1	-0.1295 µg/L	-0.1295 ppb	18:53:22
3	Zn 213.857†	842.4	-152.8	-3.5172 µg/L	-3.5172 ppb	18:53:43

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2050974.9	97.987 %	0.3786			0.39%
Sc RADIAL	95404.1	98.6 %	0.50			0.51%
Y 371.029	1404838.4	98.044 %	0.3200			0.33%
Ag 328.068†	-127.2	-1.0233 µg/L	0.42044	-1.0233 ppb	0.42044	41.09%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	11.4	5.3814 µg/L	6.51507	5.3814 ppb	6.51507	121.07%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.8	-1.1596 µg/L	2.96819	-1.1596 ppb	2.96819	255.98%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-9.5	-0.4445 µg/L	0.23610	-0.4445 ppb	0.23610	53.11%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	0.1	0.0004 µg/L	0.05421	0.0004 ppb	0.05421	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	130.6	0.0767 µg/L	0.00790	0.0767 ppb	0.00790	10.31%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-15.1	-5.4975 µg/L	1.59803	-5.4975 ppb	1.59803	29.07%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-3.9	-0.0964 µg/L	0.21605	-0.0964 ppb	0.21605	224.02%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.8	-0.0335 µg/L	0.20400	-0.0335 ppb	0.20400	609.48%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	-8.0 -0.1735 µg/L	0.07213 -0.1735 ppb	0.07213 41.58%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	46.0 0.3046 µg/L	0.32317 0.3046 ppb	0.32317 106.11%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	2.0 23.539 µg/L	29.4560 23.539 ppb	29.4560 125.14%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	-97.6 -45.555 µg/L	19.1556 -45.555 ppb	19.1556 42.05%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	0.5 6.9033 µg/L	20.87871 6.9033 ppb	20.87871 302.45%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	18.9 0.0576 µg/L	0.02086 0.0576 ppb	0.02086 36.19%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	19.3 1.9144 µg/L	0.14610 1.9144 ppb	0.14610 7.63%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	-18.3 -9.1391 µg/L	6.98736 -9.1391 ppb	6.98736 76.46%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-1.3 -0.0704 µg/L	0.11665 -0.0704 ppb	0.11665 165.68%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	3.9 6.4062 µg/L	4.44093 6.4062 ppb	4.44093 69.32%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-1.3 -0.3462 µg/L	0.82057 -0.3462 ppb	0.82057 236.99%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	2.3 7.3160 µg/L	8.07280 7.3160 ppb	8.07280 110.34%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	5.4 4.8723 µg/L	1.88900 4.8723 ppb	1.88900 38.77%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-6.9 -6.3849 µg/L	5.14771 -6.3849 ppb	5.14771 80.62%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-36.2 -6.5398 µg/L	0.60491 -6.5398 ppb	0.60491 9.25%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	-1.0 -0.0699 µg/L	0.39580 -0.0699 ppb	0.39580 566.40%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	1.1 0.4186 µg/L	0.85094 0.4186 ppb	0.85094 203.29%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	-24.7 -0.1470 µg/L	0.13472 -0.1470 ppb	0.13472 91.63%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	43.6 0.1013 µg/L	0.03091 0.1013 ppb	0.03091 30.52%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	-0.3 -0.3214 µg/L	3.00634 -0.3214 ppb	3.00634 935.43%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	3.9 0.3472 µg/L	1.18797 0.3472 ppb	1.18797 342.12%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	-43.3 -0.4997 µg/L	0.43010 -0.4997 ppb	0.43010 86.08%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-137.3 -3.1620 µg/L	0.31482 -3.1620 ppb	0.31482 9.96%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

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Analysis Begun

Start Time: 3/16/2010 19:24:50

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\031610A.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/16/2010 19:24:53

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

=====  
Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97333.8	97333.8	101 %		19:25:24
1	Al 396.153Radial†	10447.7	10508.4	5005.4 µg/L	5005.4 ppb	19:25:24
1	Ca 317.933Radial†	14088.6	13624.4	4958.2 µg/L	4958.2 ppb	19:25:24
1	Fe 238.204 Radial†	441.4	427.0	5061.3 µg/L	5061.3 ppb	19:25:44
1	K 766.490 Radial†	11084.8	10537.3	4917.6 µg/L	4917.6 ppb	19:25:24
1	Mg 279.077 IEC†	387.2	377.1	4974.8 µg/L	4974.8 ppb	19:25:44
1	Na 589.592 Radial†	21088.4	20789.6	10376 µg/L	10376 ppb	19:25:24
1	Sr 421.552†	85877.4	85256.7	506.84 µg/L	506.84 ppb	19:25:24
1	Sc 361.383	2040064.8	2040064.8	97.466 %		19:26:48
1	Y 371.029	1392583.6	1392583.6	97.188 %		19:26:48
1	Ag 328.068†	61765.6	63831.8	516.35 µg/L	516.35 ppb	19:26:53
1	As 188.979†	345.5	357.7	526.52 µg/L	526.52 ppb	19:27:14
1	B 249.677†	11261.5	11255.0	508.97 µg/L	508.97 ppb	19:26:53
1	Ba 233.527†	22903.7	23507.6	515.05 µg/L	515.05 ppb	19:26:53
1	Be 313.107†	841632.2	864674.3	507.85 µg/L	507.85 ppb	19:26:48
1	Cd 226.502†	20904.3	21618.4	513.83 µg/L	513.83 ppb	19:26:53
1	Co 228.616†	11754.9	12012.5	515.50 µg/L	515.50 ppb	19:26:53
1	Cr 267.716†	23488.2	24018.6	522.71 µg/L	522.71 ppb	19:26:53
1	Cu 324.752†	81983.8	79738.8	521.77 µg/L	521.77 ppb	19:26:53
1	Mn 257.610†	166961.6	171989.7	516.87 µg/L	516.87 ppb	19:26:48
1	Mo 202.031†	5263.9	5395.6	534.10 µg/L	534.10 ppb	19:27:14
1	Ni 231.604†	9362.9	9229.5	517.11 µg/L	517.11 ppb	19:26:53
1	P 214.914†	1815.7	1590.6	2591.1 µg/L	2591.1 ppb	19:27:14
1	Pb 220.353†	2001.9	2023.8	531.21 µg/L	531.21 ppb	19:27:14
1	S 181.975 Axial†	339.7	326.0	1037.4 µg/L	1037.4 ppb	19:27:14
1	Sb 206.836†	604.1	597.1	535.37 µg/L	535.37 ppb	19:27:14
1	Se 196.026†	574.8	562.5	540.54 µg/L	540.54 ppb	19:27:14
1	SiO2†	32621.6	30690.0	5540.7 µg/L	5540.7 ppb	19:26:53
1	Si 251.611†	37576.0	38128.9	2592.2 µg/L	2592.2 ppb	19:26:53
1	Sn 189.927†	1326.3	1368.2	533.18 µg/L	533.18 ppb	19:27:14
1	Ti 334.940†	211363.2	217436.1	508.13 µg/L	508.13 ppb	19:26:48
1	Tl 190.801†	490.6	537.5	529.83 µg/L	529.83 ppb	19:27:14
1	U 409.014†	5564.2	5714.7	517.88 µg/L	517.88 ppb	19:26:53
1	V 292.402†	42971.5	43976.5	524.32 µg/L	524.32 ppb	19:26:53
1	Zn 213.857†	23156.3	22749.6	520.14 µg/L	520.14 ppb	19:26:53
2	Sc RADIAL	97550.9	97550.9	101 %		19:25:50
2	Al 396.153Radial†	10405.9	10443.9	4974.9 µg/L	4974.9 ppb	19:25:50
2	Ca 317.933Radial†	14143.0	13647.1	4966.5 µg/L	4966.5 ppb	19:25:50
2	Fe 238.204 Radial†	444.5	429.0	5085.2 µg/L	5085.2 ppb	19:26:10
2	K 766.490 Radial†	11146.0	10573.5	4934.4 µg/L	4934.4 ppb	19:25:50
2	Mg 279.077 IEC†	391.9	380.8	5023.8 µg/L	5023.8 ppb	19:26:10
2	Na 589.592 Radial†	21078.8	20733.4	10348 µg/L	10348 ppb	19:25:50
2	Sr 421.552†	86037.1	85225.1	506.65 µg/L	506.65 ppb	19:25:50
2	Sc 361.383	2065662.1	2065662.1	98.689 %		19:27:21
2	Y 371.029	1409086.2	1409086.2	98.340 %		19:27:21
2	Ag 328.068†	61954.5	63237.9	511.55 µg/L	511.55 ppb	19:27:27
2	As 188.979†	341.0	348.8	513.27 µg/L	513.27 ppb	19:27:47

2	B 249.677†	11333.3	11184.5	505.75 µg/L	505.75 ppb	19:27:27
2	Ba 233.527†	22990.2	23304.1	510.59 µg/L	510.59 ppb	19:27:27
2	Be 313.107†	850648.3	863109.7	506.93 µg/L	506.93 ppb	19:27:21
2	Cd 226.502†	20990.6	21440.1	509.58 µg/L	509.58 ppb	19:27:27
2	Co 228.616†	11807.8	11916.6	511.37 µg/L	511.37 ppb	19:27:27
2	Cr 267.716†	23514.0	23746.2	516.79 µg/L	516.79 ppb	19:27:27
2	Cu 324.752†	82160.9	78875.9	516.14 µg/L	516.14 ppb	19:27:27
2	Mn 257.610†	168850.5	171781.0	516.24 µg/L	516.24 ppb	19:27:21
2	Mo 202.031†	5161.9	5225.3	517.25 µg/L	517.25 ppb	19:27:47
2	Ni 231.604†	9371.9	9119.5	510.95 µg/L	510.95 ppb	19:27:27
2	P 214.914†	1796.2	1547.7	2520.2 µg/L	2520.2 ppb	19:27:47
2	Pb 220.353†	1961.2	1957.1	513.68 µg/L	513.68 ppb	19:27:47
2	S 181.975 Axial†	335.3	317.2	1009.6 µg/L	1009.6 ppb	19:27:47
2	Sb 206.836†	589.1	574.2	514.71 µg/L	514.71 ppb	19:27:47
2	Se 196.026†	559.3	539.4	518.91 µg/L	518.91 ppb	19:27:47
2	SiO2†	32792.9	30448.8	5497.1 µg/L	5497.1 ppb	19:27:27
2	Si 251.611†	37740.4	37817.7	2571.0 µg/L	2571.0 ppb	19:27:27
2	Sn 189.927†	1295.0	1319.6	514.27 µg/L	514.27 ppb	19:27:47
2	Ti 334.940†	213672.6	217088.9	507.32 µg/L	507.32 ppb	19:27:21
2	Tl 190.801†	475.6	516.0	508.86 µg/L	508.86 ppb	19:27:47
2	U 409.014†	5652.3	5733.3	519.56 µg/L	519.56 ppb	19:27:27
2	V 292.402†	43018.5	43477.8	518.29 µg/L	518.29 ppb	19:27:27
2	Zn 213.857†	23225.9	22525.7	515.01 µg/L	515.01 ppb	19:27:27
3	Sc RADIAL	98065.1	98065.1	101 %		19:26:16
3	Al 396.153Radial†	10471.1	10454.1	4981.5 µg/L	4981.5 ppb	19:26:16
3	Ca 317.933Radial†	14163.5	13593.8	4947.1 µg/L	4947.1 ppb	19:26:16
3	Fe 238.204 Radial†	447.1	429.3	5087.1 µg/L	5087.1 ppb	19:26:36
3	K 766.490 Radial†	11247.0	10615.2	4953.9 µg/L	4953.9 ppb	19:26:16
3	Mg 279.077 IEC†	395.2	382.0	5038.3 µg/L	5038.3 ppb	19:26:36
3	Na 589.592 Radial†	21105.0	20649.7	10306 µg/L	10306 ppb	19:26:16
3	Sr 421.552†	86120.4	84859.7	504.48 µg/L	504.48 ppb	19:26:16
3	Sc 361.383	2055645.2	2055645.2	98.210 %		19:27:54
3	Y 371.029	1404356.6	1404356.6	98.010 %		19:27:54
3	Ag 328.068†	58061.4	59579.7	481.83 µg/L	481.83 ppb	19:28:00
3	As 188.979†	287.6	296.1	435.54 µg/L	435.54 ppb	19:28:20
3	B 249.677†	10539.3	10432.0	471.50 µg/L	471.50 ppb	19:28:00
3	Ba 233.527†	20946.8	21336.9	467.47 µg/L	467.47 ppb	19:28:00
3	Be 313.107†	787966.1	803485.2	471.91 µg/L	471.91 ppb	19:27:54
3	Cd 226.502†	19021.1	19538.4	464.32 µg/L	464.32 ppb	19:28:00
3	Co 228.616†	10616.6	10762.0	461.77 µg/L	461.77 ppb	19:28:00
3	Cr 267.716†	20616.9	20912.4	455.12 µg/L	455.12 ppb	19:28:00
3	Cu 324.752†	74417.9	71397.5	467.29 µg/L	467.29 ppb	19:28:00
3	Mn 257.610†	156502.5	160041.7	480.96 µg/L	480.96 ppb	19:27:54
3	Mo 202.031†	4307.3	4380.7	433.67 µg/L	433.67 ppb	19:28:20
3	Ni 231.604†	8469.9	8247.4	462.09 µg/L	462.09 ppb	19:28:00
3	P 214.914†	1573.2	1329.4	2161.8 µg/L	2161.8 ppb	19:28:20
3	Pb 220.353†	1681.5	1682.0	441.46 µg/L	441.46 ppb	19:28:20
3	S 181.975 Axial†	298.0	280.9	894.10 µg/L	894.10 ppb	19:28:20
3	Sb 206.836†	508.4	495.0	443.39 µg/L	443.39 ppb	19:28:20
3	Se 196.026†	494.1	475.8	459.13 µg/L	459.13 ppb	19:28:20
3	SiO2†	30462.4	28237.8	5097.9 µg/L	5097.9 ppb	19:28:00
3	Si 251.611†	34877.1	35088.6	2385.5 µg/L	2385.5 ppb	19:28:00
3	Sn 189.927†	1070.6	1097.5	427.78 µg/L	427.78 ppb	19:28:20
3	Ti 334.940†	196556.0	200715.4	469.03 µg/L	469.03 ppb	19:27:54
3	Tl 190.801†	424.8	466.6	460.26 µg/L	460.26 ppb	19:28:20
3	U 409.014†	4976.9	5073.4	459.65 µg/L	459.65 ppb	19:28:00
3	V 292.402†	38444.5	39032.8	464.98 µg/L	464.98 ppb	19:28:00
3	Zn 213.857†	20945.5	20318.3	464.49 µg/L	464.49 ppb	19:28:00

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2053790.7	98.122 %	0.6163			0.63%
Sc RADIAL	97650.0	101 %	0.4			0.38%
Y 371.029	1402008.8	97.846 %	0.5931			0.61%
Ag 328.068†	62216.5	503.24 µg/L	18.701	503.24 ppb	18.701	3.72%
QC value within limits for Ag 328.068 Recovery = 100.65%						
Al 396.153Radial†	10468.8	4987.3 µg/L	16.03	4987.3 ppb	16.03	0.32%
QC value within limits for Al 396.153Radial Recovery = 99.75%						
As 188.979†	334.2	491.78 µg/L	49.149	491.78 ppb	49.149	9.99%



QC value within limits for As 188.979 Recovery = 98.36%							
B 249.677†	10957.2	495.41 µg/L	20.765	495.41 ppb	20.765	4.19%	
QC value within limits for B 249.677 Recovery = 99.08%							
Ba 233.527†	22716.2	497.70 µg/L	26.276	497.70 ppb	26.276	5.28%	
QC value within limits for Ba 233.527 Recovery = 99.54%							
Be 313.107†	843756.4	495.57 µg/L	20.488	495.57 ppb	20.488	4.13%	
QC value within limits for Be 313.107 Recovery = 99.11%							
Ca 317.933Radial†	13621.8	4957.3 µg/L	9.74	4957.3 ppb	9.74	0.20%	
QC value within limits for Ca 317.933Radial Recovery = 99.15%							
Cd 226.502†	20865.6	495.91 µg/L	27.436	495.91 ppb	27.436	5.53%	
QC value within limits for Cd 226.502 Recovery = 99.18%							
Co 228.616†	11563.7	496.21 µg/L	29.902	496.21 ppb	29.902	6.03%	
QC value within limits for Co 228.616 Recovery = 99.24%							
Cr 267.716†	22892.4	498.21 µg/L	37.433	498.21 ppb	37.433	7.51%	
QC value within limits for Cr 267.716 Recovery = 99.64%							
Cu 324.752†	76670.7	501.73 µg/L	29.959	501.73 ppb	29.959	5.97%	
QC value within limits for Cu 324.752 Recovery = 100.35%							
Fe 238.204 Radial†	428.4	5077.9 µg/L	14.39	5077.9 ppb	14.39	0.28%	
QC value within limits for Fe 238.204 Radial Recovery = 101.56%							
K 766.490 Radial†	10575.3	4935.3 µg/L	18.20	4935.3 ppb	18.20	0.37%	
QC value within limits for K 766.490 Radial Recovery = 98.71%							
Mg 279.077 IEC†	380.0	5012.3 µg/L	33.29	5012.3 ppb	33.29	0.66%	
QC value within limits for Mg 279.077 IEC Recovery = 100.25%							
Mn 257.610†	167937.5	504.69 µg/L	20.555	504.69 ppb	20.555	4.07%	
QC value within limits for Mn 257.610 Recovery = 100.94%							
Mo 202.031†	5000.5	495.01 µg/L	53.784	495.01 ppb	53.784	10.87%	
QC value within limits for Mo 202.031 Recovery = 99.00%							
Na 589.592 Radial†	20724.2	10344 µg/L	35.1	10344 ppb	35.1	0.34%	
QC value within limits for Na 589.592 Radial Recovery = 103.44%							
Ni 231.604†	8865.5	496.71 µg/L	30.143	496.71 ppb	30.143	6.07%	
QC value within limits for Ni 231.604 Recovery = 99.34%							
P 214.914†	1489.2	2424.4 µg/L	230.18	2424.4 ppb	230.18	9.49%	
QC value within limits for P 214.914 Recovery = 96.98%							
Pb 220.353†	1887.6	495.45 µg/L	47.575	495.45 ppb	47.575	9.60%	
QC value within limits for Pb 220.353 Recovery = 99.09%							
S 181.975 Axial†	308.0	980.34 µg/L	75.969	980.34 ppb	75.969	7.75%	
QC value within limits for S 181.975 Axial Recovery = 98.03%							
Sb 206.836†	555.4	497.83 µg/L	48.262	497.83 ppb	48.262	9.69%	
QC value within limits for Sb 206.836 Recovery = 99.57%							
Se 196.026†	525.9	506.20 µg/L	42.167	506.20 ppb	42.167	8.33%	
QC value within limits for Se 196.026 Recovery = 101.24%							
SiO2†	29792.2	5378.6 µg/L	244.01	5378.6 ppb	244.01	4.54%	
QC value within limits for SiO2 Recovery = 100.58%							
Si 251.611†	37011.8	2516.2 µg/L	113.72	2516.2 ppb	113.72	4.52%	
QC value within limits for Si 251.611 Recovery = 100.65%							
Sn 189.927†	1261.8	491.74 µg/L	56.191	491.74 ppb	56.191	11.43%	
QC value within limits for Sn 189.927 Recovery = 98.35%							
Sr 421.552†	85113.8	505.99 µg/L	1.312	505.99 ppb	1.312	0.26%	
QC value within limits for Sr 421.552 Recovery = 101.20%							
Ti 334.940†	211746.8	494.83 µg/L	22.345	494.83 ppb	22.345	4.52%	
QC value within limits for Ti 334.940 Recovery = 98.97%							
Tl 190.801†	506.7	499.65 µg/L	35.688	499.65 ppb	35.688	7.14%	
QC value within limits for Tl 190.801 Recovery = 99.93%							
U 409.014†	5507.1	499.03 µg/L	34.115	499.03 ppb	34.115	6.84%	
QC value within limits for U 409.014 Recovery = 99.81%							
V 292.402†	42162.4	502.53 µg/L	32.663	502.53 ppb	32.663	6.50%	
QC value within limits for V 292.402 Recovery = 100.51%							
Zn 213.857†	21864.5	499.88 µg/L	30.758	499.88 ppb	30.758	6.15%	
QC value within limits for Zn 213.857 Recovery = 99.98%							
All analyte(s) passed QC.							

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 19:28:29

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95995.9	95995.9	99.2 %		19:29:00
1	Al 396.153Radial†	-145.6	-27.5	-13.150 µg/L	-13.150 ppb	19:29:00
1	Ca 317.933Radial†	377.7	-4.4	-1.6153 µg/L	-1.6153 ppb	19:29:20
1	Fe 238.204 Radial†	12.4	0.6	6.6154 µg/L	6.6154 ppb	19:29:20
1	K 766.490 Radial†	429.2	-52.6	-24.539 µg/L	-24.539 ppb	19:29:00
1	Mg 279.077 IEC†	8.8	0.9	12.126 µg/L	12.126 ppb	19:29:20
1	Na 589.592 Radial†	173.7	-5.5	-2.7297 µg/L	-2.7297 ppb	19:29:00
1	Sr 421.552†	127.9	-10.5	-0.0624 µg/L	-0.0624 ppb	19:29:00
1	Sc 361.383	2061088.0	2061088.0	98.470 %		19:30:22
1	Y 371.029	1409781.9	1409781.9	98.389 %		19:30:22
1	Ag 328.068†	-493.5	-40.9	-0.3307 µg/L	-0.3307 ppb	19:30:28
1	As 188.979†	-1.9	1.3	1.9544 µg/L	1.9544 ppb	19:30:48
1	B 249.677†	290.0	-4.8	-0.2214 µg/L	-0.2214 ppb	19:30:28
1	Ba 233.527†	-6.4	1.9	0.0419 µg/L	0.0419 ppb	19:30:48
1	Be 313.107†	-872.2	273.0	0.1604 µg/L	0.1604 ppb	19:30:28
1	Cd 226.502†	-158.2	10.0	0.2354 µg/L	0.2354 ppb	19:30:48
1	Co 228.616†	48.6	1.3	0.0590 µg/L	0.0590 ppb	19:30:48
1	Cr 267.716†	83.9	5.0	0.1076 µg/L	0.1076 ppb	19:30:28
1	Cu 324.752†	4333.7	24.3	0.1601 µg/L	0.1601 ppb	19:30:28
1	Mn 257.610†	-672.1	4.4	0.0128 µg/L	0.0128 ppb	19:30:48
1	Mo 202.031†	25.3	20.6	2.0403 µg/L	2.0403 ppb	19:30:48
1	Ni 231.604†	361.9	-9.4	-0.5283 µg/L	-0.5283 ppb	19:30:48
1	P 214.914†	270.0	1.8	2.9097 µg/L	2.9097 ppb	19:30:48
1	Pb 220.353†	29.5	-0.2	-0.0388 µg/L	-0.0388 ppb	19:30:48
1	S 181.975 Axial†	20.3	-2.0	-6.2635 µg/L	-6.2635 ppb	19:30:48
1	Sb 206.836†	22.4	-0.0	0.0268 µg/L	0.0268 ppb	19:30:48
1	Se 196.026†	16.5	-10.6	-9.9254 µg/L	-9.9254 ppb	19:30:48
1	SiO2†	2699.2	-38.6	-6.9688 µg/L	-6.9688 ppb	19:30:28
1	Si 251.611†	395.5	-22.4	-1.5240 µg/L	-1.5240 ppb	19:30:48
1	Sn 189.927†	-3.1	4.2	1.6545 µg/L	1.6545 ppb	19:30:48
1	Ti 334.940†	-553.5	15.2	0.0345 µg/L	0.0345 ppb	19:30:28
1	Tl 190.801†	-37.1	-3.5	-3.4390 µg/L	-3.4390 ppb	19:30:48
1	U 409.014†	-20.3	-14.9	-1.3495 µg/L	-1.3495 ppb	19:30:28
1	V 292.402†	78.2	-32.9	-0.3743 µg/L	-0.3743 ppb	19:30:28
1	Zn 213.857†	851.6	-144.0	-3.3142 µg/L	-3.3142 ppb	19:30:48
2	Sc RADIAL	96176.3	96176.3	99.4 %		19:29:26
2	Al 396.153Radial†	-99.4	19.3	9.1843 µg/L	9.1843 ppb	19:29:26
2	Ca 317.933Radial†	378.6	-4.3	-1.5602 µg/L	-1.5602 ppb	19:29:46
2	Fe 238.204 Radial†	12.7	0.8	9.9203 µg/L	9.9203 ppb	19:29:46
2	K 766.490 Radial†	434.6	-48.0	-22.399 µg/L	-22.399 ppb	19:29:26
2	Mg 279.077 IEC†	4.5	-3.5	-45.492 µg/L	-45.492 ppb	19:29:46
2	Na 589.592 Radial†	180.7	1.3	0.6393 µg/L	0.6393 ppb	19:29:26
2	Sr 421.552†	151.9	13.4	0.0799 µg/L	0.0799 ppb	19:29:26
2	Sc 361.383	2046846.2	2046846.2	97.790 %		19:30:55
2	Y 371.029	1400688.6	1400688.6	97.754 %		19:30:55
2	Ag 328.068†	-541.1	-93.1	-0.7500 µg/L	-0.7500 ppb	19:31:00
2	As 188.979†	-1.6	1.6	2.3317 µg/L	2.3317 ppb	19:31:21
2	B 249.677†	295.8	3.1	0.1363 µg/L	0.1363 ppb	19:31:00
2	Ba 233.527†	-3.0	5.3	0.1155 µg/L	0.1155 ppb	19:31:21
2	Be 313.107†	-1064.2	70.6	0.0415 µg/L	0.0415 ppb	19:31:00
2	Cd 226.502†	-160.0	6.9	0.1636 µg/L	0.1636 ppb	19:31:21
2	Co 228.616†	40.4	-6.8	-0.2900 µg/L	-0.2900 ppb	19:31:21
2	Cr 267.716†	65.0	-13.8	-0.2997 µg/L	-0.2997 ppb	19:31:00
2	Cu 324.752†	4288.6	8.8	0.0595 µg/L	0.0595 ppb	19:31:00
2	Mn 257.610†	-670.9	0.9	0.0064 µg/L	0.0064 ppb	19:31:21
2	Mo 202.031†	22.1	17.5	1.7294 µg/L	1.7294 ppb	19:31:21
2	Ni 231.604†	366.9	-1.7	-0.0971 µg/L	-0.0971 ppb	19:31:21
2	P 214.914†	270.0	3.7	6.1368 µg/L	6.1368 ppb	19:31:21
2	Pb 220.353†	36.9	7.6	1.9876 µg/L	1.9876 ppb	19:31:21

2	S 181.975 Axial†	17.0	-5.2	-16.536 µg/L	-16.536 ppb	19:31:21
2	Sb 206.836†	29.8	7.8	6.9638 µg/L	6.9638 ppb	19:31:21
2	Se 196.026†	25.0	-1.8	-1.6069 µg/L	-1.6069 ppb	19:31:21
2	SiO2†	2670.8	-48.6	-8.7729 µg/L	-8.7729 ppb	19:31:00
2	Si 251.611†	394.8	-20.3	-1.3822 µg/L	-1.3822 ppb	19:31:21
2	Sn 189.927†	-7.5	-0.2	-0.0731 µg/L	-0.0731 ppb	19:31:21
2	Ti 334.940†	-579.2	-15.1	-0.0317 µg/L	-0.0317 ppb	19:31:00
2	Tl 190.801†	-32.5	0.9	0.8712 µg/L	0.8712 ppb	19:31:21
2	U 409.014†	5.2	11.1	1.0071 µg/L	1.0071 ppb	19:31:00
2	V 292.402†	70.4	-40.3	-0.4637 µg/L	-0.4637 ppb	19:31:00
2	Zn 213.857†	854.5	-135.0	-3.1064 µg/L	-3.1064 ppb	19:31:21
3	Sc RADIAL	96769.3	96769.3	100.0 %		19:29:52
3	Al 396.153Radial†	-107.6	11.7	5.5407 µg/L	5.5407 ppb	19:29:52
3	Ca 317.933Radial†	380.8	-4.4	-1.6145 µg/L	-1.6145 ppb	19:30:12
3	Fe 238.204 Radial†	14.4	2.5	29.435 µg/L	29.435 ppb	19:30:12
3	K 766.490 Radial†	452.5	-32.8	-15.308 µg/L	-15.308 ppb	19:29:52
3	Mg 279.077 IEC†	6.4	-1.6	-21.450 µg/L	-21.450 ppb	19:30:12
3	Na 589.592 Radial†	194.0	13.5	6.7325 µg/L	6.7325 ppb	19:29:52
3	Sr 421.552†	176.5	37.1	0.2208 µg/L	0.2208 ppb	19:29:52
3	Sc 361.383	2062871.9	2062871.9	98.555 %		19:31:27
3	Y 371.029	1412085.8	1412085.8	98.549 %		19:31:27
3	Ag 328.068†	-550.9	-98.8	-0.7921 µg/L	-0.7921 ppb	19:31:32
3	As 188.979†	-4.7	-1.5	-2.1903 µg/L	-2.1903 ppb	19:31:53
3	B 249.677†	310.6	15.8	0.6996 µg/L	0.6996 ppb	19:31:32
3	Ba 233.527†	-3.2	5.2	0.1128 µg/L	0.1128 ppb	19:31:53
3	Be 313.107†	-997.3	146.9	0.0863 µg/L	0.0863 ppb	19:31:32
3	Cd 226.502†	-160.5	7.8	0.1814 µg/L	0.1814 ppb	19:31:53
3	Co 228.616†	37.9	-9.6	-0.4106 µg/L	-0.4106 ppb	19:31:53
3	Cr 267.716†	74.6	-4.5	-0.0991 µg/L	-0.0991 ppb	19:31:32
3	Cu 324.752†	4310.8	-2.7	-0.0121 µg/L	-0.0121 ppb	19:31:32
3	Mn 257.610†	-663.8	13.4	0.0435 µg/L	0.0435 ppb	19:31:53
3	Mo 202.031†	27.0	22.3	2.2095 µg/L	2.2095 ppb	19:31:53
3	Ni 231.604†	368.9	-2.6	-0.1442 µg/L	-0.1442 ppb	19:31:53
3	P 214.914†	267.0	-1.5	-2.5250 µg/L	-2.5250 ppb	19:31:53
3	Pb 220.353†	25.9	-3.9	-1.0076 µg/L	-1.0076 ppb	19:31:53
3	S 181.975 Axial†	19.8	-2.4	-7.7048 µg/L	-7.7048 ppb	19:31:53
3	Sb 206.836†	32.1	9.8	8.7961 µg/L	8.7961 ppb	19:31:53
3	Se 196.026†	16.8	-10.3	-9.5243 µg/L	-9.5243 ppb	19:31:53
3	SiO2†	2693.1	-47.2	-8.5249 µg/L	-8.5249 ppb	19:31:32
3	Si 251.611†	408.4	-9.7	-0.6579 µg/L	-0.6579 ppb	19:31:53
3	Sn 189.927†	-8.0	-0.7	-0.2621 µg/L	-0.2621 ppb	19:31:53
3	Ti 334.940†	-483.6	86.5	0.2040 µg/L	0.2040 ppb	19:31:32
3	Tl 190.801†	-27.6	6.1	5.9673 µg/L	5.9673 ppb	19:31:53
3	U 409.014†	-21.1	-15.6	-1.4186 µg/L	-1.4186 ppb	19:31:32
3	V 292.402†	92.9	-18.0	-0.2011 µg/L	-0.2011 ppb	19:31:32
3	Zn 213.857†	820.5	-176.3	-4.0591 µg/L	-4.0591 ppb	19:31:53

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2056935.4	98.272 %		0.4196			0.43%
Sc RADIAL	96313.8	99.5 %		0.42			0.42%
Y 371.029	1407518.8	98.231 %		0.4206			0.43%
Ag 328.068†	-77.6	-0.6243 µg/L		0.25509	-0.6243 ppb	0.25509	40.86%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	1.2	0.5251 µg/L		11.98212	0.5251 ppb	11.98212	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	0.5	0.6986 µg/L		2.50897	0.6986 ppb	2.50897	359.16%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	4.7	0.2048 µg/L		0.46432	0.2048 ppb	0.46432	226.68%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	4.1	0.0901 µg/L		0.04173	0.0901 ppb	0.04173	46.32%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	163.5	0.0961 µg/L		0.06005	0.0961 ppb	0.06005	62.51%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-4.4	-1.5966 µg/L		0.03158	-1.5966 ppb	0.03158	1.98%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	8.2	0.1935 µg/L		0.03740	0.1935 ppb	0.03740	19.33%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-5.0	-0.2139 µg/L		0.24388	-0.2139 ppb	0.24388	114.02%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated		
	-4.5	-0.0971 µg/L	0.20362	-0.0971 ppb
			0.20362	209.77%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated		
	10.2	0.0692 µg/L	0.08650	0.0692 ppb
			0.08650	125.03%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated		
	1.3	15.324 µg/L	12.3320	15.324 ppb
			12.3320	80.48%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
	-44.5	-20.749 µg/L	4.8318	-20.749 ppb
			4.8318	23.29%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated		
	-1.4	-18.272 µg/L	28.9405	-18.272 ppb
			28.9405	158.39%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
	6.2	0.0209 µg/L	0.01982	0.0209 ppb
			0.01982	94.85%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated		
	20.1	1.9930 µg/L	0.24352	1.9930 ppb
			0.24352	12.22%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated		
	3.1	1.5474 µg/L	4.79600	1.5474 ppb
			4.79600	309.94%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
	-4.6	-0.2565 µg/L	0.23654	-0.2565 ppb
			0.23654	92.21%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated		
	1.3	2.1738 µg/L	4.37753	2.1738 ppb
			4.37753	201.37%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated		
	1.2	0.3137 µg/L	1.52838	0.3137 ppb
			1.52838	487.17%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated		
	-3.2	-10.168 µg/L	5.5618	-10.168 ppb
			5.5618	54.70%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated		
	5.9	5.2622 µg/L	4.62565	5.2622 ppb
			4.62565	87.90%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated		
	-7.5	-7.0189 µg/L	4.69120	-7.0189 ppb
			4.69120	66.84%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated		
	-44.8	-8.0889 µg/L	0.97792	-8.0889 ppb
			0.97792	12.09%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated		
	-17.5	-1.1880 µg/L	0.46455	-1.1880 ppb
			0.46455	39.10%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated		
	1.1	0.4398 µg/L	1.05623	0.4398 ppb
			1.05623	240.18%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated		
	13.4	0.0794 µg/L	0.14159	0.0794 ppb
			0.14159	178.27%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated		
	28.9	0.0690 µg/L	0.12154	0.0690 ppb
			0.12154	176.27%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated		
	1.2	1.1332 µg/L	4.70860	1.1332 ppb
			4.70860	415.52%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated		
	-6.4	-0.5870 µg/L	1.38097	-0.5870 ppb
			1.38097	235.26%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated		
	-30.4	-0.3464 µg/L	0.13353	-0.3464 ppb
			0.13353	38.55%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated		
	-151.8	-3.4932 µg/L	0.50097	-3.4932 ppb
			0.50097	14.34%

QC value within limits for Zn 213.857 Recovery = Not calculated

All analyte(s) passed QC.

## =====

## Analysis Begun

Start Time: 3/16/2010 19:51:25

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\COPY.SIF

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/16/2010 19:51:27

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

## -----

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97839.2	97839.2	101 %		19:52:00
1	Al 396.153Radial†	10640.7	10645.7	5070.8 µg/L	5070.8 ppb	19:52:00
1	Ca 317.933Radial†	14667.9	14125.0	5140.4 µg/L	5140.4 ppb	19:52:00
1	Fe 238.204 Radial†	458.2	441.3	5230.8 µg/L	5230.8 ppb	19:52:21
1	K 766.490 Radial†	11480.4	10871.7	5073.6 µg/L	5073.6 ppb	19:52:00
1	Mg 279.077 IEC†	409.2	396.8	5234.7 µg/L	5234.7 ppb	19:52:21
1	Na 589.592 Radial†	21366.8	20956.7	10460 µg/L	10460 ppb	19:52:00
1	Sr 421.552†	87577.9	86497.8	514.22 µg/L	514.22 ppb	19:52:00
1	Sc 361.383	2076660.3	2076660.3	99.214 %		19:53:25
1	Y 371.029	1416112.1	1416112.1	98.830 %		19:53:25
1	Ag 328.068†	63569.4	64533.1	522.05 µg/L	522.05 ppb	19:53:30
1	As 188.979†	359.2	365.3	537.68 µg/L	537.68 ppb	19:53:51
1	B 249.677†	11637.0	11429.8	516.83 µg/L	516.83 ppb	19:53:30
1	Ba 233.527†	23764.6	23961.2	524.98 µg/L	524.98 ppb	19:53:30
1	Be 313.107†	877065.4	885171.0	519.89 µg/L	519.89 ppb	19:53:25
1	Cd 226.502†	21801.5	22144.7	526.33 µg/L	526.33 ppb	19:53:30
1	Co 228.616†	12190.7	12239.2	525.22 µg/L	525.22 ppb	19:53:30
1	Cr 267.716†	24382.2	24495.1	533.08 µg/L	533.08 ppb	19:53:30
1	Cu 324.752†	84138.2	80427.9	526.30 µg/L	526.30 ppb	19:53:30
1	Mn 257.610†	174563.9	176633.5	530.82 µg/L	530.82 ppb	19:53:25
1	Mo 202.031†	5437.4	5475.4	542.00 µg/L	542.00 ppb	19:53:51
1	Ni 231.604†	9717.0	9417.0	527.62 µg/L	527.62 ppb	19:53:30
1	P 214.914†	1880.1	1622.6	2644.0 µg/L	2644.0 ppb	19:53:51
1	Pb 220.353†	2057.1	2043.2	536.33 µg/L	536.33 ppb	19:53:51
1	S 181.975 Axial†	345.5	325.7	1036.6 µg/L	1036.6 ppb	19:53:51
1	Sb 206.836†	615.1	597.2	535.49 µg/L	535.49 ppb	19:53:51
1	Se 196.026†	593.8	571.2	549.09 µg/L	549.09 ppb	19:53:51
1	SiO2†	34250.0	31741.5	5730.5 µg/L	5730.5 ppb	19:53:30
1	Si 251.611†	39432.9	39321.1	2673.2 µg/L	2673.2 ppb	19:53:30
1	Sn 189.927†	1388.4	1406.9	548.25 µg/L	548.25 ppb	19:53:51
1	Ti 334.940†	220245.2	222566.9	520.11 µg/L	520.11 ppb	19:53:25
1	Tl 190.801†	508.4	546.5	538.75 µg/L	538.75 ppb	19:53:51
1	U 409.014†	5765.4	5816.8	527.12 µg/L	527.12 ppb	19:53:30
1	V 292.402†	44405.1	44644.5	532.28 µg/L	532.28 ppb	19:53:30
1	Zn 213.857†	23932.9	23113.6	528.44 µg/L	528.44 ppb	19:53:30
2	Sc RADIAL	97597.7	97597.7	101 %		19:52:27
2	Al 396.153Radial†	10677.1	10707.9	5100.7 µg/L	5100.7 ppb	19:52:27
2	Ca 317.933Radial†	14638.5	14131.8	5142.8 µg/L	5142.8 ppb	19:52:27
2	Fe 238.204 Radial†	457.4	441.7	5234.9 µg/L	5234.9 ppb	19:52:47
2	K 766.490 Radial†	11391.8	10811.9	5045.7 µg/L	5045.7 ppb	19:52:27
2	Mg 279.077 IEC†	406.3	395.0	5210.1 µg/L	5210.1 ppb	19:52:47
2	Na 589.592 Radial†	21351.9	20994.2	10478 µg/L	10478 ppb	19:52:27
2	Sr 421.552†	87702.3	86835.5	516.23 µg/L	516.23 ppb	19:52:27
2	Sc 361.383	2082617.3	2082617.3	99.499 %		19:53:58
2	Y 371.029	1422493.4	1422493.4	99.276 %		19:53:58
2	Ag 328.068†	63035.2	63812.9	516.23 µg/L	516.23 ppb	19:54:04
2	As 188.979†	355.6	360.6	530.71 µg/L	530.71 ppb	19:54:24

2	B 249.677†	11573.8	11332.8	512.41 µg/L	512.41 ppb	19:54:04
2	Ba 233.527†	23587.1	23714.3	519.57 µg/L	519.57 ppb	19:54:04
2	Be 313.107†	880164.4	885757.0	520.23 µg/L	520.23 ppb	19:53:58
2	Cd 226.502†	21584.8	21864.1	519.65 µg/L	519.65 ppb	19:54:04
2	Co 228.616†	12091.5	12104.3	519.42 µg/L	519.42 ppb	19:54:04
2	Cr 267.716†	24127.8	24169.1	525.99 µg/L	525.99 ppb	19:54:04
2	Cu 324.752†	83566.8	79611.1	520.97 µg/L	520.97 ppb	19:54:04
2	Mn 257.610†	175000.5	176569.0	530.63 µg/L	530.63 ppb	19:53:58
2	Mo 202.031†	5336.6	5358.4	530.42 µg/L	530.42 ppb	19:54:24
2	Ni 231.604†	9684.1	9356.0	524.20 µg/L	524.20 ppb	19:54:04
2	P 214.914†	1853.5	1590.4	2590.9 µg/L	2590.9 ppb	19:54:24
2	Pb 220.353†	2025.2	2005.2	526.34 µg/L	526.34 ppb	19:54:24
2	S 181.975 Axial†	350.9	330.2	1050.7 µg/L	1050.7 ppb	19:54:24
2	Sb 206.836†	605.0	585.3	524.77 µg/L	524.77 ppb	19:54:24
2	Se 196.026†	587.2	562.8	541.21 µg/L	541.21 ppb	19:54:24
2	SiO2†	34117.9	31510.1	5688.7 µg/L	5688.7 ppb	19:54:04
2	Si 251.611†	39342.6	39116.7	2659.3 µg/L	2659.3 ppb	19:54:04
2	Sn 189.927†	1347.8	1362.0	530.78 µg/L	530.78 ppb	19:54:24
2	Ti 334.940†	220718.5	222407.6	519.74 µg/L	519.74 ppb	19:53:58
2	Tl 190.801†	494.8	531.4	523.98 µg/L	523.98 ppb	19:54:24
2	U 409.014†	5727.2	5761.9	522.13 µg/L	522.13 ppb	19:54:04
2	V 292.402†	44030.2	44139.7	526.21 µg/L	526.21 ppb	19:54:04
2	Zn 213.857†	23785.0	22896.0	523.46 µg/L	523.46 ppb	19:54:04
3	Sc RADIAL	98144.6	98144.6	101 %		19:52:53
3	Al 396.153Radial†	10606.4	10579.2	5041.1 µg/L	5041.1 ppb	19:52:53
3	Ca 317.933Radial†	14641.9	14054.3	5114.7 µg/L	5114.7 ppb	19:52:53
3	Fe 238.204 Radial†	459.2	440.9	5225.0 µg/L	5225.0 ppb	19:53:13
3	K 766.490 Radial†	11480.9	10836.9	5057.4 µg/L	5057.4 ppb	19:52:53
3	Mg 279.077 IEC†	406.4	392.8	5180.5 µg/L	5180.5 ppb	19:53:13
3	Na 589.592 Radial†	21376.3	20900.3	10431 µg/L	10431 ppb	19:52:53
3	Sr 421.552†	87791.8	86439.2	513.87 µg/L	513.87 ppb	19:52:53
3	Sc 361.383	2081562.8	2081562.8	99.448 %		19:54:31
3	Y 371.029	1420172.1	1420172.1	99.114 %		19:54:31
3	Ag 328.068†	59458.1	60248.0	487.24 µg/L	487.24 ppb	19:54:37
3	As 188.979†	297.0	301.9	444.20 µg/L	444.20 ppb	19:54:57
3	B 249.677†	10822.7	10583.4	478.31 µg/L	478.31 ppb	19:54:37
3	Ba 233.527†	21641.8	21770.3	476.96 µg/L	476.96 ppb	19:54:37
3	Be 313.107†	814231.0	819906.0	481.56 µg/L	481.56 ppb	19:54:31
3	Cd 226.502†	19691.6	19971.4	474.61 µg/L	474.61 ppb	19:54:37
3	Co 228.616†	10914.0	10926.5	468.82 µg/L	468.82 ppb	19:54:37
3	Cr 267.716†	21116.9	21153.8	460.37 µg/L	460.37 ppb	19:54:37
3	Cu 324.752†	76073.3	72118.5	472.03 µg/L	472.03 ppb	19:54:37
3	Mn 257.610†	162229.7	163816.5	492.30 µg/L	492.30 ppb	19:54:31
3	Mo 202.031†	4440.4	4460.0	441.52 µg/L	441.52 ppb	19:54:57
3	Ni 231.604†	8745.0	8416.6	471.57 µg/L	471.57 ppb	19:54:37
3	P 214.914†	1614.4	1351.0	2197.1 µg/L	2197.1 ppb	19:54:57
3	Pb 220.353†	1756.3	1735.9	455.61 µg/L	455.61 ppb	19:54:57
3	S 181.975 Axial†	307.8	286.9	913.20 µg/L	913.20 ppb	19:54:57
3	Sb 206.836†	523.5	503.7	451.29 µg/L	451.29 ppb	19:54:57
3	Se 196.026†	508.1	483.6	466.77 µg/L	466.77 ppb	19:54:57
3	SiO2†	31722.6	29118.8	5257.0 µg/L	5257.0 ppb	19:54:37
3	Si 251.611†	36484.6	36262.9	2465.3 µg/L	2465.3 ppb	19:54:37
3	Sn 189.927†	1107.0	1120.6	436.79 µg/L	436.79 ppb	19:54:57
3	Ti 334.940†	203069.7	204773.3	478.51 µg/L	478.51 ppb	19:54:31
3	Tl 190.801†	445.2	481.8	475.20 µg/L	475.20 ppb	19:54:57
3	U 409.014†	5074.6	5108.5	462.81 µg/L	462.81 ppb	19:54:37
3	V 292.402†	39393.0	39499.2	470.54 µg/L	470.54 ppb	19:54:37
3	Zn 213.857†	21550.1	20660.8	472.31 µg/L	472.31 ppb	19:54:37

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2080280.1	99.387 %	0.1519			0.15%
Sc RADIAL	97860.5	101 %	0.3			0.28%
Y 371.029	1419592.5	99.073 %	0.2254			0.23%
Ag 328.068†	62864.7	508.51 µg/L	18.644	508.51 ppb	18.644	3.67%
QC value within limits for Ag 328.068 Recovery = 101.70%						
Al 396.153Radial†	10644.3	5070.9 µg/L	29.81	5070.9 ppb	29.81	0.59%
QC value within limits for Al 396.153Radial Recovery = 101.42%						
As 188.979†	342.6	504.20 µg/L	52.079	504.20 ppb	52.079	10.33%

QC value within limits for As 188.979 Recovery = 100.84%						
B 249.677†	11115.3	502.52 µg/L	21.083	502.52 ppb	21.083	4.20%
QC value within limits for B 249.677 Recovery = 100.50%						
Ba 233.527†	23148.6	507.17 µg/L	26.305	507.17 ppb	26.305	5.19%
QC value within limits for Ba 233.527 Recovery = 101.43%						
Be 313.107†	863611.4	507.23 µg/L	22.231	507.23 ppb	22.231	4.38%
QC value within limits for Be 313.107 Recovery = 101.45%						
Ca 317.933Radial†	14103.7	5132.6 µg/L	15.62	5132.6 ppb	15.62	0.30%
QC value within limits for Ca 317.933Radial Recovery = 102.65%						
Cd 226.502†	21326.7	506.86 µg/L	28.131	506.86 ppb	28.131	5.55%
QC value within limits for Cd 226.502 Recovery = 101.37%						
Co 228.616†	11756.7	504.49 µg/L	31.023	504.49 ppb	31.023	6.15%
QC value within limits for Co 228.616 Recovery = 100.90%						
Cr 267.716†	23272.6	506.48 µg/L	40.087	506.48 ppb	40.087	7.91%
QC value within limits for Cr 267.716 Recovery = 101.30%						
Cu 324.752†	77385.9	506.43 µg/L	29.915	506.43 ppb	29.915	5.91%
QC value within limits for Cu 324.752 Recovery = 101.29%						
Fe 238.204 Radial†	441.3	5230.3 µg/L	4.97	5230.3 ppb	4.97	0.09%
QC value within limits for Fe 238.204 Radial Recovery = 104.61%						
K 766.490 Radial†	10840.2	5058.9 µg/L	14.02	5058.9 ppb	14.02	0.28%
QC value within limits for K 766.490 Radial Recovery = 101.18%						
Mg 279.077 IEC†	394.9	5208.4 µg/L	27.15	5208.4 ppb	27.15	0.52%
QC value within limits for Mg 279.077 IEC Recovery = 104.17%						
Mn 257.610†	172339.7	517.92 µg/L	22.183	517.92 ppb	22.183	4.28%
QC value within limits for Mn 257.610 Recovery = 103.58%						
Mo 202.031†	5097.9	504.65 µg/L	54.975	504.65 ppb	54.975	10.89%
QC value within limits for Mo 202.031 Recovery = 100.93%						
Na 589.592 Radial†	20950.4	10456 µg/L	23.6	10456 ppb	23.6	0.23%
QC value within limits for Na 589.592 Radial Recovery = 104.56%						
Ni 231.604†	9063.2	507.80 µg/L	31.419	507.80 ppb	31.419	6.19%
QC value within limits for Ni 231.604 Recovery = 101.56%						
P 214.914†	1521.3	2477.3 µg/L	244.14	2477.3 ppb	244.14	9.85%
QC value within limits for P 214.914 Recovery = 99.09%						
Pb 220.353†	1928.1	506.09 µg/L	44.002	506.09 ppb	44.002	8.69%
QC value within limits for Pb 220.353 Recovery = 101.22%						
S 181.975 Axial†	314.3	1000.2 µg/L	75.64	1000.2 ppb	75.64	7.56%
QC value within limits for S 181.975 Axial Recovery = 100.02%						
Sb 206.836†	562.1	503.85 µg/L	45.837	503.85 ppb	45.837	9.10%
QC value within limits for Sb 206.836 Recovery = 100.77%						
Se 196.026†	539.2	519.03 µg/L	45.424	519.03 ppb	45.424	8.75%
QC value within limits for Se 196.026 Recovery = 103.81%						
SiO2†	30790.1	5558.7 µg/L	262.14	5558.7 ppb	262.14	4.72%
QC value within limits for SiO2 Recovery = 103.95%						
Si 251.611†	38233.6	2599.3 µg/L	116.23	2599.3 ppb	116.23	4.47%
QC value within limits for Si 251.611 Recovery = 103.97%						
Sn 189.927†	1296.5	505.27 µg/L	59.944	505.27 ppb	59.944	11.86%
QC value within limits for Sn 189.927 Recovery = 101.05%						
Sr 421.552†	86590.8	514.77 µg/L	1.272	514.77 ppb	1.272	0.25%
QC value within limits for Sr 421.552 Recovery = 102.95%						
Ti 334.940†	216582.6	506.12 µg/L	23.914	506.12 ppb	23.914	4.72%
QC value within limits for Ti 334.940 Recovery = 101.22%						
Tl 190.801†	519.9	512.64 µg/L	33.256	512.64 ppb	33.256	6.49%
QC value within limits for Tl 190.801 Recovery = 102.53%						
U 409.014†	5562.4	504.02 µg/L	35.776	504.02 ppb	35.776	7.10%
QC value within limits for U 409.014 Recovery = 100.80%						
V 292.402†	42761.1	509.68 µg/L	34.030	509.68 ppb	34.030	6.68%
QC value within limits for V 292.402 Recovery = 101.94%						
Zn 213.857†	22223.4	508.07 µg/L	31.070	508.07 ppb	31.070	6.12%
QC value within limits for Zn 213.857 Recovery = 101.61%						
All analyte(s) passed QC.						

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 19:55:07

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94738.0	94738.0	97.9 %		19:55:37
1	Al 396.153Radial†	-96.3	21.0	9.9621 µg/L	9.9621 ppb	19:55:37
1	Ca 317.933Radial†	358.2	-19.4	-7.0564 µg/L	-7.0564 ppb	19:55:57
1	Fe 238.204 Radial†	13.7	2.0	23.843 µg/L	23.843 ppb	19:55:57
1	K 766.490 Radial†	499.0	24.5	11.420 µg/L	11.420 ppb	19:55:37
1	Mg 279.077 IEC†	8.8	1.0	12.563 µg/L	12.563 ppb	19:55:57
1	Na 589.592 Radial†	186.8	10.3	5.1324 µg/L	5.1324 ppb	19:55:37
1	Sr 421.552†	117.4	-19.5	-0.1158 µg/L	-0.1158 ppb	19:55:37
1	Sc 361.383	2029206.5	2029206.5	96.947 %		19:56:59
1	Y 371.029	1387774.3	1387774.3	96.853 %		19:56:59
1	Ag 328.068†	-491.3	-46.6	-0.3806 µg/L	-0.3806 ppb	19:57:05
1	As 188.979†	-1.1	2.1	3.0602 µg/L	3.0602 ppb	19:57:25
1	B 249.677†	318.2	28.9	1.2985 µg/L	1.2985 ppb	19:57:25
1	Ba 233.527†	1.0	9.4	0.2036 µg/L	0.2036 ppb	19:57:25
1	Be 313.107†	-931.9	197.6	0.1160 µg/L	0.1160 ppb	19:57:05
1	Cd 226.502†	-184.0	-19.2	-0.4586 µg/L	-0.4586 ppb	19:57:25
1	Co 228.616†	49.7	3.2	0.1402 µg/L	0.1402 ppb	19:57:25
1	Cr 267.716†	63.9	-14.3	-0.3128 µg/L	-0.3128 ppb	19:57:25
1	Cu 324.752†	4325.6	85.1	0.5606 µg/L	0.5606 ppb	19:57:05
1	Mn 257.610†	-648.1	18.4	0.0560 µg/L	0.0560 ppb	19:57:25
1	Mo 202.031†	26.9	22.6	2.2395 µg/L	2.2395 ppb	19:57:25
1	Ni 231.604†	368.6	3.3	0.1867 µg/L	0.1867 ppb	19:57:25
1	P 214.914†	267.5	3.5	5.8132 µg/L	5.8132 ppb	19:57:25
1	Pb 220.353†	32.7	3.5	0.9336 µg/L	0.9336 ppb	19:57:25
1	S 181.975 Axial†	21.4	-0.4	-1.3484 µg/L	-1.3484 ppb	19:57:25
1	Sb 206.836†	26.3	4.4	3.9387 µg/L	3.9387 ppb	19:57:25
1	Se 196.026†	23.5	-3.0	-2.7947 µg/L	-2.7947 ppb	19:57:25
1	SiO2†	2774.9	82.6	14.906 µg/L	14.906 ppb	19:57:25
1	Si 251.611†	469.4	60.1	4.0872 µg/L	4.0872 ppb	19:57:25
1	Sn 189.927†	0.9	8.3	3.2361 µg/L	3.2361 ppb	19:57:25
1	Ti 334.940†	-429.3	134.4	0.3132 µg/L	0.3132 ppb	19:57:05
1	Tl 190.801†	-33.1	0.0	0.0038 µg/L	0.0038 ppb	19:57:25
1	U 409.014†	-48.8	-44.6	-4.0498 µg/L	-4.0498 ppb	19:57:05
1	V 292.402†	2.5	-109.8	-1.2865 µg/L	-1.2865 ppb	19:57:05
1	Zn 213.857†	880.5	-100.6	-2.3207 µg/L	-2.3207 ppb	19:57:25
2	Sc RADIAL	93645.4	93645.4	96.8 %		19:56:03
2	Al 396.153Radial†	-113.5	2.0	0.9249 µg/L	0.9249 ppb	19:56:03
2	Ca 317.933Radial†	374.0	1.2	0.4546 µg/L	0.4546 ppb	19:56:23
2	Fe 238.204 Radial†	13.0	1.5	17.701 µg/L	17.701 ppb	19:56:23
2	K 766.490 Radial†	494.7	26.0	12.125 µg/L	12.125 ppb	19:56:03
2	Mg 279.077 IEC†	11.0	3.4	45.008 µg/L	45.008 ppb	19:56:23
2	Na 589.592 Radial†	198.4	24.5	12.230 µg/L	12.230 ppb	19:56:03
2	Sr 421.552†	145.7	11.2	0.0667 µg/L	0.0667 ppb	19:56:03
2	Sc 361.383	2036326.4	2036326.4	97.287 %		19:57:31
2	Y 371.029	1394230.9	1394230.9	97.303 %		19:57:31
2	Ag 328.068†	-535.3	-90.0	-0.7233 µg/L	-0.7233 ppb	19:57:37
2	As 188.979†	-2.6	0.5	0.7869 µg/L	0.7869 ppb	19:57:57
2	B 249.677†	307.8	17.1	0.7654 µg/L	0.7654 ppb	19:57:57
2	Ba 233.527†	-10.8	-2.6	-0.0582 µg/L	-0.0582 ppb	19:57:57
2	Be 313.107†	-976.4	155.2	0.0911 µg/L	0.0911 ppb	19:57:37
2	Cd 226.502†	-171.9	-6.1	-0.1462 µg/L	-0.1462 ppb	19:57:57
2	Co 228.616†	45.5	-1.3	-0.0557 µg/L	-0.0557 ppb	19:57:57
2	Cr 267.716†	80.8	2.8	0.0614 µg/L	0.0614 ppb	19:57:57
2	Cu 324.752†	4328.6	72.6	0.4775 µg/L	0.4775 ppb	19:57:37
2	Mn 257.610†	-661.0	7.5	0.0207 µg/L	0.0207 ppb	19:57:57
2	Mo 202.031†	23.7	19.3	1.9083 µg/L	1.9083 ppb	19:57:57
2	Ni 231.604†	367.5	0.8	0.0475 µg/L	0.0475 ppb	19:57:57
2	P 214.914†	280.8	16.2	26.918 µg/L	26.918 ppb	19:57:57
2	Pb 220.353†	29.8	0.5	0.1343 µg/L	0.1343 ppb	19:57:57



2	S 181.975 Axial†	21.8	-0.1	-0.4129 µg/L	-0.4129 ppb	19:57:57
2	Sb 206.836†	27.1	5.1	4.5951 µg/L	4.5951 ppb	19:57:57
2	Se 196.026†	22.2	-4.5	-4.1928 µg/L	-4.1928 ppb	19:57:57
2	SiO2†	2769.1	66.6	12.026 µg/L	12.026 ppb	19:57:57
2	Si 251.611†	513.9	104.2	7.0825 µg/L	7.0825 ppb	19:57:57
2	Sn 189.927†	-5.0	2.3	0.9017 µg/L	0.9017 ppb	19:57:57
2	Ti 334.940†	-443.1	121.8	0.2812 µg/L	0.2812 ppb	19:57:37
2	Tl 190.801†	-33.3	-0.1	-0.0847 µg/L	-0.0847 ppb	19:57:57
2	U 409.014†	-30.5	-25.6	-2.3239 µg/L	-2.3239 ppb	19:57:37
2	V 292.402†	88.1	-21.7	-0.2466 µg/L	-0.2466 ppb	19:57:37
2	Zn 213.857†	875.1	-109.3	-2.5213 µg/L	-2.5213 ppb	19:57:57
3	Sc RADIAL	94860.9	94860.9	98.0 %		19:56:29
3	Al 396.153Radial†	-133.5	-16.9	-8.0813 µg/L	-8.0813 ppb	19:56:29
3	Ca 317.933Radial†	372.2	-5.5	-2.0087 µg/L	-2.0087 ppb	19:56:49
3	Fe 238.204 Radial†	13.4	1.7	20.132 µg/L	20.132 ppb	19:56:49
3	K 766.490 Radial†	417.8	-59.1	-27.580 µg/L	-27.580 ppb	19:56:29
3	Mg 279.077 IEC†	6.0	-1.8	-24.069 µg/L	-24.069 ppb	19:56:49
3	Na 589.592 Radial†	189.4	12.7	6.3217 µg/L	6.3217 ppb	19:56:29
3	Sr 421.552†	152.7	16.3	0.0971 µg/L	0.0971 ppb	19:56:29
3	Sc 361.383	1978977.7	1978977.7	94.547 %		19:58:03
3	Y 371.029	1354847.1	1354847.1	94.555 %		19:58:03
3	Ag 328.068†	-571.1	-143.8	-1.1544 µg/L	-1.1544 ppb	19:58:09
3	As 188.979†	-1.9	1.2	1.8203 µg/L	1.8203 ppb	19:58:29
3	B 249.677†	303.4	21.5	0.9661 µg/L	0.9661 ppb	19:58:29
3	Ba 233.527†	-6.9	1.1	0.0247 µg/L	0.0247 ppb	19:58:29
3	Be 313.107†	-1029.4	70.1	0.0410 µg/L	0.0410 ppb	19:58:09
3	Cd 226.502†	-174.0	-13.4	-0.3203 µg/L	-0.3203 ppb	19:58:29
3	Co 228.616†	41.4	-4.3	-0.1837 µg/L	-0.1837 ppb	19:58:29
3	Cr 267.716†	76.6	0.8	0.0179 µg/L	0.0179 ppb	19:58:29
3	Cu 324.752†	4368.0	243.2	1.5925 µg/L	1.5925 ppb	19:58:09
3	Mn 257.610†	-679.2	-31.4	-0.0916 µg/L	-0.0916 ppb	19:58:29
3	Mo 202.031†	18.8	14.7	1.4585 µg/L	1.4585 ppb	19:58:29
3	Ni 231.604†	374.3	19.0	1.0635 µg/L	1.0635 ppb	19:58:29
3	P 214.914†	272.3	15.6	25.651 µg/L	25.651 ppb	19:58:29
3	Pb 220.353†	26.9	-1.7	-0.4459 µg/L	-0.4459 ppb	19:58:29
3	S 181.975 Axial†	17.9	-3.6	-11.522 µg/L	-11.522 ppb	19:58:29
3	Sb 206.836†	24.6	3.3	2.9564 µg/L	2.9564 ppb	19:58:29
3	Se 196.026†	26.5	0.7	0.7395 µg/L	0.7395 ppb	19:58:29
3	SiO2†	2759.0	138.4	24.981 µg/L	24.981 ppb	19:58:29
3	Si 251.611†	485.8	89.7	6.0984 µg/L	6.0984 ppb	19:58:29
3	Sn 189.927†	-7.2	-0.2	-0.0782 µg/L	-0.0782 ppb	19:58:29
3	Ti 334.940†	-411.6	141.9	0.3336 µg/L	0.3336 ppb	19:58:09
3	Tl 190.801†	-34.5	-2.3	-2.2668 µg/L	-2.2668 ppb	19:58:29
3	U 409.014†	-20.8	-16.2	-1.4697 µg/L	-1.4697 ppb	19:58:09
3	V 292.402†	90.8	-16.3	-0.1847 µg/L	-0.1847 ppb	19:58:09
3	Zn 213.857†	861.9	-97.2	-2.2454 µg/L	-2.2454 ppb	19:58:29

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2014836.9	96.261 %	1.4934			1.55%
Sc RADIAL	94414.7	97.5 %	0.69			0.71%
Y 371.029	1378950.8	96.237 %	1.4741			1.53%
Ag 328.068†	-93.5	-0.7528 µg/L	0.38775	-0.7528 ppb	0.38775	51.51%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	2.0	0.9352 µg/L	9.02172	0.9352 ppb	9.02172	964.68%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.3	1.8891 µg/L	1.13821	1.8891 ppb	1.13821	60.25%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	22.5	1.0100 µg/L	0.26926	1.0100 ppb	0.26926	26.66%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.6	0.0567 µg/L	0.13380	0.0567 ppb	0.13380	235.80%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	141.0	0.0827 µg/L	0.03817	0.0827 ppb	0.03817	46.16%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-7.9	-2.8702 µg/L	3.82886	-2.8702 ppb	3.82886	133.40%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-12.9	-0.3084 µg/L	0.15653	-0.3084 ppb	0.15653	50.76%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.8	-0.0330 µg/L	0.16314	-0.0330 ppb	0.16314	493.62%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-3.6	-0.0779 µg/L	0.20462	-0.0779 ppb	0.20462 262.82%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	133.7	0.8769 µg/L	0.62114	0.8769 ppb	0.62114 70.84%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	1.7	20.558 µg/L	3.0931	20.558 ppb	3.0931 15.05%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-2.9	-1.3450 µg/L	22.72283	-1.3450 ppb	22.72283 >999.9%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	0.8	11.167 µg/L	34.5597	11.167 ppb	34.5597 309.47%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	-1.8	-0.0050 µg/L	0.07708	-0.0050 ppb	0.07708 >999.9%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	18.9	1.8688 µg/L	0.39203	1.8688 ppb	0.39203 20.98%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	15.8	7.8947 µg/L	3.80125	7.8947 ppb	3.80125 48.15%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	7.7	0.4326 µg/L	0.55082	0.4326 ppb	0.55082 127.33%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	11.8	19.461 µg/L	11.8361	19.461 ppb	11.8361 60.82%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	0.8	0.2073 µg/L	0.69261	0.2073 ppb	0.69261 334.08%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-1.4	-4.4278 µg/L	6.16156	-4.4278 ppb	6.16156 139.16%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	4.3	3.8301 µg/L	0.82473	3.8301 ppb	0.82473 21.53%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-2.3	-2.0827 µg/L	2.54208	-2.0827 ppb	2.54208 122.06%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	95.8	17.304 µg/L	6.8024	17.304 ppb	6.8024 39.31%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	84.7	5.7561 µg/L	1.52672	5.7561 ppb	1.52672 26.52%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	3.5	1.3532 µg/L	1.70269	1.3532 ppb	1.70269 125.83%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	2.7	0.0160 µg/L	0.11514	0.0160 ppb	0.11514 721.10%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	132.7	0.3093 µg/L	0.02640	0.3093 ppb	0.02640 8.53%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	-0.8	-0.7826 µg/L	1.28613	-0.7826 ppb	1.28613 164.35%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-28.8	-2.6144 µg/L	1.31436	-2.6144 ppb	1.31436 50.27%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-49.3	-0.5726 µg/L	0.61904	-0.5726 ppb	0.61904 108.11%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-102.4	-2.3625 µg/L	0.14260	-2.3625 ppb	0.14260 6.04%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 20:31:24

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	98865.0	98865.0	102 %		20:31:57
1	Al 396.153Radial†	10627.4	10523.5	5012.4 µg/L	5012.4 ppb	20:31:57
1	Ca 317.933Radial†	14640.2	13947.4	5075.8 µg/L	5075.8 ppb	20:31:57
1	Fe 238.204 Radial†	459.7	438.1	5192.8 µg/L	5192.8 ppb	20:32:17
1	K 766.490 Radial†	11449.3	10723.5	5004.5 µg/L	5004.5 ppb	20:31:57
1	Mg 279.077 IEC†	405.4	388.9	5130.3 µg/L	5130.3 ppb	20:32:17
1	Na 589.592 Radial†	21413.6	20783.2	10373 µg/L	10373 ppb	20:31:57
1	Sr 421.552†	87790.4	85806.9	510.11 µg/L	510.11 ppb	20:31:57
1	Sc 361.383	2066065.1	2066065.1	98.708 %		20:33:21
1	Y 371.029	1409893.2	1409893.2	98.396 %		20:33:21
1	Ag 328.068†	62998.6	64283.4	520.03 µg/L	520.03 ppb	20:33:27
1	As 188.979†	351.6	359.4	529.01 µg/L	529.01 ppb	20:33:47
1	B 249.677†	11528.3	11379.8	514.58 µg/L	514.58 ppb	20:33:27
1	Ba 233.527†	23584.5	23901.6	523.67 µg/L	523.67 ppb	20:33:27
1	Be 313.107†	870015.7	882562.4	518.36 µg/L	518.36 ppb	20:33:21
1	Cd 226.502†	21576.3	22029.3	523.59 µg/L	523.59 ppb	20:33:27
1	Co 228.616†	12115.9	12226.4	524.68 µg/L	524.68 ppb	20:33:27
1	Cr 267.716†	24146.9	24382.7	530.64 µg/L	530.64 ppb	20:33:27
1	Cu 324.752†	83558.9	80275.9	525.30 µg/L	525.30 ppb	20:33:27
1	Mn 257.610†	173044.2	175996.2	528.91 µg/L	528.91 ppb	20:33:21
1	Mo 202.031†	5408.6	5474.3	541.89 µg/L	541.89 ppb	20:33:47
1	Ni 231.604†	9661.0	9410.5	527.25 µg/L	527.25 ppb	20:33:27
1	P 214.914†	1852.2	1604.0	2613.1 µg/L	2613.1 ppb	20:33:47
1	Pb 220.353†	2033.0	2029.4	532.71 µg/L	532.71 ppb	20:33:47
1	S 181.975 Axial†	350.7	332.8	1059.1 µg/L	1059.1 ppb	20:33:47
1	Sb 206.836†	613.1	598.4	536.61 µg/L	536.61 ppb	20:33:47
1	Se 196.026†	577.2	557.4	536.11 µg/L	536.11 ppb	20:33:47
1	SiO2†	33702.5	31363.9	5662.3 µg/L	5662.3 ppb	20:33:27
1	Si 251.611†	38917.7	39003.0	2651.6 µg/L	2651.6 ppb	20:33:27
1	Sn 189.927†	1359.9	1385.2	539.79 µg/L	539.79 ppb	20:33:47
1	Ti 334.940†	217967.4	221397.7	517.39 µg/L	517.39 ppb	20:33:21
1	Tl 190.801†	504.9	545.6	537.88 µg/L	537.88 ppb	20:33:47
1	U 409.014†	5718.3	5799.0	525.51 µg/L	525.51 ppb	20:33:27
1	V 292.402†	43985.7	44449.1	529.97 µg/L	529.97 ppb	20:33:27
1	Zn 213.857†	23845.4	23148.7	529.26 µg/L	529.26 ppb	20:33:27
2	Sc RADIAL	98542.5	98542.5	102 %		20:32:23
2	Al 396.153Radial†	10572.0	10503.1	5003.1 µg/L	5003.1 ppb	20:32:23
2	Ca 317.933Radial†	14565.3	13920.7	5066.0 µg/L	5066.0 ppb	20:32:23
2	Fe 238.204 Radial†	457.7	437.6	5186.4 µg/L	5186.4 ppb	20:32:43
2	K 766.490 Radial†	11397.1	10708.9	4997.7 µg/L	4997.7 ppb	20:32:23
2	Mg 279.077 IEC†	406.9	391.7	5167.3 µg/L	5167.3 ppb	20:32:43
2	Na 589.592 Radial†	21297.9	20738.2	10351 µg/L	10351 ppb	20:32:23
2	Sr 421.552†	87401.8	85706.5	509.51 µg/L	509.51 ppb	20:32:23
2	Sc 361.383	2082205.2	2082205.2	99.479 %		20:33:54
2	Y 371.029	1418990.3	1418990.3	99.031 %		20:33:54
2	Ag 328.068†	62657.0	63445.3	513.25 µg/L	513.25 ppb	20:34:00
2	As 188.979†	351.1	356.2	524.23 µg/L	524.23 ppb	20:34:20
2	B 249.677†	11497.7	11258.6	509.07 µg/L	509.07 ppb	20:34:00
2	Ba 233.527†	23521.9	23653.5	518.24 µg/L	518.24 ppb	20:34:00
2	Be 313.107†	875955.5	881701.1	517.85 µg/L	517.85 ppb	20:33:54
2	Cd 226.502†	21495.7	21778.8	517.63 µg/L	517.63 ppb	20:34:00
2	Co 228.616†	12112.1	12127.5	520.41 µg/L	520.41 ppb	20:34:00
2	Cr 267.716†	23997.0	24042.4	523.23 µg/L	523.23 ppb	20:34:00
2	Cu 324.752†	83144.7	79203.4	518.30 µg/L	518.30 ppb	20:34:00
2	Mn 257.610†	174144.9	175743.7	528.15 µg/L	528.15 ppb	20:33:54
2	Mo 202.031†	5293.5	5316.1	526.24 µg/L	526.24 ppb	20:34:20
2	Ni 231.604†	9619.3	9292.7	520.65 µg/L	520.65 ppb	20:34:00
2	P 214.914†	1824.8	1561.9	2543.8 µg/L	2543.8 ppb	20:34:20
2	Pb 220.353†	2013.0	1993.3	523.22 µg/L	523.22 ppb	20:34:20

2	S 181.975 Axial†	347.9	327.2	1041.3 µg/L	1041.3 ppb	20:34:20
2	Sb 206.836†	606.2	586.7	525.96 µg/L	525.96 ppb	20:34:20
2	Se 196.026†	579.6	555.3	534.02 µg/L	534.02 ppb	20:34:20
2	SiO2†	33723.5	31120.4	5618.3 µg/L	5618.3 ppb	20:34:00
2	Si 251.611†	38857.6	38637.0	2626.7 µg/L	2626.7 ppb	20:34:00
2	Sn 189.927†	1342.0	1356.4	528.59 µg/L	528.59 ppb	20:34:20
2	Ti 334.940†	219868.6	221597.2	517.85 µg/L	517.85 ppb	20:33:54
2	Tl 190.801†	499.5	536.2	528.69 µg/L	528.69 ppb	20:34:20
2	U 409.014†	5651.7	5687.1	515.35 µg/L	515.35 ppb	20:34:00
2	V 292.402†	43785.0	43901.9	523.37 µg/L	523.37 ppb	20:34:00
2	Zn 213.857†	23713.0	22828.4	521.92 µg/L	521.92 ppb	20:34:00
3	Sc RADIAL	98752.6	98752.6	102 %		20:32:49
3	Al 396.153Radial†	10500.9	10411.4	4960.9 µg/L	4960.9 ppb	20:32:49
3	Ca 317.933Radial†	14590.6	13915.1	5064.0 µg/L	5064.0 ppb	20:32:49
3	Fe 238.204 Radial†	462.3	441.1	5227.3 µg/L	5227.3 ppb	20:33:09
3	K 766.490 Radial†	11390.2	10678.3	4983.4 µg/L	4983.4 ppb	20:32:49
3	Mg 279.077 IEC†	407.0	390.9	5155.9 µg/L	5155.9 ppb	20:33:09
3	Na 589.592 Radial†	21342.2	20737.1	10350 µg/L	10350 ppb	20:32:49
3	Sr 421.552†	87520.8	85640.5	509.12 µg/L	509.12 ppb	20:32:49
3	Sc 361.383	2056958.0	2056958.0	98.273 %		20:34:28
3	Y 371.029	1404464.2	1404464.2	98.018 %		20:34:28
3	Ag 328.068†	58959.7	60456.1	488.93 µg/L	488.93 ppb	20:34:33
3	As 188.979†	299.9	308.5	453.83 µg/L	453.83 ppb	20:34:54
3	B 249.677†	10735.7	10625.0	480.20 µg/L	480.20 ppb	20:34:33
3	Ba 233.527†	21489.3	21875.4	479.26 µg/L	479.26 ppb	20:34:33
3	Be 313.107†	807846.1	823202.6	483.49 µg/L	483.49 ppb	20:34:28
3	Cd 226.502†	19450.3	19962.7	474.41 µg/L	474.41 ppb	20:34:33
3	Co 228.616†	10856.9	10999.6	471.96 µg/L	471.96 ppb	20:34:33
3	Cr 267.716†	21015.0	21304.1	463.64 µg/L	463.64 ppb	20:34:33
3	Cu 324.752†	75628.3	72580.8	475.05 µg/L	475.05 ppb	20:34:33
3	Mn 257.610†	161360.7	164883.5	495.51 µg/L	495.51 ppb	20:34:28
3	Mo 202.031†	4435.2	4508.0	446.28 µg/L	446.28 ppb	20:34:54
3	Ni 231.604†	8714.6	8490.9	475.73 µg/L	475.73 ppb	20:34:33
3	P 214.914†	1608.9	1364.8	2219.8 µg/L	2219.8 ppb	20:34:54
3	Pb 220.353†	1753.2	1753.9	460.32 µg/L	460.32 ppb	20:34:54
3	S 181.975 Axial†	302.5	285.3	907.85 µg/L	907.85 ppb	20:34:54
3	Sb 206.836†	526.1	512.6	459.22 µg/L	459.22 ppb	20:34:54
3	Se 196.026†	517.2	499.0	481.24 µg/L	481.24 ppb	20:34:54
3	SiO2†	31371.3	29142.9	5261.3 µg/L	5261.3 ppb	20:34:33
3	Si 251.611†	36025.5	36234.5	2463.4 µg/L	2463.4 ppb	20:34:33
3	Sn 189.927†	1107.2	1134.1	442.03 µg/L	442.03 ppb	20:34:54
3	Ti 334.940†	201582.8	205702.8	480.68 µg/L	480.68 ppb	20:34:28
3	Tl 190.801†	446.4	488.3	481.59 µg/L	481.59 ppb	20:34:54
3	U 409.014†	5030.1	5124.3	464.24 µg/L	464.24 ppb	20:34:33
3	V 292.402†	39200.9	39777.5	473.87 µg/L	473.87 ppb	20:34:33
3	Zn 213.857†	21468.1	20836.6	476.33 µg/L	476.33 ppb	20:34:33

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2068409.4	98.820 %		0.6109			0.62%
Sc RADIAL	98720.0	102 %		0.2			0.17%
Y 371.029	1411115.9	98.482 %		0.5122			0.52%
Ag 328.068†	62728.3	507.40 µg/L		16.351	507.40 ppb	16.351	3.22%
QC value within limits for Ag 328.068 Recovery = 101.48%							
Al 396.153Radial†	10479.3	4992.1 µg/L		27.46	4992.1 ppb	27.46	0.55%
QC value within limits for Al 396.153Radial Recovery = 99.84%							
As 188.979†	341.4	502.36 µg/L		42.091	502.36 ppb	42.091	8.38%
QC value within limits for As 188.979 Recovery = 100.47%							
B 249.677†	11087.8	501.28 µg/L		18.466	501.28 ppb	18.466	3.68%
QC value within limits for B 249.677 Recovery = 100.26%							
Ba 233.527†	23143.5	507.06 µg/L		24.225	507.06 ppb	24.225	4.78%
QC value within limits for Ba 233.527 Recovery = 101.41%							
Be 313.107†	862488.7	506.57 µg/L		19.984	506.57 ppb	19.984	3.94%
QC value within limits for Be 313.107 Recovery = 101.31%							
Ca 317.933Radial†	13927.7	5068.6 µg/L		6.28	5068.6 ppb	6.28	0.12%
QC value within limits for Ca 317.933Radial Recovery = 101.37%							
Cd 226.502†	21256.9	505.21 µg/L		26.839	505.21 ppb	26.839	5.31%
QC value within limits for Cd 226.502 Recovery = 101.04%							
Co 228.616†	11784.5	505.68 µg/L		29.281	505.68 ppb	29.281	5.79%

Cr	267.716†	23243.1	505.84 µg/L	36.727	505.84 ppb	36.727	7.26%
Cu	324.752†	77353.3	506.22 µg/L	27.218	506.22 ppb	27.218	5.38%
Fe	238.204 Radial†	438.9	5202.2 µg/L	22.00	5202.2 ppb	22.00	0.42%
K	766.490 Radial†	10703.6	4995.2 µg/L	10.77	4995.2 ppb	10.77	0.22%
Mg	279.077 IEC†	390.5	5151.1 µg/L	18.96	5151.1 ppb	18.96	0.37%
Mn	257.610†	172207.8	517.52 µg/L	19.066	517.52 ppb	19.066	3.68%
Mo	202.031†	5099.5	504.80 µg/L	51.284	504.80 ppb	51.284	10.16%
Na	589.592 Radial†	20752.8	10358 µg/L	13.1	10358 ppb	13.1	0.13%
Ni	231.604†	9064.7	507.88 µg/L	28.034	507.88 ppb	28.034	5.52%
P	214.914†	1510.3	2458.9 µg/L	209.96	2458.9 ppb	209.96	8.54%
Pb	220.353†	1925.5	505.41 µg/L	39.341	505.41 ppb	39.341	7.78%
S	181.975 Axial†	315.1	1002.8 µg/L	82.68	1002.8 ppb	82.68	8.25%
Sb	206.836†	565.9	507.27 µg/L	41.945	507.27 ppb	41.945	8.27%
Se	196.026†	537.2	517.12 µg/L	31.094	517.12 ppb	31.094	6.01%
SiO2†		30542.4	5514.0 µg/L	219.91	5514.0 ppb	219.91	3.99%
Si	251.611†	37958.2	2580.5 µg/L	102.24	2580.5 ppb	102.24	3.96%
Sn	189.927†	1291.9	503.47 µg/L	53.505	503.47 ppb	53.505	10.63%
Sr	421.552†	85718.0	509.58 µg/L	0.498	509.58 ppb	0.498	0.10%
Ti	334.940†	216232.5	505.31 µg/L	21.326	505.31 ppb	21.326	4.22%
Tl	190.801†	523.4	516.05 µg/L	30.202	516.05 ppb	30.202	5.85%
U	409.014†	5536.8	501.70 µg/L	32.834	501.70 ppb	32.834	6.54%
V	292.402†	42709.5	509.07 µg/L	30.662	509.07 ppb	30.662	6.02%
Zn	213.857†	22271.2	509.17 µg/L	28.676	509.17 ppb	28.676	5.63%

QC value within limits for Co 228.616 Recovery = 101.14%  
 QC value within limits for Cr 267.716 Recovery = 101.17%  
 QC value within limits for Cu 324.752 Recovery = 101.24%  
 QC value within limits for Fe 238.204 Radial Recovery = 104.04%  
 QC value within limits for K 766.490 Radial Recovery = 99.90%  
 QC value within limits for Mg 279.077 IEC Recovery = 103.02%  
 QC value within limits for Mn 257.610 Recovery = 103.50%  
 QC value within limits for Mo 202.031 Recovery = 100.96%  
 QC value within limits for Na 589.592 Radial Recovery = 103.58%  
 QC value within limits for Ni 231.604 Recovery = 101.58%  
 QC value within limits for P 214.914 Recovery = 98.36%  
 QC value within limits for Pb 220.353 Recovery = 101.08%  
 QC value within limits for S 181.975 Axial Recovery = 100.28%  
 QC value within limits for Sb 206.836 Recovery = 101.45%  
 QC value within limits for Se 196.026 Recovery = 103.42%  
 QC value within limits for SiO2 Recovery = 103.11%  
 QC value within limits for Si 251.611 Recovery = 103.22%  
 QC value within limits for Sn 189.927 Recovery = 100.69%  
 QC value within limits for Sr 421.552 Recovery = 101.92%  
 QC value within limits for Ti 334.940 Recovery = 101.06%  
 QC value within limits for Tl 190.801 Recovery = 103.21%  
 QC value within limits for U 409.014 Recovery = 100.34%  
 QC value within limits for V 292.402 Recovery = 101.81%  
 QC value within limits for Zn 213.857 Recovery = 101.83%

All analyte(s) passed QC.

Sequence No.: 13  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 20:35:03  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96083.3	96083.3	99.3 %		20:35:34
1	Al 396.153Radial†	-138.6	-20.3	-9.7187 µg/L	-9.7187 ppb	20:35:34
1	Ca 317.933Radial†	383.4	0.9	0.3324 µg/L	0.3324 ppb	20:35:54
1	Fe 238.204 Radial†	14.3	2.4	28.751 µg/L	28.751 ppb	20:35:54
1	K 766.490 Radial†	508.9	27.3	12.757 µg/L	12.757 ppb	20:35:34
1	Mg 279.077 IEC†	7.4	-0.5	-6.4283 µg/L	-6.4283 ppb	20:35:54
1	Na 589.592 Radial†	163.7	-15.7	-7.8434 µg/L	-7.8434 ppb	20:35:34
1	Sr 421.552†	124.0	-14.5	-0.0865 µg/L	-0.0865 ppb	20:35:34
1	Sc 361.383	2048664.7	2048664.7	97.877 %		20:36:56
1	Y 371.029	1403583.7	1403583.7	97.956 %		20:36:56
1	Ag 328.068†	-536.7	-88.2	-0.7100 µg/L	-0.7100 ppb	20:37:02
1	As 188.979†	-2.7	0.4	0.6467 µg/L	0.6467 ppb	20:37:22
1	B 249.677†	286.2	-7.0	-0.3338 µg/L	-0.3338 ppb	20:37:02
1	Ba 233.527†	6.6	15.1	0.3299 µg/L	0.3299 ppb	20:37:22
1	Be 313.107†	-988.8	148.5	0.0872 µg/L	0.0872 ppb	20:37:02
1	Cd 226.502†	-166.8	0.2	0.0017 µg/L	0.0017 ppb	20:37:22
1	Co 228.616†	49.2	2.2	0.0941 µg/L	0.0941 ppb	20:37:22
1	Cr 267.716†	39.1	-40.3	-0.8771 µg/L	-0.8771 ppb	20:37:02
1	Cu 324.752†	4316.0	32.9	0.2204 µg/L	0.2204 ppb	20:37:02
1	Mn 257.610†	-672.0	0.4	0.0032 µg/L	0.0032 ppb	20:37:02
1	Mo 202.031†	24.9	20.3	2.0074 µg/L	2.0074 ppb	20:37:22
1	Ni 231.604†	365.4	-3.6	-0.2025 µg/L	-0.2025 ppb	20:37:22
1	P 214.914†	275.1	8.7	14.391 µg/L	14.391 ppb	20:37:22
1	Pb 220.353†	25.1	-4.6	-1.1950 µg/L	-1.1950 ppb	20:37:22
1	S 181.975 Axial†	17.1	-5.0	-16.070 µg/L	-16.070 ppb	20:37:22
1	Sb 206.836†	27.4	5.3	4.7262 µg/L	4.7262 ppb	20:37:22
1	Se 196.026†	27.6	0.9	0.9433 µg/L	0.9433 ppb	20:37:22
1	SiO2†	2780.0	60.6	10.934 µg/L	10.934 ppb	20:37:02
1	Si 251.611†	472.2	58.4	3.9671 µg/L	3.9671 ppb	20:37:22
1	Sn 189.927†	-1.8	5.6	2.1739 µg/L	2.1739 ppb	20:37:22
1	Ti 334.940†	-437.6	130.1	0.3048 µg/L	0.3048 ppb	20:37:02
1	Tl 190.801†	-30.5	2.9	2.8816 µg/L	2.8816 ppb	20:37:22
1	U 409.014†	4.1	10.0	0.9074 µg/L	0.9074 ppb	20:37:02
1	V 292.402†	57.8	-53.2	-0.6177 µg/L	-0.6177 ppb	20:37:02
1	Zn 213.857†	958.9	-29.2	-0.6723 µg/L	-0.6723 ppb	20:37:22
2	Sc RADIAL	95467.2	95467.2	98.6 %		20:36:00
2	Al 396.153Radial†	-106.5	11.3	5.3659 µg/L	5.3659 ppb	20:36:00
2	Ca 317.933Radial†	377.5	-2.5	-0.9254 µg/L	-0.9254 ppb	20:36:20
2	Fe 238.204 Radial†	11.9	0.1	1.5618 µg/L	1.5618 ppb	20:36:20
2	K 766.490 Radial†	463.2	-15.7	-7.3328 µg/L	-7.3328 ppb	20:36:00
2	Mg 279.077 IEC†	7.3	-0.6	-7.9575 µg/L	-7.9575 ppb	20:36:20
2	Na 589.592 Radial†	187.0	9.0	4.5063 µg/L	4.5063 ppb	20:36:00
2	Sr 421.552†	111.3	-26.5	-0.1578 µg/L	-0.1578 ppb	20:36:00
2	Sc 361.383	2055980.9	2055980.9	98.226 %		20:37:28
2	Y 371.029	1409935.7	1409935.7	98.399 %		20:37:28
2	Ag 328.068†	-495.5	-44.2	-0.3589 µg/L	-0.3589 ppb	20:37:34
2	As 188.979†	-4.7	-1.5	-2.2212 µg/L	-2.2212 ppb	20:37:54
2	B 249.677†	312.3	18.6	0.8442 µg/L	0.8442 ppb	20:37:34
2	Ba 233.527†	-5.5	2.8	0.0595 µg/L	0.0595 ppb	20:37:54
2	Be 313.107†	-1003.1	137.6	0.0807 µg/L	0.0807 ppb	20:37:34
2	Cd 226.502†	-170.3	-2.8	-0.0673 µg/L	-0.0673 ppb	20:37:54
2	Co 228.616†	39.6	-7.8	-0.3346 µg/L	-0.3346 ppb	20:37:54
2	Cr 267.716†	76.8	-2.1	-0.0460 µg/L	-0.0460 ppb	20:37:34
2	Cu 324.752†	4331.4	33.0	0.2157 µg/L	0.2157 ppb	20:37:34
2	Mn 257.610†	-677.3	-2.6	-0.0071 µg/L	-0.0071 ppb	20:37:34
2	Mo 202.031†	20.5	15.7	1.5576 µg/L	1.5576 ppb	20:37:54
2	Ni 231.604†	373.0	2.8	0.1583 µg/L	0.1583 ppb	20:37:54
2	P 214.914†	272.0	4.5	7.3893 µg/L	7.3893 ppb	20:37:54
2	Pb 220.353†	38.2	8.7	2.2847 µg/L	2.2847 ppb	20:37:54

2	S 181.975 Axial†	26.2	4.1	13.010 µg/L	13.010 ppb	20:37:54
2	Sb 206.836†	22.9	0.6	0.5175 µg/L	0.5175 ppb	20:37:54
2	Se 196.026†	22.8	-4.1	-3.8566 µg/L	-3.8566 ppb	20:37:54
2	SiO2†	2816.1	87.3	15.752 µg/L	15.752 ppb	20:37:34
2	Si 251.611†	488.9	73.6	5.0043 µg/L	5.0043 ppb	20:37:54
2	Sn 189.927†	-7.7	-0.4	-0.1488 µg/L	-0.1488 ppb	20:37:54
2	Ti 334.940†	-407.4	162.5	0.3807 µg/L	0.3807 ppb	20:37:34
2	Tl 190.801†	-35.7	-2.2	-2.1575 µg/L	-2.1575 ppb	20:37:54
2	U 409.014†	-84.0	-79.7	-7.2390 µg/L	-7.2390 ppb	20:37:34
2	V 292.402†	58.5	-52.7	-0.6185 µg/L	-0.6185 ppb	20:37:34
2	Zn 213.857†	954.7	-36.9	-0.8509 µg/L	-0.8509 ppb	20:37:54
3	Sc RADIAL	95960.9	95960.9	99.1 %		20:36:26
3	Al 396.153Radial†	-96.8	21.6	10.292 µg/L	10.292 ppb	20:36:26
3	Ca 317.933Radial†	373.7	-8.3	-3.0374 µg/L	-3.0374 ppb	20:36:46
3	Fe 238.204 Radial†	14.5	2.7	32.080 µg/L	32.080 ppb	20:36:46
3	K 766.490 Radial†	526.3	45.5	21.223 µg/L	21.223 ppb	20:36:26
3	Mg 279.077 IEC†	8.8	0.9	11.859 µg/L	11.859 ppb	20:36:46
3	Na 589.592 Radial†	192.7	13.8	6.8633 µg/L	6.8633 ppb	20:36:26
3	Sr 421.552†	108.1	-30.4	-0.1809 µg/L	-0.1809 ppb	20:36:26
3	Sc 361.383	2074157.7	2074157.7	99.095 %		20:38:00
3	Y 371.029	1421052.3	1421052.3	99.175 %		20:38:00
3	Ag 328.068†	-534.8	-79.5	-0.6376 µg/L	-0.6376 ppb	20:38:06
3	As 188.979†	-3.9	-0.6	-0.9523 µg/L	-0.9523 ppb	20:38:27
3	B 249.677†	285.9	-10.9	-0.5111 µg/L	-0.5111 ppb	20:38:06
3	Ba 233.527†	0.4	8.8	0.1922 µg/L	0.1922 ppb	20:38:27
3	Be 313.107†	-915.3	235.2	0.1381 µg/L	0.1381 ppb	20:38:06
3	Cd 226.502†	-163.8	5.3	0.1217 µg/L	0.1217 ppb	20:38:27
3	Co 228.616†	51.7	4.1	0.1778 µg/L	0.1778 ppb	20:38:27
3	Cr 267.716†	63.8	-15.9	-0.3457 µg/L	-0.3457 ppb	20:38:06
3	Cu 324.752†	4349.6	12.7	0.0887 µg/L	0.0887 ppb	20:38:06
3	Mn 257.610†	-664.0	16.9	0.0519 µg/L	0.0519 ppb	20:38:06
3	Mo 202.031†	22.9	17.9	1.7767 µg/L	1.7767 ppb	20:38:27
3	Ni 231.604†	375.3	1.8	0.1023 µg/L	0.1023 ppb	20:38:27
3	P 214.914†	263.2	-6.8	-11.269 µg/L	-11.269 ppb	20:38:27
3	Pb 220.353†	34.6	4.7	1.2351 µg/L	1.2351 ppb	20:38:27
3	S 181.975 Axial†	16.7	-5.7	-18.013 µg/L	-18.013 ppb	20:38:27
3	Sb 206.836†	24.0	1.5	1.3802 µg/L	1.3802 ppb	20:38:27
3	Se 196.026†	14.4	-12.7	-11.882 µg/L	-11.882 ppb	20:38:27
3	SiO2†	2810.1	56.0	10.109 µg/L	10.109 ppb	20:38:06
3	Si 251.611†	487.3	67.7	4.5993 µg/L	4.5993 ppb	20:38:27
3	Sn 189.927†	-4.9	2.5	0.9581 µg/L	0.9581 ppb	20:38:27
3	Ti 334.940†	-456.2	116.9	0.2724 µg/L	0.2724 ppb	20:38:06
3	Tl 190.801†	-34.6	-0.8	-0.8080 µg/L	-0.8080 ppb	20:38:27
3	U 409.014†	32.1	38.2	3.4648 µg/L	3.4648 ppb	20:38:06
3	V 292.402†	84.7	-26.8	-0.3040 µg/L	-0.3040 ppb	20:38:06
3	Zn 213.857†	916.2	-84.3	-1.9442 µg/L	-1.9442 ppb	20:38:27

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2059601.1	98.399 %	0.6271			0.64%
Sc RADIAL	95837.1	99.0 %	0.34			0.34%
Y 371.029	1411523.9	98.510 %	0.6171			0.63%
Ag 328.068†	-70.6	-0.5688 µg/L	0.18537	-0.5688 ppb	0.18537	32.59%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	4.2	1.9798 µg/L	10.42634	1.9798 ppb	10.42634	526.63%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.6	-0.8423 µg/L	1.43711	-0.8423 ppb	1.43711	170.62%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	0.2	-0.0002 µg/L	0.73663	-0.0002 ppb	0.73663	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	8.9	0.1939 µg/L	0.13520	0.1939 ppb	0.13520	69.74%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	173.8	0.1020 µg/L	0.03141	0.1020 ppb	0.03141	30.80%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-3.3	-1.2102 µg/L	1.70284	-1.2102 ppb	1.70284	140.71%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	0.9	0.0187 µg/L	0.09562	0.0187 ppb	0.09562	511.49%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.5	-0.0209 µg/L	0.27487	-0.0209 ppb	0.27487	>999.9%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-19.4	-0.4229 µg/L	0.42091	-0.4229 ppb	0.42091	99.53%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	26.2	0.1749 µg/L	0.07471	0.1749 ppb	0.07471	42.71%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.8	20.798 µg/L	16.7417	20.798 ppb	16.7417	80.50%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	19.0	8.8823 µg/L	14.66675	8.8823 ppb	14.66675	165.12%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.1	-0.8422 µg/L	11.02622	-0.8422 ppb	11.02622	>999.9%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	4.9	0.0160 µg/L	0.03151	0.0160 ppb	0.03151	197.16%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	18.0	1.7806 µg/L	0.22491	1.7806 ppb	0.22491	12.63%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	2.4	1.1754 µg/L	7.89893	1.1754 ppb	7.89893	672.03%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	0.3	0.0194 µg/L	0.19417	0.0194 ppb	0.19417	>999.9%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	2.1	3.5038 µg/L	13.26402	3.5038 ppb	13.26402	378.56%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	2.9	0.7749 µg/L	1.78493	0.7749 ppb	1.78493	230.34%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-2.2	-7.0246 µg/L	17.37736	-7.0246 ppb	17.37736	247.38%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	2.4	2.2080 µg/L	2.22308	2.2080 ppb	2.22308	100.69%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-5.3	-4.9318 µg/L	6.48001	-4.9318 ppb	6.48001	131.39%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	67.9	12.265 µg/L	3.0479	12.265 ppb	3.0479	24.85%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	66.5	4.5236 µg/L	0.52271	4.5236 ppb	0.52271	11.56%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	2.6	0.9944 µg/L	1.16179	0.9944 ppb	1.16179	116.83%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-23.8	-0.1417 µg/L	0.04922	-0.1417 ppb	0.04922	34.72%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	136.5	0.3193 µg/L	0.05558	0.3193 ppb	0.05558	17.41%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-0.0	-0.0280 µg/L	2.60853	-0.0280 ppb	2.60853	>999.9%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-10.5	-0.9556 µg/L	5.58981	-0.9556 ppb	5.58981	584.95%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-44.3	-0.5134 µg/L	0.18136	-0.5134 ppb	0.18136	35.33%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-50.1	-1.1558 µg/L	0.68860	-1.1558 ppb	0.68860	59.58%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.



Sequence No.: 23

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 21:11:25

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96658.9	96658.9	99.9 %			21:11:57
1	Al 396.153Radial†	10560.5	10693.9	5094.0 µg/L		5094.0 ppb	21:11:57
1	Ca 317.933Radial†	14432.1	14066.1	5119.0 µg/L		5119.0 ppb	21:11:57
1	Fe 238.204 Radial†	446.4	435.0	5156.5 µg/L		5156.5 ppb	21:12:18
1	K 766.490 Radial†	11377.7	10907.6	5090.4 µg/L		5090.4 ppb	21:11:57
1	Mg 279.077 IEC†	398.3	390.8	5155.8 µg/L		5155.8 ppb	21:12:18
1	Na 589.592 Radial†	20557.3	20404.3	10184 µg/L		10184 ppb	21:11:57
1	Sr 421.552†	85096.9	85071.4	505.74 µg/L		505.74 ppb	21:11:57
1	Sc 361.383	2088004.2	2088004.2	99.756 %			21:13:21
1	Y 371.029	1424361.7	1424361.7	99.406 %			21:13:21
1	Ag 328.068†	62897.2	63511.2	513.78 µg/L		513.78 ppb	21:13:27
1	As 188.979†	356.2	360.3	530.29 µg/L		530.29 ppb	21:13:47
1	B 249.677†	11513.8	11242.5	508.36 µg/L		508.36 ppb	21:13:27
1	Ba 233.527†	23600.3	23666.4	518.52 µg/L		518.52 ppb	21:13:27
1	Be 313.107†	876347.4	879648.5	516.65 µg/L		516.65 ppb	21:13:21
1	Cd 226.502†	21563.7	21787.0	517.83 µg/L		517.83 ppb	21:13:27
1	Co 228.616†	12112.7	12094.2	518.99 µg/L		518.99 ppb	21:13:27
1	Cr 267.716†	24162.0	24140.8	525.37 µg/L		525.37 ppb	21:13:27
1	Cu 324.752†	83243.8	79070.6	517.42 µg/L		517.42 ppb	21:13:27
1	Mn 257.610†	174733.6	175847.7	528.46 µg/L		528.46 ppb	21:13:21
1	Mo 202.031†	5387.5	5395.6	534.10 µg/L		534.10 ppb	21:13:47
1	Ni 231.604†	9628.3	9275.0	519.66 µg/L		519.66 ppb	21:13:27
1	P 214.914†	1861.9	1594.0	2597.3 µg/L		2597.3 ppb	21:13:47
1	Pb 220.353†	2023.4	1998.1	524.51 µg/L		524.51 ppb	21:13:47
1	S 181.975 Axial†	349.2	327.5	1042.3 µg/L		1042.3 ppb	21:13:47
1	Sb 206.836†	608.5	587.3	526.60 µg/L		526.60 ppb	21:13:47
1	Se 196.026†	577.7	551.8	530.69 µg/L		530.69 ppb	21:13:47
1	SiO2†	33820.2	31123.2	5618.8 µg/L		5618.8 ppb	21:13:27
1	Si 251.611†	38983.1	38654.3	2627.9 µg/L		2627.9 ppb	21:13:27
1	Sn 189.927†	1361.4	1372.2	534.73 µg/L		534.73 ppb	21:13:47
1	Ti 334.940†	219866.1	220980.8	516.41 µg/L		516.41 ppb	21:13:21
1	Tl 190.801†	504.9	540.3	532.60 µg/L		532.60 ppb	21:13:47
1	U 409.014†	5653.6	5673.2	514.09 µg/L		514.09 ppb	21:13:27
1	V 292.402†	43958.8	43954.0	524.05 µg/L		524.05 ppb	21:13:27
1	Zn 213.857†	23747.6	22796.8	521.20 µg/L		521.20 ppb	21:13:27
2	Sc RADIAL	96924.0	96924.0	100 %			21:12:23
2	Al 396.153Radial†	10625.5	10729.9	5111.2 µg/L		5111.2 ppb	21:12:23
2	Ca 317.933Radial†	14470.4	14064.8	5118.5 µg/L		5118.5 ppb	21:12:23
2	Fe 238.204 Radial†	449.7	437.1	5180.7 µg/L		5180.7 ppb	21:12:44
2	K 766.490 Radial†	11323.2	10822.0	5050.4 µg/L		5050.4 ppb	21:12:23
2	Mg 279.077 IEC†	403.4	394.8	5208.4 µg/L		5208.4 ppb	21:12:44
2	Na 589.592 Radial†	20613.9	20404.4	10184 µg/L		10184 ppb	21:12:23
2	Sr 421.552†	85468.0	85209.0	506.56 µg/L		506.56 ppb	21:12:23
2	Sc 361.383	2070112.7	2070112.7	98.901 %			21:13:54
2	Y 371.029	1412512.0	1412512.0	98.579 %			21:13:54
2	Ag 328.068†	62871.2	64029.8	517.98 µg/L		517.98 ppb	21:14:00
2	As 188.979†	350.6	357.8	526.58 µg/L		526.58 ppb	21:14:20
2	B 249.677†	11515.8	11344.3	512.97 µg/L		512.97 ppb	21:14:00
2	Ba 233.527†	23557.1	23827.2	522.04 µg/L		522.04 ppb	21:14:00
2	Be 313.107†	868660.0	879468.3	516.54 µg/L		516.54 ppb	21:13:54
2	Cd 226.502†	21612.3	22023.0	523.44 µg/L		523.44 ppb	21:14:00
2	Co 228.616†	12122.2	12208.8	523.91 µg/L		523.91 ppb	21:14:00
2	Cr 267.716†	24075.8	24263.0	528.03 µg/L		528.03 ppb	21:14:00
2	Cu 324.752†	83200.5	79748.1	521.85 µg/L		521.85 ppb	21:14:00
2	Mn 257.610†	173112.8	175722.8	528.08 µg/L		528.08 ppb	21:13:54
2	Mo 202.031†	5298.0	5351.7	529.75 µg/L		529.75 ppb	21:14:20
2	Ni 231.604†	9614.7	9344.6	523.56 µg/L		523.56 ppb	21:14:00
2	P 214.914†	1832.3	1580.3	2573.9 µg/L		2573.9 ppb	21:14:20
2	Pb 220.353†	2019.2	2011.5	527.99 µg/L		527.99 ppb	21:14:20

2	S 181.975 Axial†	342.8	324.0	1031.2 µg/L	1031.2 ppb	21:14:20
2	Sb 206.836†	600.3	584.3	523.79 µg/L	523.79 ppb	21:14:20
2	Se 196.026†	582.7	561.8	540.11 µg/L	540.11 ppb	21:14:20
2	SiO2†	33855.2	31451.5	5678.1 µg/L	5678.1 ppb	21:14:00
2	Si 251.611†	39087.0	39097.1	2658.0 µg/L	2658.0 ppb	21:14:00
2	Sn 189.927†	1341.7	1364.1	531.57 µg/L	531.57 ppb	21:14:20
2	Ti 334.940†	217653.2	220648.3	515.63 µg/L	515.63 ppb	21:13:54
2	Tl 190.801†	499.0	538.7	531.03 µg/L	531.03 ppb	21:14:20
2	U 409.014†	5632.4	5700.8	516.59 µg/L	516.59 ppb	21:14:00
2	V 292.402†	43909.5	44284.9	527.93 µg/L	527.93 ppb	21:14:00
2	Zn 213.857†	23786.4	23041.8	526.82 µg/L	526.82 ppb	21:14:00
3	Sc RADIAL	97049.8	97049.8	100 %		21:12:49
3	Al 396.153Radial†	10603.2	10694.0	5095.9 µg/L	5095.9 ppb	21:12:49
3	Ca 317.933Radial†	14512.3	14087.9	5126.9 µg/L	5126.9 ppb	21:12:49
3	Fe 238.204 Radial†	448.8	435.6	5162.6 µg/L	5162.6 ppb	21:13:10
3	K 766.490 Radial†	11390.8	10874.8	5075.0 µg/L	5075.0 ppb	21:12:49
3	Mg 279.077 IEC†	399.2	390.2	5145.8 µg/L	5145.8 ppb	21:13:10
3	Na 589.592 Radial†	20633.4	20397.2	10180 µg/L	10180 ppb	21:12:49
3	Sr 421.552†	85599.8	85229.8	506.68 µg/L	506.68 ppb	21:12:49
3	Sc 361.383	2081264.3	2081264.3	99.434 %		21:14:28
3	Y 371.029	1419446.8	1419446.8	99.063 %		21:14:28
3	Ag 328.068†	59352.4	60150.4	486.47 µg/L	486.47 ppb	21:14:33
3	As 188.979†	299.8	304.8	448.42 µg/L	448.42 ppb	21:14:54
3	B 249.677†	10808.7	10570.8	477.77 µg/L	477.77 ppb	21:14:33
3	Ba 233.527†	21647.0	21778.6	477.14 µg/L	477.14 ppb	21:14:33
3	Be 313.107†	813784.0	819574.0	481.36 µg/L	481.36 ppb	21:14:28
3	Cd 226.502†	19757.6	20040.6	476.26 µg/L	476.26 ppb	21:14:33
3	Co 228.616†	11022.1	11036.8	473.56 µg/L	473.56 ppb	21:14:33
3	Cr 267.716†	21305.0	21346.0	464.55 µg/L	464.55 ppb	21:14:33
3	Cu 324.752†	76010.5	72066.4	471.68 µg/L	471.68 ppb	21:14:33
3	Mn 257.610†	163021.9	164636.6	494.77 µg/L	494.77 ppb	21:14:28
3	Mo 202.031†	4450.1	4470.3	442.54 µg/L	442.54 ppb	21:14:54
3	Ni 231.604†	8728.8	8401.5	470.72 µg/L	470.72 ppb	21:14:33
3	P 214.914†	1613.9	1350.7	2196.6 µg/L	2196.6 ppb	21:14:54
3	Pb 220.353†	1759.1	1739.0	456.43 µg/L	456.43 ppb	21:14:54
3	S 181.975 Axial†	304.7	283.9	903.37 µg/L	903.37 ppb	21:14:54
3	Sb 206.836†	522.5	502.7	450.36 µg/L	450.36 ppb	21:14:54
3	Se 196.026†	500.3	475.8	459.28 µg/L	459.28 ppb	21:14:54
3	SiO2†	31688.0	29088.6	5251.5 µg/L	5251.5 ppb	21:14:33
3	Si 251.611†	36359.3	36142.1	2457.1 µg/L	2457.1 ppb	21:14:33
3	Sn 189.927†	1105.3	1119.0	436.18 µg/L	436.18 ppb	21:14:54
3	Ti 334.940†	202710.2	204441.0	477.74 µg/L	477.74 ppb	21:14:28
3	Tl 190.801†	447.4	484.0	477.31 µg/L	477.31 ppb	21:14:54
3	U 409.014†	4988.4	5022.6	455.01 µg/L	455.01 ppb	21:14:33
3	V 292.402†	39594.8	39707.8	473.02 µg/L	473.02 ppb	21:14:33
3	Zn 213.857†	21686.2	20800.8	475.54 µg/L	475.54 ppb	21:14:33

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2079793.8	99.364 %	0.4317			0.43%
Sc RADIAL	96877.6	100 %	0.2			0.21%
Y 371.029	1418773.5	99.016 %	0.4155			0.42%
Ag 328.068†	62563.8	506.08 µg/L	17.110	506.08 ppb	17.110	3.38%
QC value within limits for Ag 328.068 Recovery = 101.22%						
Al 396.153Radial†	10705.9	5100.4 µg/L	9.47	5100.4 ppb	9.47	0.19%
QC value within limits for Al 396.153Radial Recovery = 102.01%						
As 188.979†	341.0	501.76 µg/L	46.235	501.76 ppb	46.235	9.21%
QC value within limits for As 188.979 Recovery = 100.35%						
B 249.677†	11052.6	499.70 µg/L	19.128	499.70 ppb	19.128	3.83%
QC value within limits for B 249.677 Recovery = 99.94%						
Ba 233.527†	23090.7	505.90 µg/L	24.968	505.90 ppb	24.968	4.94%
QC value within limits for Ba 233.527 Recovery = 101.18%						
Be 313.107†	859563.6	504.85 µg/L	20.340	504.85 ppb	20.340	4.03%
QC value within limits for Be 313.107 Recovery = 100.97%						
Ca 317.933Radial†	14073.0	5121.4 µg/L	4.73	5121.4 ppb	4.73	0.09%
QC value within limits for Ca 317.933Radial Recovery = 102.43%						
Cd 226.502†	21283.5	505.84 µg/L	25.769	505.84 ppb	25.769	5.09%
QC value within limits for Cd 226.502 Recovery = 101.17%						
Co 228.616†	11779.9	505.49 µg/L	27.759	505.49 ppb	27.759	5.49%

QC value within limits for Co 228.616 Recovery = 101.10%							
Cr 267.716†	23249.9	505.99 µg/L	35.905	505.99 ppb	35.905	7.10%	
QC value within limits for Cr 267.716 Recovery = 101.20%							
Cu 324.752†	76961.7	503.65 µg/L	27.779	503.65 ppb	27.779	5.52%	
QC value within limits for Cu 324.752 Recovery = 100.73%							
Fe 238.204 Radial†	435.9	5166.6 µg/L	12.56	5166.6 ppb	12.56	0.24%	
QC value within limits for Fe 238.204 Radial Recovery = 103.33%							
K 766.490 Radial†	10868.1	5072.0 µg/L	20.15	5072.0 ppb	20.15	0.40%	
QC value within limits for K 766.490 Radial Recovery = 101.44%							
Mg 279.077 IEC†	391.9	5170.0 µg/L	33.63	5170.0 ppb	33.63	0.65%	
QC value within limits for Mg 279.077 IEC Recovery = 103.40%							
Mn 257.610†	172069.0	517.10 µg/L	19.345	517.10 ppb	19.345	3.74%	
QC value within limits for Mn 257.610 Recovery = 103.42%							
Mo 202.031†	5072.5	502.13 µg/L	51.655	502.13 ppb	51.655	10.29%	
QC value within limits for Mo 202.031 Recovery = 100.43%							
Na 589.592 Radial†	20402.0	10183 µg/L	2.1	10183 ppb	2.1	0.02%	
QC value within limits for Na 589.592 Radial Recovery = 101.83%							
Ni 231.604†	9007.0	504.64 µg/L	29.443	504.64 ppb	29.443	5.83%	
QC value within limits for Ni 231.604 Recovery = 100.93%							
P 214.914†	1508.3	2456.0 µg/L	224.89	2456.0 ppb	224.89	9.16%	
QC value within limits for P 214.914 Recovery = 98.24%							
Pb 220.353†	1916.2	502.97 µg/L	40.350	502.97 ppb	40.350	8.02%	
QC value within limits for Pb 220.353 Recovery = 100.59%							
S 181.975 Axial†	311.8	992.29 µg/L	77.208	992.29 ppb	77.208	7.78%	
QC value within limits for S 181.975 Axial Recovery = 99.23%							
Sb 206.836†	558.1	500.25 µg/L	43.231	500.25 ppb	43.231	8.64%	
QC value within limits for Sb 206.836 Recovery = 100.05%							
Se 196.026†	529.8	510.03 µg/L	44.201	510.03 ppb	44.201	8.67%	
QC value within limits for Se 196.026 Recovery = 102.01%							
SiO2†	30554.4	5516.2 µg/L	231.09	5516.2 ppb	231.09	4.19%	
QC value within limits for SiO2 Recovery = 103.15%							
Si 251.611†	37964.5	2581.0 µg/L	108.35	2581.0 ppb	108.35	4.20%	
QC value within limits for Si 251.611 Recovery = 103.24%							
Sn 189.927†	1285.1	500.83 µg/L	56.006	500.83 ppb	56.006	11.18%	
QC value within limits for Sn 189.927 Recovery = 100.17%							
Sr 421.552†	85170.0	506.33 µg/L	0.512	506.33 ppb	0.512	0.10%	
QC value within limits for Sr 421.552 Recovery = 101.27%							
Ti 334.940†	215356.7	503.26 µg/L	22.107	503.26 ppb	22.107	4.39%	
QC value within limits for Ti 334.940 Recovery = 100.65%							
Tl 190.801†	521.0	513.65 µg/L	31.477	513.65 ppb	31.477	6.13%	
QC value within limits for Tl 190.801 Recovery = 102.73%							
U 409.014†	5465.5	495.23 µg/L	34.854	495.23 ppb	34.854	7.04%	
QC value within limits for U 409.014 Recovery = 99.05%							
V 292.402†	42648.9	508.33 µg/L	30.643	508.33 ppb	30.643	6.03%	
QC value within limits for V 292.402 Recovery = 101.67%							
Zn 213.857†	22213.1	507.85 µg/L	28.125	507.85 ppb	28.125	5.54%	
QC value within limits for Zn 213.857 Recovery = 101.57%							
All analyte(s) passed QC.							

Sequence No.: 24

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 21:15:03

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97062.8	97062.8	100 %		21:15:34
1	Al 396.153Radial†	-121.4	-1.8	-0.8939 µg/L	-0.8939 ppb	21:15:34
1	Ca 317.933Radial†	380.8	-5.6	-2.0218 µg/L	-2.0218 ppb	21:15:54
1	Fe 238.204 Radial†	12.4	0.4	4.6132 µg/L	4.6132 ppb	21:15:54
1	K 766.490 Radial†	447.0	-39.6	-18.465 µg/L	-18.465 ppb	21:15:34
1	Mg 279.077 IEC†	9.0	1.0	13.574 µg/L	13.574 ppb	21:15:54
1	Na 589.592 Radial†	222.9	41.6	20.784 µg/L	20.784 ppb	21:15:34
1	Sr 421.552†	156.3	16.5	0.0979 µg/L	0.0979 ppb	21:15:34
1	Sc 361.383	2081073.2	2081073.2	99.425 %		21:16:56
1	Y 371.029	1423928.0	1423928.0	99.376 %		21:16:56
1	Ag 328.068†	-477.2	-19.7	-0.1592 µg/L	-0.1592 ppb	21:17:02
1	As 188.979†	-2.6	0.6	0.8880 µg/L	0.8880 ppb	21:17:22
1	B 249.677†	305.4	7.8	0.3515 µg/L	0.3515 ppb	21:17:22
1	Ba 233.527†	-2.0	6.4	0.1388 µg/L	0.1388 ppb	21:17:22
1	Be 313.107†	-1008.0	145.0	0.0851 µg/L	0.0851 ppb	21:17:02
1	Cd 226.502†	-174.7	-5.2	-0.1231 µg/L	-0.1231 ppb	21:17:22
1	Co 228.616†	42.7	-5.1	-0.2196 µg/L	-0.2196 ppb	21:17:22
1	Cr 267.716†	74.0	-5.9	-0.1276 µg/L	-0.1276 ppb	21:17:22
1	Cu 324.752†	4393.8	42.5	0.2787 µg/L	0.2787 ppb	21:17:02
1	Mn 257.610†	-675.1	8.0	0.0234 µg/L	0.0234 ppb	21:17:22
1	Mo 202.031†	22.5	17.5	1.7364 µg/L	1.7364 ppb	21:17:22
1	Ni 231.604†	374.0	-0.7	-0.0391 µg/L	-0.0391 ppb	21:17:22
1	P 214.914†	275.4	4.6	7.6210 µg/L	7.6210 ppb	21:17:22
1	Pb 220.353†	27.5	-2.5	-0.6467 µg/L	-0.6467 ppb	21:17:22
1	S 181.975 Axial†	20.0	-2.4	-7.6755 µg/L	-7.6755 ppb	21:17:22
1	Sb 206.836†	22.9	0.3	0.2757 µg/L	0.2757 ppb	21:17:22
1	Se 196.026†	21.1	-6.1	-5.7182 µg/L	-5.7182 ppb	21:17:22
1	SiO2†	2826.8	63.4	11.444 µg/L	11.444 ppb	21:17:22
1	Si 251.611†	550.6	129.7	8.8187 µg/L	8.8187 ppb	21:17:22
1	Sn 189.927†	-0.8	6.6	2.5809 µg/L	2.5809 ppb	21:17:22
1	Ti 334.940†	-412.1	162.8	0.3795 µg/L	0.3795 ppb	21:17:02
1	Tl 190.801†	-29.0	4.9	4.7782 µg/L	4.7782 ppb	21:17:22
1	U 409.014†	-47.9	-42.4	-3.8462 µg/L	-3.8462 ppb	21:17:02
1	V 292.402†	95.2	-16.5	-0.1865 µg/L	-0.1865 ppb	21:17:02
1	Zn 213.857†	967.4	-35.9	-0.8274 µg/L	-0.8274 ppb	21:17:22
2	Sc RADIAL	96905.6	96905.6	100 %		21:16:00
2	Al 396.153Radial†	-91.9	27.6	13.105 µg/L	13.105 ppb	21:16:00
2	Ca 317.933Radial†	382.0	-3.8	-1.3691 µg/L	-1.3691 ppb	21:16:20
2	Fe 238.204 Radial†	15.2	3.2	37.596 µg/L	37.596 ppb	21:16:20
2	K 766.490 Radial†	514.8	28.9	13.467 µg/L	13.467 ppb	21:16:00
2	Mg 279.077 IEC†	8.7	0.7	9.1539 µg/L	9.1539 ppb	21:16:20
2	Na 589.592 Radial†	216.7	35.9	17.893 µg/L	17.893 ppb	21:16:00
2	Sr 421.552†	137.7	-1.8	-0.0110 µg/L	-0.0110 ppb	21:16:00
2	Sc 361.383	2074475.6	2074475.6	99.110 %		21:17:28
2	Y 371.029	1420759.1	1420759.1	99.155 %		21:17:28
2	Ag 328.068†	-471.2	-15.2	-0.1211 µg/L	-0.1211 ppb	21:17:34
2	As 188.979†	-4.9	-1.6	-2.4465 µg/L	-2.4465 ppb	21:17:55
2	B 249.677†	305.3	8.7	0.3749 µg/L	0.3749 ppb	21:17:55
2	Ba 233.527†	-4.7	3.7	0.0805 µg/L	0.0805 ppb	21:17:55
2	Be 313.107†	-1010.4	139.4	0.0817 µg/L	0.0817 ppb	21:17:34
2	Cd 226.502†	-164.7	4.4	0.1002 µg/L	0.1002 ppb	21:17:55
2	Co 228.616†	47.1	-0.6	-0.0236 µg/L	-0.0236 ppb	21:17:55
2	Cr 267.716†	66.1	-13.6	-0.2949 µg/L	-0.2949 ppb	21:17:55
2	Cu 324.752†	4265.5	-72.9	-0.4691 µg/L	-0.4691 ppb	21:17:34
2	Mn 257.610†	-665.2	15.8	0.0491 µg/L	0.0491 ppb	21:17:55
2	Mo 202.031†	27.9	23.1	2.2827 µg/L	2.2827 ppb	21:17:55
2	Ni 231.604†	376.7	3.1	0.1769 µg/L	0.1769 ppb	21:17:55
2	P 214.914†	269.3	-0.7	-1.0582 µg/L	-1.0582 ppb	21:17:55
2	Pb 220.353†	28.6	-1.3	-0.3294 µg/L	-0.3294 ppb	21:17:55

2	S 181.975 Axial†	22.0	-0.4	-1.1951 µg/L	-1.1951 ppb	21:17:55
2	Sb 206.836†	27.5	5.0	4.4953 µg/L	4.4953 ppb	21:17:55
2	Se 196.026†	25.6	-1.5	-1.2633 µg/L	-1.2633 ppb	21:17:55
2	SiO2†	2822.6	68.2	12.319 µg/L	12.319 ppb	21:17:55
2	Si 251.611†	573.7	154.7	10.519 µg/L	10.519 ppb	21:17:55
2	Sn 189.927†	-7.2	0.2	0.0724 µg/L	0.0724 ppb	21:17:55
2	Ti 334.940†	-368.3	205.6	0.4800 µg/L	0.4800 ppb	21:17:34
2	Tl 190.801†	-30.7	3.2	3.0819 µg/L	3.0819 ppb	21:17:55
2	U 409.014†	-79.4	-74.3	-6.7480 µg/L	-6.7480 ppb	21:17:34
2	V 292.402†	91.5	-20.0	-0.2309 µg/L	-0.2309 ppb	21:17:34
2	Zn 213.857†	953.9	-46.4	-1.0713 µg/L	-1.0713 ppb	21:17:55
3	Sc RADIAL	98063.3	98063.3	101 %		21:16:26
3	Al 396.153Radial†	-109.4	11.3	5.3452 µg/L	5.3452 ppb	21:16:26
3	Ca 317.933Radial†	388.4	-1.9	-0.7058 µg/L	-0.7058 ppb	21:16:46
3	Fe 238.204 Radial†	12.2	0.1	1.2721 µg/L	1.2721 ppb	21:16:46
3	K 766.490 Radial†	450.2	-41.0	-19.128 µg/L	-19.128 ppb	21:16:26
3	Mg 279.077 IEC†	12.2	4.0	52.912 µg/L	52.912 ppb	21:16:46
3	Na 589.592 Radial†	189.2	6.2	3.0955 µg/L	3.0955 ppb	21:16:26
3	Sr 421.552†	114.9	-26.0	-0.1549 µg/L	-0.1549 ppb	21:16:26
3	Sc 361.383	2082012.9	2082012.9	99.470 %		21:18:01
3	Y 371.029	1425859.7	1425859.7	99.511 %		21:18:01
3	Ag 328.068†	-411.0	47.0	0.3810 µg/L	0.3810 ppb	21:18:06
3	As 188.979†	-0.1	3.2	4.7029 µg/L	4.7029 ppb	21:18:27
3	B 249.677†	297.4	-0.4	-0.0181 µg/L	-0.0181 ppb	21:18:27
3	Ba 233.527†	-13.2	-4.9	-0.1057 µg/L	-0.1057 ppb	21:18:27
3	Be 313.107†	-1002.7	150.8	0.0884 µg/L	0.0884 ppb	21:18:06
3	Cd 226.502†	-169.6	0.1	0.0021 µg/L	0.0021 ppb	21:18:27
3	Co 228.616†	48.1	0.3	0.0130 µg/L	0.0130 ppb	21:18:27
3	Cr 267.716†	67.6	-12.2	-0.2660 µg/L	-0.2660 ppb	21:18:27
3	Cu 324.752†	4336.1	-17.5	-0.1142 µg/L	-0.1142 ppb	21:18:06
3	Mn 257.610†	-687.8	-4.5	-0.0170 µg/L	-0.0170 ppb	21:18:27
3	Mo 202.031†	25.5	20.5	2.0318 µg/L	2.0318 ppb	21:18:27
3	Ni 231.604†	380.5	5.6	0.3153 µg/L	0.3153 ppb	21:18:27
3	P 214.914†	280.0	9.1	15.180 µg/L	15.180 ppb	21:18:27
3	Pb 220.353†	33.7	3.7	0.9757 µg/L	0.9757 ppb	21:18:27
3	S 181.975 Axial†	23.9	1.5	4.7828 µg/L	4.7828 ppb	21:18:27
3	Sb 206.836†	29.2	6.6	5.9168 µg/L	5.9168 ppb	21:18:27
3	Se 196.026†	20.1	-7.1	-6.7089 µg/L	-6.7089 ppb	21:18:27
3	SiO2†	2851.1	86.6	15.632 µg/L	15.632 ppb	21:18:27
3	Si 251.611†	589.1	168.1	11.429 µg/L	11.429 ppb	21:18:27
3	Sn 189.927†	-5.4	2.0	0.7882 µg/L	0.7882 ppb	21:18:27
3	Ti 334.940†	-355.7	219.6	0.5093 µg/L	0.5093 ppb	21:18:06
3	Tl 190.801†	-33.6	0.3	0.2753 µg/L	0.2753 ppb	21:18:27
3	U 409.014†	-52.9	-47.4	-4.3001 µg/L	-4.3001 ppb	21:18:06
3	V 292.402†	155.3	43.8	0.5273 µg/L	0.5273 ppb	21:18:06
3	Zn 213.857†	943.3	-60.6	-1.3986 µg/L	-1.3986 ppb	21:18:27

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2079187.2	99.335 %	0.1962			0.20%
Sc RADIAL	97343.9	101 %	0.6			0.65%
Y 371.029	1423515.6	99.347 %	0.1797			0.18%
Ag 328.068†	4.0	0.0336 µg/L	0.30147	0.0336 ppb	0.30147	897.80%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	12.3	5.8521 µg/L	7.01318	5.8521 ppb	7.01318	119.84%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.7	1.0481 µg/L	3.57737	1.0481 ppb	3.57737	341.31%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	5.4	0.2361 µg/L	0.22046	0.2361 ppb	0.22046	93.37%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	1.7	0.0379 µg/L	0.12769	0.0379 ppb	0.12769	337.04%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	145.1	0.0851 µg/L	0.00335	0.0851 ppb	0.00335	3.94%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-3.8	-1.3656 µg/L	0.65800	-1.3656 ppb	0.65800	48.19%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-0.2	-0.0069 µg/L	0.11195	-0.0069 ppb	0.11195	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.8	-0.0768 µg/L	0.12508	-0.0768 ppb	0.12508	162.94%

Cr 267.716†	-10.6	-0.2295 µg/L	0.08941	-0.2295 ppb	0.08941	38.96%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-16.0	-0.1015 µg/L	0.37405	-0.1015 ppb	0.37405	368.42%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.2	14.494 µg/L	20.0766	14.494 ppb	20.0766	138.52%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-17.2	-8.0419 µg/L	18.63056	-8.0419 ppb	18.63056	231.67%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.9	25.213 µg/L	24.0891	25.213 ppb	24.0891	95.54%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	6.4	0.0185 µg/L	0.03328	0.0185 ppb	0.03328	179.82%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	20.4	2.0170 µg/L	0.27347	2.0170 ppb	0.27347	13.56%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	27.9	13.924 µg/L	9.4885	13.924 ppb	9.4885	68.14%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	2.7	0.1510 µg/L	0.17861	0.1510 ppb	0.17861	118.26%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	4.4	7.2475 µg/L	8.12542	7.2475 ppb	8.12542	112.11%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-0.0	-0.0001 µg/L	0.85988	-0.0001 ppb	0.85988	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-0.4	-1.3626 µg/L	6.23084	-1.3626 ppb	6.23084	457.27%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	4.0	3.5626 µg/L	2.93396	3.5626 ppb	2.93396	82.35%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-4.9	-4.5635 µg/L	2.90062	-4.5635 ppb	2.90062	63.56%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	72.7	13.132 µg/L	2.2092	13.132 ppb	2.2092	16.82%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	150.9	10.256 µg/L	1.3251	10.256 ppb	1.3251	12.92%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	2.9	1.1472 µg/L	1.29220	1.1472 ppb	1.29220	112.64%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-3.8	-0.0226 µg/L	0.12678	-0.0226 ppb	0.12678	560.00%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	196.0	0.4563 µg/L	0.06806	0.4563 ppb	0.06806	14.92%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	2.8	2.7118 µg/L	2.27415	2.7118 ppb	2.27415	83.86%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-54.7	-4.9648 µg/L	1.56090	-4.9648 ppb	1.56090	31.44%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2.4	0.0367 µg/L	0.42551	0.0367 ppb	0.42551	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-47.6	-1.0991 µg/L	0.28659	-1.0991 ppb	0.28659	26.08%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 33  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 3/16/2010 21:47:54  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97772.3	97772.3	101 %		21:48:26
1	Al 396.153Radial†	10777.9	10788.7	5138.8 µg/L	5138.8 ppb	21:48:26
1	Ca 317.933Radial†	14899.9	14364.6	5227.6 µg/L	5227.6 ppb	21:48:26
1	Fe 238.204 Radial†	472.9	456.2	5406.9 µg/L	5406.9 ppb	21:48:46
1	K 766.490 Radial†	11668.9	11066.1	5164.3 µg/L	5164.3 ppb	21:48:26
1	Mg 279.077 IEC†	413.2	401.1	5290.7 µg/L	5290.7 ppb	21:48:46
1	Na 589.592 Radial†	22064.6	21662.0	10812 µg/L	10812 ppb	21:48:26
1	Sr 421.552†	90194.1	89146.9	529.97 µg/L	529.97 ppb	21:48:26
1	Sc 361.383	2036065.5	2036065.5	97.275 %		21:49:50
1	Y 371.029	1390415.9	1390415.9	97.037 %		21:49:50
1	Ag 328.068†	63581.9	65823.5	532.50 µg/L	532.50 ppb	21:49:56
1	As 188.979†	355.8	369.0	543.01 µg/L	543.01 ppb	21:50:16
1	B 249.677†	11667.3	11694.8	528.78 µg/L	528.78 ppb	21:49:56
1	Ba 233.527†	23835.8	24512.1	537.05 µg/L	537.05 ppb	21:49:56
1	Be 313.107†	885352.9	911316.0	535.25 µg/L	535.25 ppb	21:49:50
1	Cd 226.502†	21743.0	22522.7	535.30 µg/L	535.30 ppb	21:49:56
1	Co 228.616†	12247.7	12542.8	538.24 µg/L	538.24 ppb	21:49:56
1	Cr 267.716†	24374.4	24977.1	543.57 µg/L	543.57 ppb	21:49:56
1	Cu 324.752†	84640.3	82634.9	540.75 µg/L	540.75 ppb	21:49:56
1	Mn 257.610†	176407.4	182036.7	547.07 µg/L	547.07 ppb	21:49:50
1	Mo 202.031†	5446.8	5594.3	553.77 µg/L	553.77 ppb	21:50:16
1	Ni 231.604†	9732.8	9628.6	539.47 µg/L	539.47 ppb	21:49:56
1	P 214.914†	1867.0	1646.9	2682.8 µg/L	2682.8 ppb	21:50:16
1	Pb 220.353†	2058.1	2085.6	547.44 µg/L	547.44 ppb	21:50:16
1	S 181.975 Axial†	348.7	336.0	1069.2 µg/L	1069.2 ppb	21:50:16
1	Sb 206.836†	620.6	615.3	551.68 µg/L	551.68 ppb	21:50:16
1	Se 196.026†	576.7	565.5	544.27 µg/L	544.27 ppb	21:50:16
1	SiO2†	34292.2	32473.2	5862.6 µg/L	5862.6 ppb	21:49:56
1	Si 251.611†	39619.8	40305.7	2740.1 µg/L	2740.1 ppb	21:49:56
1	Sn 189.927†	1379.0	1425.1	555.33 µg/L	555.33 ppb	21:50:16
1	Ti 334.940†	222407.5	229215.8	535.66 µg/L	535.66 ppb	21:49:50
1	Tl 190.801†	505.3	553.5	545.79 µg/L	545.79 ppb	21:50:16
1	U 409.014†	5754.8	5921.8	536.62 µg/L	536.62 ppb	21:49:56
1	V 292.402†	44444.8	45577.7	543.40 µg/L	543.40 ppb	21:49:56
1	Zn 213.857†	23996.1	23659.5	540.92 µg/L	540.92 ppb	21:49:56
2	Sc RADIAL	97138.7	97138.7	100 %		21:48:52
2	Al 396.153Radial†	10690.8	10771.6	5130.7 µg/L	5130.7 ppb	21:48:52
2	Ca 317.933Radial†	14789.5	14350.8	5222.6 µg/L	5222.6 ppb	21:48:52
2	Fe 238.204 Radial†	472.7	459.0	5441.1 µg/L	5441.1 ppb	21:49:12
2	K 766.490 Radial†	11512.8	10985.9	5126.9 µg/L	5126.9 ppb	21:48:52
2	Mg 279.077 IEC†	409.6	400.1	5278.4 µg/L	5278.4 ppb	21:49:12
2	Na 589.592 Radial†	21869.7	21610.2	10786 µg/L	10786 ppb	21:48:52
2	Sr 421.552†	89385.7	88923.8	528.64 µg/L	528.64 ppb	21:48:52
2	Sc 361.383	2023565.8	2023565.8	96.678 %		21:50:24
2	Y 371.029	1382580.5	1382580.5	96.490 %		21:50:24
2	Ag 328.068†	63927.4	66584.5	538.65 µg/L	538.65 ppb	21:50:29
2	As 188.979†	351.5	366.8	539.80 µg/L	539.80 ppb	21:50:50
2	B 249.677†	11718.8	11822.2	534.56 µg/L	534.56 ppb	21:50:29
2	Ba 233.527†	23947.7	24779.2	542.90 µg/L	542.90 ppb	21:50:29
2	Be 313.107†	877927.9	909257.9	534.04 µg/L	534.04 ppb	21:50:24
2	Cd 226.502†	21827.8	22748.5	540.67 µg/L	540.67 ppb	21:50:29
2	Co 228.616†	12316.1	12691.3	544.62 µg/L	544.62 ppb	21:50:29
2	Cr 267.716†	24508.1	25270.2	549.95 µg/L	549.95 ppb	21:50:29
2	Cu 324.752†	84880.8	83421.2	545.89 µg/L	545.89 ppb	21:50:29
2	Mn 257.610†	175312.6	182024.4	547.03 µg/L	547.03 ppb	21:50:24
2	Mo 202.031†	5362.0	5541.1	548.51 µg/L	548.51 ppb	21:50:50
2	Ni 231.604†	9753.9	9712.2	544.15 µg/L	544.15 ppb	21:50:29
2	P 214.914†	1854.3	1645.7	2680.1 µg/L	2680.1 ppb	21:50:50
2	Pb 220.353†	2018.7	2057.9	540.14 µg/L	540.14 ppb	21:50:50

2	S 181.975 Axial†	347.9	337.3	1073.4 µg/L	1073.4 ppb	21:50:50
2	Sb 206.836†	607.8	606.0	543.25 µg/L	543.25 ppb	21:50:50
2	Se 196.026†	581.5	574.2	552.53 µg/L	552.53 ppb	21:50:50
2	SiO2†	34604.6	33014.1	5960.2 µg/L	5960.2 ppb	21:50:29
2	Si 251.611†	39829.3	40774.0	2772.0 µg/L	2772.0 ppb	21:50:29
2	Sn 189.927†	1354.2	1408.2	548.76 µg/L	548.76 ppb	21:50:50
2	Ti 334.940†	220615.8	228774.9	534.63 µg/L	534.63 ppb	21:50:24
2	Tl 190.801†	499.0	550.2	542.54 µg/L	542.54 ppb	21:50:50
2	U 409.014†	5827.5	6033.6	546.76 µg/L	546.76 ppb	21:50:29
2	V 292.402†	44729.1	46154.0	550.18 µg/L	550.18 ppb	21:50:29
2	Zn 213.857†	24138.1	23958.7	547.78 µg/L	547.78 ppb	21:50:29
3	Sc RADIAL	97577.3	97577.3	101 %		21:49:18
3	Al 396.153Radial†	10734.3	10766.8	5130.3 µg/L	5130.3 ppb	21:49:18
3	Ca 317.933Radial†	14887.2	14381.5	5233.7 µg/L	5233.7 ppb	21:49:18
3	Fe 238.204 Radial†	477.3	461.5	5468.7 µg/L	5468.7 ppb	21:49:39
3	K 766.490 Radial†	11587.2	11008.2	5137.3 µg/L	5137.3 ppb	21:49:18
3	Mg 279.077 IEC†	413.6	402.3	5305.3 µg/L	5305.3 ppb	21:49:39
3	Na 589.592 Radial†	21927.6	21569.7	10766 µg/L	10766 ppb	21:49:18
3	Sr 421.552†	89853.8	88987.8	529.02 µg/L	529.02 ppb	21:49:18
3	Sc 361.383	2022166.2	2022166.2	96.611 %		21:50:57
3	Y 371.029	1382316.9	1382316.9	96.472 %		21:50:57
3	Ag 328.068†	59770.9	62328.0	504.08 µg/L	504.08 ppb	21:51:03
3	As 188.979†	299.5	313.3	460.84 µg/L	460.84 ppb	21:51:23
3	B 249.677†	10865.3	10947.1	494.71 µg/L	494.71 ppb	21:51:03
3	Ba 233.527†	21707.8	22477.7	492.46 µg/L	492.46 ppb	21:51:03
3	Be 313.107†	815029.8	844781.7	496.17 µg/L	496.17 ppb	21:50:57
3	Cd 226.502†	19723.3	20585.8	489.20 µg/L	489.20 ppb	21:51:03
3	Co 228.616†	10963.9	11300.4	484.87 µg/L	484.87 ppb	21:51:03
3	Cr 267.716†	21326.6	21994.5	478.67 µg/L	478.67 ppb	21:51:03
3	Cu 324.752†	76473.5	74779.7	489.46 µg/L	489.46 ppb	21:51:03
3	Mn 257.610†	163134.3	169544.4	509.52 µg/L	509.52 ppb	21:50:57
3	Mo 202.031†	4489.9	4642.3	459.57 µg/L	459.57 ppb	21:51:23
3	Ni 231.604†	8750.7	8680.8	486.37 µg/L	486.37 ppb	21:51:03
3	P 214.914†	1610.8	1394.9	2268.1 µg/L	2268.1 ppb	21:51:23
3	Pb 220.353†	1766.6	1798.4	472.01 µg/L	472.01 ppb	21:51:23
3	S 181.975 Axial†	305.0	293.2	932.98 µg/L	932.98 ppb	21:51:23
3	Sb 206.836†	520.5	516.1	462.37 µg/L	462.37 ppb	21:51:23
3	Se 196.026†	519.0	509.9	492.16 µg/L	492.16 ppb	21:51:23
3	SiO2†	31949.4	30290.5	5468.5 µg/L	5468.5 ppb	21:51:03
3	Si 251.611†	36672.9	37535.4	2551.8 µg/L	2551.8 ppb	21:51:03
3	Sn 189.927†	1105.0	1151.2	448.73 µg/L	448.73 ppb	21:51:23
3	Ti 334.940†	203323.0	211033.2	493.14 µg/L	493.14 ppb	21:50:57
3	Tl 190.801†	450.0	499.9	492.99 µg/L	492.99 ppb	21:51:23
3	U 409.014†	5059.3	5242.6	474.94 µg/L	474.94 ppb	21:51:03
3	V 292.402†	39722.0	41003.3	488.46 µg/L	488.46 ppb	21:51:03
3	Zn 213.857†	21680.5	21432.3	489.96 µg/L	489.96 ppb	21:51:03

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2027265.8	96.854 %	0.3656			0.38%
Sc RADIAL	97496.1	101 %	0.3			0.33%
Y 371.029	1385104.4	96.666 %	0.3212			0.33%
Ag 328.068†	64912.0	525.08 µg/L	18.444	525.08 ppb	18.444	3.51%
QC value within limits for Ag 328.068 Recovery = 105.02%						
Al 396.153Radial†	10775.7	5133.3 µg/L	4.81	5133.3 ppb	4.81	0.09%
QC value within limits for Al 396.153Radial Recovery = 102.67%						
As 188.979†	349.7	514.55 µg/L	46.545	514.55 ppb	46.545	9.05%
QC value within limits for As 188.979 Recovery = 102.91%						
B 249.677†	11488.0	519.35 µg/L	21.531	519.35 ppb	21.531	4.15%
QC value within limits for B 249.677 Recovery = 103.87%						
Ba 233.527†	23923.0	524.14 µg/L	27.588	524.14 ppb	27.588	5.26%
QC value within limits for Ba 233.527 Recovery = 104.83%						
Be 313.107†	888451.9	521.82 µg/L	22.220	521.82 ppb	22.220	4.26%
QC value within limits for Be 313.107 Recovery = 104.36%						
Ca 317.933Radial†	14365.7	5228.0 µg/L	5.60	5228.0 ppb	5.60	0.11%
QC value within limits for Ca 317.933Radial Recovery = 104.56%						
Cd 226.502†	21952.3	521.73 µg/L	28.294	521.73 ppb	28.294	5.42%
QC value within limits for Cd 226.502 Recovery = 104.35%						
Co 228.616†	12178.2	522.58 µg/L	32.810	522.58 ppb	32.810	6.28%



QC value within limits for Co 228.616	Recovery = 104.52%			
Cr 267.716†	24080.6	524.06 µg/L	39.442	524.06 ppb
QC value within limits for Cr 267.716	Recovery = 104.81%			
Cu 324.752†	80278.6	525.37 µg/L	31.206	525.37 ppb
QC value within limits for Cu 324.752	Recovery = 105.07%			
Fe 238.204 Radial†	458.9	5438.9 µg/L	30.96	5438.9 ppb
QC value within limits for Fe 238.204 Radial	Recovery = 108.78%			
K 766.490 Radial†	11020.1	5142.9 µg/L	19.31	5142.9 ppb
QC value within limits for K 766.490 Radial	Recovery = 102.86%			
Mg 279.077 IEC†	401.2	5291.5 µg/L	13.49	5291.5 ppb
QC value within limits for Mg 279.077 IEC	Recovery = 105.83%			
Mn 257.610†	177868.5	534.54 µg/L	21.665	534.54 ppb
QC value within limits for Mn 257.610	Recovery = 106.91%			
Mo 202.031†	5259.2	520.62 µg/L	52.933	520.62 ppb
QC value within limits for Mo 202.031	Recovery = 104.12%			
Na 589.592 Radial†	21614.0	10788 µg/L	23.1	10788 ppb
QC value within limits for Na 589.592 Radial	Recovery = 107.88%			
Ni 231.604†	9340.5	523.33 µg/L	32.093	523.33 ppb
QC value within limits for Ni 231.604	Recovery = 104.67%			
P 214.914†	1562.5	2543.7 µg/L	238.63	2543.7 ppb
QC value within limits for P 214.914	Recovery = 101.75%			
Pb 220.353†	1980.6	519.86 µg/L	41.603	519.86 ppb
QC value within limits for Pb 220.353	Recovery = 103.97%			
S 181.975 Axial†	322.1	1025.2 µg/L	79.88	1025.2 ppb
QC value within limits for S 181.975 Axial	Recovery = 102.52%			
Sb 206.836†	579.1	519.10 µg/L	49.309	519.10 ppb
QC value within limits for Sb 206.836	Recovery = 103.82%			
Se 196.026†	549.9	529.65 µg/L	32.729	529.65 ppb
QC value within limits for Se 196.026	Recovery = 105.93%			
SiO2†	31925.9	5763.8 µg/L	260.32	5763.8 ppb
QC value within limits for SiO2	Recovery = 107.78%			
Si 251.611†	39538.3	2688.0 µg/L	119.00	2688.0 ppb
QC value within limits for Si 251.611	Recovery = 107.52%			
Sn 189.927†	1328.2	517.61 µg/L	59.742	517.61 ppb
QC value within limits for Sn 189.927	Recovery = 103.52%			
Sr 421.552†	89019.5	529.21 µg/L	0.683	529.21 ppb
QC value within limits for Sr 421.552	Recovery = 105.84%			
Ti 334.940†	223008.0	521.14 µg/L	24.256	521.14 ppb
QC value within limits for Ti 334.940	Recovery = 104.23%			
Tl 190.801†	534.5	527.10 µg/L	29.588	527.10 ppb
QC value within limits for Tl 190.801	Recovery = 105.42%			
U 409.014†	5732.7	519.44 µg/L	38.872	519.44 ppb
QC value within limits for U 409.014	Recovery = 103.89%			
V 292.402†	44245.0	527.35 µg/L	33.850	527.35 ppb
QC value within limits for V 292.402	Recovery = 105.47%			
Zn 213.857†	23016.8	526.22 µg/L	31.592	526.22 ppb
QC value within limits for Zn 213.857	Recovery = 105.24%			

All analyte(s) passed QC.

Sequence No.: 34  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 21:51:33  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94390.7	94390.7	97.5 %		21:52:03
1	Al 396.153Radial†	-119.4	-3.1	-1.5454 µg/L	-1.5454 ppb	21:52:03
1	Ca 317.933Radial†	347.5	-28.9	-10.535 µg/L	-10.535 ppb	21:52:23
1	Fe 238.204 Radial†	16.4	4.9	57.546 µg/L	57.546 ppb	21:52:23
1	K 766.490 Radial†	477.9	4.7	2.2018 µg/L	2.2018 ppb	21:52:03
1	Mg 279.077 IEC†	6.7	-1.1	-14.748 µg/L	-14.748 ppb	21:52:23
1	Na 589.592 Radial†	155.9	-20.7	-10.322 µg/L	-10.322 ppb	21:52:03
1	Sr 421.552†	119.8	-16.6	-0.0985 µg/L	-0.0985 ppb	21:52:03
1	Sc 361.383	2029019.0	2029019.0	96.938 %		21:53:25
1	Y 371.029	1388215.0	1388215.0	96.884 %		21:53:25
1	Ag 328.068†	-402.4	45.1	0.3677 µg/L	0.3677 ppb	21:53:31
1	As 188.979†	-1.9	1.3	1.9515 µg/L	1.9515 ppb	21:53:52
1	B 249.677†	314.7	25.3	1.1166 µg/L	1.1166 ppb	21:53:31
1	Ba 233.527†	0.8	9.2	0.2016 µg/L	0.2016 ppb	21:53:52
1	Be 313.107†	-914.0	216.0	0.1267 µg/L	0.1267 ppb	21:53:31
1	Cd 226.502†	-166.4	-1.1	-0.0327 µg/L	-0.0327 ppb	21:53:52
1	Co 228.616†	42.0	-4.8	-0.2032 µg/L	-0.2032 ppb	21:53:52
1	Cr 267.716†	67.0	-11.1	-0.2414 µg/L	-0.2414 ppb	21:53:31
1	Cu 324.752†	4250.4	7.9	0.0627 µg/L	0.0627 ppb	21:53:31
1	Mn 257.610†	-672.7	-7.0	-0.0165 µg/L	-0.0165 ppb	21:53:52
1	Mo 202.031†	25.8	21.5	2.1301 µg/L	2.1301 ppb	21:53:52
1	Ni 231.604†	368.3	3.1	0.1727 µg/L	0.1727 ppb	21:53:52
1	P 214.914†	269.5	5.6	9.2710 µg/L	9.2710 ppb	21:53:52
1	Pb 220.353†	22.4	-7.1	-1.8556 µg/L	-1.8556 ppb	21:53:52
1	S 181.975 Axial†	24.4	2.7	8.5125 µg/L	8.5125 ppb	21:53:52
1	Sb 206.836†	23.6	1.6	1.4455 µg/L	1.4455 ppb	21:53:52
1	Se 196.026†	20.6	-6.1	-5.4921 µg/L	-5.4921 ppb	21:53:52
1	SiO2†	2893.3	204.9	36.997 µg/L	36.997 ppb	21:53:31
1	Si 251.611†	600.7	195.6	13.300 µg/L	13.300 ppb	21:53:52
1	Sn 189.927†	-2.4	5.0	1.9427 µg/L	1.9427 ppb	21:53:52
1	Ti 334.940†	-349.6	216.6	0.5075 µg/L	0.5075 ppb	21:53:31
1	Tl 190.801†	-30.1	3.0	2.9569 µg/L	2.9569 ppb	21:53:52
1	U 409.014†	-23.5	-18.4	-1.6764 µg/L	-1.6764 ppb	21:53:31
1	V 292.402†	125.0	16.7	0.2035 µg/L	0.2035 ppb	21:53:31
1	Zn 213.857†	714.3	-272.0	-6.2652 µg/L	-6.2652 ppb	21:53:52
2	Sc RADIAL	94779.5	94779.5	97.9 %		21:52:29
2	Al 396.153Radial†	-111.3	5.6	2.6322 µg/L	2.6322 ppb	21:52:29
2	Ca 317.933Radial†	353.1	-24.7	-8.9876 µg/L	-8.9876 ppb	21:52:49
2	Fe 238.204 Radial†	12.7	1.0	11.443 µg/L	11.443 ppb	21:52:49
2	K 766.490 Radial†	503.4	28.7	13.414 µg/L	13.414 ppb	21:52:29
2	Mg 279.077 IEC†	10.4	2.7	35.244 µg/L	35.244 ppb	21:52:49
2	Na 589.592 Radial†	167.9	-9.2	-4.5726 µg/L	-4.5726 ppb	21:52:29
2	Sr 421.552†	124.3	-12.5	-0.0743 µg/L	-0.0743 ppb	21:52:29
2	Sc 361.383	2023388.2	2023388.2	96.669 %		21:53:58
2	Y 371.029	1384724.1	1384724.1	96.640 %		21:53:58
2	Ag 328.068†	-498.1	-55.0	-0.4428 µg/L	-0.4428 ppb	21:54:03
2	As 188.979†	-0.6	2.7	3.9309 µg/L	3.9309 ppb	21:54:24
2	B 249.677†	300.6	11.6	0.5187 µg/L	0.5187 ppb	21:54:03
2	Ba 233.527†	-3.3	5.0	0.1096 µg/L	0.1096 ppb	21:54:24
2	Be 313.107†	-980.5	144.6	0.0848 µg/L	0.0848 ppb	21:54:03
2	Cd 226.502†	-157.7	7.4	0.1751 µg/L	0.1751 ppb	21:54:24
2	Co 228.616†	35.5	-11.3	-0.4861 µg/L	-0.4861 ppb	21:54:24
2	Cr 267.716†	44.4	-34.4	-0.7474 µg/L	-0.7474 ppb	21:54:03
2	Cu 324.752†	4267.9	38.3	0.2520 µg/L	0.2520 ppb	21:54:03
2	Mn 257.610†	-659.4	4.8	0.0128 µg/L	0.0128 ppb	21:54:24
2	Mo 202.031†	22.6	18.3	1.8095 µg/L	1.8095 ppb	21:54:24
2	Ni 231.604†	363.6	-0.7	-0.0400 µg/L	-0.0400 ppb	21:54:24
2	P 214.914†	267.4	4.2	6.9881 µg/L	6.9881 ppb	21:54:24
2	Pb 220.353†	30.6	1.4	0.3798 µg/L	0.3798 ppb	21:54:24

2	S 181.975 Axial†	27.2	5.6	17.892 µg/L	17.892 ppb	21:54:24
2	Sb 206.836†	25.1	3.3	2.9604 µg/L	2.9604 ppb	21:54:24
2	Se 196.026†	15.5	-11.3	-10.633 µg/L	-10.633 ppb	21:54:24
2	SiO2†	2871.6	190.8	34.443 µg/L	34.443 ppb	21:54:03
2	Si 251.611†	627.8	225.4	15.323 µg/L	15.323 ppb	21:54:24
2	Sn 189.927†	-4.4	2.9	1.1250 µg/L	1.1250 ppb	21:54:24
2	Ti 334.940†	-376.3	187.9	0.4365 µg/L	0.4365 ppb	21:54:03
2	Tl 190.801†	-26.0	7.2	7.0532 µg/L	7.0532 ppb	21:54:24
2	U 409.014†	38.1	45.2	4.1028 µg/L	4.1028 ppb	21:54:03
2	V 292.402†	83.9	-25.5	-0.2858 µg/L	-0.2858 ppb	21:54:03
2	Zn 213.857†	709.8	-274.6	-6.3246 µg/L	-6.3246 ppb	21:54:24
3	Sc RADIAL	93880.6	93880.6	97.0 %		21:52:55
3	Al 396.153Radial†	-93.0	23.4	11.148 µg/L	11.148 ppb	21:52:55
3	Ca 317.933Radial†	352.9	-21.4	-7.7985 µg/L	-7.7985 ppb	21:53:15
3	Fe 238.204 Radial†	12.9	1.3	15.467 µg/L	15.467 ppb	21:53:15
3	K 766.490 Radial†	551.9	83.6	39.029 µg/L	39.029 ppb	21:52:55
3	Mg 279.077 IEC†	9.5	1.8	24.061 µg/L	24.061 ppb	21:53:15
3	Na 589.592 Radial†	184.9	10.0	4.9951 µg/L	4.9951 ppb	21:52:55
3	Sr 421.552†	133.9	-1.4	-0.0082 µg/L	-0.0082 ppb	21:52:55
3	Sc 361.383	2018677.8	2018677.8	96.444 %		21:54:30
3	Y 371.029	1382797.4	1382797.4	96.505 %		21:54:30
3	Ag 328.068†	-555.3	-115.5	-0.9289 µg/L	-0.9289 ppb	21:54:35
3	As 188.979†	-3.0	0.2	0.2205 µg/L	0.2205 ppb	21:54:56
3	B 249.677†	312.3	24.4	1.1000 µg/L	1.1000 ppb	21:54:35
3	Ba 233.527†	-4.0	4.2	0.0922 µg/L	0.0922 ppb	21:54:56
3	Be 313.107†	-964.8	158.4	0.0929 µg/L	0.0929 ppb	21:54:35
3	Cd 226.502†	-174.7	-10.5	-0.2522 µg/L	-0.2522 ppb	21:54:56
3	Co 228.616†	49.9	3.7	0.1597 µg/L	0.1597 ppb	21:54:56
3	Cr 267.716†	55.8	-22.4	-0.4871 µg/L	-0.4871 ppb	21:54:35
3	Cu 324.752†	4285.5	66.8	0.4393 µg/L	0.4393 ppb	21:54:35
3	Mn 257.610†	-662.1	0.5	0.0008 µg/L	0.0008 ppb	21:54:56
3	Mo 202.031†	18.0	13.5	1.3376 µg/L	1.3376 ppb	21:54:56
3	Ni 231.604†	364.9	1.5	0.0815 µg/L	0.0815 ppb	21:54:56
3	P 214.914†	263.4	0.7	1.1238 µg/L	1.1238 ppb	21:54:56
3	Pb 220.353†	34.4	5.5	1.4415 µg/L	1.4415 ppb	21:54:56
3	S 181.975 Axial†	15.5	-6.5	-20.741 µg/L	-20.741 ppb	21:54:56
3	Sb 206.836†	26.9	5.2	4.6521 µg/L	4.6521 ppb	21:54:56
3	Se 196.026†	25.6	-0.8	-0.6925 µg/L	-0.6925 ppb	21:54:56
3	SiO2†	2924.2	252.3	45.545 µg/L	45.545 ppb	21:54:35
3	Si 251.611†	645.5	245.2	16.670 µg/L	16.670 ppb	21:54:56
3	Sn 189.927†	-8.2	-1.0	-0.3979 µg/L	-0.3979 ppb	21:54:56
3	Ti 334.940†	-380.6	182.6	0.4250 µg/L	0.4250 ppb	21:54:35
3	Tl 190.801†	-29.6	3.4	3.3724 µg/L	3.3724 ppb	21:54:56
3	U 409.014†	-22.9	-17.9	-1.6257 µg/L	-1.6257 ppb	21:54:35
3	V 292.402†	79.4	-29.9	-0.3479 µg/L	-0.3479 ppb	21:54:35
3	Zn 213.857†	727.0	-255.1	-5.8760 µg/L	-5.8760 ppb	21:54:56

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2023695.0	96.684 %	0.2474			0.26%
Sc RADIAL	94350.3	97.5 %	0.47			0.48%
Y 371.029	1385245.5	96.676 %	0.1917			0.20%
Ag 328.068†	-41.8	-0.3347 µg/L	0.65499	-0.3347 ppb	0.65499	195.71%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	8.6	4.0783 µg/L	6.46919	4.0783 ppb	6.46919	158.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.4	2.0343 µg/L	1.85656	2.0343 ppb	1.85656	91.26%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	20.4	0.9118 µg/L	0.34048	0.9118 ppb	0.34048	37.34%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	6.2	0.1345 µg/L	0.05881	0.1345 ppb	0.05881	43.74%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	173.0	0.1015 µg/L	0.02224	0.1015 ppb	0.02224	21.91%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-25.0	-9.1071 µg/L	1.37226	-9.1071 ppb	1.37226	15.07%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-1.4	-0.0366 µg/L	0.21365	-0.0366 ppb	0.21365	583.80%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.1	-0.1765 µg/L	0.32368	-0.1765 ppb	0.32368	183.34%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated				
	-22.6	-0.4920 µg/L	0.25301	-0.4920 ppb	0.25301	51.43%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated				
	37.7	0.2514 µg/L	0.18830	0.2514 ppb	0.18830	74.91%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated				
	2.4	28.152 µg/L	25.5355	28.152 ppb	25.5355	90.71%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated				
	39.0	18.215 µg/L	18.8772	18.215 ppb	18.8772	103.63%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated				
	1.1	14.852 µg/L	26.2377	14.852 ppb	26.2377	176.66%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated				
	-0.5	-0.0010 µg/L	0.01472	-0.0010 ppb	0.01472	>999.9%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated				
	17.8	1.7591 µg/L	0.39865	1.7591 ppb	0.39865	22.66%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated				
	-6.6	-3.2999 µg/L	7.73750	-3.2999 ppb	7.73750	234.48%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated				
	1.3	0.0714 µg/L	0.10673	0.0714 ppb	0.10673	149.54%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated				
	3.5	5.7943 µg/L	4.20277	5.7943 ppb	4.20277	72.53%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated				
	-0.1	-0.0114 µg/L	1.68302	-0.0114 ppb	1.68302	>999.9%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated				
	0.6	1.8880 µg/L	20.15032	1.8880 ppb	20.15032	>999.9%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated				
	3.3	3.0193 µg/L	1.60411	3.0193 ppb	1.60411	53.13%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated				
	-6.0	-5.6058 µg/L	4.97111	-5.6058 ppb	4.97111	88.68%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated				
	216.0	38.995 µg/L	5.8143	38.995 ppb	5.8143	14.91%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated				
	222.1	15.097 µg/L	1.6962	15.097 ppb	1.6962	11.24%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated				
	2.3	0.8899 µg/L	1.18790	0.8899 ppb	1.18790	133.48%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated				
	-10.1	-0.0603 µg/L	0.04671	-0.0603 ppb	0.04671	77.41%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated				
	195.7	0.4563 µg/L	0.04466	0.4563 ppb	0.04466	9.79%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated				
	4.6	4.4609 µg/L	2.25465	4.4609 ppb	2.25465	50.54%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated				
	3.0	0.2669 µg/L	3.32211	0.2669 ppb	3.32211	>999.9%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated				
	-12.9	-0.1434 µg/L	0.30203	-0.1434 ppb	0.30203	210.63%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated				
	-267.2	-6.1553 µg/L	0.24370	-6.1553 ppb	0.24370	3.96%
	QC value within limits for Zn 213.857 Recovery = Not calculated					

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 22:27:41

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94106.2	94106.2	97.2 %		22:28:13
1	Al 396.153Radial†	10686.2	11110.1	5292.1 µg/L	5292.1 ppb	22:28:13
1	Ca 317.933Radial†	14708.8	14742.8	5365.2 µg/L	5365.2 ppb	22:28:13
1	Fe 238.204 Radial†	453.8	454.8	5390.6 µg/L	5390.6 ppb	22:28:33
1	K 766.490 Radial†	11576.4	11421.0	5330.0 µg/L	5330.0 ppb	22:28:13
1	Mg 279.077 IEC†	407.2	410.9	5420.1 µg/L	5420.1 ppb	22:28:33
1	Na 589.592 Radial†	21167.7	21590.4	10776 µg/L	10776 ppb	22:28:13
1	Sr 421.552†	87052.3	89393.9	531.44 µg/L	531.44 ppb	22:28:13
1	Sc 361.383	2022576.3	2022576.3	96.630 %		22:29:36
1	Y 371.029	1381603.7	1381603.7	96.422 %		22:29:36
1	Ag 328.068†	64257.5	66958.5	541.68 µg/L	541.68 ppb	22:29:42
1	As 188.979†	359.3	375.0	551.96 µg/L	551.96 ppb	22:30:02
1	B 249.677†	11730.4	11840.1	535.40 µg/L	535.40 ppb	22:29:42
1	Ba 233.527†	24138.1	24988.3	547.48 µg/L	547.48 ppb	22:29:42
1	Be 313.107†	887805.3	919924.0	540.30 µg/L	540.30 ppb	22:29:36
1	Cd 226.502†	22009.6	22947.7	545.42 µg/L	545.42 ppb	22:29:42
1	Co 228.616†	12334.9	12717.0	545.73 µg/L	545.73 ppb	22:29:42
1	Cr 267.716†	24702.5	25483.7	554.60 µg/L	554.60 ppb	22:29:42
1	Cu 324.752†	85178.7	83772.4	548.18 µg/L	548.18 ppb	22:29:42
1	Mn 257.610†	177313.3	184183.6	553.51 µg/L	553.51 ppb	22:29:36
1	Mo 202.031†	5481.9	5667.9	561.06 µg/L	561.06 ppb	22:30:02
1	Ni 231.604†	9802.6	9767.6	547.26 µg/L	547.26 ppb	22:29:42
1	P 214.914†	1870.7	1663.6	2709.8 µg/L	2709.8 ppb	22:30:02
1	Pb 220.353†	2070.2	2112.3	554.44 µg/L	554.44 ppb	22:30:02
1	S 181.975 Axial†	347.1	336.7	1071.5 µg/L	1071.5 ppb	22:30:02
1	Sb 206.836†	615.7	614.4	550.89 µg/L	550.89 ppb	22:30:02
1	Se 196.026†	594.9	588.3	565.53 µg/L	565.53 ppb	22:30:02
1	SiO2†	33946.7	32350.8	5840.5 µg/L	5840.5 ppb	22:29:42
1	Si 251.611†	39156.9	40098.3	2726.0 µg/L	2726.0 ppb	22:29:42
1	Sn 189.927†	1381.5	1437.1	560.03 µg/L	560.03 ppb	22:30:02
1	Ti 334.940†	222132.8	230456.4	538.55 µg/L	538.55 ppb	22:29:36
1	Tl 190.801†	501.4	553.0	545.23 µg/L	545.23 ppb	22:30:02
1	U 409.014†	5863.9	6074.2	550.45 µg/L	550.45 ppb	22:29:42
1	V 292.402†	44987.5	46444.0	553.72 µg/L	553.72 ppb	22:29:42
1	Zn 213.857†	24193.8	24028.6	549.37 µg/L	549.37 ppb	22:29:42
2	Sc RADIAL	94501.5	94501.5	97.6 %		22:28:38
2	Al 396.153Radial†	10779.7	11159.9	5316.0 µg/L	5316.0 ppb	22:28:38
2	Ca 317.933Radial†	14716.6	14687.4	5345.1 µg/L	5345.1 ppb	22:28:38
2	Fe 238.204 Radial†	459.7	458.9	5439.3 µg/L	5439.3 ppb	22:28:58
2	K 766.490 Radial†	11605.2	11400.7	5320.5 µg/L	5320.5 ppb	22:28:38
2	Mg 279.077 IEC†	402.9	404.7	5338.7 µg/L	5338.7 ppb	22:28:58
2	Na 589.592 Radial†	21331.5	21667.1	10814 µg/L	10814 ppb	22:28:38
2	Sr 421.552†	87626.1	89607.1	532.70 µg/L	532.70 ppb	22:28:38
2	Sc 361.383	2027679.8	2027679.8	96.874 %		22:30:09
2	Y 371.029	1383619.3	1383619.3	96.563 %		22:30:09
2	Ag 328.068†	64316.1	66851.7	540.82 µg/L	540.82 ppb	22:30:15
2	As 188.979†	356.5	371.2	546.36 µg/L	546.36 ppb	22:30:36
2	B 249.677†	11781.5	11862.3	536.38 µg/L	536.38 ppb	22:30:15
2	Ba 233.527†	24189.1	24978.1	547.26 µg/L	547.26 ppb	22:30:15
2	Be 313.107†	886721.2	916492.5	538.29 µg/L	538.29 ppb	22:30:09
2	Cd 226.502†	22126.5	23011.1	546.92 µg/L	546.92 ppb	22:30:15
2	Co 228.616†	12405.6	12757.8	547.47 µg/L	547.47 ppb	22:30:15
2	Cr 267.716†	24731.7	25449.5	553.85 µg/L	553.85 ppb	22:30:15
2	Cu 324.752†	85312.3	83688.4	547.64 µg/L	547.64 ppb	22:30:15
2	Mn 257.610†	177500.8	183915.3	552.71 µg/L	552.71 ppb	22:30:09
2	Mo 202.031†	5406.9	5576.2	551.98 µg/L	551.98 ppb	22:30:36
2	Ni 231.604†	9823.6	9763.7	547.04 µg/L	547.04 ppb	22:30:15
2	P 214.914†	1859.7	1647.3	2682.7 µg/L	2682.7 ppb	22:30:36
2	Pb 220.353†	2058.8	2095.0	549.90 µg/L	549.90 ppb	22:30:36

2	S 181.975 Axial†	345.6	334.2	1063.7 µg/L	1063.7 ppb	22:30:36
2	Sb 206.836†	615.9	613.0	549.54 µg/L	549.54 ppb	22:30:36
2	Se 196.026†	588.9	580.6	558.47 µg/L	558.47 ppb	22:30:36
2	SiO2†	34143.7	32465.7	5861.2 µg/L	5861.2 ppb	22:30:15
2	Si 251.611†	39387.5	40234.3	2735.3 µg/L	2735.3 ppb	22:30:15
2	Sn 189.927†	1365.0	1416.5	552.02 µg/L	552.02 ppb	22:30:36
2	Ti 334.940†	222253.6	230002.4	537.50 µg/L	537.50 ppb	22:30:09
2	Tl 190.801†	504.4	554.7	546.97 µg/L	546.97 ppb	22:30:36
2	U 409.014†	5786.1	5978.6	541.77 µg/L	541.77 ppb	22:30:15
2	V 292.402†	45086.4	46428.9	553.46 µg/L	553.46 ppb	22:30:15
2	Zn 213.857†	24296.9	24072.0	550.37 µg/L	550.37 ppb	22:30:15
3	Sc RADIAL	93922.4	93922.4	97.0 %		22:29:04
3	Al 396.153Radial†	10756.8	11204.3	5339.0 µg/L	5339.0 ppb	22:29:04
3	Ca 317.933Radial†	14614.9	14675.5	5340.7 µg/L	5340.7 ppb	22:29:04
3	Fe 238.204 Radial†	460.3	462.4	5479.9 µg/L	5479.9 ppb	22:29:24
3	K 766.490 Radial†	11467.8	11332.4	5288.6 µg/L	5288.6 ppb	22:29:04
3	Mg 279.077 IEC†	408.0	412.5	5439.5 µg/L	5439.5 ppb	22:29:24
3	Na 589.592 Radial†	21241.1	21708.6	10835 µg/L	10835 ppb	22:29:04
3	Sr 421.552†	87033.7	89549.9	532.36 µg/L	532.36 ppb	22:29:04
3	Sc 361.383	2017327.1	2017327.1	96.379 %		22:30:43
3	Y 371.029	1375283.0	1375283.0	95.981 %		22:30:43
3	Ag 328.068†	60022.2	62737.1	507.40 µg/L	507.40 ppb	22:30:48
3	As 188.979†	306.4	321.2	472.56 µg/L	472.56 ppb	22:31:09
3	B 249.677†	10959.1	11071.4	500.36 µg/L	500.36 ppb	22:30:48
3	Ba 233.527†	21860.9	22690.5	497.13 µg/L	497.13 ppb	22:30:48
3	Be 313.107†	823429.3	855520.5	502.48 µg/L	502.48 ppb	22:30:43
3	Cd 226.502†	19925.2	20844.2	495.35 µg/L	495.35 ppb	22:30:48
3	Co 228.616†	11050.9	11418.0	489.91 µg/L	489.91 ppb	22:30:48
3	Cr 267.716†	21613.1	22344.7	486.29 µg/L	486.29 ppb	22:30:48
3	Cu 324.752†	77194.3	75717.4	495.58 µg/L	495.58 ppb	22:30:48
3	Mn 257.610†	165860.2	172777.7	519.23 µg/L	519.23 ppb	22:30:43
3	Mo 202.031†	4540.8	4706.3	465.90 µg/L	465.90 ppb	22:31:09
3	Ni 231.604†	8784.2	8737.2	489.53 µg/L	489.53 ppb	22:30:48
3	P 214.914†	1627.7	1416.5	2303.6 µg/L	2303.6 ppb	22:31:09
3	Pb 220.353†	1782.6	1819.4	477.55 µg/L	477.55 ppb	22:31:09
3	S 181.975 Axial†	309.8	298.9	951.21 µg/L	951.21 ppb	22:31:09
3	Sb 206.836†	538.9	536.4	480.52 µg/L	480.52 ppb	22:31:09
3	Se 196.026†	521.8	514.1	496.06 µg/L	496.06 ppb	22:31:09
3	SiO2†	31586.3	29993.1	5414.8 µg/L	5414.8 ppb	22:30:48
3	Si 251.611†	36179.7	37114.7	2523.2 µg/L	2523.2 ppb	22:30:48
3	Sn 189.927†	1136.8	1186.9	462.63 µg/L	462.63 ppb	22:31:09
3	Ti 334.940†	205401.5	213694.7	499.35 µg/L	499.35 ppb	22:30:43
3	Tl 190.801†	457.4	508.7	501.71 µg/L	501.71 ppb	22:31:09
3	U 409.014†	5093.3	5290.5	479.28 µg/L	479.28 ppb	22:30:48
3	V 292.402†	40105.5	41499.8	494.39 µg/L	494.39 ppb	22:30:48
3	Zn 213.857†	21848.5	21660.4	495.18 µg/L	495.18 ppb	22:30:48

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2022527.7	96.628 %	0.2473			0.26%
Sc RADIAL	94176.7	97.3 %	0.31			0.31%
Y 371.029	1380168.6	96.322 %	0.3036			0.32%
Ag 328.068†	65515.8	529.97 µg/L	19.546	529.97 ppb	19.546	3.69%
QC value within limits for Ag 328.068 Recovery = 105.99%						
Al 396.153Radial†	11158.1	5315.7 µg/L	23.46	5315.7 ppb	23.46	0.44%
QC value within limits for Al 396.153Radial Recovery = 106.31%						
As 188.979†	355.8	523.63 µg/L	44.315	523.63 ppb	44.315	8.46%
QC value within limits for As 188.979 Recovery = 104.73%						
B 249.677†	11591.2	524.05 µg/L	20.520	524.05 ppb	20.520	3.92%
QC value within limits for B 249.677 Recovery = 104.81%						
Ba 233.527†	24219.0	530.62 µg/L	29.010	530.62 ppb	29.010	5.47%
QC value within limits for Ba 233.527 Recovery = 106.12%						
Be 313.107†	897312.3	527.02 µg/L	21.281	527.02 ppb	21.281	4.04%
QC value within limits for Be 313.107 Recovery = 105.40%						
Ca 317.933Radial†	14701.9	5350.3 µg/L	13.06	5350.3 ppb	13.06	0.24%
QC value within limits for Ca 317.933Radial Recovery = 107.01%						
Cd 226.502†	22267.7	529.23 µg/L	29.350	529.23 ppb	29.350	5.55%
QC value within limits for Cd 226.502 Recovery = 105.85%						
Co 228.616†	12297.6	527.71 µg/L	32.740	527.71 ppb	32.740	6.20%

QC value within limits for Co 228.616	Recovery = 105.54%			
Cr 267.716†	24426.0	531.58 µg/L	39.224	7.38%
QC value within limits for Cr 267.716	Recovery = 106.32%			
Cu 324.752†	81059.4	530.47 µg/L	30.211	5.70%
QC value within limits for Cu 324.752	Recovery = 106.09%			
Fe 238.204 Radial†	458.7	5436.6 µg/L	44.69	0.82%
QC value within limits for Fe 238.204 Radial	Recovery = 108.73%			
K 766.490 Radial†	11384.7	5313.0 µg/L	21.66	0.41%
QC value within limits for K 766.490 Radial	Recovery = 106.26%			
Mg 279.077 IEC†	409.3	5399.4 µg/L	53.51	0.99%
QC value within limits for Mg 279.077 IEC	Recovery = 107.99%			
Mn 257.610†	180292.2	541.82 µg/L	19.563	3.61%
QC value within limits for Mn 257.610	Recovery = 108.36%			
Mo 202.031†	5316.8	526.31 µg/L	52.514	9.98%
QC value within limits for Mo 202.031	Recovery = 105.26%			
Na 589.592 Radial†	21655.4	10808 µg/L	29.9	0.28%
QC value within limits for Na 589.592 Radial	Recovery = 108.08%			
Ni 231.604†	9422.8	527.94 µg/L	33.262	6.30%
QC value within limits for Ni 231.604	Recovery = 105.59%			
P 214.914†	1575.8	2565.3 µg/L	227.10	8.85%
QC value within limits for P 214.914	Recovery = 102.61%			
Pb 220.353†	2008.9	527.30 µg/L	43.142	8.18%
QC value within limits for Pb 220.353	Recovery = 105.46%			
S 181.975 Axial†	323.3	1028.8 µg/L	67.31	6.54%
QC value within limits for S 181.975 Axial	Recovery = 102.88%			
Sb 206.836†	587.9	526.98 µg/L	40.249	7.64%
QC value within limits for Sb 206.836	Recovery = 105.40%			
Se 196.026†	561.0	540.02 µg/L	38.233	7.08%
QC value within limits for Se 196.026	Recovery = 108.00%			
SiO2†	31603.2	5705.5 µg/L	251.95	4.42%
QC value within limits for SiO2	Recovery = 106.69%			
Si 251.611†	39149.1	2661.5 µg/L	119.86	4.50%
QC value within limits for Si 251.611	Recovery = 106.46%			
Sn 189.927†	1346.8	524.90 µg/L	54.068	10.30%
QC value within limits for Sn 189.927	Recovery = 104.98%			
Sr 421.552†	89517.0	532.17 µg/L	0.656	0.12%
QC value within limits for Sr 421.552	Recovery = 106.43%			
Ti 334.940†	224717.8	525.13 µg/L	22.332	4.25%
QC value within limits for Ti 334.940	Recovery = 105.03%			
Tl 190.801†	538.8	531.30 µg/L	25.646	4.83%
QC value within limits for Tl 190.801	Recovery = 106.26%			
U 409.014†	5781.1	523.83 µg/L	38.828	7.41%
QC value within limits for U 409.014	Recovery = 104.77%			
V 292.402†	44790.9	533.86 µg/L	34.182	6.40%
QC value within limits for V 292.402	Recovery = 106.77%			
Zn 213.857†	23253.7	531.64 µg/L	31.581	5.94%
QC value within limits for Zn 213.857	Recovery = 106.33%			

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 101

Date Collected: 3/16/2010 22:31:18

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94127.1	94127.1	97.3 %		22:31:50
1	Al 396.153Radial†	300.6	428.4	204.23 µg/L	204.23 ppb	22:31:50
1	Ca 317.933Radial†	909.8	550.3	200.25 µg/L	200.25 ppb	22:32:10
1	Fe 238.204 Radial†	21.9	10.6	125.34 µg/L	125.34 ppb	22:32:10
1	K 766.490 Radial†	817.3	355.0	165.68 µg/L	165.68 ppb	22:31:50
1	Mg 279.077 IEC†	30.0	22.8	301.22 µg/L	301.22 ppb	22:32:10
1	Na 589.592 Radial†	893.6	738.3	368.49 µg/L	368.49 ppb	22:31:50
1	Sr 421.552†	1010.0	899.1	5.3450 µg/L	5.3450 ppb	22:31:50
1	Sc 361.383	2022759.6	2022759.6	96.639 %		22:33:12
1	Y 371.029	1385488.2	1385488.2	96.693 %		22:33:12
1	Ag 328.068†	204.1	671.4	5.4353 µg/L	5.4353 ppb	22:33:17
1	As 188.979†	18.4	22.3	32.932 µg/L	32.932 ppb	22:33:38
1	B 249.677†	1404.0	1153.4	52.288 µg/L	52.288 ppb	22:33:38
1	Ba 233.527†	236.9	253.6	5.5549 µg/L	5.5549 ppb	22:33:38
1	Be 313.107†	7759.9	9188.6	5.3966 µg/L	5.3966 ppb	22:33:17
1	Cd 226.502†	40.5	212.5	5.0429 µg/L	5.0429 ppb	22:33:38
1	Co 228.616†	168.6	126.4	5.4319 µg/L	5.4319 ppb	22:33:38
1	Cr 267.716†	312.8	243.4	5.2981 µg/L	5.2981 ppb	22:33:38
1	Cu 324.752†	5923.8	1753.1	11.474 µg/L	11.474 ppb	22:33:17
1	Mn 257.610†	2815.7	3600.6	10.809 µg/L	10.809 ppb	22:33:38
1	Mo 202.031†	136.8	136.4	13.506 µg/L	13.506 ppb	22:33:38
1	Ni 231.604†	460.4	99.5	5.5773 µg/L	5.5773 ppb	22:33:38
1	P 214.914†	363.6	103.8	171.29 µg/L	171.29 ppb	22:33:38
1	Pb 220.353†	68.0	40.2	10.525 µg/L	10.525 ppb	22:33:38
1	S 181.975 Axial†	51.9	31.2	99.344 µg/L	99.344 ppb	22:33:38
1	Sb 206.836†	40.3	19.0	17.101 µg/L	17.101 ppb	22:33:38
1	Se 196.026†	64.8	39.7	37.474 µg/L	37.474 ppb	22:33:38
1	SiO2†	4001.0	1360.4	245.61 µg/L	245.61 ppb	22:33:17
1	Si 251.611†	1916.8	1559.4	106.01 µg/L	106.01 ppb	22:33:38
1	Sn 189.927†	20.7	28.9	11.259 µg/L	11.259 ppb	22:33:38
1	Ti 334.940†	1892.1	2535.2	5.9076 µg/L	5.9076 ppb	22:33:17
1	Tl 190.801†	-12.1	21.6	21.225 µg/L	21.225 ppb	22:33:38
1	U 409.014†	612.3	639.4	58.026 µg/L	58.026 ppb	22:33:17
1	V 292.402†	538.6	445.0	5.4137 µg/L	5.4137 ppb	22:33:17
1	Zn 213.857†	1314.7	351.6	8.0288 µg/L	8.0288 ppb	22:33:38
2	Sc RADIAL	93978.5	93978.5	97.1 %		22:32:16
2	Al 396.153Radial†	327.4	456.5	217.61 µg/L	217.61 ppb	22:32:16
2	Ca 317.933Radial†	915.3	557.4	202.85 µg/L	202.85 ppb	22:32:36
2	Fe 238.204 Radial†	22.1	10.8	127.40 µg/L	127.40 ppb	22:32:36
2	K 766.490 Radial†	813.1	352.1	164.33 µg/L	164.33 ppb	22:32:16
2	Mg 279.077 IEC†	31.3	24.3	319.85 µg/L	319.85 ppb	22:32:36
2	Na 589.592 Radial†	873.2	718.7	358.71 µg/L	358.71 ppb	22:32:16
2	Sr 421.552†	998.9	889.4	5.2872 µg/L	5.2872 ppb	22:32:16
2	Sc 361.383	2008682.6	2008682.6	95.966 %		22:33:44
2	Y 371.029	1375643.9	1375643.9	96.006 %		22:33:44
2	Ag 328.068†	156.5	623.3	5.0458 µg/L	5.0458 ppb	22:33:49
2	As 188.979†	20.0	24.1	35.490 µg/L	35.490 ppb	22:34:10
2	B 249.677†	1388.9	1148.0	52.039 µg/L	52.039 ppb	22:34:10
2	Ba 233.527†	234.1	252.3	5.5266 µg/L	5.5266 ppb	22:34:10
2	Be 313.107†	7735.2	9219.1	5.4146 µg/L	5.4146 ppb	22:33:49
2	Cd 226.502†	45.1	217.6	5.1633 µg/L	5.1633 ppb	22:34:10
2	Co 228.616†	166.4	125.3	5.3830 µg/L	5.3830 ppb	22:34:10
2	Cr 267.716†	325.8	259.3	5.6421 µg/L	5.6421 ppb	22:34:10
2	Cu 324.752†	5886.5	1757.3	11.502 µg/L	11.502 ppb	22:33:49
2	Mn 257.610†	2818.7	3624.2	10.878 µg/L	10.878 ppb	22:34:10
2	Mo 202.031†	140.0	140.8	13.934 µg/L	13.934 ppb	22:34:10
2	Ni 231.604†	457.4	99.7	5.5859 µg/L	5.5859 ppb	22:34:10
2	P 214.914†	365.5	108.5	179.02 µg/L	179.02 ppb	22:34:10
2	Pb 220.353†	65.8	38.4	10.056 µg/L	10.056 ppb	22:34:10



2	S 181.975 Axial†	60.2	40.2	127.85 µg/L	127.85 ppb	22:34:10
2	Sb 206.836†	32.4	11.1	10.041 µg/L	10.041 ppb	22:34:10
2	Se 196.026†	57.2	32.3	30.477 µg/L	30.477 ppb	22:34:10
2	SiO2†	3964.5	1351.4	243.97 µg/L	243.97 ppb	22:33:49
2	Si 251.611†	1919.5	1576.1	107.15 µg/L	107.15 ppb	22:34:10
2	Sn 189.927†	23.0	31.4	12.249 µg/L	12.249 ppb	22:34:10
2	Ti 334.940†	1751.9	2402.8	5.5966 µg/L	5.5966 ppb	22:33:49
2	Tl 190.801†	-10.5	23.1	22.712 µg/L	22.712 ppb	22:34:10
2	U 409.014†	612.3	643.8	58.430 µg/L	58.430 ppb	22:33:49
2	V 292.402†	493.8	402.3	4.9132 µg/L	4.9132 ppb	22:33:49
2	Zn 213.857†	1319.5	366.2	8.3630 µg/L	8.3630 ppb	22:34:10
3	Sc RADIAL	93987.0	93987.0	97.1 %		22:32:42
3	Al 396.153Radial†	315.2	443.9	211.67 µg/L	211.67 ppb	22:32:42
3	Ca 317.933Radial†	918.5	560.6	204.02 µg/L	204.02 ppb	22:33:02
3	Fe 238.204 Radial†	21.3	10.0	118.55 µg/L	118.55 ppb	22:33:02
3	K 766.490 Radial†	788.8	327.0	152.61 µg/L	152.61 ppb	22:32:42
3	Mg 279.077 IEC†	30.3	23.3	306.67 µg/L	306.67 ppb	22:33:02
3	Na 589.592 Radial†	818.0	661.8	330.30 µg/L	330.30 ppb	22:32:42
3	Sr 421.552†	989.1	879.1	5.2263 µg/L	5.2263 ppb	22:32:42
3	Sc 361.383	2034646.9	2034646.9	97.207 %		22:34:16
3	Y 371.029	1393115.7	1393115.7	97.226 %		22:34:16
3	Ag 328.068†	105.2	568.4	4.6018 µg/L	4.6018 ppb	22:34:21
3	As 188.979†	19.4	23.2	34.172 µg/L	34.172 ppb	22:34:42
3	B 249.677†	1279.6	1017.0	46.098 µg/L	46.098 ppb	22:34:42
3	Ba 233.527†	213.4	228.0	4.9936 µg/L	4.9936 ppb	22:34:42
3	Be 313.107†	7124.8	8488.3	4.9854 µg/L	4.9854 ppb	22:34:21
3	Cd 226.502†	34.0	205.5	4.8769 µg/L	4.8769 ppb	22:34:42
3	Co 228.616†	155.4	111.8	4.8032 µg/L	4.8032 ppb	22:34:42
3	Cr 267.716†	264.4	191.7	4.1729 µg/L	4.1729 ppb	22:34:42
3	Cu 324.752†	5790.3	1580.0	10.342 µg/L	10.342 ppb	22:34:21
3	Mn 257.610†	2341.0	3095.3	9.2891 µg/L	9.2891 ppb	22:34:42
3	Mo 202.031†	117.3	115.5	11.435 µg/L	11.435 ppb	22:34:42
3	Ni 231.604†	445.8	81.7	4.5788 µg/L	4.5788 ppb	22:34:42
3	P 214.914†	352.6	90.3	149.06 µg/L	149.06 ppb	22:34:42
3	Pb 220.353†	62.7	34.3	8.9782 µg/L	8.9782 ppb	22:34:42
3	S 181.975 Axial†	50.6	29.6	94.057 µg/L	94.057 ppb	22:34:42
3	Sb 206.836†	33.1	11.3	10.242 µg/L	10.242 ppb	22:34:42
3	Se 196.026†	59.3	33.7	31.819 µg/L	31.819 ppb	22:34:42
3	SiO2†	3916.8	1249.6	225.59 µg/L	225.59 ppb	22:34:21
3	Si 251.611†	1747.6	1373.7	93.388 µg/L	93.388 ppb	22:34:42
3	Sn 189.927†	25.6	33.8	13.166 µg/L	13.166 ppb	22:34:42
3	Ti 334.940†	1560.1	2182.2	5.0817 µg/L	5.0817 ppb	22:34:21
3	Tl 190.801†	-12.8	21.0	20.561 µg/L	20.561 ppb	22:34:42
3	U 409.014†	539.7	561.0	50.908 µg/L	50.908 ppb	22:34:21
3	V 292.402†	467.7	368.9	4.4898 µg/L	4.4898 ppb	22:34:21
3	Zn 213.857†	1235.4	262.1	5.9738 µg/L	5.9738 ppb	22:34:42

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2022029.7	96.604 %	0.6210			0.64%
Sc RADIAL	94030.9	97.2 %	0.09			0.09%
Y 371.029	1384749.2	96.642 %	0.6113			0.63%
Ag 328.068†	621.0	5.0277 µg/L	0.41706	5.0277 ppb	0.41706	8.30%
QC value within limits for Ag 328.068 Recovery = 100.55%						
Al 396.153Radial†	442.9	211.17 µg/L	6.702	211.17 ppb	6.702	3.17%
QC value within limits for Al 396.153Radial Recovery = 105.59%						
As 188.979†	23.2	34.198 µg/L	1.2789	34.198 ppb	1.2789	3.74%
QC value within limits for As 188.979 Recovery = 113.99%						
B 249.677†	1106.1	50.142 µg/L	3.5040	50.142 ppb	3.5040	6.99%
QC value within limits for B 249.677 Recovery = 100.28%						
Ba 233.527†	244.6	5.3583 µg/L	0.31623	5.3583 ppb	0.31623	5.90%
QC value within limits for Ba 233.527 Recovery = 107.17%						
Be 313.107†	8965.4	5.2655 µg/L	0.24275	5.2655 ppb	0.24275	4.61%
QC value within limits for Be 313.107 Recovery = 105.31%						
Ca 317.933Radial†	556.1	202.37 µg/L	1.930	202.37 ppb	1.930	0.95%
QC value within limits for Ca 317.933Radial Recovery = 101.19%						
Cd 226.502†	211.9	5.0277 µg/L	0.14379	5.0277 ppb	0.14379	2.86%
QC value within limits for Cd 226.502 Recovery = 100.55%						
Co 228.616†	121.2	5.2060 µg/L	0.34970	5.2060 ppb	0.34970	6.72%

QC value within limits for Co 228.616	Recovery = 104.12%			
Cr 267.716†	231.5	5.0377 µg/L	0.76845	15.25%
QC value within limits for Cr 267.716	Recovery = 100.75%			
Cu 324.752†	1696.8	11.106 µg/L	0.6617	5.96%
QC value within limits for Cu 324.752	Recovery = 111.06%			
Fe 238.204 Radial†	10.5	123.77 µg/L	4.630	3.74%
QC value within limits for Fe 238.204 Radial	Recovery = 123.77%			
K 766.490 Radial†	344.7	160.87 µg/L	7.187	4.47%
QC value within limits for K 766.490 Radial	Recovery = 107.25%			
Mg 279.077 IEC†	23.5	309.25 µg/L	9.578	3.10%
QC value within limits for Mg 279.077 IEC	Recovery = 103.08%			
Mn 257.610†	3440.0	10.325 µg/L	0.8981	8.70%
QC value within limits for Mn 257.610	Recovery = 103.25%			
Mo 202.031†	130.9	12.958 µg/L	1.3364	10.31%
QC value within limits for Mo 202.031	Recovery = 129.58%			
Na 589.592 Radial†	706.3	352.50 µg/L	19.839	5.63%
QC value within limits for Na 589.592 Radial	Recovery = 117.50%			
Ni 231.604†	93.6	5.2473 µg/L	0.57897	11.03%
QC value within limits for Ni 231.604	Recovery = 104.95%			
P 214.914†	100.9	166.46 µg/L	15.554	9.34%
QC value within limits for P 214.914	Recovery = 110.97%			
Pb 220.353†	37.7	9.8529 µg/L	0.79295	8.05%
QC value within limits for Pb 220.353	Recovery = 98.53%			
S 181.975 Axial†	33.6	107.08 µg/L	18.176	16.97%
QC value within limits for S 181.975 Axial	Recovery = 107.08%			
Sb 206.836†	13.8	12.462 µg/L	4.0190	32.25%
QC value within limits for Sb 206.836	Recovery = 124.62%			
Se 196.026†	35.2	33.257 µg/L	3.7130	11.16%
QC value within limits for Se 196.026	Recovery = 110.86%			
SiO2†	1320.4	238.39 µg/L	11.114	4.66%
QC value within limits for SiO2	Recovery = 111.92%			
Si 251.611†	1503.0	102.18 µg/L	7.638	7.47%
QC value within limits for Si 251.611	Recovery = 102.18%			
Sn 189.927†	31.3	12.225 µg/L	0.9536	7.80%
QC value within limits for Sn 189.927	Recovery = 122.25%			
Sr 421.552†	889.2	5.2862 µg/L	0.05934	1.12%
QC value within limits for Sr 421.552	Recovery = 105.72%			
Ti 334.940†	2373.4	5.5286 µg/L	0.41708	7.54%
QC value within limits for Ti 334.940	Recovery = 110.57%			
Tl 190.801†	21.9	21.499 µg/L	1.1011	5.12%
QC value within limits for Tl 190.801	Recovery = 107.50%			
U 409.014†	614.7	55.788 µg/L	4.2307	7.58%
QC value within limits for U 409.014	Recovery = 111.58%			
V 292.402†	405.4	4.9389 µg/L	0.46247	9.36%
QC value within limits for V 292.402	Recovery = 98.78%			
Zn 213.857†	326.6	7.4552 µg/L	1.29376	17.35%
QC value within limits for Zn 213.857	Recovery = 74.55%			

All analyte(s) passed QC.

Sequence No.: 11  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 3/16/2010 22:34:52  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	93772.1	93772.1	96.9 %		22:35:23
1	Al 396.153Radial†	-141.7	-27.0	-12.909 µg/L	-12.909 ppb	22:35:23
1	Ca 317.933Radial†	331.8	-42.8	-15.584 µg/L	-15.584 ppb	22:35:43
1	Fe 238.204 Radial†	12.7	1.1	13.092 µg/L	13.092 ppb	22:35:43
1	K 766.490 Radial†	480.3	10.4	4.8595 µg/L	4.8595 ppb	22:35:23
1	Mg 279.077 IEC†	6.8	-1.0	-13.389 µg/L	-13.389 ppb	22:35:43
1	Na 589.592 Radial†	230.9	57.7	28.814 µg/L	28.814 ppb	22:35:23
1	Sr 421.552†	109.3	-26.6	-0.1583 µg/L	-0.1583 ppb	22:35:23
1	Sc 361.383	2027705.1	2027705.1	96.875 %		22:36:46
1	Y 371.029	1387973.1	1387973.1	96.867 %		22:36:46
1	Ag 328.068†	-436.8	9.4	0.0743 µg/L	0.0743 ppb	22:36:51
1	As 188.979†	-6.8	-3.8	-5.6222 µg/L	-5.6222 ppb	22:37:12
1	B 249.677†	292.5	2.6	0.1096 µg/L	0.1096 ppb	22:37:12
1	Ba 233.527†	-2.5	5.8	0.1265 µg/L	0.1265 ppb	22:37:12
1	Be 313.107†	-891.1	239.0	0.1404 µg/L	0.1404 ppb	22:36:51
1	Cd 226.502†	-169.8	-4.7	-0.1119 µg/L	-0.1119 ppb	22:37:12
1	Co 228.616†	49.9	3.5	0.1489 µg/L	0.1489 ppb	22:37:12
1	Cr 267.716†	71.4	-6.5	-0.1417 µg/L	-0.1417 ppb	22:37:12
1	Cu 324.752†	4233.1	-7.1	-0.0438 µg/L	-0.0438 ppb	22:36:51
1	Mn 257.610†	-688.7	-24.0	-0.0703 µg/L	-0.0703 ppb	22:37:12
1	Mo 202.031†	13.1	8.4	0.8269 µg/L	0.8269 ppb	22:37:12
1	Ni 231.604†	373.8	8.9	0.5009 µg/L	0.5009 ppb	22:37:12
1	P 214.914†	272.7	9.1	15.038 µg/L	15.038 ppb	22:37:12
1	Pb 220.353†	21.0	-8.5	-2.2180 µg/L	-2.2180 ppb	22:37:12
1	S 181.975 Axial†	19.7	-2.2	-6.9670 µg/L	-6.9670 ppb	22:37:12
1	Sb 206.836†	20.1	-2.0	-1.7588 µg/L	-1.7588 ppb	22:37:12
1	Se 196.026†	27.7	1.2	1.2177 µg/L	1.2177 ppb	22:37:12
1	SiO2†	2715.5	23.3	4.2125 µg/L	4.2125 ppb	22:37:12
1	Si 251.611†	458.0	48.7	3.3076 µg/L	3.3076 ppb	22:37:12
1	Sn 189.927†	-4.9	2.3	0.9066 µg/L	0.9066 ppb	22:37:12
1	Ti 334.940†	-525.2	35.1	0.0829 µg/L	0.0829 ppb	22:36:51
1	Tl 190.801†	-36.6	-3.7	-3.5669 µg/L	-3.5669 ppb	22:37:12
1	U 409.014†	20.7	27.2	2.4706 µg/L	2.4706 ppb	22:36:51
1	V 292.402†	85.2	-24.3	-0.2802 µg/L	-0.2802 ppb	22:36:51
1	Zn 213.857†	728.0	-257.4	-5.9283 µg/L	-5.9283 ppb	22:37:12
2	Sc RADIAL	93786.8	93786.8	96.9 %		22:35:49
2	Al 396.153Radial†	-103.7	12.3	5.8420 µg/L	5.8420 ppb	22:35:49
2	Ca 317.933Radial†	342.7	-31.6	-11.513 µg/L	-11.513 ppb	22:36:09
2	Fe 238.204 Radial†	12.4	0.8	9.8011 µg/L	9.8011 ppb	22:36:09
2	K 766.490 Radial†	343.3	-131.1	-61.161 µg/L	-61.161 ppb	22:35:49
2	Mg 279.077 IEC†	6.9	-0.9	-12.073 µg/L	-12.073 ppb	22:36:09
2	Na 589.592 Radial†	277.3	105.6	52.722 µg/L	52.722 ppb	22:35:49
2	Sr 421.552†	126.7	-8.6	-0.0513 µg/L	-0.0513 ppb	22:35:49
2	Sc 361.383	2022184.1	2022184.1	96.612 %		22:37:18
2	Y 371.029	1383562.6	1383562.6	96.559 %		22:37:18
2	Ag 328.068†	-521.0	-79.1	-0.6390 µg/L	-0.6390 ppb	22:37:23
2	As 188.979†	-1.0	2.2	3.2035 µg/L	3.2035 ppb	22:37:44
2	B 249.677†	306.5	17.9	0.8067 µg/L	0.8067 ppb	22:37:44
2	Ba 233.527†	-3.7	4.6	0.0991 µg/L	0.0991 ppb	22:37:44
2	Be 313.107†	-948.5	177.1	0.1040 µg/L	0.1040 ppb	22:37:23
2	Cd 226.502†	-169.7	-5.0	-0.1198 µg/L	-0.1198 ppb	22:37:44
2	Co 228.616†	48.4	2.0	0.0859 µg/L	0.0859 ppb	22:37:44
2	Cr 267.716†	77.9	0.4	0.0080 µg/L	0.0080 ppb	22:37:44
2	Cu 324.752†	4283.0	56.6	0.3714 µg/L	0.3714 ppb	22:37:23
2	Mn 257.610†	-683.3	-20.3	-0.0597 µg/L	-0.0597 ppb	22:37:44
2	Mo 202.031†	12.9	8.2	0.8094 µg/L	0.8094 ppb	22:37:44
2	Ni 231.604†	381.1	17.6	0.9869 µg/L	0.9869 ppb	22:37:44
2	P 214.914†	267.1	4.1	6.8036 µg/L	6.8036 ppb	22:37:44
2	Pb 220.353†	24.9	-4.4	-1.1530 µg/L	-1.1530 ppb	22:37:44

2	S 181.975 Axial†	18.7	-3.2	-10.287 µg/L	-10.287 ppb	22:37:44
2	Sb 206.836†	22.7	0.8	0.7489 µg/L	0.7489 ppb	22:37:44
2	Se 196.026†	17.4	-9.3	-8.7227 µg/L	-8.7227 ppb	22:37:44
2	SiO2†	2730.8	46.8	8.4508 µg/L	8.4508 ppb	22:37:44
2	Si 251.611†	475.7	68.3	4.6433 µg/L	4.6433 ppb	22:37:44
2	Sn 189.927†	-0.5	7.0	2.7111 µg/L	2.7111 ppb	22:37:44
2	Ti 334.940†	-498.3	61.5	0.1446 µg/L	0.1446 ppb	22:37:23
2	Tl 190.801†	-39.0	-6.3	-6.1351 µg/L	-6.1351 ppb	22:37:44
2	U 409.014†	-46.1	-41.9	-3.8086 µg/L	-3.8086 ppb	22:37:23
2	V 292.402†	49.1	-61.5	-0.7255 µg/L	-0.7255 ppb	22:37:23
2	Zn 213.857†	737.6	-245.4	-5.6548 µg/L	-5.6548 ppb	22:37:44
3	Sc RADIAL	93264.2	93264.2	96.4 %		22:36:15
3	Al 396.153Radial†	-118.9	-4.1	-1.9622 µg/L	-1.9622 ppb	22:36:15
3	Ca 317.933Radial†	342.2	-30.2	-10.981 µg/L	-10.981 ppb	22:36:35
3	Fe 238.204 Radial†	11.3	-0.2	-2.9661 µg/L	-2.9661 ppb	22:36:35
3	K 766.490 Radial†	469.4	1.8	0.8541 µg/L	0.8541 ppb	22:36:15
3	Mg 279.077 IEC†	6.5	-1.3	-16.839 µg/L	-16.839 ppb	22:36:35
3	Na 589.592 Radial†	205.6	32.8	16.356 µg/L	16.356 ppb	22:36:15
3	Sr 421.552†	123.7	-11.0	-0.0656 µg/L	-0.0656 ppb	22:36:15
3	Sc 361.383	2027556.9	2027556.9	96.868 %		22:37:50
3	Y 371.029	1389495.7	1389495.7	96.973 %		22:37:50
3	Ag 328.068†	-429.3	17.0	0.1316 µg/L	0.1316 ppb	22:37:56
3	As 188.979†	-2.3	0.9	1.3428 µg/L	1.3428 ppb	22:38:16
3	B 249.677†	300.2	10.6	0.4819 µg/L	0.4819 ppb	22:38:16
3	Ba 233.527†	-2.7	5.7	0.1224 µg/L	0.1224 ppb	22:38:16
3	Be 313.107†	-982.7	144.4	0.0849 µg/L	0.0849 ppb	22:37:56
3	Cd 226.502†	-175.2	-10.3	-0.2441 µg/L	-0.2441 ppb	22:38:16
3	Co 228.616†	36.5	-10.4	-0.4468 µg/L	-0.4468 ppb	22:38:16
3	Cr 267.716†	56.8	-21.6	-0.4694 µg/L	-0.4694 ppb	22:38:16
3	Cu 324.752†	4256.6	17.5	0.1137 µg/L	0.1137 ppb	22:37:56
3	Mn 257.610†	-711.6	-47.6	-0.1422 µg/L	-0.1422 ppb	22:38:16
3	Mo 202.031†	14.5	9.8	0.9692 µg/L	0.9692 ppb	22:38:16
3	Ni 231.604†	366.0	0.9	0.0534 µg/L	0.0534 ppb	22:38:16
3	P 214.914†	263.2	-0.7	-1.0849 µg/L	-1.0849 ppb	22:38:16
3	Pb 220.353†	26.3	-3.1	-0.8083 µg/L	-0.8083 ppb	22:38:16
3	S 181.975 Axial†	21.9	0.0	0.0723 µg/L	0.0723 ppb	22:38:16
3	Sb 206.836†	19.9	-2.2	-1.9187 µg/L	-1.9187 ppb	22:38:16
3	Se 196.026†	24.9	-1.6	-1.4956 µg/L	-1.4956 ppb	22:38:16
3	SiO2†	2724.8	33.2	5.9888 µg/L	5.9888 ppb	22:38:16
3	Si 251.611†	476.6	67.9	4.6187 µg/L	4.6187 ppb	22:38:16
3	Sn 189.927†	-1.0	6.4	2.4736 µg/L	2.4736 ppb	22:38:16
3	Ti 334.940†	-609.5	-51.9	-0.1203 µg/L	-0.1203 ppb	22:37:56
3	Tl 190.801†	-27.4	5.8	5.7170 µg/L	5.7170 ppb	22:38:16
3	U 409.014†	64.8	72.7	6.5995 µg/L	6.5995 ppb	22:37:56
3	V 292.402†	45.2	-65.6	-0.7610 µg/L	-0.7610 ppb	22:37:56
3	Zn 213.857†	745.6	-239.2	-5.5060 µg/L	-5.5060 ppb	22:38:16

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2025815.4	96.785 %	0.1503			0.16%
Sc RADIAL	93607.7	96.7 %	0.31			0.32%
Y 371.029	1387010.5	96.799 %	0.2151			0.22%
Ag 328.068†	-17.6	-0.1444 µg/L	0.42928	-0.1444 ppb	0.42928	297.36%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-6.3	-3.0096 µg/L	9.41905	-3.0096 ppb	9.41905	312.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.2	-0.3586 µg/L	4.65237	-0.3586 ppb	4.65237	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	10.4	0.4661 µg/L	0.34883	0.4661 ppb	0.34883	74.85%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.4	0.1160 µg/L	0.01479	0.1160 ppb	0.01479	12.75%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	186.8	0.1098 µg/L	0.02822	0.1098 ppb	0.02822	25.71%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-34.9	-12.693 µg/L	2.5181	-12.693 ppb	2.5181	19.84%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-6.7	-0.1586 µg/L	0.07415	-0.1586 ppb	0.07415	46.75%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.7	-0.0707 µg/L	0.32730	-0.0707 ppb	0.32730	463.18%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-9.2	-0.2010 µg/L	0.24417	-0.2010 ppb	0.24417 121.46%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	22.3	0.1471 µg/L	0.20961	0.1471 ppb	0.20961 142.52%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	0.6	6.6424 µg/L	8.48231	6.6424 ppb	8.48231 127.70%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-39.6	-18.482 µg/L	37.0150	-18.482 ppb	37.0150 200.27%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	-1.1	-14.100 µg/L	2.4612	-14.100 ppb	2.4612 17.45%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	-30.6	-0.0907 µg/L	0.04488	-0.0907 ppb	0.04488 49.45%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	8.8	0.8685 µg/L	0.08763	0.8685 ppb	0.08763 10.09%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	65.4	32.631 µg/L	18.4813	32.631 ppb	18.4813 56.64%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	9.2	0.5137 µg/L	0.46689	0.5137 ppb	0.46689 90.88%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	4.2	6.9190 µg/L	8.06214	6.9190 ppb	8.06214 116.52%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	-5.3	-1.3931 µg/L	0.73489	-1.3931 ppb	0.73489 52.75%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	-1.8	-5.7271 µg/L	5.28965	-5.7271 ppb	5.28965 92.36%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	-1.1	-0.9762 µg/L	1.49611	-0.9762 ppb	1.49611 153.26%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	-3.2	-3.0002 µg/L	5.13816	-3.0002 ppb	5.13816 171.26%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	34.4	6.2173 µg/L	2.12838	6.2173 ppb	2.12838 34.23%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	61.6	4.1899 µg/L	0.76414	4.1899 ppb	0.76414 18.24%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	5.2	2.0304 µg/L	0.98050	2.0304 ppb	0.98050 48.29%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	-15.4	-0.0917 µg/L	0.05808	-0.0917 ppb	0.05808 63.32%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	14.9	0.0357 µg/L	0.13862	0.0357 ppb	0.13862 387.86%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	-1.4	-1.3283 µg/L	6.23511	-1.3283 ppb	6.23511 469.40%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	19.3	1.7538 µg/L	5.24094	1.7538 ppb	5.24094 298.83%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-50.5	-0.5889 µg/L	0.26792	-0.5889 ppb	0.26792 45.50%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-247.3	-5.6964 µg/L	0.21417	-5.6964 ppb	0.21417 3.76%
	QC value within limits for Zn 213.857 Recovery = Not calculated				

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: 1202047709|955136|1

Analyst: JWJ

Initial Sample Wt:

Dilution:

Autosampler Location: 327

Date Collected: 3/16/2010 22:38:26

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047709|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	93867.2	93867.2	97.0 %		22:38:58
1	Al 396.153Radial†	-113.5	2.3	1.0648 µg/L	1.0648 ppb	22:38:58
1	Ca 317.933Radial†	379.1	5.6	2.0231 µg/L	2.0231 ppb	22:39:18
1	Fe 238.204 Radial†	16.9	5.4	64.315 µg/L	64.315 ppb	22:39:18
1	K 766.490 Radial†	483.7	13.4	6.2717 µg/L	6.2717 ppb	22:38:58
1	Mg 279.077 IEC†	6.2	-1.6	-21.355 µg/L	-21.355 ppb	22:39:18
1	Na 589.592 Radial†	274.7	102.7	51.242 µg/L	51.242 ppb	22:38:58
1	Sr 421.552†	153.4	18.7	0.1112 µg/L	0.1112 ppb	22:38:58
1	Sc 361.383	2006715.3	2006715.3	95.872 %		22:40:21
1	Y 371.029	1371309.4	1371309.4	95.704 %		22:40:21
1	Ag 328.068†	-498.3	-59.5	-0.4738 µg/L	-0.4738 ppb	22:40:26
1	As 188.979†	-3.1	0.1	0.0736 µg/L	0.0736 ppb	22:40:47
1	B 249.677†	304.9	18.7	0.8140 µg/L	0.8140 ppb	22:40:26
1	Ba 233.527†	-1.0	7.4	0.1619 µg/L	0.1619 ppb	22:40:47
1	Be 313.107†	-1054.0	59.4	0.0348 µg/L	0.0348 ppb	22:40:26
1	Cd 226.502†	-166.0	-2.5	-0.0670 µg/L	-0.0670 ppb	22:40:47
1	Co 228.616†	46.8	0.8	0.0336 µg/L	0.0336 ppb	22:40:47
1	Cr 267.716†	68.9	-8.4	-0.1824 µg/L	-0.1824 ppb	22:40:26
1	Cu 324.752†	4295.6	103.8	0.6902 µg/L	0.6902 ppb	22:40:26
1	Mn 257.610†	-522.4	142.1	0.4323 µg/L	0.4323 ppb	22:40:47
1	Mo 202.031†	14.7	10.2	1.0085 µg/L	1.0085 ppb	22:40:47
1	Ni 231.604†	365.4	4.2	0.2352 µg/L	0.2352 ppb	22:40:47
1	P 214.914†	263.4	2.4	3.8624 µg/L	3.8624 ppb	22:40:47
1	Pb 220.353†	35.2	6.6	1.7248 µg/L	1.7248 ppb	22:40:47
1	S 181.975 Axial†	23.6	2.0	6.5163 µg/L	6.5163 ppb	22:40:47
1	Sb 206.836†	21.3	-0.5	-0.4134 µg/L	-0.4134 ppb	22:40:47
1	Se 196.026†	29.4	3.3	3.3434 µg/L	3.3434 ppb	22:40:47
1	SiO2†	3036.3	387.3	69.922 µg/L	69.922 ppb	22:40:26
1	Si 251.611†	723.3	330.3	22.456 µg/L	22.456 ppb	22:40:47
1	Sn 189.927†	-3.2	4.1	1.6147 µg/L	1.6147 ppb	22:40:47
1	Ti 334.940†	-409.1	150.5	0.3536 µg/L	0.3536 ppb	22:40:26
1	Tl 190.801†	-30.8	2.0	2.0063 µg/L	2.0063 ppb	22:40:47
1	U 409.014†	46.2	54.0	4.8904 µg/L	4.8904 ppb	22:40:26
1	V 292.402†	99.6	-8.5	-0.0958 µg/L	-0.0958 ppb	22:40:26
1	Zn 213.857†	760.9	-215.2	-4.9580 µg/L	-4.9580 ppb	22:40:47
2	Sc RADIAL	94605.6	94605.6	97.7 %		22:39:24
2	Al 396.153Radial†	-96.4	20.6	9.8432 µg/L	9.8432 ppb	22:39:24
2	Ca 317.933Radial†	378.6	2.1	0.7617 µg/L	0.7617 ppb	22:39:44
2	Fe 238.204 Radial†	14.9	3.2	38.397 µg/L	38.397 ppb	22:39:44
2	K 766.490 Radial†	538.7	65.7	30.684 µg/L	30.684 ppb	22:39:24
2	Mg 279.077 IEC†	6.9	-0.9	-12.442 µg/L	-12.442 ppb	22:39:44
2	Na 589.592 Radial†	232.2	57.0	28.425 µg/L	28.425 ppb	22:39:24
2	Sr 421.552†	114.9	-21.9	-0.1299 µg/L	-0.1299 ppb	22:39:24
2	Sc 361.383	1989784.6	1989784.6	95.064 %		22:40:53
2	Y 371.029	1356902.1	1356902.1	94.698 %		22:40:53
2	Ag 328.068†	-481.4	-46.2	-0.3737 µg/L	-0.3737 ppb	22:40:59
2	As 188.979†	-1.9	1.2	1.7879 µg/L	1.7879 ppb	22:41:19
2	B 249.677†	308.6	25.2	1.1244 µg/L	1.1244 ppb	22:40:59
2	Ba 233.527†	-2.4	5.9	0.1284 µg/L	0.1284 ppb	22:41:19
2	Be 313.107†	-1038.2	66.7	0.0391 µg/L	0.0391 ppb	22:40:59
2	Cd 226.502†	-164.6	-2.5	-0.0646 µg/L	-0.0646 ppb	22:41:19
2	Co 228.616†	42.8	-3.1	-0.1316 µg/L	-0.1316 ppb	22:41:19
2	Cr 267.716†	61.1	-16.0	-0.3485 µg/L	-0.3485 ppb	22:40:59
2	Cu 324.752†	4244.0	87.7	0.5799 µg/L	0.5799 ppb	22:40:59
2	Mn 257.610†	-527.7	131.9	0.3995 µg/L	0.3995 ppb	22:41:19
2	Mo 202.031†	10.8	6.2	0.6194 µg/L	0.6194 ppb	22:41:19
2	Ni 231.604†	352.2	-6.4	-0.3610 µg/L	-0.3610 ppb	22:41:19
2	P 214.914†	263.7	5.0	8.2324 µg/L	8.2324 ppb	22:41:19
2	Pb 220.353†	28.5	-0.2	-0.0548 µg/L	-0.0548 ppb	22:41:19

2	S 181.975 Axial†	23.9	2.6	8.3266 µg/L	8.3266 ppb	22:41:19
2	Sb 206.836†	23.4	1.8	1.6637 µg/L	1.6637 ppb	22:41:19
2	Se 196.026†	21.3	-4.9	-4.5089 µg/L	-4.5089 ppb	22:41:19
2	SiO2†	2979.2	354.2	63.939 µg/L	63.939 ppb	22:40:59
2	Si 251.611†	747.5	362.3	24.628 µg/L	24.628 ppb	22:41:19
2	Sn 189.927†	6.5	14.2	5.5364 µg/L	5.5364 ppb	22:41:19
2	Ti 334.940†	-463.5	89.7	0.2107 µg/L	0.2107 ppb	22:40:59
2	Tl 190.801†	-31.9	0.6	0.5594 µg/L	0.5594 ppb	22:41:19
2	U 409.014†	-16.0	-11.0	-1.0021 µg/L	-1.0021 ppb	22:40:59
2	V 292.402†	41.6	-68.6	-0.8113 µg/L	-0.8113 ppb	22:40:59
2	Zn 213.857†	761.9	-207.4	-4.7752 µg/L	-4.7752 ppb	22:41:19
3	Sc RADIAL	94620.1	94620.1	97.8 %		22:39:50
3	Al 396.153Radial†	-105.7	11.2	5.3430 µg/L	5.3430 ppb	22:39:50
3	Ca 317.933Radial†	379.0	2.4	0.8890 µg/L	0.8890 ppb	22:40:10
3	Fe 238.204 Radial†	17.8	6.3	73.984 µg/L	73.984 ppb	22:40:10
3	K 766.490 Radial†	455.8	-19.1	-8.9067 µg/L	-8.9067 ppb	22:39:50
3	Mg 279.077 IEC†	7.9	0.1	1.5850 µg/L	1.5850 ppb	22:40:10
3	Na 589.592 Radial†	225.5	50.1	24.992 µg/L	24.992 ppb	22:39:50
3	Sr 421.552†	141.3	5.1	0.0302 µg/L	0.0302 ppb	22:39:50
3	Sc 361.383	1998001.8	1998001.8	95.456 %		22:41:25
3	Y 371.029	1366904.5	1366904.5	95.396 %		22:41:25
3	Ag 328.068†	-530.5	-95.5	-0.7637 µg/L	-0.7637 ppb	22:41:31
3	As 188.979†	-8.1	-5.3	-7.7743 µg/L	-7.7743 ppb	22:41:51
3	B 249.677†	304.8	19.9	0.8658 µg/L	0.8658 ppb	22:41:31
3	Ba 233.527†	-6.8	1.3	0.0271 µg/L	0.0271 ppb	22:41:51
3	Be 313.107†	-932.9	181.5	0.1065 µg/L	0.1065 ppb	22:41:31
3	Cd 226.502†	-163.7	-0.9	-0.0293 µg/L	-0.0293 ppb	22:41:51
3	Co 228.616†	41.7	-4.4	-0.1887 µg/L	-0.1887 ppb	22:41:51
3	Cr 267.716†	95.7	20.0	0.4356 µg/L	0.4356 ppb	22:41:31
3	Cu 324.752†	4234.3	59.2	0.4004 µg/L	0.4004 ppb	22:41:31
3	Mn 257.610†	-524.6	137.4	0.4171 µg/L	0.4171 ppb	22:41:51
3	Mo 202.031†	8.8	4.1	0.4099 µg/L	0.4099 ppb	22:41:51
3	Ni 231.604†	359.2	-0.7	-0.0355 µg/L	-0.0355 ppb	22:41:51
3	P 214.914†	253.3	-7.1	-11.814 µg/L	-11.814 ppb	22:41:51
3	Pb 220.353†	21.0	-8.2	-2.1496 µg/L	-2.1496 ppb	22:41:51
3	S 181.975 Axial†	19.4	-2.2	-6.9935 µg/L	-6.9935 ppb	22:41:51
3	Sb 206.836†	23.5	1.9	1.6729 µg/L	1.6729 ppb	22:41:51
3	Se 196.026†	21.3	-5.0	-4.4297 µg/L	-4.4297 ppb	22:41:51
3	SiO2†	3006.3	369.6	66.734 µg/L	66.734 ppb	22:41:31
3	Si 251.611†	744.0	355.3	24.157 µg/L	24.157 ppb	22:41:51
3	Sn 189.927†	1.8	9.4	3.6401 µg/L	3.6401 ppb	22:41:51
3	Ti 334.940†	-425.2	131.8	0.3080 µg/L	0.3080 ppb	22:41:31
3	Tl 190.801†	-25.7	7.2	7.0779 µg/L	7.0779 ppb	22:41:51
3	U 409.014†	-2.8	2.9	0.2488 µg/L	0.2488 ppb	22:41:31
3	V 292.402†	78.3	-30.3	-0.3626 µg/L	-0.3626 ppb	22:41:31
3	Zn 213.857†	752.4	-220.7	-5.0843 µg/L	-5.0843 ppb	22:41:51

Mean Data: 1202047709|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1998167.2	95.464 %		0.4045			0.42%
Sc RADIAL	94364.3	97.5 %		0.44			0.46%
Y 371.029	1365038.7	95.266 %		0.5152			0.54%
Ag 328.068†	-67.1	-0.5370 µg/L		0.20253	-0.5370 ppb	0.20253	37.71%
Al 396.153Radial†	11.4	5.4170 µg/L		4.38967	5.4170 ppb	4.38967	81.04%
As 188.979†	-1.3	-1.9709 µg/L		5.09844	-1.9709 ppb	5.09844	258.68%
B 249.677†	21.3	0.9347 µg/L		0.16625	0.9347 ppb	0.16625	17.79%
Ba 233.527†	4.9	0.1058 µg/L		0.07018	0.1058 ppb	0.07018	66.35%
Be 313.107†	102.6	0.0601 µg/L		0.04023	0.0601 ppb	0.04023	66.88%
Ca 317.933Radial†	3.4	1.2246 µg/L		0.69444	1.2246 ppb	0.69444	56.71%
Cd 226.502†	-2.0	-0.0536 µg/L		0.02111	-0.0536 ppb	0.02111	39.36%
Co 228.616†	-2.2	-0.0956 µg/L		0.11541	-0.0956 ppb	0.11541	120.77%
Cr 267.716†	-1.4	-0.0318 µg/L		0.41318	-0.0318 ppb	0.41318	>999.9%
Cu 324.752†	83.6	0.5568 µg/L		0.14624	0.5568 ppb	0.14624	26.26%
Fe 238.204 Radial†	5.0	58.898 µg/L		18.4012	58.898 ppb	18.4012	31.24%
K 766.490 Radial†	20.0	9.3497 µg/L		19.97400	9.3497 ppb	19.97400	213.63%
Mg 279.077 IEC†	-0.8	-10.737 µg/L		11.5646	-10.737 ppb	11.5646	107.71%
Mn 257.610†	137.1	0.4163 µg/L		0.01641	0.4163 ppb	0.01641	3.94%
Mo 202.031†	6.8	0.6793 µg/L		0.30373	0.6793 ppb	0.30373	44.71%
Na 589.592 Radial†	69.9	34.886 µg/L		14.2682	34.886 ppb	14.2682	40.90%

Ni 231.604†	-1.0	-0.0538 µg/L	0.29854	-0.0538 ppb	0.29854	555.39%
P 214.914†	0.1	0.0937 µg/L	10.54097	0.0937 ppb	10.54097	>999.9%
Pb 220.353†	-0.6	-0.1599 µg/L	1.93932	-0.1599 ppb	1.93932	>999.9%
S 181.975 Axial†	0.8	2.6165 µg/L	8.37154	2.6165 ppb	8.37154	319.96%
Sb 206.836†	1.1	0.9744 µg/L	1.20191	0.9744 ppb	1.20191	123.35%
Se 196.026†	-2.2	-1.8651 µg/L	4.51083	-1.8651 ppb	4.51083	241.86%
SiO2†	370.4	66.865 µg/L	2.9936	66.865 ppb	2.9936	4.48%
Si 251.611†	349.3	23.747 µg/L	1.1428	23.747 ppb	1.1428	4.81%
Sn 189.927†	9.2	3.5971 µg/L	1.96122	3.5971 ppb	1.96122	54.52%
Sr 421.552†	0.6	0.0038 µg/L	0.12272	0.0038 ppb	0.12272	>999.9%
Ti 334.940†	124.0	0.2908 µg/L	0.07303	0.2908 ppb	0.07303	25.12%
Tl 190.801†	3.3	3.2145 µg/L	3.42306	3.2145 ppb	3.42306	106.49%
U 409.014†	15.3	1.3790 µg/L	3.10458	1.3790 ppb	3.10458	225.13%
V 292.402†	-35.8	-0.4232 µg/L	0.36162	-0.4232 ppb	0.36162	85.44%
Zn 213.857†	-214.4	-4.9392 µg/L	0.15541	-4.9392 ppb	0.15541	3.15%



Sequence No.: 13

Sample ID: 1202047714|955136|2

Analyst: JWW

Initial Sample Wt:

Dilution:

Autosampler Location: 328

Date Collected: 3/16/2010 22:42:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047714|955136|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96501.2	96501.2	99.7 %		22:42:32
1	Al 396.153Radial†	111965.8	112418.2	53659 µg/L	53659 ppb	22:42:32
1	Ca 317.933Radial†	155909.2	155987.8	56767 µg/L	56767 ppb	22:42:32
1	Fe 238.204 Radial†	9461.5	9477.7	112110 µg/L	112110 ppb	22:42:52
1	K 766.490 Radial†	51447.5	51115.2	23855 µg/L	23855 ppb	22:42:32
1	Mg 279.077 IEC†	1697.8	1694.8	22228 µg/L	22228 ppb	22:42:52
1	Na 589.592 Radial†	11733.5	11587.8	5783.5 µg/L	5783.5 ppb	22:42:32
1	Sr 421.552†	217885.1	218393.9	1298.3 µg/L	1298.3 ppb	22:42:32
1	Sc 361.383	2020901.6	2020901.6	96.550 %		22:43:57
1	Y 371.029	1393889.5	1393889.5	97.280 %		22:43:57
1	Ag 328.068†	19803.1	20970.8	181.89 µg/L	181.89 ppb	22:44:03
1	As 188.979†	421.1	439.4	628.17 µg/L	628.17 ppb	22:44:24
1	B 249.677†	19080.2	19462.6	827.05 µg/L	827.05 ppb	22:44:03
1	Ba 233.527†	51835.0	53695.5	1175.7 µg/L	1175.7 ppb	22:44:03
1	Be 313.107†	759033.5	787312.6	461.22 µg/L	461.22 ppb	22:43:57
1	Cd 226.502†	14731.1	15428.0	354.85 µg/L	354.85 ppb	22:44:03
1	Co 228.616†	12390.0	12784.7	542.00 µg/L	542.00 ppb	22:44:24
1	Cr 267.716†	63933.2	66137.3	1438.9 µg/L	1438.9 ppb	22:44:03
1	Cu 324.752†	160297.1	161647.8	1076.9 µg/L	1076.9 ppb	22:44:03
1	Mn 257.610†	1084166.3	1123590.5	3382.0 µg/L	3382.0 ppb	22:43:57
1	Mo 202.031†	2961.1	3061.7	307.22 µg/L	307.22 ppb	22:44:24
1	Ni 231.604†	13987.1	14109.9	792.19 µg/L	792.19 ppb	22:44:24
1	P 214.914†	3454.1	3305.1	5309.9 µg/L	5309.9 ppb	22:44:24
1	Pb 220.353†	1885.4	1922.6	509.15 µg/L	509.15 ppb	22:44:24
1	S 181.975 Axial†	665.5	666.8	2121.9 µg/L	2121.9 ppb	22:44:24
1	Sb 206.836†	784.5	789.9	692.42 µg/L	692.42 ppb	22:44:24
1	Se 196.026†	1746.9	1782.0	2009.1 µg/L	2009.1 ppb	22:44:24
1	SiO2†	269277.6	276119.2	49849 µg/L	49849 ppb	22:44:03
1	Si 251.611†	328932.6	340261.3	23132 µg/L	23132 ppb	22:44:03
1	Sn 189.927†	1542.3	1604.9	629.95 µg/L	629.95 ppb	22:44:24
1	Ti 334.940†	1487704.9	1541437.9	3603.6 µg/L	3603.6 ppb	22:43:57
1	Tl 190.801†	673.0	731.1	761.53 µg/L	761.53 ppb	22:44:24
1	U 409.014†	-600.4	-616.1	-74.983 µg/L	-74.983 ppb	22:44:03
1	V 292.402†	60584.4	62636.8	730.61 µg/L	730.61 ppb	22:44:03
1	Zn 213.857†	147148.6	151397.4	3474.0 µg/L	3474.0 ppb	22:44:03
2	Sc RADIAL	95552.5	95552.5	98.7 %		22:42:58
2	Al 396.153Radial†	111205.7	112763.2	53823 µg/L	53823 ppb	22:42:58
2	Ca 317.933Radial†	154951.7	156570.4	56979 µg/L	56979 ppb	22:42:58
2	Fe 238.204 Radial†	9535.5	9646.9	114110 µg/L	114110 ppb	22:43:18
2	K 766.490 Radial†	51155.0	51331.2	23955 µg/L	23955 ppb	22:42:58
2	Mg 279.077 IEC†	1711.1	1725.2	22626 µg/L	22626 ppb	22:43:18
2	Na 589.592 Radial†	11679.2	11649.7	5814.4 µg/L	5814.4 ppb	22:42:58
2	Sr 421.552†	216723.3	219386.8	1304.2 µg/L	1304.2 ppb	22:42:58
2	Sc 361.383	2027565.9	2027565.9	96.869 %		22:44:31
2	Y 371.029	1399489.7	1399489.7	97.670 %		22:44:31
2	Ag 328.068†	19948.4	21053.4	182.73 µg/L	182.73 ppb	22:44:36
2	As 188.979†	414.5	431.2	615.73 µg/L	615.73 ppb	22:44:57
2	B 249.677†	19253.9	19577.0	831.21 µg/L	831.21 ppb	22:44:36
2	Ba 233.527†	52261.8	53959.7	1181.4 µg/L	1181.4 ppb	22:44:36
2	Be 313.107†	761601.5	787379.6	461.26 µg/L	461.26 ppb	22:44:31
2	Cd 226.502†	14842.5	15492.9	356.16 µg/L	356.16 ppb	22:44:36
2	Co 228.616†	12307.7	12657.5	536.54 µg/L	536.54 ppb	22:44:57
2	Cr 267.716†	64548.2	66554.5	1448.0 µg/L	1448.0 ppb	22:44:36
2	Cu 324.752†	161430.7	162272.4	1081.3 µg/L	1081.3 ppb	22:44:36
2	Mn 257.610†	1089396.8	1125299.3	3387.3 µg/L	3387.3 ppb	22:44:31
2	Mo 202.031†	2942.0	3032.0	304.36 µg/L	304.36 ppb	22:44:57
2	Ni 231.604†	13910.1	13982.9	785.10 µg/L	785.10 ppb	22:44:57
2	P 214.914†	3427.8	3266.2	5243.2 µg/L	5243.2 ppb	22:44:57
2	Pb 220.353†	1858.8	1888.7	500.31 µg/L	500.31 ppb	22:44:57

2	S 181.975 Axial†	678.8	678.2	2158.4 µg/L	2158.4 ppb	22:44:57
2	Sb 206.836†	777.2	779.6	683.10 µg/L	683.10 ppb	22:44:57
2	Se 196.026†	1732.5	1761.1	1995.5 µg/L	1995.5 ppb	22:44:57
2	SiO2†	271413.7	277407.5	50082 µg/L	50082 ppb	22:44:36
2	Si 251.611†	331413.5	341702.6	23230 µg/L	23230 ppb	22:44:36
2	Sn 189.927†	1535.8	1592.9	625.29 µg/L	625.29 ppb	22:44:57
2	Ti 334.940†	1492128.9	1540940.3	3602.4 µg/L	3602.4 ppb	22:44:31
2	Tl 190.801†	666.7	722.4	753.27 µg/L	753.27 ppb	22:44:57
2	U 409.014†	-738.8	-756.9	-88.057 µg/L	-88.057 ppb	22:44:36
2	V 292.402†	61105.0	62968.0	734.25 µg/L	734.25 ppb	22:44:36
2	Zn 213.857†	148454.3	152244.3	3493.4 µg/L	3493.4 ppb	22:44:36
3	Sc RADIAL	95428.6	95428.6	98.6 %		22:43:24
3	Al 396.153Radial†	111522.0	113230.2	54047 µg/L	54047 ppb	22:43:24
3	Ca 317.933Radial†	155026.6	156850.1	57081 µg/L	57081 ppb	22:43:24
3	Fe 238.204 Radial†	9515.9	9639.5	114020 µg/L	114020 ppb	22:43:44
3	K 766.490 Radial†	51332.6	51578.7	24071 µg/L	24071 ppb	22:43:24
3	Mg 279.077 IEC†	1709.9	1726.3	22641 µg/L	22641 ppb	22:43:44
3	Na 589.592 Radial†	11714.5	11700.8	5839.9 µg/L	5839.9 ppb	22:43:24
3	Sr 421.552†	217145.4	220099.9	1308.5 µg/L	1308.5 ppb	22:43:24
3	Sc 361.383	2020875.2	2020875.2	96.549 %		22:45:04
3	Y 371.029	1393498.5	1393498.5	97.252 %		22:45:04
3	Ag 328.068†	19227.2	20374.7	176.95 µg/L	176.95 ppb	22:45:10
3	As 188.979†	375.5	392.2	558.12 µg/L	558.12 ppb	22:45:30
3	B 249.677†	18474.3	18835.3	797.43 µg/L	797.43 ppb	22:45:10
3	Ba 233.527†	49294.6	51065.0	1118.0 µg/L	1118.0 ppb	22:45:10
3	Be 313.107†	730899.4	758183.2	444.16 µg/L	444.16 ppb	22:45:04
3	Cd 226.502†	13953.3	14622.6	335.41 µg/L	335.41 ppb	22:45:10
3	Co 228.616†	11032.9	11379.2	481.89 µg/L	481.89 ppb	22:45:30
3	Cr 267.716†	59618.1	61668.9	1341.7 µg/L	1341.7 ppb	22:45:10
3	Cu 324.752†	151684.3	152729.3	1019.0 µg/L	1019.0 ppb	22:45:10
3	Mn 257.610†	1047962.1	1086106.9	3269.5 µg/L	3269.5 ppb	22:45:04
3	Mo 202.031†	2645.4	2734.9	274.95 µg/L	274.95 ppb	22:45:30
3	Ni 231.604†	12476.7	12545.7	704.56 µg/L	704.56 ppb	22:45:30
3	P 214.914†	3134.7	2974.4	4764.3 µg/L	4764.3 ppb	22:45:30
3	Pb 220.353†	1740.4	1772.4	469.85 µg/L	469.85 ppb	22:45:30
3	S 181.975 Axial†	619.2	618.7	1969.1 µg/L	1969.1 ppb	22:45:30
3	Sb 206.836†	695.2	697.3	610.40 µg/L	610.40 ppb	22:45:30
3	Se 196.026†	1619.1	1649.6	1890.4 µg/L	1890.4 ppb	22:45:30
3	SiO2†	257191.3	263604.5	47590 µg/L	47590 ppb	22:45:10
3	Si 251.611†	314217.7	325024.9	22096 µg/L	22096 ppb	22:45:10
3	Sn 189.927†	1360.2	1416.3	556.53 µg/L	556.53 ppb	22:45:30
3	Ti 334.940†	1429486.4	1481158.5	3462.6 µg/L	3462.6 ppb	22:45:04
3	Tl 190.801†	612.6	668.6	699.24 µg/L	699.24 ppb	22:45:30
3	U 409.014†	-669.8	-687.9	-81.790 µg/L	-81.790 ppb	22:45:10
3	V 292.402†	56964.6	58888.4	685.65 µg/L	685.65 ppb	22:45:10
3	Zn 213.857†	139877.7	143868.6	3301.0 µg/L	3301.0 ppb	22:45:10

Mean Data: 1202047714|955136|2

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2023114.2	96.656 %	%	0.1842			0.19%
Sc RADIAL	95827.5	99.0 %	%	0.61			0.61%
Y 371.029	1395625.9	97.401 %	%	0.2339			0.24%
Ag 328.068†	20799.6	180.52 µg/L	µg/L	3.119	180.52 ppb	3.119	1.73%
Al 396.153Radial†	112803.9	53843 µg/L	µg/L	194.9	53843 ppb	194.9	0.36%
As 188.979†	420.9	600.68 µg/L	µg/L	37.375	600.68 ppb	37.375	6.22%
B 249.677†	19291.6	818.56 µg/L	µg/L	18.421	818.56 ppb	18.421	2.25%
Ba 233.527†	52906.7	1158.4 µg/L	µg/L	35.05	1158.4 ppb	35.05	3.03%
Be 313.107†	777625.1	455.54 µg/L	µg/L	9.862	455.54 ppb	9.862	2.16%
Ca 317.933Radial†	156469.4	56943 µg/L	µg/L	160.1	56943 ppb	160.1	0.28%
Cd 226.502†	15181.2	348.81 µg/L	µg/L	11.625	348.81 ppb	11.625	3.33%
Co 228.616†	12273.8	520.14 µg/L	µg/L	33.243	520.14 ppb	33.243	6.39%
Cr 267.716†	64786.9	1409.5 µg/L	µg/L	58.92	1409.5 ppb	58.92	4.18%
Cu 324.752†	158883.2	1059.1 µg/L	µg/L	34.78	1059.1 ppb	34.78	3.28%
Fe 238.204 Radial†	9588.0	113420 µg/L	µg/L	1130.7	113420 ppb	1130.7	1.00%
K 766.490 Radial†	51341.7	23960 µg/L	µg/L	108.2	23960 ppb	108.2	0.45%
Mg 279.077 IEC†	1715.4	22498 µg/L	µg/L	234.2	22498 ppb	234.2	1.04%
Mn 257.610†	1111665.6	3346.3 µg/L	µg/L	66.55	3346.3 ppb	66.55	1.99%
Mo 202.031†	2942.9	295.51 µg/L	µg/L	17.862	295.51 ppb	17.862	6.04%
Na 589.592 Radial†	11646.1	5812.6 µg/L	µg/L	28.24	5812.6 ppb	28.24	0.49%

Ni 231.604†	13546.2	760.61 µg/L	48.677	760.61 ppb	48.677	6.40%
P 214.914†	3181.9	5105.8 µg/L	297.61	5105.8 ppb	297.61	5.83%
Pb 220.353†	1861.2	493.10 µg/L	20.620	493.10 ppb	20.620	4.18%
S 181.975 Axial†	654.6	2083.1 µg/L	100.40	2083.1 ppb	100.40	4.82%
Sb 206.836†	755.6	661.97 µg/L	44.905	661.97 ppb	44.905	6.78%
Se 196.026†	1730.9	1965.0 µg/L	64.93	1965.0 ppb	64.93	3.30%
SiO2†	272377.1	49174 µg/L	1376.5	49174 ppb	1376.5	2.80%
Si 251.611†	335662.9	22820 µg/L	628.2	22820 ppb	628.2	2.75%
Sn 189.927†	1538.0	603.92 µg/L	41.111	603.92 ppb	41.111	6.81%
Sr 421.552†	219293.5	1303.7 µg/L	5.09	1303.7 ppb	5.09	0.39%
Ti 334.940†	1521178.9	3556.2 µg/L	81.06	3556.2 ppb	81.06	2.28%
Tl 190.801†	707.4	738.01 µg/L	33.830	738.01 ppb	33.830	4.58%
U 409.014†	-686.9	-81.610 µg/L	6.5390	-81.610 ppb	6.5390	8.01%
V 292.402†	61497.7	716.84 µg/L	27.069	716.84 ppb	27.069	3.78%
Zn 213.857†	149170.1	3422.8 µg/L	105.91	3422.8 ppb	105.91	3.09%

Sequence No.: 15

Sample ID: 1202047710|955136|1

Analyst: JWJ

Initial Sample Wt:

Dilution:

Autosampler Location: 330

Date Collected: 3/16/2010 22:49:18

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047710|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97606.1	97606.1	101 %		22:49:48
1	Al 396.153Radial†	180153.9	178763.8	85336 µg/L	85336 ppb	22:49:48
1	Ca 317.933Radial†	68263.9	67306.7	24494 µg/L	24494 ppb	22:49:48
1	Fe 238.204 Radial†	9991.1	9895.5	117040 µg/L	117040 ppb	22:50:09
1	K 766.490 Radial†	25404.2	24706.0	11530 µg/L	11530 ppb	22:49:48
1	Mg 279.077 IEC†	1136.0	1118.5	14620 µg/L	14620 ppb	22:50:09
1	Na 589.592 Radial†	4448.0	4230.1	2111.3 µg/L	2111.3 ppb	22:49:48
1	Sr 421.552†	40780.9	40299.8	239.58 µg/L	239.58 ppb	22:49:48
1	Sc 361.383	2028928.5	2028928.5	96.934 %		22:51:14
1	Y 371.029	1426236.2	1426236.2	99.537 %		22:51:14
1	Ag 328.068†	-1503.4	-1090.8	1.4249 µg/L	1.4249 ppb	22:51:19
1	As 188.979†	19.7	23.6	17.380 µg/L	17.380 ppb	22:51:40
1	B 249.677†	1170.5	908.2	-19.740 µg/L	-19.740 ppb	22:51:19
1	Ba 233.527†	62840.6	64836.8	1418.3 µg/L	1418.3 ppb	22:51:19
1	Be 313.107†	11863.5	13397.6	6.9664 µg/L	6.9664 ppb	22:51:19
1	Cd 226.502†	474.9	660.5	2.5358 µg/L	2.5358 ppb	22:51:40
1	Co 228.616†	882.0	861.9	32.069 µg/L	32.069 ppb	22:51:40
1	Cr 267.716†	3329.9	3354.9	73.080 µg/L	73.080 ppb	22:51:40
1	Cu 324.752†	10403.3	6355.7	63.516 µg/L	63.516 ppb	22:51:19
1	Mn 257.610†	776212.9	801453.4	2414.7 µg/L	2414.7 ppb	22:51:14
1	Mo 202.031†	33.9	29.9	7.4042 µg/L	7.4042 ppb	22:51:40
1	Ni 231.604†	1403.7	1071.2	61.556 µg/L	61.556 ppb	22:51:40
1	P 214.914†	1300.2	1068.9	1699.9 µg/L	1699.9 ppb	22:51:40
1	Pb 220.353†	342.0	322.6	93.010 µg/L	93.010 ppb	22:51:40
1	S 181.975 Axial†	246.8	232.1	738.56 µg/L	738.56 ppb	22:51:40
1	Sb 206.836†	11.7	-10.6	-10.610 µg/L	-10.610 ppb	22:51:40
1	Se 196.026†	-95.1	-125.4	241.02 µg/L	241.02 ppb	22:51:40
1	SiO2†	543171.8	557573.8	100660 µg/L	100660 ppb	22:51:14
1	Si 251.611†	662731.0	683270.6	46451 µg/L	46451 ppb	22:51:14
1	Sn 189.927†	-17.3	-10.5	-2.1530 µg/L	-2.1530 ppb	22:51:40
1	Ti 334.940†	984635.9	1016359.6	2375.9 µg/L	2375.9 ppb	22:51:14
1	Tl 190.801†	-52.7	-20.3	24.289 µg/L	24.289 ppb	22:51:40
1	U 409.014†	-1321.0	-1357.0	-140.97 µg/L	-140.97 ppb	22:51:19
1	V 292.402†	14829.5	15186.3	164.49 µg/L	164.49 ppb	22:51:19
1	Zn 213.857†	13685.2	13109.2	295.10 µg/L	295.10 ppb	22:51:40
2	Sc RADIAL	96995.0	96995.0	100 %		22:50:14
2	Al 396.153Radial†	180131.4	179866.9	85863 µg/L	85863 ppb	22:50:14
2	Ca 317.933Radial†	68145.8	67615.3	24607 µg/L	24607 ppb	22:50:14
2	Fe 238.204 Radial†	10020.4	9987.1	118130 µg/L	118130 ppb	22:50:35
2	K 766.490 Radial†	25281.8	24742.6	11547 µg/L	11547 ppb	22:50:14
2	Mg 279.077 IEC†	1141.0	1130.6	14779 µg/L	14779 ppb	22:50:35
2	Na 589.592 Radial†	4414.9	4224.9	2108.7 µg/L	2108.7 ppb	22:50:14
2	Sr 421.552†	40713.2	40487.0	240.69 µg/L	240.69 ppb	22:50:14
2	Sc 361.383	2033550.6	2033550.6	97.155 %		22:51:47
2	Y 371.029	1429529.5	1429529.5	99.767 %		22:51:47
2	Ag 328.068†	-1526.5	-1111.0	1.3408 µg/L	1.3408 ppb	22:51:53
2	As 188.979†	17.1	20.8	13.222 µg/L	13.222 ppb	22:52:14
2	B 249.677†	1121.4	854.9	-22.726 µg/L	-22.726 ppb	22:51:53
2	Ba 233.527†	62511.7	64350.9	1407.7 µg/L	1407.7 ppb	22:51:53
2	Be 313.107†	11778.3	13282.1	6.8980 µg/L	6.8980 ppb	22:51:53
2	Cd 226.502†	478.3	662.9	2.4703 µg/L	2.4703 ppb	22:52:14
2	Co 228.616†	883.2	861.0	32.029 µg/L	32.029 ppb	22:52:14
2	Cr 267.716†	3313.7	3330.5	72.548 µg/L	72.548 ppb	22:52:14
2	Cu 324.752†	10314.3	6239.7	62.962 µg/L	62.962 ppb	22:51:53
2	Mn 257.610†	778040.8	801514.7	2414.9 µg/L	2414.9 ppb	22:51:47
2	Mo 202.031†	25.6	21.2	6.5857 µg/L	6.5857 ppb	22:52:14
2	Ni 231.604†	1415.7	1080.3	62.083 µg/L	62.083 ppb	22:52:14
2	P 214.914†	1299.2	1064.8	1692.5 µg/L	1692.5 ppb	22:52:14
2	Pb 220.353†	339.2	319.0	92.119 µg/L	92.119 ppb	22:52:14

2	S 181.975 Axial†	256.9	241.9	769.93 µg/L	769.93 ppb	22:52:14
2	Sb 206.836†	20.9	-1.2	-2.2474 µg/L	-2.2474 ppb	22:52:14
2	Se 196.026†	-94.9	-125.0	244.80 µg/L	244.80 ppb	22:52:14
2	SiO2†	544239.6	557399.3	100630 µg/L	100630 ppb	22:51:47
2	Si 251.611†	664337.9	683370.6	46458 µg/L	46458 ppb	22:51:47
2	Sn 189.927†	-12.2	-5.1	-0.0523 µg/L	-0.0523 ppb	22:52:14
2	Ti 334.940†	987371.0	1016866.0	2377.0 µg/L	2377.0 ppb	22:51:47
2	Tl 190.801†	-48.9	-16.2	28.426 µg/L	28.426 ppb	22:52:14
2	U 409.014†	-1391.3	-1426.3	-147.42 µg/L	-147.42 ppb	22:51:53
2	V 292.402†	14802.5	15123.7	163.60 µg/L	163.60 ppb	22:51:53
2	Zn 213.857†	13628.3	13018.6	292.95 µg/L	292.95 ppb	22:52:14
3	Sc RADIAL	96438.7	96438.7	99.6 %		22:50:40
3	Al 396.153Radial†	178895.5	179663.4	85766 µg/L	85766 ppb	22:50:40
3	Ca 317.933Radial†	67558.5	67418.2	24535 µg/L	24535 ppb	22:50:40
3	Fe 238.204 Radial†	10072.4	10097.0	119420 µg/L	119420 ppb	22:51:01
3	K 766.490 Radial†	25168.5	24774.4	11562 µg/L	11562 ppb	22:50:40
3	Mg 279.077 IEC†	1142.6	1138.8	14885 µg/L	14885 ppb	22:51:01
3	Na 589.592 Radial†	4403.1	4238.5	2115.5 µg/L	2115.5 ppb	22:50:40
3	Sr 421.552†	40432.0	40439.1	240.41 µg/L	240.41 ppb	22:50:40
3	Sc 361.383	2019412.1	2019412.1	96.479 %		22:52:21
3	Y 371.029	1415065.0	1415065.0	98.757 %		22:52:21
3	Ag 328.068†	-1454.1	-1046.9	1.9063 µg/L	1.9063 ppb	22:52:26
3	As 188.979†	19.2	23.1	16.458 µg/L	16.458 ppb	22:52:47
3	B 249.677†	1120.5	862.0	-23.089 µg/L	-23.089 ppb	22:52:26
3	Ba 233.527†	60265.9	62473.7	1366.6 µg/L	1366.6 ppb	22:52:26
3	Be 313.107†	11228.0	12796.6	6.6466 µg/L	6.6466 ppb	22:52:26
3	Cd 226.502†	410.2	595.8	0.7223 µg/L	0.7223 ppb	22:52:47
3	Co 228.616†	814.0	795.7	29.408 µg/L	29.408 ppb	22:52:47
3	Cr 267.716†	2984.3	3012.9	65.637 µg/L	65.637 ppb	22:52:47
3	Cu 324.752†	10147.6	6141.3	62.564 µg/L	62.564 ppb	22:52:26
3	Mn 257.610†	748253.5	776247.2	2339.0 µg/L	2339.0 ppb	22:52:21
3	Mo 202.031†	23.6	19.4	6.4537 µg/L	6.4537 ppb	22:52:47
3	Ni 231.604†	1311.8	982.7	56.631 µg/L	56.631 ppb	22:52:47
3	P 214.914†	1214.5	986.4	1561.2 µg/L	1561.2 ppb	22:52:47
3	Pb 220.353†	308.2	289.2	84.327 µg/L	84.327 ppb	22:52:47
3	S 181.975 Axial†	232.4	218.3	694.78 µg/L	694.78 ppb	22:52:47
3	Sb 206.836†	23.1	1.2	0.0132 µg/L	0.0132 ppb	22:52:47
3	Se 196.026†	-78.0	-108.1	264.66 µg/L	264.66 ppb	22:52:47
3	SiO2†	525844.9	542255.3	97896 µg/L	97896 ppb	22:52:21
3	Si 251.611†	642140.7	665150.8	45219 µg/L	45219 ppb	22:52:21
3	Sn 189.927†	-25.5	-19.0	-5.4891 µg/L	-5.4891 ppb	22:52:47
3	Ti 334.940†	943912.5	978936.8	2288.3 µg/L	2288.3 ppb	22:52:21
3	Tl 190.801†	-58.7	-26.8	17.240 µg/L	17.240 ppb	22:52:47
3	U 409.014†	-1269.1	-1309.6	-137.00 µg/L	-137.00 ppb	22:52:26
3	V 292.402†	14090.9	14492.8	155.98 µg/L	155.98 ppb	22:52:26
3	Zn 213.857†	12647.3	12100.0	271.76 µg/L	271.76 ppb	22:52:47

Mean Data: 1202047710|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2027297.1	96.856 %	%	0.3444			0.36%
Sc RADIAL	97013.2	100 %	%	0.6			0.60%
Y 371.029	1423610.2	99.354 %	%	0.5291			0.53%
Ag 328.068†	-1082.9	1.5573 µg/L	µg/L	0.30514	1.5573 ppb	0.30514	19.59%
Al 396.153Radial†	179431.4	85655 µg/L	µg/L	280.2	85655 ppb	280.2	0.33%
As 188.979†	22.5	15.687 µg/L	µg/L	2.1838	15.687 ppb	2.1838	13.92%
B 249.677†	875.0	-21.852 µg/L	µg/L	1.8378	-21.852 ppb	1.8378	8.41%
Ba 233.527†	63887.1	1397.5 µg/L	µg/L	27.30	1397.5 ppb	27.30	1.95%
Be 313.107†	13158.8	6.8370 µg/L	µg/L	0.16842	6.8370 ppb	0.16842	2.46%
Ca 317.933Radial†	67446.7	24545 µg/L	µg/L	56.9	24545 ppb	56.9	0.23%
Cd 226.502†	639.7	1.9095 µg/L	µg/L	1.02864	1.9095 ppb	1.02864	53.87%
Co 228.616†	839.5	31.169 µg/L	µg/L	1.5248	31.169 ppb	1.5248	4.89%
Cr 267.716†	3232.8	70.422 µg/L	µg/L	4.1525	70.422 ppb	4.1525	5.90%
Cu 324.752†	6245.5	63.014 µg/L	µg/L	0.4783	63.014 ppb	0.4783	0.76%
Fe 238.204 Radial†	9993.2	118200 µg/L	µg/L	1193.4	118200 ppb	1193.4	1.01%
K 766.490 Radial†	24741.0	11546 µg/L	µg/L	16.0	11546 ppb	16.0	0.14%
Mg 279.077 IEC†	1129.3	14761 µg/L	µg/L	133.4	14761 ppb	133.4	0.90%
Mn 257.610†	793071.7	2389.5 µg/L	µg/L	43.74	2389.5 ppb	43.74	1.83%
Mo 202.031†	23.5	6.8145 µg/L	µg/L	0.51495	6.8145 ppb	0.51495	7.56%
Na 589.592 Radial†	4231.2	2111.8 µg/L	µg/L	3.43	2111.8 ppb	3.43	0.16%

Ni 231.604†	1044.7	60.090 µg/L	3.0072	60.090 ppb	3.0072	5.00%
P 214.914†	1040.1	1651.2 µg/L	78.04	1651.2 ppb	78.04	4.73%
Pb 220.353†	310.3	89.819 µg/L	4.7768	89.819 ppb	4.7768	5.32%
S 181.975 Axial†	230.8	734.43 µg/L	37.744	734.43 ppb	37.744	5.14%
Sb 206.836†	-3.5	-4.2813 µg/L	5.59594	-4.2813 ppb	5.59594	130.71%
Se 196.026†	-119.5	250.16 µg/L	12.700	250.16 ppb	12.700	5.08%
SiO2†	552409.5	99730 µg/L	1587.7	99730 ppb	1587.7	1.59%
Si 251.611†	677264.0	46043 µg/L	713.2	46043 ppb	713.2	1.55%
Sn 189.927†	-11.5	-2.5648 µg/L	2.74172	-2.5648 ppb	2.74172	106.90%
Sr 421.552†	40408.7	240.22 µg/L	0.578	240.22 ppb	0.578	0.24%
Ti 334.940†	1004054.1	2347.1 µg/L	50.88	2347.1 ppb	50.88	2.17%
Tl 190.801†	-21.1	23.318 µg/L	5.6557	23.318 ppb	5.6557	24.25%
U 409.014†	-1364.3	-141.80 µg/L	5.257	-141.80 ppb	5.257	3.71%
V 292.402†	14934.2	161.36 µg/L	4.677	161.36 ppb	4.677	2.90%
Zn 213.857†	12742.6	286.60 µg/L	12.900	286.60 ppb	12.900	4.50%

Sequence No.: 16

Sample ID: 1202047712|955136|1

Analyst: JWJ

Initial Sample Wt:

Dilution:

Autosampler Location: 331

Date Collected: 3/16/2010 22:52:56

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047712|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97246.3	97246.3	100 %		22:53:27
1	Al 396.153Radial†	331903.1	330459.1	157740 µg/L	157740 ppb	22:53:27
1	Ca 317.933Radial†	80092.0	79329.4	28870 µg/L	28870 ppb	22:53:27
1	Fe 238.204 Radial†	11646.6	11579.7	136970 µg/L	136970 ppb	22:53:48
1	K 766.490 Radial†	45644.8	44944.4	20975 µg/L	20975 ppb	22:53:27
1	Mg 279.077 IEC†	1966.6	1949.4	25561 µg/L	25561 ppb	22:53:48
1	Na 589.592 Radial†	15411.1	15157.9	7565.4 µg/L	7565.4 ppb	22:53:27
1	Sr 421.552†	128850.0	128103.6	761.56 µg/L	761.56 ppb	22:53:27
1	Sc 361.383	2032491.6	2032491.6	97.104 %		22:54:54
1	Y 371.029	1436520.9	1436520.9	100.25 %		22:54:54
1	Ag 328.068†	63530.2	65885.1	544.42 µg/L	544.42 ppb	22:54:59
1	As 188.979†	372.6	387.0	550.54 µg/L	550.54 ppb	22:55:20
1	B 249.677†	12719.3	12799.3	510.40 µg/L	510.40 ppb	22:54:59
1	Ba 233.527†	71241.6	73374.8	1606.0 µg/L	1606.0 ppb	22:54:59
1	Be 313.107†	939408.1	968583.7	567.75 µg/L	567.75 ppb	22:54:54
1	Cd 226.502†	22555.7	23399.0	541.32 µg/L	541.32 ppb	22:54:59
1	Co 228.616†	12619.1	12947.4	549.33 µg/L	549.33 ppb	22:55:20
1	Cr 267.716†	28338.5	29103.4	633.44 µg/L	633.44 ppb	22:54:59
1	Cu 324.752†	97966.8	96511.8	656.12 µg/L	656.12 ppb	22:54:59
1	Mn 257.610†	870936.1	897597.8	2704.1 µg/L	2704.1 ppb	22:54:54
1	Mo 202.031†	5157.9	5306.7	530.31 µg/L	530.31 ppb	22:55:20
1	Ni 231.604†	10694.1	10636.1	597.67 µg/L	597.67 ppb	22:55:20
1	P 214.914†	1719.4	1498.3	2363.7 µg/L	2363.7 ppb	22:55:20
1	Pb 220.353†	2344.8	2384.5	639.40 µg/L	639.40 ppb	22:55:20
1	S 181.975 Axial†	1925.9	1960.8	6240.3 µg/L	6240.3 ppb	22:55:20
1	Sb 206.836†	428.5	418.6	374.38 µg/L	374.38 ppb	22:55:20
1	Se 196.026†	485.9	473.1	858.44 µg/L	858.44 ppb	22:55:20
1	SiO2†	562232.4	576220.7	104030 µg/L	104030 ppb	22:54:54
1	Si 251.611†	686894.6	706956.4	48062 µg/L	48062 ppb	22:54:54
1	Sn 189.927†	1385.6	1434.3	560.75 µg/L	560.75 ppb	22:55:20
1	Ti 334.940†	1469150.2	1513543.3	3537.7 µg/L	3537.7 ppb	22:54:54
1	Tl 190.801†	455.4	503.1	549.58 µg/L	549.58 ppb	22:55:20
1	U 409.014†	3883.6	4005.2	342.87 µg/L	342.87 ppb	22:54:59
1	V 292.402†	60754.6	62454.3	725.74 µg/L	725.74 ppb	22:54:59
1	Zn 213.857†	41676.8	41910.9	953.34 µg/L	953.34 ppb	22:54:59
2	Sc RADIAL	96701.8	96701.8	99.9 %		22:53:53
2	Al 396.153Radial†	331439.5	331855.4	158410 µg/L	158410 ppb	22:53:53
2	Ca 317.933Radial†	79658.8	79344.8	28875 µg/L	28875 ppb	22:53:53
2	Fe 238.204 Radial†	11650.1	11648.6	137790 µg/L	137790 ppb	22:54:14
2	K 766.490 Radial†	45584.9	45140.3	21066 µg/L	21066 ppb	22:53:53
2	Mg 279.077 IEC†	1961.6	1955.3	25639 µg/L	25639 ppb	22:54:14
2	Na 589.592 Radial†	15365.0	15198.2	7585.5 µg/L	7585.5 ppb	22:53:53
2	Sr 421.552†	128479.2	128454.8	763.65 µg/L	763.65 ppb	22:53:53
2	Sc 361.383	2022378.1	2022378.1	96.621 %		22:55:27
2	Y 371.029	1429961.0	1429961.0	99.797 %		22:55:27
2	Ag 328.068†	63968.4	66665.8	550.81 µg/L	550.81 ppb	22:55:33
2	As 188.979†	382.4	399.0	568.19 µg/L	568.19 ppb	22:55:54
2	B 249.677†	12805.9	12954.4	517.03 µg/L	517.03 ppb	22:55:33
2	Ba 233.527†	71642.9	74156.9	1623.2 µg/L	1623.2 ppb	22:55:33
2	Be 313.107†	935878.0	969768.1	568.44 µg/L	568.44 ppb	22:55:27
2	Cd 226.502†	22704.9	23669.5	547.66 µg/L	547.66 ppb	22:55:33
2	Co 228.616†	12569.0	12960.5	549.89 µg/L	549.89 ppb	22:55:54
2	Cr 267.716†	28566.2	29485.1	641.75 µg/L	641.75 ppb	22:55:33
2	Cu 324.752†	98754.0	97831.1	664.89 µg/L	664.89 ppb	22:55:33
2	Mn 257.610†	867704.8	898738.7	2707.5 µg/L	2707.5 ppb	22:55:27
2	Mo 202.031†	5159.3	5334.6	533.10 µg/L	533.10 ppb	22:55:54
2	Ni 231.604†	10669.7	10665.9	599.35 µg/L	599.35 ppb	22:55:54
2	P 214.914†	1708.1	1495.5	2357.6 µg/L	2357.6 ppb	22:55:54
2	Pb 220.353†	2351.6	2403.7	644.48 µg/L	644.48 ppb	22:55:54

2	S 181.975 Axial†	1934.4	1979.5	6299.7 µg/L	6299.7 ppb	22:55:54
2	Sb 206.836†	424.3	416.4	372.40 µg/L	372.40 ppb	22:55:54
2	Se 196.026†	488.0	477.7	865.30 µg/L	865.30 ppb	22:55:54
2	SiO2†	558608.2	575365.2	103870 µg/L	103870 ppb	22:55:27
2	Si 251.611†	682549.7	705997.0	47996 µg/L	47996 ppb	22:55:27
2	Sn 189.927†	1375.7	1431.3	559.56 µg/L	559.56 ppb	22:55:54
2	Ti 334.940†	1463497.4	1515258.7	3541.7 µg/L	3541.7 ppb	22:55:27
2	Tl 190.801†	460.8	511.0	557.45 µg/L	557.45 ppb	22:55:54
2	U 409.014†	4004.7	4150.5	355.95 µg/L	355.95 ppb	22:55:33
2	V 292.402†	61193.2	63221.1	734.74 µg/L	734.74 ppb	22:55:33
2	Zn 213.857†	41972.3	42431.4	965.26 µg/L	965.26 ppb	22:55:33
3	Sc RADIAL	96142.7	96142.7	99.3 %		22:54:20
3	Al 396.153Radial†	329561.7	331894.1	158430 µg/L	158430 ppb	22:54:20
3	Ca 317.933Radial†	79406.8	79554.7	28952 µg/L	28952 ppb	22:54:20
3	Fe 238.204 Radial†	11663.6	11729.9	138750 µg/L	138750 ppb	22:54:40
3	K 766.490 Radial†	45434.5	45254.2	21119 µg/L	21119 ppb	22:54:20
3	Mg 279.077 IEC†	1969.3	1974.6	25891 µg/L	25891 ppb	22:54:40
3	Na 589.592 Radial†	15330.7	15253.0	7612.9 µg/L	7612.9 ppb	22:54:20
3	Sr 421.552†	127962.1	128682.0	765.00 µg/L	765.00 ppb	22:54:20
3	Sc 361.383	2025744.3	2025744.3	96.782 %		22:56:01
3	Y 371.029	1431446.2	1431446.2	99.901 %		22:56:01
3	Ag 328.068†	62706.8	65252.3	539.29 µg/L	539.29 ppb	22:56:07
3	As 188.979†	358.1	373.3	530.16 µg/L	530.16 ppb	22:56:27
3	B 249.677†	12482.1	12597.8	500.28 µg/L	500.28 ppb	22:56:07
3	Ba 233.527†	68826.6	71123.7	1556.8 µg/L	1556.8 ppb	22:56:07
3	Be 313.107†	906780.7	938093.6	549.88 µg/L	549.88 ppb	22:56:01
3	Cd 226.502†	21983.6	22885.2	528.87 µg/L	528.87 ppb	22:56:07
3	Co 228.616†	11580.1	11917.1	505.28 µg/L	505.28 ppb	22:56:27
3	Cr 267.716†	27083.1	27903.5	607.33 µg/L	607.33 ppb	22:56:07
3	Cu 324.752†	94504.4	93270.4	635.29 µg/L	635.29 ppb	22:56:07
3	Mn 257.610†	842998.8	871718.9	2626.4 µg/L	2626.4 ppb	22:56:01
3	Mo 202.031†	4744.6	4897.2	489.86 µg/L	489.86 ppb	22:56:27
3	Ni 231.604†	9880.3	9831.9	552.64 µg/L	552.64 ppb	22:56:27
3	P 214.914†	1607.8	1388.9	2182.3 µg/L	2182.3 ppb	22:56:27
3	Pb 220.353†	2207.1	2250.3	604.22 µg/L	604.22 ppb	22:56:27
3	S 181.975 Axial†	1830.1	1868.5	5946.3 µg/L	5946.3 ppb	22:56:27
3	Sb 206.836†	388.3	378.5	338.26 µg/L	338.26 ppb	22:56:27
3	Se 196.026†	464.7	452.8	844.79 µg/L	844.79 ppb	22:56:27
3	SiO2†	543575.9	558872.2	100900 µg/L	100900 ppb	22:56:01
3	Si 251.611†	663759.3	685407.9	46597 µg/L	46597 ppb	22:56:01
3	Sn 189.927†	1268.8	1318.5	515.64 µg/L	515.64 ppb	22:56:27
3	Ti 334.940†	1414898.5	1462526.8	3418.3 µg/L	3418.3 ppb	22:56:01
3	Tl 190.801†	428.8	477.2	523.30 µg/L	523.30 ppb	22:56:27
3	U 409.014†	3738.6	3868.8	330.23 µg/L	330.23 ppb	22:56:07
3	V 292.402†	58203.1	60026.3	696.47 µg/L	696.47 ppb	22:56:07
3	Zn 213.857†	40548.5	40888.0	929.92 µg/L	929.92 ppb	22:56:07

Mean Data: 1202047712|955136|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2026871.3	96.835 %	0.2460			0.25%
Sc RADIAL	96696.9	99.9 %	0.57			0.57%
Y 371.029	1432642.7	99.984 %	0.2401			0.24%
Ag 328.068†	65934.4	544.84 µg/L	5.774	544.84 ppb	5.774	1.06%
Al 396.153Radial†	331402.9	158190 µg/L	390.5	158190 ppb	390.5	0.25%
As 188.979†	386.4	549.63 µg/L	19.034	549.63 ppb	19.034	3.46%
B 249.677†	12783.8	509.24 µg/L	8.431	509.24 ppb	8.431	1.66%
Ba 233.527†	72885.1	1595.3 µg/L	34.48	1595.3 ppb	34.48	2.16%
Be 313.107†	958815.1	562.02 µg/L	10.523	562.02 ppb	10.523	1.87%
Ca 317.933Radial†	79409.7	28899 µg/L	45.8	28899 ppb	45.8	0.16%
Cd 226.502†	23317.9	539.28 µg/L	9.564	539.28 ppb	9.564	1.77%
Co 228.616†	12608.3	534.83 µg/L	25.595	534.83 ppb	25.595	4.79%
Cr 267.716†	28830.6	627.50 µg/L	17.963	627.50 ppb	17.963	2.86%
Cu 324.752†	95871.1	652.10 µg/L	15.208	652.10 ppb	15.208	2.33%
Fe 238.204 Radial†	11652.7	137840 µg/L	888.7	137840 ppb	888.7	0.64%
K 766.490 Radial†	45113.0	21053 µg/L	73.1	21053 ppb	73.1	0.35%
Mg 279.077 IEC†	1959.8	25697 µg/L	172.2	25697 ppb	172.2	0.67%
Mn 257.610†	889351.8	2679.3 µg/L	45.89	2679.3 ppb	45.89	1.71%
Mo 202.031†	5179.5	517.76 µg/L	24.199	517.76 ppb	24.199	4.67%
Na 589.592 Radial†	15203.1	7587.9 µg/L	23.83	7587.9 ppb	23.83	0.31%



Ni 231.604†	10378.0	583.22 µg/L	26.496	583.22 ppb	26.496	4.54%
P 214.914†	1460.9	2301.2 µg/L	102.99	2301.2 ppb	102.99	4.48%
Pb 220.353†	2346.2	629.37 µg/L	21.927	629.37 ppb	21.927	3.48%
S 181.975 Axial†	1936.3	6162.1 µg/L	189.19	6162.1 ppb	189.19	3.07%
Sb 206.836†	404.5	361.68 µg/L	20.308	361.68 ppb	20.308	5.61%
Se 196.026†	467.9	856.18 µg/L	10.439	856.18 ppb	10.439	1.22%
SiO2†	570152.7	102930 µg/L	1765.4	102930 ppb	1765.4	1.72%
Si 251.611†	699453.8	47552 µg/L	827.6	47552 ppb	827.6	1.74%
Sn 189.927†	1394.7	545.32 µg/L	25.705	545.32 ppb	25.705	4.71%
Sr 421.552†	128413.5	763.40 µg/L	1.732	763.40 ppb	1.732	0.23%
Ti 334.940†	1497109.6	3499.2 µg/L	70.07	3499.2 ppb	70.07	2.00%
Tl 190.801†	497.1	543.44 µg/L	17.885	543.44 ppb	17.885	3.29%
U 409.014†	4008.2	343.02 µg/L	12.862	343.02 ppb	12.862	3.75%
V 292.402†	61900.5	718.99 µg/L	20.011	718.99 ppb	20.011	2.78%
Zn 213.857†	41743.4	949.50 µg/L	17.980	949.50 ppb	17.980	1.89%

Sequence No.: 17  
 Sample ID: 1202047713|955136|1  
 Analyst: JWW  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 332  
 Date Collected: 3/16/2010 22:56:38  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202047713|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96078.8	96078.8	99.3 %		22:57:09
1	Al 396.153Radial†	324462.5	326977.9	156080 µg/L	156080 ppb	22:57:09
1	Ca 317.933Radial†	88027.7	88292.5	32132 µg/L	32132 ppb	22:57:09
1	Fe 238.204 Radial†	11443.9	11516.4	136220 µg/L	136220 ppb	22:57:29
1	K 766.490 Radial†	45248.8	45097.6	21046 µg/L	21046 ppb	22:57:09
1	Mg 279.077 IEC†	1937.2	1943.5	25485 µg/L	25485 ppb	22:57:29
1	Na 589.592 Radial†	15028.3	14958.7	7465.9 µg/L	7465.9 ppb	22:57:09
1	Sr 421.552†	133323.3	134168.5	797.61 µg/L	797.61 ppb	22:57:09
1	Sc 361.383	2024520.0	2024520.0	96.723 %		22:58:35
1	Y 371.029	1423467.9	1423467.9	99.344 %		22:58:35
1	Ag 328.068†	63184.5	65785.4	543.77 µg/L	543.77 ppb	22:58:41
1	As 188.979†	380.1	396.3	563.96 µg/L	563.96 ppb	22:59:01
1	B 249.677†	12850.6	12986.6	519.30 µg/L	519.30 ppb	22:58:41
1	Ba 233.527†	75704.2	78277.4	1713.3 µg/L	1713.3 ppb	22:58:41
1	Be 313.107†	921458.5	953835.3	559.00 µg/L	559.00 ppb	22:58:35
1	Cd 226.502†	22349.4	23277.1	538.51 µg/L	538.51 ppb	22:58:41
1	Co 228.616†	12696.1	13078.1	554.47 µg/L	554.47 ppb	22:59:01
1	Cr 267.716†	28505.2	29390.7	639.71 µg/L	639.71 ppb	22:58:41
1	Cu 324.752†	97765.0	96700.5	657.22 µg/L	657.22 ppb	22:58:41
1	Mn 257.610†	1015761.4	1050861.2	3164.7 µg/L	3164.7 ppb	22:58:35
1	Mo 202.031†	5172.0	5342.1	533.79 µg/L	533.79 ppb	22:59:01
1	Ni 231.604†	10703.3	10689.0	600.62 µg/L	600.62 ppb	22:59:01
1	P 214.914†	1754.8	1541.9	2436.0 µg/L	2436.0 ppb	22:59:01
1	Pb 220.353†	2373.1	2423.3	649.43 µg/L	649.43 ppb	22:59:01
1	S 181.975 Axial†	1931.8	1974.7	6284.6 µg/L	6284.6 ppb	22:59:01
1	Sb 206.836†	439.3	431.5	385.84 µg/L	385.84 ppb	22:59:01
1	Se 196.026†	469.1	457.6	841.25 µg/L	841.25 ppb	22:59:01
1	SiO2†	534858.0	550198.7	99331 µg/L	99331 ppb	22:58:35
1	Si 251.611†	653420.0	675133.0	45898 µg/L	45898 ppb	22:58:35
1	Sn 189.927†	1366.8	1420.6	555.71 µg/L	555.71 ppb	22:59:01
1	Ti 334.940†	1557834.6	1611189.5	3766.1 µg/L	3766.1 ppb	22:58:35
1	Tl 190.801†	459.8	509.5	558.80 µg/L	558.80 ppb	22:59:01
1	U 409.014†	4074.3	4218.1	362.10 µg/L	362.10 ppb	22:58:41
1	V 292.402†	63002.7	65024.8	756.25 µg/L	756.25 ppb	22:58:41
1	Zn 213.857†	40162.6	40514.4	921.21 µg/L	921.21 ppb	22:58:41
2	Sc RADIAL	95641.2	95641.2	98.8 %		22:57:35
2	Al 396.153Radial†	323014.7	327008.3	156090 µg/L	156090 ppb	22:57:35
2	Ca 317.933Radial†	87643.2	88309.1	32138 µg/L	32138 ppb	22:57:35
2	Fe 238.204 Radial†	11517.0	11643.2	137720 µg/L	137720 ppb	22:57:55
2	K 766.490 Radial†	45076.0	45131.3	21062 µg/L	21062 ppb	22:57:35
2	Mg 279.077 IEC†	1952.3	1967.8	25803 µg/L	25803 ppb	22:57:55
2	Na 589.592 Radial†	14955.4	14954.2	7463.7 µg/L	7463.7 ppb	22:57:35
2	Sr 421.552†	132980.0	134435.6	799.20 µg/L	799.20 ppb	22:57:35
2	Sc 361.383	2029318.7	2029318.7	96.952 %		22:59:09
2	Y 371.029	1428665.8	1428665.8	99.707 %		22:59:09
2	Ag 328.068†	62911.3	65349.0	540.34 µg/L	540.34 ppb	22:59:15
2	As 188.979†	375.5	390.6	555.42 µg/L	555.42 ppb	22:59:35
2	B 249.677†	12746.2	12847.5	512.20 µg/L	512.20 ppb	22:59:15
2	Ba 233.527†	75152.2	77523.0	1696.8 µg/L	1696.8 ppb	22:59:15
2	Be 313.107†	921819.1	951954.4	557.89 µg/L	557.89 ppb	22:59:09
2	Cd 226.502†	22216.7	23085.6	533.78 µg/L	533.78 ppb	22:59:15
2	Co 228.616†	12567.8	12914.8	547.47 µg/L	547.47 ppb	22:59:35
2	Cr 267.716†	28429.7	29243.1	636.50 µg/L	636.50 ppb	22:59:15
2	Cu 324.752†	97448.4	96134.9	653.80 µg/L	653.80 ppb	22:59:15
2	Mn 257.610†	1017223.3	1049885.7	3161.8 µg/L	3161.8 ppb	22:59:09
2	Mo 202.031†	5128.0	5284.1	528.10 µg/L	528.10 ppb	22:59:35
2	Ni 231.604†	10584.3	10540.1	592.29 µg/L	592.29 ppb	22:59:35
2	P 214.914†	1735.0	1517.1	2393.9 µg/L	2393.9 ppb	22:59:35
2	Pb 220.353†	2353.5	2397.3	642.63 µg/L	642.63 ppb	22:59:35

2	S 181.975 Axial†	1928.2	1966.2	6257.5 µg/L	6257.5 ppb	22:59:35
2	Sb 206.836†	425.7	416.4	372.30 µg/L	372.30 ppb	22:59:35
2	Se 196.026†	471.4	458.9	847.00 µg/L	847.00 ppb	22:59:35
2	SiO2†	533728.9	547726.4	98884 µg/L	98884 ppb	22:59:09
2	Si 251.611†	652360.5	672442.8	45715 µg/L	45715 ppb	22:59:09
2	Sn 189.927†	1359.8	1410.0	551.59 µg/L	551.59 ppb	22:59:35
2	Ti 334.940†	1557879.4	1607427.1	3757.2 µg/L	3757.2 ppb	22:59:09
2	Tl 190.801†	457.1	505.6	555.13 µg/L	555.13 ppb	22:59:35
2	U 409.014†	3975.0	4105.7	351.69 µg/L	351.69 ppb	22:59:15
2	V 292.402†	62680.4	64538.4	750.25 µg/L	750.25 ppb	22:59:15
2	Zn 213.857†	39870.7	40115.1	911.97 µg/L	911.97 ppb	22:59:15
3	Sc RADIAL	97111.1	97111.1	100 %		22:58:01
3	Al 396.153Radial†	328426.7	327454.1	156310 µg/L	156310 ppb	22:58:01
3	Ca 317.933Radial†	89162.0	88480.3	32200 µg/L	32200 ppb	22:58:01
3	Fe 238.204 Radial†	11556.0	11505.6	136100 µg/L	136100 ppb	22:58:21
3	K 766.490 Radial†	45738.5	45101.1	21048 µg/L	21048 ppb	22:58:01
3	Mg 279.077 IEC†	1954.5	1940.0	25438 µg/L	25438 ppb	22:58:21
3	Na 589.592 Radial†	15251.4	15020.1	7496.6 µg/L	7496.6 ppb	22:58:01
3	Sr 421.552†	135305.1	134715.9	800.87 µg/L	800.87 ppb	22:58:01
3	Sc 361.383	2022705.2	2022705.2	96.636 %		22:59:43
3	Y 371.029	1422437.2	1422437.2	99.272 %		22:59:43
3	Ag 328.068†	61265.9	63858.6	527.99 µg/L	527.99 ppb	22:59:49
3	As 188.979†	344.4	359.6	509.90 µg/L	509.90 ppb	23:00:09
3	B 249.677†	12354.1	12484.7	496.53 µg/L	496.53 ppb	22:59:49
3	Ba 233.527†	71861.2	74370.9	1627.8 µg/L	1627.8 ppb	22:59:49
3	Be 313.107†	888244.3	920319.8	539.36 µg/L	539.36 ppb	22:59:43
3	Cd 226.502†	21362.1	22276.3	514.68 µg/L	514.68 ppb	22:59:49
3	Co 228.616†	11491.8	11843.7	501.70 µg/L	501.70 ppb	23:00:09
3	Cr 267.716†	26764.9	27616.3	601.09 µg/L	601.09 ppb	22:59:49
3	Cu 324.752†	92727.8	91578.6	623.74 µg/L	623.74 ppb	22:59:49
3	Mn 257.610†	980063.3	1014862.8	3056.5 µg/L	3056.5 ppb	22:59:43
3	Mo 202.031†	4705.7	4864.4	486.51 µg/L	486.51 ppb	23:00:09
3	Ni 231.604†	9755.6	9718.2	546.23 µg/L	546.23 ppb	23:00:09
3	P 214.914†	1617.7	1401.6	2206.1 µg/L	2206.1 ppb	23:00:09
3	Pb 220.353†	2218.3	2265.3	607.95 µg/L	607.95 ppb	23:00:09
3	S 181.975 Axial†	1808.9	1849.4	5885.6 µg/L	5885.6 ppb	23:00:09
3	Sb 206.836†	401.4	392.7	350.89 µg/L	350.89 ppb	23:00:09
3	Se 196.026†	466.3	455.2	838.58 µg/L	838.58 ppb	23:00:09
3	SiO2†	516464.1	531660.6	95984 µg/L	95984 ppb	22:59:43
3	Si 251.611†	631100.4	652642.7	44369 µg/L	44369 ppb	22:59:43
3	Sn 189.927†	1244.1	1294.8	506.77 µg/L	506.77 ppb	23:00:09
3	Ti 334.940†	1497143.3	1549830.8	3622.6 µg/L	3622.6 ppb	22:59:43
3	Tl 190.801†	428.5	477.5	525.98 µg/L	525.98 ppb	23:00:09
3	U 409.014†	3849.8	3989.6	341.37 µg/L	341.37 ppb	22:59:49
3	V 292.402†	59260.2	61210.6	710.76 µg/L	710.76 ppb	22:59:49
3	Zn 213.857†	38253.6	38576.2	876.89 µg/L	876.89 ppb	22:59:49

Mean Data: 1202047713|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2025514.7	96.771 %	0.1633			0.17%
Sc RADIAL	96277.0	99.5 %	0.78			0.78%
Y 371.029	1424857.0	99.441 %	0.2330			0.23%
Ag 328.068†	64997.7	537.36 µg/L	8.299	537.36 ppb	8.299	1.54%
Al 396.153Radial†	327146.8	156160 µg/L	127.8	156160 ppb	127.8	0.08%
As 188.979†	382.2	543.10 µg/L	29.062	543.10 ppb	29.062	5.35%
B 249.677†	12773.0	509.34 µg/L	11.652	509.34 ppb	11.652	2.29%
Ba 233.527†	76723.8	1679.3 µg/L	45.36	1679.3 ppb	45.36	2.70%
Be 313.107†	942036.5	552.08 µg/L	11.033	552.08 ppb	11.033	2.00%
Ca 317.933Radial†	88360.6	32156 µg/L	37.8	32156 ppb	37.8	0.12%
Cd 226.502†	22879.7	528.99 µg/L	12.617	528.99 ppb	12.617	2.39%
Co 228.616†	12612.2	534.55 µg/L	28.662	534.55 ppb	28.662	5.36%
Cr 267.716†	28750.0	625.76 µg/L	21.430	625.76 ppb	21.430	3.42%
Cu 324.752†	94804.7	644.92 µg/L	18.423	644.92 ppb	18.423	2.86%
Fe 238.204 Radial†	11555.1	136680 µg/L	904.8	136680 ppb	904.8	0.66%
K 766.490 Radial†	45110.0	21052 µg/L	8.6	21052 ppb	8.6	0.04%
Mg 279.077 IEC†	1950.4	25575 µg/L	198.6	25575 ppb	198.6	0.78%
Mn 257.610†	1038536.6	3127.6 µg/L	61.66	3127.6 ppb	61.66	1.97%
Mo 202.031†	5163.5	516.13 µg/L	25.811	516.13 ppb	25.811	5.00%
Na 589.592 Radial†	14977.7	7475.4 µg/L	18.38	7475.4 ppb	18.38	0.25%

Ni 231.604†	10315.8	579.71 µg/L	29.294	579.71 ppb	29.294	5.05%
P 214.914†	1486.9	2345.3 µg/L	122.41	2345.3 ppb	122.41	5.22%
Pb 220.353†	2362.0	633.34 µg/L	22.245	633.34 ppb	22.245	3.51%
S 181.975 Axial†	1930.1	6142.6 µg/L	222.94	6142.6 ppb	222.94	3.63%
Sb 206.836†	413.5	369.68 µg/L	17.623	369.68 ppb	17.623	4.77%
Se 196.026†	457.2	842.27 µg/L	4.302	842.27 ppb	4.302	0.51%
SiO2†	543195.2	98066 µg/L	1817.2	98066 ppb	1817.2	1.85%
Si 251.611†	666739.5	45328 µg/L	835.0	45328 ppb	835.0	1.84%
Sn 189.927†	1375.1	538.02 µg/L	27.146	538.02 ppb	27.146	5.05%
Sr 421.552†	134440.0	799.23 µg/L	1.627	799.23 ppb	1.627	0.20%
Ti 334.940†	1589482.5	3715.3 µg/L	80.41	3715.3 ppb	80.41	2.16%
Tl 190.801†	497.5	546.63 µg/L	17.985	546.63 ppb	17.985	3.29%
U 409.014†	4104.5	351.72 µg/L	10.367	351.72 ppb	10.367	2.95%
V 292.402†	63591.2	739.09 µg/L	24.712	739.09 ppb	24.712	3.34%
Zn 213.857†	39735.2	903.36 µg/L	23.383	903.36 ppb	23.383	2.59%

Sequence No.: 18

Sample ID: 1202047711|955136|5

Analyst: JWJ

Initial Sample Wt:

Dilution:

Autosampler Location: 333

Date Collected: 3/16/2010 23:00:18

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202047711|955136|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	94830.8	94830.8	98.0 %		23:00:49
1	Al 396.153Radial†	45535.7	46595.0	22243 µg/L	22243 ppb	23:00:49
1	Ca 317.933Radial†	19037.0	19044.6	6930.8 µg/L	6930.8 ppb	23:00:49
1	Fe 238.204 Radial†	2089.3	2120.4	25080 µg/L	25080 ppb	23:01:09
1	K 766.490 Radial†	6461.3	6109.4	2851.1 µg/L	2851.1 ppb	23:00:49
1	Mg 279.077 IEC†	309.3	307.7	4029.0 µg/L	4029.0 ppb	23:01:09
1	Na 589.592 Radial†	1174.2	1017.8	508.01 µg/L	508.01 ppb	23:00:49
1	Sr 421.552†	10087.3	10156.1	60.377 µg/L	60.377 ppb	23:00:49
1	Sc 361.383	2038854.0	2038854.0	97.408 %		23:02:11
1	Y 371.029	1400069.2	1400069.2	97.711 %		23:02:11
1	Ag 328.068†	-724.8	-283.9	-0.0972 µg/L	-0.0972 ppb	23:02:17
1	As 188.979†	1.2	4.5	2.6848 µg/L	2.6848 ppb	23:02:37
1	B 249.677†	509.7	223.9	-2.9012 µg/L	-2.9012 ppb	23:02:17
1	Ba 233.527†	16243.1	16683.8	364.94 µg/L	364.94 ppb	23:02:17
1	Be 313.107†	2097.3	3312.0	1.7869 µg/L	1.7869 ppb	23:02:17
1	Cd 226.502†	-36.2	133.4	0.3496 µg/L	0.3496 ppb	23:02:37
1	Co 228.616†	195.0	152.1	5.6641 µg/L	5.6641 ppb	23:02:37
1	Cr 267.716†	770.0	710.3	15.472 µg/L	15.472 ppb	23:02:37
1	Cu 324.752†	5624.8	1397.8	13.845 µg/L	13.845 ppb	23:02:17
1	Mn 257.610†	129746.0	133885.5	403.60 µg/L	403.60 ppb	23:02:17
1	Mo 202.031†	25.2	20.8	3.0088 µg/L	3.0088 ppb	23:02:37
1	Ni 231.604†	583.5	222.1	12.775 µg/L	12.775 ppb	23:02:37
1	P 214.914†	574.9	317.8	512.64 µg/L	512.64 ppb	23:02:37
1	Pb 220.353†	100.7	73.2	21.296 µg/L	21.296 ppb	23:02:37
1	S 181.975 Axial†	70.2	49.5	157.50 µg/L	157.50 ppb	23:02:37
1	Sb 206.836†	19.3	-2.9	-2.7998 µg/L	-2.7998 ppb	23:02:37
1	Se 196.026†	-5.9	-33.4	44.718 µg/L	44.718 ppb	23:02:37
1	SiO2†	117397.1	117741.3	21257 µg/L	21257 ppb	23:02:17
1	Si 251.611†	141932.3	145285.1	9877.0 µg/L	9877.0 ppb	23:02:17
1	Sn 189.927†	-14.6	-7.6	-2.3685 µg/L	-2.3685 ppb	23:02:37
1	Ti 334.940†	173295.9	178484.6	417.15 µg/L	417.15 ppb	23:02:11
1	Tl 190.801†	-29.6	3.7	11.590 µg/L	11.590 ppb	23:02:37
1	U 409.014†	-267.3	-268.6	-28.297 µg/L	-28.297 ppb	23:02:17
1	V 292.402†	3282.9	3257.9	35.304 µg/L	35.304 ppb	23:02:17
1	Zn 213.857†	3496.5	2580.7	57.927 µg/L	57.927 ppb	23:02:37
2	Sc RADIAL	95383.3	95383.3	98.5 %		23:01:14
2	Al 396.153Radial†	45733.8	46526.7	22210 µg/L	22210 ppb	23:01:14
2	Ca 317.933Radial†	19111.0	19007.2	6917.1 µg/L	6917.1 ppb	23:01:14
2	Fe 238.204 Radial†	2081.7	2100.4	24843 µg/L	24843 ppb	23:01:35
2	K 766.490 Radial†	6485.3	6095.4	2844.6 µg/L	2844.6 ppb	23:01:14
2	Mg 279.077 IEC†	311.1	307.7	4030.4 µg/L	4030.4 ppb	23:01:35
2	Na 589.592 Radial†	1204.0	1041.1	519.62 µg/L	519.62 ppb	23:01:14
2	Sr 421.552†	10156.9	10167.1	60.442 µg/L	60.442 ppb	23:01:14
2	Sc 361.383	2048786.3	2048786.3	97.882 %		23:02:44
2	Y 371.029	1409150.7	1409150.7	98.345 %		23:02:44
2	Ag 328.068†	-788.4	-345.3	-0.6088 µg/L	-0.6088 ppb	23:02:50
2	As 188.979†	-0.4	2.8	0.2774 µg/L	0.2774 ppb	23:03:10
2	B 249.677†	503.8	215.3	-3.1663 µg/L	-3.1663 ppb	23:02:50
2	Ba 233.527†	16162.6	16520.6	361.38 µg/L	361.38 ppb	23:02:50
2	Be 313.107†	2185.6	3391.7	1.8343 µg/L	1.8343 ppb	23:02:50
2	Cd 226.502†	-40.6	129.1	0.2745 µg/L	0.2745 ppb	23:03:10
2	Co 228.616†	186.5	142.5	5.2553 µg/L	5.2553 ppb	23:03:10
2	Cr 267.716†	772.5	708.9	15.443 µg/L	15.443 ppb	23:03:10
2	Cu 324.752†	5627.1	1372.2	13.633 µg/L	13.633 ppb	23:02:50
2	Mn 257.610†	129496.6	132985.0	400.88 µg/L	400.88 ppb	23:02:50
2	Mo 202.031†	23.7	19.1	2.8340 µg/L	2.8340 ppb	23:03:10
2	Ni 231.604†	586.0	221.7	12.753 µg/L	12.753 ppb	23:03:10
2	P 214.914†	581.8	322.0	519.94 µg/L	519.94 ppb	23:03:10
2	Pb 220.353†	92.6	64.4	18.997 µg/L	18.997 ppb	23:03:10

2	S 181.975 Axial†	78.0	57.2	181.99 µg/L	181.99 ppb	23:03:10
2	Sb 206.836†	21.4	-0.9	-1.0075 µg/L	-1.0075 ppb	23:03:10
2	Se 196.026†	-14.6	-42.3	35.591 µg/L	35.591 ppb	23:03:10
2	SiO2†	116997.8	116749.1	21077 µg/L	21077 ppb	23:02:50
2	Si 251.611†	141140.6	143769.8	9774.0 µg/L	9774.0 ppb	23:02:50
2	Sn 189.927†	-9.1	-1.8	-0.1258 µg/L	-0.1258 ppb	23:03:10
2	Ti 334.940†	173583.1	177915.5	415.82 µg/L	415.82 ppb	23:02:44
2	Tl 190.801†	-33.5	-0.1	7.8038 µg/L	7.8038 ppb	23:03:10
2	U 409.014†	-322.4	-323.5	-33.250 µg/L	-33.250 ppb	23:02:50
2	V 292.402†	3293.3	3252.2	35.261 µg/L	35.261 ppb	23:02:50
2	Zn 213.857†	3480.9	2547.3	57.170 µg/L	57.170 ppb	23:03:10
3	Sc RADIAL	95185.5	95185.5	98.3 %		23:01:40
3	Al 396.153Radial†	45406.8	46290.7	22098 µg/L	22098 ppb	23:01:40
3	Ca 317.933Radial†	19096.3	19032.6	6926.4 µg/L	6926.4 ppb	23:01:40
3	Fe 238.204 Radial†	2079.6	2102.7	24870 µg/L	24870 ppb	23:02:01
3	K 766.490 Radial†	6471.1	6094.7	2844.3 µg/L	2844.3 ppb	23:01:40
3	Mg 279.077 IEC†	307.5	304.7	3990.3 µg/L	3990.3 ppb	23:02:01
3	Na 589.592 Radial†	1166.4	1005.5	501.84 µg/L	501.84 ppb	23:01:40
3	Sr 421.552†	10052.1	10082.0	59.936 µg/L	59.936 ppb	23:01:40
3	Sc 361.383	2045630.8	2045630.8	97.732 %		23:03:17
3	Y 371.029	1406230.7	1406230.7	98.141 %		23:03:17
3	Ag 328.068†	-702.8	-259.0	0.0710 µg/L	0.0710 ppb	23:03:22
3	As 188.979†	1.9	5.2	3.6939 µg/L	3.6939 ppb	23:03:43
3	B 249.677†	508.4	220.9	-2.9338 µg/L	-2.9338 ppb	23:03:22
3	Ba 233.527†	15505.4	15873.7	347.22 µg/L	347.22 ppb	23:03:22
3	Be 313.107†	2023.4	3229.2	1.7454 µg/L	1.7454 ppb	23:03:22
3	Cd 226.502†	-52.2	117.2	-0.0130 µg/L	-0.0130 ppb	23:03:43
3	Co 228.616†	178.0	134.1	4.9304 µg/L	4.9304 ppb	23:03:43
3	Cr 267.716†	661.1	596.2	12.989 µg/L	12.989 ppb	23:03:43
3	Cu 324.752†	5593.7	1346.8	13.473 µg/L	13.473 ppb	23:03:22
3	Mn 257.610†	123080.0	126623.6	381.76 µg/L	381.76 ppb	23:03:22
3	Mo 202.031†	24.7	20.1	2.9381 µg/L	2.9381 ppb	23:03:43
3	Ni 231.604†	557.8	193.8	11.188 µg/L	11.188 ppb	23:03:43
3	P 214.914†	550.1	290.5	467.56 µg/L	467.56 ppb	23:03:43
3	Pb 220.353†	82.3	54.1	16.276 µg/L	16.276 ppb	23:03:43
3	S 181.975 Axial†	67.3	46.4	147.51 µg/L	147.51 ppb	23:03:43
3	Sb 206.836†	22.6	0.4	0.1436 µg/L	0.1436 ppb	23:03:43
3	Se 196.026†	-1.2	-28.5	48.614 µg/L	48.614 ppb	23:03:43
3	SiO2†	112706.0	112542.1	20318 µg/L	20318 ppb	23:03:22
3	Si 251.611†	136011.7	138744.4	9432.4 µg/L	9432.4 ppb	23:03:22
3	Sn 189.927†	-8.5	-1.3	0.0933 µg/L	0.0933 ppb	23:03:43
3	Ti 334.940†	166139.9	170573.1	398.66 µg/L	398.66 ppb	23:03:17
3	Tl 190.801†	-31.7	1.7	9.3152 µg/L	9.3152 ppb	23:03:43
3	U 409.014†	-356.9	-359.4	-36.510 µg/L	-36.510 ppb	23:03:22
3	V 292.402†	3093.2	3052.7	32.894 µg/L	32.894 ppb	23:03:22
3	Zn 213.857†	3150.2	2214.5	49.515 µg/L	49.515 ppb	23:03:43

## Mean Data: 1202047711|955136|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2044423.7	97.674 %		0.2425			0.25%
Sc RADIAL	95133.2	98.3 %		0.29			0.29%
Y 371.029	1405150.2	98.065 %		0.3236			0.33%
Ag 328.068†	-296.1	-0.2117 µg/L		0.35409	-0.2117 ppb	0.35409	167.29%
Al 396.153Radial†	46470.8	22184 µg/L		76.2	22184 ppb	76.2	0.34%
As 188.979†	4.2	2.2187 µg/L		1.75531	2.2187 ppb	1.75531	79.11%
B 249.677†	220.0	-3.0004 µg/L		0.14458	-3.0004 ppb	0.14458	4.82%
Ba 233.527†	16359.4	357.85 µg/L		9.372	357.85 ppb	9.372	2.62%
Be 313.107†	3311.0	1.7889 µg/L		0.04449	1.7889 ppb	0.04449	2.49%
Ca 317.933Radial†	19028.2	6924.8 µg/L		6.95	6924.8 ppb	6.95	0.10%
Cd 226.502†	126.6	0.2037 µg/L		0.19136	0.2037 ppb	0.19136	93.95%
Co 228.616†	142.9	5.2833 µg/L		0.36763	5.2833 ppb	0.36763	6.96%
Cr 267.716†	671.8	14.635 µg/L		1.4252	14.635 ppb	1.4252	9.74%
Cu 324.752†	1372.3	13.650 µg/L		0.1868	13.650 ppb	0.1868	1.37%
Fe 238.204 Radial†	2107.8	24931 µg/L		129.9	24931 ppb	129.9	0.52%
K 766.490 Radial†	6099.8	2846.7 µg/L		3.85	2846.7 ppb	3.85	0.14%
Mg 279.077 IEC†	306.7	4016.6 µg/L		22.75	4016.6 ppb	22.75	0.57%
Mn 257.610†	131164.7	395.41 µg/L		11.899	395.41 ppb	11.899	3.01%
Mo 202.031†	20.0	2.9270 µg/L		0.08793	2.9270 ppb	0.08793	3.00%
Na 589.592 Radial†	1021.5	509.82 µg/L		9.027	509.82 ppb	9.027	1.77%

Ni 231.604†	212.6	12.239 µg/L	0.9102	12.239 ppb	0.9102	7.44%
P 214.914†	310.1	500.05 µg/L	28.370	500.05 ppb	28.370	5.67%
Pb 220.353†	63.9	18.857 µg/L	2.5128	18.857 ppb	2.5128	13.33%
S 181.975 Axial†	51.0	162.33 µg/L	17.741	162.33 ppb	17.741	10.93%
Sb 206.836†	-1.1	-1.2212 µg/L	1.48332	-1.2212 ppb	1.48332	121.46%
Se 196.026†	-34.7	42.974 µg/L	6.6846	42.974 ppb	6.6846	15.55%
SiO2†	115677.5	20884 µg/L	498.3	20884 ppb	498.3	2.39%
Si 251.611†	142599.8	9694.5 µg/L	232.76	9694.5 ppb	232.76	2.40%
Sn 189.927†	-3.5	-0.8003 µg/L	1.36246	-0.8003 ppb	1.36246	170.24%
Sr 421.552†	10135.1	60.252 µg/L	0.2752	60.252 ppb	0.2752	0.46%
Ti 334.940†	175657.8	410.55 µg/L	10.317	410.55 ppb	10.317	2.51%
Tl 190.801†	1.8	9.5695 µg/L	1.90571	9.5695 ppb	1.90571	19.91%
U 409.014†	-317.2	-32.686 µg/L	4.1359	-32.686 ppb	4.1359	12.65%
V 292.402†	3187.6	34.486 µg/L	1.3791	34.486 ppb	1.3791	4.00%
Zn 213.857†	2447.5	54.871 µg/L	4.6535	54.871 ppb	4.6535	8.48%

Sequence No.: 19

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 3/16/2010 23:03:56

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95147.6	95147.6	98.3 %		23:04:30
1	Al 396.153Radial†	10781.8	11087.0	5281.1 µg/L	5281.1 ppb	23:04:30
1	Ca 317.933Radial†	14741.8	14610.7	5317.2 µg/L	5317.2 ppb	23:04:30
1	Fe 238.204 Radial†	462.6	458.7	5436.4 µg/L	5436.4 ppb	23:04:50
1	K 766.490 Radial†	11510.6	11223.8	5237.9 µg/L	5237.9 ppb	23:04:30
1	Mg 279.077 IEC†	409.3	408.3	5386.8 µg/L	5386.8 ppb	23:04:50
1	Na 589.592 Radial†	21153.1	21337.3	10650 µg/L	10650 ppb	23:04:30
1	Sr 421.552†	87319.9	88686.2	527.23 µg/L	527.23 ppb	23:04:30
1	Sc 361.383	2052957.9	2052957.9	98.082 %		23:05:54
1	Y 371.029	1403973.6	1403973.6	97.983 %		23:05:54
1	Ag 328.068†	64811.7	66539.4	538.30 µg/L	538.30 ppb	23:05:59
1	As 188.979†	367.2	377.7	555.84 µg/L	555.84 ppb	23:06:20
1	B 249.677†	11876.2	11809.1	533.97 µg/L	533.97 ppb	23:05:59
1	Ba 233.527†	24254.5	24737.3	541.99 µg/L	541.99 ppb	23:05:59
1	Be 313.107†	900460.2	919229.7	539.89 µg/L	539.89 ppb	23:05:54
1	Cd 226.502†	22277.5	22883.8	543.89 µg/L	543.89 ppb	23:05:59
1	Co 228.616†	12425.1	12620.0	541.56 µg/L	541.56 ppb	23:05:59
1	Cr 267.716†	25035.0	25444.3	553.74 µg/L	553.74 ppb	23:05:59
1	Cu 324.752†	85888.2	83191.3	544.39 µg/L	544.39 ppb	23:05:59
1	Mn 257.610†	180314.7	184528.2	554.55 µg/L	554.55 ppb	23:05:54
1	Mo 202.031†	5530.2	5633.2	557.62 µg/L	557.62 ppb	23:06:20
1	Ni 231.604†	9845.6	9661.3	541.30 µg/L	541.30 ppb	23:05:59
1	P 214.914†	1885.3	1649.8	2687.3 µg/L	2687.3 ppb	23:06:20
1	Pb 220.353†	2091.2	2101.9	551.74 µg/L	551.74 ppb	23:06:20
1	S 181.975 Axial†	351.8	336.1	1069.7 µg/L	1069.7 ppb	23:06:20
1	Sb 206.836†	632.8	622.4	558.00 µg/L	558.00 ppb	23:06:20
1	Se 196.026†	594.8	579.1	557.01 µg/L	557.01 ppb	23:06:20
1	SiO2†	34820.3	32721.5	5907.4 µg/L	5907.4 ppb	23:05:59
1	Si 251.611†	40110.9	40471.3	2751.4 µg/L	2751.4 ppb	23:05:59
1	Sn 189.927†	1397.6	1432.4	558.19 µg/L	558.19 ppb	23:06:20
1	Ti 334.940†	225681.7	230672.6	539.06 µg/L	539.06 ppb	23:05:54
1	Tl 190.801†	519.0	563.2	555.28 µg/L	555.28 ppb	23:06:20
1	U 409.014†	5850.2	5970.4	541.03 µg/L	541.03 ppb	23:05:59
1	V 292.402†	45506.0	46283.7	551.79 µg/L	551.79 ppb	23:05:59
1	Zn 213.857†	24385.8	23853.9	545.38 µg/L	545.38 ppb	23:05:59
2	Sc RADIAL	95295.1	95295.1	98.5 %		23:04:56
2	Al 396.153Radial†	10740.2	11027.8	5252.8 µg/L	5252.8 ppb	23:04:56
2	Ca 317.933Radial†	14712.2	14557.4	5297.8 µg/L	5297.8 ppb	23:04:56
2	Fe 238.204 Radial†	462.6	457.9	5427.6 µg/L	5427.6 ppb	23:05:16
2	K 766.490 Radial†	11529.3	11224.6	5238.3 µg/L	5238.3 ppb	23:04:56
2	Mg 279.077 IEC†	415.4	413.9	5459.9 µg/L	5459.9 ppb	23:05:16
2	Na 589.592 Radial†	21297.3	21450.5	10706 µg/L	10706 ppb	23:04:56
2	Sr 421.552†	87648.6	88882.6	528.40 µg/L	528.40 ppb	23:04:56
2	Sc 361.383	2021882.9	2021882.9	96.597 %		23:06:27
2	Y 371.029	1383329.9	1383329.9	96.543 %		23:06:27
2	Ag 328.068†	65124.1	67878.4	549.13 µg/L	549.13 ppb	23:06:32
2	As 188.979†	358.7	374.5	551.23 µg/L	551.23 ppb	23:06:53
2	B 249.677†	11941.1	12062.4	545.49 µg/L	545.49 ppb	23:06:32
2	Ba 233.527†	24383.0	25250.4	553.23 µg/L	553.23 ppb	23:06:32
2	Be 313.107†	897833.3	930620.4	546.58 µg/L	546.58 ppb	23:06:27
2	Cd 226.502†	22436.0	23396.9	556.10 µg/L	556.10 ppb	23:06:32
2	Co 228.616†	12506.0	12898.4	553.50 µg/L	553.50 ppb	23:06:32
2	Cr 267.716†	25191.6	25998.8	565.81 µg/L	565.81 ppb	23:06:32
2	Cu 324.752†	86251.0	84912.7	555.63 µg/L	555.63 ppb	23:06:32
2	Mn 257.610†	179582.3	186595.5	560.76 µg/L	560.76 ppb	23:06:27
2	Mo 202.031†	5464.2	5651.6	559.44 µg/L	559.44 ppb	23:06:53
2	Ni 231.604†	9916.7	9889.1	554.07 µg/L	554.07 ppb	23:06:32
2	P 214.914†	1870.1	1663.6	2709.1 µg/L	2709.1 ppb	23:06:53
2	Pb 220.353†	2071.9	2114.8	555.07 µg/L	555.07 ppb	23:06:53



2	S 181.975 Axial†	353.9	343.8	1094.1 µg/L	1094.1 ppb	23:06:53
2	Sb 206.836†	629.3	628.8	563.56 µg/L	563.56 ppb	23:06:53
2	Se 196.026†	595.5	589.2	566.43 µg/L	566.43 ppb	23:06:53
2	SiO2†	35153.2	33611.9	6068.1 µg/L	6068.1 ppb	23:06:32
2	Si 251.611†	40459.2	41460.4	2818.6 µg/L	2818.6 ppb	23:06:32
2	Sn 189.927†	1390.5	1447.0	563.87 µg/L	563.87 ppb	23:06:53
2	Ti 334.940†	225313.1	233827.5	546.43 µg/L	546.43 ppb	23:06:27
2	Tl 190.801†	514.0	566.2	558.28 µg/L	558.28 ppb	23:06:53
2	U 409.014†	5866.9	6079.4	550.92 µg/L	550.92 ppb	23:06:32
2	V 292.402†	45802.2	47303.4	563.88 µg/L	563.88 ppb	23:06:32
2	Zn 213.857†	24471.4	24324.6	556.14 µg/L	556.14 ppb	23:06:32
3	Sc RADIAL	95135.2	95135.2	98.3 %		23:05:21
3	Al 396.153Radial†	10801.0	11108.0	5293.0 µg/L	5293.0 ppb	23:05:21
3	Ca 317.933Radial†	14814.8	14686.9	5344.9 µg/L	5344.9 ppb	23:05:21
3	Fe 238.204 Radial†	464.4	460.5	5457.1 µg/L	5457.1 ppb	23:05:42
3	K 766.490 Radial†	11554.1	11269.6	5259.3 µg/L	5259.3 ppb	23:05:21
3	Mg 279.077 IEC†	416.9	416.1	5487.8 µg/L	5487.8 ppb	23:05:42
3	Na 589.592 Radial†	21336.2	21526.4	10744 µg/L	10744 ppb	23:05:21
3	Sr 421.552†	87854.7	89241.9	530.53 µg/L	530.53 ppb	23:05:21
3	Sc 361.383	2038790.8	2038790.8	97.405 %		23:07:00
3	Y 371.029	1393722.7	1393722.7	97.268 %		23:07:00
3	Ag 328.068†	61311.9	63405.6	512.80 µg/L	512.80 ppb	23:07:06
3	As 188.979†	311.5	323.1	475.34 µg/L	475.34 ppb	23:07:26
3	B 249.677†	11123.3	11120.2	502.59 µg/L	502.59 ppb	23:07:06
3	Ba 233.527†	22233.5	22834.3	500.28 µg/L	500.28 ppb	23:07:06
3	Be 313.107†	844374.9	868029.6	509.82 µg/L	509.82 ppb	23:07:00
3	Cd 226.502†	20329.6	21041.8	500.05 µg/L	500.05 ppb	23:07:06
3	Co 228.616†	11270.9	11523.1	494.42 µg/L	494.42 ppb	23:07:06
3	Cr 267.716†	21998.5	22504.3	489.76 µg/L	489.76 ppb	23:07:06
3	Cu 324.752†	78445.8	76159.0	498.46 µg/L	498.46 ppb	23:07:06
3	Mn 257.610†	169802.7	175013.6	525.95 µg/L	525.95 ppb	23:07:00
3	Mo 202.031†	4614.0	4731.8	468.43 µg/L	468.43 ppb	23:07:26
3	Ni 231.604†	8971.7	8833.9	494.95 µg/L	494.95 ppb	23:07:06
3	P 214.914†	1654.7	1426.3	2319.7 µg/L	2319.7 ppb	23:07:26
3	Pb 220.353†	1801.8	1819.6	477.59 µg/L	477.59 ppb	23:07:26
3	S 181.975 Axial†	313.6	299.4	952.90 µg/L	952.90 ppb	23:07:26
3	Sb 206.836†	546.0	537.9	481.83 µg/L	481.83 ppb	23:07:26
3	Se 196.026†	535.0	521.9	503.26 µg/L	503.26 ppb	23:07:26
3	SiO2†	32706.9	30798.6	5560.2 µg/L	5560.2 ppb	23:07:06
3	Si 251.611†	37498.4	38073.4	2588.4 µg/L	2588.4 ppb	23:07:06
3	Sn 189.927†	1152.4	1190.5	464.04 µg/L	464.04 ppb	23:07:26
3	Ti 334.940†	210528.1	216714.3	506.41 µg/L	506.41 ppb	23:07:00
3	Tl 190.801†	466.5	513.1	506.03 µg/L	506.03 ppb	23:07:26
3	U 409.014†	5190.1	5334.2	483.25 µg/L	483.25 ppb	23:07:06
3	V 292.402†	40921.8	41899.7	499.14 µg/L	499.14 ppb	23:07:06
3	Zn 213.857†	22213.1	21796.0	498.27 µg/L	498.27 ppb	23:07:06

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2037877.2	97.361 %	0.7433			0.76%
Sc RADIAL	95192.6	98.4 %	0.09			0.09%
Y 371.029	1393675.4	97.265 %	0.7204			0.74%
Ag 328.068†	65941.2	533.41 µg/L	18.654	533.41 ppb	18.654	3.50%
QC value within limits for Ag 328.068 Recovery = 106.68%						
Al 396.153Radial†	11074.3	5275.7 µg/L	20.64	5275.7 ppb	20.64	0.39%
QC value within limits for Al 396.153Radial Recovery = 105.51%						
As 188.979†	358.4	527.47 µg/L	45.204	527.47 ppb	45.204	8.57%
QC value within limits for As 188.979 Recovery = 105.49%						
B 249.677†	11663.9	527.35 µg/L	22.200	527.35 ppb	22.200	4.21%
QC value within limits for B 249.677 Recovery = 105.47%						
Ba 233.527†	24274.0	531.83 µg/L	27.900	531.83 ppb	27.900	5.25%
QC value within limits for Ba 233.527 Recovery = 106.37%						
Be 313.107†	905959.9	532.10 µg/L	19.580	532.10 ppb	19.580	3.68%
QC value within limits for Be 313.107 Recovery = 106.42%						
Ca 317.933Radial†	14618.4	5319.9 µg/L	23.69	5319.9 ppb	23.69	0.45%
QC value within limits for Ca 317.933Radial Recovery = 106.40%						
Cd 226.502†	22440.8	533.34 µg/L	29.472	533.34 ppb	29.472	5.53%
QC value within limits for Cd 226.502 Recovery = 106.67%						
Co 228.616†	12347.2	529.83 µg/L	31.240	529.83 ppb	31.240	5.90%

Cr	267.716†	24649.2	536.44 µg/L	40.867	536.44 ppb	40.867	7.62%
QC value within limits for Cr 267.716 Recovery = 107.29%							
Cu	324.752†	81421.0	532.83 µg/L	30.288	532.83 ppb	30.288	5.68%
QC value within limits for Cu 324.752 Recovery = 106.57%							
Fe	238.204 Radial†	459.0	5440.4 µg/L	15.12	5440.4 ppb	15.12	0.28%
QC value within limits for Fe 238.204 Radial Recovery = 108.81%							
K	766.490 Radial†	11239.3	5245.2 µg/L	12.23	5245.2 ppb	12.23	0.23%
QC value within limits for K 766.490 Radial Recovery = 104.90%							
Mg	279.077 IEC†	412.8	5444.8 µg/L	52.13	5444.8 ppb	52.13	0.96%
QC value within limits for Mg 279.077 IEC Recovery = 108.90%							
Mn	257.610†	182045.7	547.09 µg/L	18.566	547.09 ppb	18.566	3.39%
QC value within limits for Mn 257.610 Recovery = 109.42%							
Mo	202.031†	5338.9	528.50 µg/L	52.027	528.50 ppb	52.027	9.84%
QC value within limits for Mo 202.031 Recovery = 105.70%							
Na	589.592 Radial†	21438.0	10700 µg/L	47.5	10700 ppb	47.5	0.44%
QC value within limits for Na 589.592 Radial Recovery = 107.00%							
Ni	231.604†	9461.4	530.10 µg/L	31.108	530.10 ppb	31.108	5.87%
QC value within limits for Ni 231.604 Recovery = 106.02%							
P	214.914†	1579.9	2572.0 µg/L	218.79	2572.0 ppb	218.79	8.51%
QC value within limits for P 214.914 Recovery = 102.88%							
Pb	220.353†	2012.1	528.13 µg/L	43.802	528.13 ppb	43.802	8.29%
QC value within limits for Pb 220.353 Recovery = 105.63%							
S	181.975 Axial†	326.4	1038.9 µg/L	75.48	1038.9 ppb	75.48	7.27%
QC value within limits for S 181.975 Axial Recovery = 103.89%							
Sb	206.836†	596.3	534.46 µg/L	45.664	534.46 ppb	45.664	8.54%
QC value within limits for Sb 206.836 Recovery = 106.89%							
Se	196.026†	563.4	542.23 µg/L	34.080	542.23 ppb	34.080	6.29%
QC value within limits for Se 196.026 Recovery = 108.45%							
SiO2†		32377.3	5845.3 µg/L	259.59	5845.3 ppb	259.59	4.44%
QC value within limits for SiO2 Recovery = 109.31%							
Si	251.611†	40001.7	2719.5 µg/L	118.40	2719.5 ppb	118.40	4.35%
QC value within limits for Si 251.611 Recovery = 108.78%							
Sn	189.927†	1356.6	528.70 µg/L	56.066	528.70 ppb	56.066	10.60%
QC value within limits for Sn 189.927 Recovery = 105.74%							
Sr	421.552†	88936.9	528.72 µg/L	1.675	528.72 ppb	1.675	0.32%
QC value within limits for Sr 421.552 Recovery = 105.74%							
Ti	334.940†	227071.5	530.63 µg/L	21.298	530.63 ppb	21.298	4.01%
QC value within limits for Ti 334.940 Recovery = 106.13%							
Tl	190.801†	547.5	539.86 µg/L	29.341	539.86 ppb	29.341	5.43%
QC value within limits for Tl 190.801 Recovery = 107.97%							
U	409.014†	5794.7	525.07 µg/L	36.550	525.07 ppb	36.550	6.96%
QC value within limits for U 409.014 Recovery = 105.01%							
V	292.402†	45162.3	538.27 µg/L	34.420	538.27 ppb	34.420	6.39%
QC value within limits for V 292.402 Recovery = 107.65%							
Zn	213.857†	23324.8	533.26 µg/L	30.778	533.26 ppb	30.778	5.77%
QC value within limits for Zn 213.857 Recovery = 106.65%							

All analyte(s) passed QC.

Sequence No.: 20

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 23:07:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	92168.3	92168.3	95.2 %		23:08:07
1	Al 396.153Radial†	-111.8	1.9	0.8682 µg/L	0.8682 ppb	23:08:07
1	Ca 317.933Radial†	349.5	-18.3	-6.6619 µg/L	-6.6619 ppb	23:08:27
1	Fe 238.204 Radial†	14.0	2.7	32.438 µg/L	32.438 ppb	23:08:27
1	K 766.490 Radial†	486.6	25.6	11.960 µg/L	11.960 ppb	23:08:07
1	Mg 279.077 IEC†	8.7	1.2	15.272 µg/L	15.272 ppb	23:08:27
1	Na 589.592 Radial†	171.9	-0.1	-0.0376 µg/L	-0.0376 ppb	23:08:07
1	Sr 421.552†	130.4	-2.4	-0.0145 µg/L	-0.0145 ppb	23:08:07
1	Sc 361.383	2023005.3	2023005.3	96.651 %		23:09:29
1	Y 371.029	1386264.2	1386264.2	96.747 %		23:09:29
1	Ag 328.068†	-516.1	-73.7	-0.5912 µg/L	-0.5912 ppb	23:09:35
1	As 188.979†	-0.2	3.0	4.4647 µg/L	4.4647 ppb	23:09:56
1	B 249.677†	292.4	3.2	0.1276 µg/L	0.1276 ppb	23:09:35
1	Ba 233.527†	-9.0	-0.9	-0.0193 µg/L	-0.0193 ppb	23:09:56
1	Be 313.107†	-866.0	262.8	0.1542 µg/L	0.1542 ppb	23:09:35
1	Cd 226.502†	-161.4	3.6	0.0811 µg/L	0.0811 ppb	23:09:56
1	Co 228.616†	49.1	2.7	0.1177 µg/L	0.1177 ppb	23:09:56
1	Cr 267.716†	76.7	-0.9	-0.0199 µg/L	-0.0199 ppb	23:09:35
1	Cu 324.752†	4311.1	83.9	0.5538 µg/L	0.5538 ppb	23:09:35
1	Mn 257.610†	-669.2	-5.4	-0.0153 µg/L	-0.0153 ppb	23:09:35
1	Mo 202.031†	26.6	22.4	2.2166 µg/L	2.2166 ppb	23:09:56
1	Ni 231.604†	365.6	1.3	0.0758 µg/L	0.0758 ppb	23:09:56
1	P 214.914†	271.4	8.5	13.995 µg/L	13.995 ppb	23:09:56
1	Pb 220.353†	27.4	-1.8	-0.4668 µg/L	-0.4668 ppb	23:09:56
1	S 181.975 Axial†	19.3	-2.6	-8.1937 µg/L	-8.1937 ppb	23:09:56
1	Sb 206.836†	25.2	3.3	2.9974 µg/L	2.9974 ppb	23:09:56
1	Se 196.026†	26.7	0.3	0.3456 µg/L	0.3456 ppb	23:09:56
1	SiO2†	2875.4	195.3	35.252 µg/L	35.252 ppb	23:09:35
1	Si 251.611†	606.0	202.9	13.796 µg/L	13.796 ppb	23:09:56
1	Sn 189.927†	0.1	7.5	2.9292 µg/L	2.9292 ppb	23:09:56
1	Ti 334.940†	-328.6	237.3	0.5535 µg/L	0.5535 ppb	23:09:35
1	Tl 190.801†	-35.5	-2.6	-2.5276 µg/L	-2.5276 ppb	23:09:56
1	U 409.014†	11.9	18.2	1.6440 µg/L	1.6440 ppb	23:09:35
1	V 292.402†	89.8	-19.4	-0.2146 µg/L	-0.2146 ppb	23:09:35
1	Zn 213.857†	723.3	-260.5	-6.0008 µg/L	-6.0008 ppb	23:09:56
2	Sc RADIAL	92056.8	92056.8	95.1 %		23:08:33
2	Al 396.153Radial†	-102.7	11.3	5.3661 µg/L	5.3661 ppb	23:08:33
2	Ca 317.933Radial†	339.3	-28.6	-10.395 µg/L	-10.395 ppb	23:08:53
2	Fe 238.204 Radial†	13.8	2.6	30.636 µg/L	30.636 ppb	23:08:53
2	K 766.490 Radial†	435.1	-27.9	-13.000 µg/L	-13.000 ppb	23:08:33
2	Mg 279.077 IEC†	11.8	4.4	58.249 µg/L	58.249 ppb	23:08:53
2	Na 589.592 Radial†	168.9	-3.0	-1.4810 µg/L	-1.4810 ppb	23:08:33
2	Sr 421.552†	121.3	-11.9	-0.0706 µg/L	-0.0706 ppb	23:08:33
2	Sc 361.383	2026853.4	2026853.4	96.835 %		23:10:02
2	Y 371.029	1387781.3	1387781.3	96.853 %		23:10:02
2	Ag 328.068†	-428.5	17.7	0.1460 µg/L	0.1460 ppb	23:10:07
2	As 188.979†	0.3	3.6	5.2640 µg/L	5.2640 ppb	23:10:28
2	B 249.677†	298.8	9.2	0.4013 µg/L	0.4013 ppb	23:10:07
2	Ba 233.527†	-9.0	-0.9	-0.0197 µg/L	-0.0197 ppb	23:10:28
2	Be 313.107†	-957.0	170.6	0.1000 µg/L	0.1000 ppb	23:10:07
2	Cd 226.502†	-170.7	-5.7	-0.1383 µg/L	-0.1383 ppb	23:10:28
2	Co 228.616†	49.6	3.2	0.1369 µg/L	0.1369 ppb	23:10:28
2	Cr 267.716†	89.8	12.5	0.2719 µg/L	0.2719 ppb	23:10:07
2	Cu 324.752†	4310.1	74.3	0.4910 µg/L	0.4910 ppb	23:10:07
2	Mn 257.610†	-689.7	-25.2	-0.0780 µg/L	-0.0780 ppb	23:10:07
2	Mo 202.031†	16.2	11.6	1.1532 µg/L	1.1532 ppb	23:10:28
2	Ni 231.604†	360.6	-4.6	-0.2554 µg/L	-0.2554 ppb	23:10:28
2	P 214.914†	263.7	-0.1	-0.2245 µg/L	-0.2245 ppb	23:10:28
2	Pb 220.353†	23.2	-6.2	-1.6179 µg/L	-1.6179 ppb	23:10:28

2	S 181.975 Axial†	22.6	0.8	2.5960 µg/L	2.5960 ppb	23:10:28
2	Sb 206.836†	25.1	3.2	2.8335 µg/L	2.8335 ppb	23:10:28
2	Se 196.026†	19.0	-7.7	-7.1750 µg/L	-7.1750 ppb	23:10:28
2	SiO2†	2892.1	206.9	37.349 µg/L	37.349 ppb	23:10:07
2	Si 251.611†	621.5	217.7	14.799 µg/L	14.799 ppb	23:10:28
2	Sn 189.927†	-7.2	0.0	0.0124 µg/L	0.0124 ppb	23:10:28
2	Ti 334.940†	-361.1	204.4	0.4731 µg/L	0.4731 ppb	23:10:07
2	Tl 190.801†	-35.2	-2.3	-2.2207 µg/L	-2.2207 ppb	23:10:28
2	U 409.014†	17.2	23.6	2.1404 µg/L	2.1404 ppb	23:10:07
2	V 292.402†	126.9	18.7	0.2287 µg/L	0.2287 ppb	23:10:07
2	Zn 213.857†	723.5	-261.7	-6.0294 µg/L	-6.0294 ppb	23:10:28
3	Sc RADIAL	94969.6	94969.6	98.1 %		23:08:59
3	Al 396.153Radial†	-97.6	19.8	9.4252 µg/L	9.4252 ppb	23:08:59
3	Ca 317.933Radial†	346.8	-31.9	-11.609 µg/L	-11.609 ppb	23:09:19
3	Fe 238.204 Radial†	15.2	3.5	41.894 µg/L	41.894 ppb	23:09:19
3	K 766.490 Radial†	420.7	-56.6	-26.394 µg/L	-26.394 ppb	23:08:59
3	Mg 279.077 IEC†	6.1	-1.8	-23.306 µg/L	-23.306 ppb	23:09:19
3	Na 589.592 Radial†	134.8	-43.2	-21.585 µg/L	-21.585 ppb	23:08:59
3	Sr 421.552†	124.5	-12.5	-0.0743 µg/L	-0.0743 ppb	23:08:59
3	Sc 361.383	2027944.9	2027944.9	96.887 %		23:10:34
3	Y 371.029	1388599.4	1388599.4	96.910 %		23:10:34
3	Ag 328.068†	-432.9	13.4	0.1091 µg/L	0.1091 ppb	23:10:40
3	As 188.979†	1.2	4.5	6.5805 µg/L	6.5805 ppb	23:11:00
3	B 249.677†	322.3	33.3	1.4884 µg/L	1.4884 ppb	23:10:40
3	Ba 233.527†	4.4	13.0	0.2838 µg/L	0.2838 ppb	23:11:00
3	Be 313.107†	-919.8	209.5	0.1229 µg/L	0.1229 ppb	23:10:40
3	Cd 226.502†	-168.5	-3.4	-0.0843 µg/L	-0.0843 ppb	23:11:00
3	Co 228.616†	48.9	2.4	0.1043 µg/L	0.1043 ppb	23:11:00
3	Cr 267.716†	75.1	-2.8	-0.0603 µg/L	-0.0603 ppb	23:10:40
3	Cu 324.752†	4345.2	108.1	0.7140 µg/L	0.7140 ppb	23:10:40
3	Mn 257.610†	-689.4	-24.5	-0.0697 µg/L	-0.0697 ppb	23:10:40
3	Mo 202.031†	26.7	22.5	2.2246 µg/L	2.2246 ppb	23:11:00
3	Ni 231.604†	367.0	1.8	0.1038 µg/L	0.1038 ppb	23:11:00
3	P 214.914†	264.7	0.9	1.3742 µg/L	1.3742 ppb	23:11:00
3	Pb 220.353†	30.4	1.3	0.3414 µg/L	0.3414 ppb	23:11:00
3	S 181.975 Axial†	20.2	-1.7	-5.4814 µg/L	-5.4814 ppb	23:11:00
3	Sb 206.836†	20.1	-2.0	-1.7250 µg/L	-1.7250 ppb	23:11:00
3	Se 196.026†	21.4	-5.2	-4.7729 µg/L	-4.7729 ppb	23:11:00
3	SiO2†	2901.5	215.0	38.806 µg/L	38.806 ppb	23:10:40
3	Si 251.611†	635.0	231.3	15.726 µg/L	15.726 ppb	23:11:00
3	Sn 189.927†	2.0	9.5	3.7155 µg/L	3.7155 ppb	23:11:00
3	Ti 334.940†	-308.1	259.2	0.6078 µg/L	0.6078 ppb	23:10:40
3	Tl 190.801†	-34.2	-1.2	-1.1739 µg/L	-1.1739 ppb	23:11:00
3	U 409.014†	-70.7	-67.2	-6.1040 µg/L	-6.1040 ppb	23:10:40
3	V 292.402†	83.0	-26.7	-0.3095 µg/L	-0.3095 ppb	23:10:40
3	Zn 213.857†	732.5	-252.8	-5.8230 µg/L	-5.8230 ppb	23:11:00

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2025934.5	96.791 %	0.1240			0.13%
Sc RADIAL	93064.9	96.2 %	1.71			1.77%
Y 371.029	1387548.3	96.837 %	0.0827			0.09%
Ag 328.068†	-14.2	-0.1120 µg/L	0.41534	-0.1120 ppb	0.41534	370.71%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	11.0	5.2198 µg/L	4.28034	5.2198 ppb	4.28034	82.00%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.7	5.4364 µg/L	1.06840	5.4364 ppb	1.06840	19.65%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	15.2	0.6725 µg/L	0.71979	0.6725 ppb	0.71979	107.04%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	3.7	0.0816 µg/L	0.17512	0.0816 ppb	0.17512	214.53%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	214.3	0.1257 µg/L	0.02719	0.1257 ppb	0.02719	21.63%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-26.3	-9.5552 µg/L	2.57804	-9.5552 ppb	2.57804	26.98%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-1.8	-0.0472 µg/L	0.11434	-0.0472 ppb	0.11434	242.43%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.8	0.1196 µg/L	0.01638	0.1196 ppb	0.01638	13.69%

QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	2.9	0.0639 µg/L	0.18125	0.0639 ppb	0.18125 283.76%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 324.752†	88.8	0.5863 µg/L	0.11499	0.5863 ppb	0.11499 19.61%
QC value within limits for Cu 324.752 Recovery = Not calculated					
Fe 238.204 Radial†	3.0	34.989 µg/L	6.0476	34.989 ppb	6.0476 17.28%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated					
K 766.490 Radial†	-19.6	-9.1448 µg/L	19.46550	-9.1448 ppb	19.46550 212.86%
QC value within limits for K 766.490 Radial Recovery = Not calculated					
Mg 279.077 IEC†	1.3	16.738 µg/L	40.7976	16.738 ppb	40.7976 243.74%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated					
Mn 257.610†	-18.4	-0.0543 µg/L	0.03402	-0.0543 ppb	0.03402 62.62%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	18.8	1.8648 µg/L	0.61627	1.8648 ppb	0.61627 33.05%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592 Radial†	-15.4	-7.7012 µg/L	12.04544	-7.7012 ppb	12.04544 156.41%
QC value within limits for Na 589.592 Radial Recovery = Not calculated					
Ni 231.604†	-0.5	-0.0253 µg/L	0.19978	-0.0253 ppb	0.19978 790.84%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 214.914†	3.1	5.0481 µg/L	7.78901	5.0481 ppb	7.78901 154.30%
QC value within limits for P 214.914 Recovery = Not calculated					
Pb 220.353†	-2.2	-0.5811 µg/L	0.98465	-0.5811 ppb	0.98465 169.45%
QC value within limits for Pb 220.353 Recovery = Not calculated					
S 181.975 Axial†	-1.2	-3.6930 µg/L	5.61276	-3.6930 ppb	5.61276 151.98%
QC value within limits for S 181.975 Axial Recovery = Not calculated					
Sb 206.836†	1.5	1.3686 µg/L	2.68041	1.3686 ppb	2.68041 195.84%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-4.2	-3.8674 µg/L	3.84124	-3.8674 ppb	3.84124 99.32%
QC value within limits for Se 196.026 Recovery = Not calculated					
SiO2†	205.7	37.136 µg/L	1.7868	37.136 ppb	1.7868 4.81%
QC value within limits for SiO2 Recovery = Not calculated					
Si 251.611†	217.3	14.774 µg/L	0.9651	14.774 ppb	0.9651 6.53%
QC value within limits for Si 251.611 Recovery = Not calculated					
Sn 189.927†	5.7	2.2191 µg/L	1.95105	2.2191 ppb	1.95105 87.92%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	-8.9	-0.0532 µg/L	0.03352	-0.0532 ppb	0.03352 63.04%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 334.940†	233.6	0.5448 µg/L	0.06778	0.5448 ppb	0.06778 12.44%
QC value within limits for Ti 334.940 Recovery = Not calculated					
Tl 190.801†	-2.0	-1.9741 µg/L	0.70975	-1.9741 ppb	0.70975 35.95%
QC value within limits for Tl 190.801 Recovery = Not calculated					
U 409.014†	-8.5	-0.7732 µg/L	4.62330	-0.7732 ppb	4.62330 597.94%
QC value within limits for U 409.014 Recovery = Not calculated					
V 292.402†	-9.1	-0.0984 µg/L	0.28728	-0.0984 ppb	0.28728 291.87%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 213.857†	-258.3	-5.9510 µg/L	0.11182	-5.9510 ppb	0.11182 1.88%
QC value within limits for Zn 213.857 Recovery = Not calculated					

All analyte(s) passed QC.

Sequence No.: 21  
 Sample ID: 247336001|955136|1  
 Analyst: JWJ  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 334  
 Date Collected: 3/16/2010 23:11:10  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 247336001|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95580.7	95580.7	98.8 %			23:11:43
1	Al 396.153Radial†	76108.1	77189.0	36847 µg/L		36847 ppb	23:11:43
1	Ca 317.933Radial†	133271.8	134570.3	48973 µg/L		48973 ppb	23:11:43
1	Fe 238.204 Radial†	7966.9	8055.6	95279 µg/L		95279 ppb	23:12:03
1	K 766.490 Radial†	13234.3	12916.2	6027.7 µg/L		6027.7 ppb	23:11:43
1	Mg 279.077 IEC†	571.8	571.1	7426.4 µg/L		7426.4 ppb	23:12:03
1	Na 589.592 Radial†	3888.2	3756.7	1875.0 µg/L		1875.0 ppb	23:11:43
1	Sr 421.552†	41125.1	41505.2	246.74 µg/L		246.74 ppb	23:11:43
1	Sc 361.383	2026411.6	2026411.6	96.814 %			23:13:08
1	Y 371.029	1472908.1	1472908.1	102.79 %			23:13:08
1	Ag 328.068†	-1241.2	-821.8	1.3764 µg/L		1.3764 ppb	23:13:14
1	As 188.979†	26.8	30.9	27.901 µg/L		27.901 ppb	23:13:34
1	B 249.677†	914.9	645.7	-20.336 µg/L		-20.336 ppb	23:13:14
1	Ba 233.527†	21370.1	22081.9	483.11 µg/L		483.11 ppb	23:13:14
1	Be 313.107†	12338.3	13903.2	7.2139 µg/L		7.2139 ppb	23:13:14
1	Cd 226.502†	383.1	566.3	2.7299 µg/L		2.7299 ppb	23:13:34
1	Co 228.616†	491.9	460.0	14.542 µg/L		14.542 ppb	23:13:34
1	Cr 267.716†	2272.3	2266.9	49.365 µg/L		49.365 ppb	23:13:34
1	Cu 324.752†	11655.6	7662.6	67.961 µg/L		67.961 ppb	23:13:14
1	Mn 257.610†	946357.0	978192.2	2945.0 µg/L		2945.0 ppb	23:13:08
1	Mo 202.031†	112.3	110.8	14.587 µg/L		14.587 ppb	23:13:34
1	Ni 231.604†	983.4	638.8	37.046 µg/L		37.046 ppb	23:13:34
1	P 214.914†	780.3	533.6	813.86 µg/L		813.86 ppb	23:13:34
1	Pb 220.353†	4555.9	4675.6	1230.4 µg/L		1230.4 ppb	23:13:34
1	S 181.975 Axial†	416.3	407.5	1296.8 µg/L		1296.8 ppb	23:13:34
1	Sb 206.836†	14.7	-7.6	-7.8561 µg/L		-7.8561 ppb	23:13:34
1	Se 196.026†	-81.9	-111.9	187.27 µg/L		187.27 ppb	23:13:34
1	SiO2†	463759.9	476244.2	85979 µg/L		85979 ppb	23:13:08
1	Si 251.611†	565581.9	583773.2	39687 µg/L		39687 ppb	23:13:08
1	Sn 189.927†	-17.2	-10.4	0.2944 µg/L		0.2944 ppb	23:13:34
1	Ti 334.940†	1037227.0	1071943.3	2506.8 µg/L		2506.8 ppb	23:13:08
1	Tl 190.801†	-46.1	-13.6	23.814 µg/L		23.814 ppb	23:13:34
1	U 409.014†	-1726.3	-1777.3	-177.60 µg/L		-177.60 ppb	23:13:14
1	V 292.402†	8164.4	8320.8	86.167 µg/L		86.167 ppb	23:13:14
1	Zn 213.857†	23504.5	23269.3	530.56 µg/L		530.56 ppb	23:13:14
2	Sc RADIAL	95572.1	95572.1	98.7 %			23:12:09
2	Al 396.153Radial†	76020.5	77107.2	36808 µg/L		36808 ppb	23:12:09
2	Ca 317.933Radial†	133095.0	134403.4	48912 µg/L		48912 ppb	23:12:09
2	Fe 238.204 Radial†	7940.4	8029.5	94970 µg/L		94970 ppb	23:12:29
2	K 766.490 Radial†	13177.4	12859.7	6001.4 µg/L		6001.4 ppb	23:12:09
2	Mg 279.077 IEC†	566.8	566.0	7359.8 µg/L		7359.8 ppb	23:12:29
2	Na 589.592 Radial†	3849.1	3717.5	1855.4 µg/L		1855.4 ppb	23:12:09
2	Sr 421.552†	41181.1	41565.7	247.10 µg/L		247.10 ppb	23:12:09
2	Sc 361.383	2030891.6	2030891.6	97.028 %			23:13:42
2	Y 371.029	1475615.8	1475615.8	102.98 %			23:13:42
2	Ag 328.068†	-1288.2	-867.4	0.9797 µg/L		0.9797 ppb	23:13:47
2	As 188.979†	25.9	30.0	26.612 µg/L		26.612 ppb	23:14:08
2	B 249.677†	913.6	642.3	-20.329 µg/L		-20.329 ppb	23:13:47
2	Ba 233.527†	21345.0	22007.3	481.47 µg/L		481.47 ppb	23:13:47
2	Be 313.107†	12278.3	13813.3	7.1608 µg/L		7.1608 ppb	23:13:47
2	Cd 226.502†	371.4	553.4	2.4564 µg/L		2.4564 ppb	23:14:08
2	Co 228.616†	490.6	457.6	14.436 µg/L		14.436 ppb	23:14:08
2	Cr 267.716†	2264.4	2253.5	49.074 µg/L		49.074 ppb	23:14:08
2	Cu 324.752†	11637.7	7617.5	67.609 µg/L		67.609 ppb	23:13:47
2	Mn 257.610†	948673.7	978423.5	2945.7 µg/L		2945.7 ppb	23:13:42
2	Mo 202.031†	112.9	111.2	14.616 µg/L		14.616 ppb	23:14:08
2	Ni 231.604†	960.9	613.5	35.619 µg/L		35.619 ppb	23:14:08
2	P 214.914†	784.2	535.8	817.89 µg/L		817.89 ppb	23:14:08
2	Pb 220.353†	4532.7	4641.4	1221.4 µg/L		1221.4 ppb	23:14:08

2	S 181.975 Axial†	410.4	400.4	1274.3 µg/L	1274.3 ppb	23:14:08
2	Sb 206.836†	12.1	-10.3	-10.266 µg/L	-10.266 ppb	23:14:08
2	Se 196.026†	-74.3	-103.9	193.85 µg/L	193.85 ppb	23:14:08
2	SiO2†	464609.8	476063.5	85946 µg/L	85946 ppb	23:13:42
2	Si 251.611†	566683.7	583620.1	39677 µg/L	39677 ppb	23:13:42
2	Sn 189.927†	-13.4	-6.3	1.8624 µg/L	1.8624 ppb	23:14:08
2	Ti 334.940†	1039813.0	1072245.2	2507.5 µg/L	2507.5 ppb	23:13:42
2	Tl 190.801†	-50.1	-17.6	19.877 µg/L	19.877 ppb	23:14:08
2	U 409.014†	-1706.3	-1752.8	-175.33 µg/L	-175.33 ppb	23:13:47
2	V 292.402†	8100.0	8235.8	85.205 µg/L	85.205 ppb	23:13:47
2	Zn 213.857†	23362.0	23068.8	525.97 µg/L	525.97 ppb	23:13:47
3	Sc RADIAL	95044.9	95044.9	98.2 %		23:12:34
3	Al 396.153Radial†	76037.7	77551.8	37021 µg/L	37021 ppb	23:12:34
3	Ca 317.933Radial†	133116.3	135172.8	49192 µg/L	49192 ppb	23:12:34
3	Fe 238.204 Radial†	7958.4	8092.4	95715 µg/L	95715 ppb	23:12:55
3	K 766.490 Radial†	13156.7	12912.7	6026.1 µg/L	6026.1 ppb	23:12:34
3	Mg 279.077 IEC†	569.1	571.6	7432.7 µg/L	7432.7 ppb	23:12:55
3	Na 589.592 Radial†	3917.5	3808.8	1901.0 µg/L	1901.0 ppb	23:12:34
3	Sr 421.552†	41188.0	41804.1	248.52 µg/L	248.52 ppb	23:12:34
3	Sc 361.383	2026194.1	2026194.1	96.803 %		23:14:15
3	Y 371.029	1467654.8	1467654.8	102.43 %		23:14:15
3	Ag 328.068†	-1264.4	-846.0	1.1769 µg/L	1.1769 ppb	23:14:21
3	As 188.979†	20.7	24.6	18.517 µg/L	18.517 ppb	23:14:41
3	B 249.677†	864.6	593.8	-22.926 µg/L	-22.926 ppb	23:14:21
3	Ba 233.527†	20410.1	21092.6	461.46 µg/L	461.46 ppb	23:14:21
3	Be 313.107†	11560.0	13100.6	6.7779 µg/L	6.7779 ppb	23:14:21
3	Cd 226.502†	342.0	523.8	1.6684 µg/L	1.6684 ppb	23:14:41
3	Co 228.616†	450.1	416.9	12.882 µg/L	12.882 ppb	23:14:41
3	Cr 267.716†	2053.4	2041.0	44.448 µg/L	44.448 ppb	23:14:41
3	Cu 324.752†	11244.7	7239.3	65.279 µg/L	65.279 ppb	23:14:21
3	Mn 257.610†	916000.5	946938.0	2851.1 µg/L	2851.1 ppb	23:14:15
3	Mo 202.031†	95.0	93.1	12.845 µg/L	12.845 ppb	23:14:41
3	Ni 231.604†	923.9	577.5	33.612 µg/L	33.612 ppb	23:14:41
3	P 214.914†	750.1	502.4	762.05 µg/L	762.05 ppb	23:14:41
3	Pb 220.353†	4236.1	4345.9	1144.0 µg/L	1144.0 ppb	23:14:41
3	S 181.975 Axial†	382.9	373.0	1187.2 µg/L	1187.2 ppb	23:14:41
3	Sb 206.836†	22.0	-0.0	-1.1011 µg/L	-1.1011 ppb	23:14:41
3	Se 196.026†	-63.0	-92.4	206.96 µg/L	206.96 ppb	23:14:41
3	SiO2†	449939.2	462018.5	83411 µg/L	83411 ppb	23:14:15
3	Si 251.611†	549079.7	566788.7	38532 µg/L	38532 ppb	23:14:15
3	Sn 189.927†	-29.2	-22.7	-4.5017 µg/L	-4.5017 ppb	23:14:41
3	Ti 334.940†	998479.4	1032031.1	2413.5 µg/L	2413.5 ppb	23:14:15
3	Tl 190.801†	-41.2	-8.4	27.672 µg/L	27.672 ppb	23:14:41
3	U 409.014†	-1622.2	-1669.9	-167.93 µg/L	-167.93 ppb	23:14:21
3	V 292.402†	7681.3	7822.6	80.217 µg/L	80.217 ppb	23:14:21
3	Zn 213.857†	22471.8	22205.1	506.05 µg/L	506.05 ppb	23:14:21

Mean Data: 247336001|955136|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2027832.4	96.881 %	0.1267			0.13%
Sc RADIAL	95399.2	98.6 %	0.32			0.32%
Y 371.029	1472059.6	102.74 %	0.282			0.27%
Ag 328.068†	-845.1	1.1777 µg/L	0.19836	1.1777 ppb	0.19836	16.84%
Al 396.153Radial†	77282.6	36892 µg/L	113.0	36892 ppb	113.0	0.31%
As 188.979†	28.5	24.343 µg/L	5.0869	24.343 ppb	5.0869	20.90%
B 249.677†	627.2	-21.197 µg/L	1.4970	-21.197 ppb	1.4970	7.06%
Ba 233.527†	21727.3	475.35 µg/L	12.054	475.35 ppb	12.054	2.54%
Be 313.107†	13605.7	7.0509 µg/L	0.23788	7.0509 ppb	0.23788	3.37%
Ca 317.933Radial†	134715.5	49026 µg/L	147.3	49026 ppb	147.3	0.30%
Cd 226.502†	547.8	2.2849 µg/L	0.55114	2.2849 ppb	0.55114	24.12%
Co 228.616†	444.8	13.953 µg/L	0.9294	13.953 ppb	0.9294	6.66%
Cr 267.716†	2187.1	47.629 µg/L	2.7585	47.629 ppb	2.7585	5.79%
Cu 324.752†	7506.5	66.950 µg/L	1.4578	66.950 ppb	1.4578	2.18%
Fe 238.204 Radial†	8059.2	95321 µg/L	373.9	95321 ppb	373.9	0.39%
K 766.490 Radial†	12896.2	6018.4 µg/L	14.77	6018.4 ppb	14.77	0.25%
Mg 279.077 IEC†	569.5	7406.3 µg/L	40.36	7406.3 ppb	40.36	0.54%
Mn 257.610†	967851.2	2914.0 µg/L	54.42	2914.0 ppb	54.42	1.87%
Mo 202.031†	105.0	14.016 µg/L	1.0143	14.016 ppb	1.0143	7.24%
Na 589.592 Radial†	3761.0	1877.1 µg/L	22.84	1877.1 ppb	22.84	1.22%

Ni 231.604†	609.9	35.426 µg/L	1.7255	35.426 ppb	1.7255	4.87%
P 214.914†	524.0	797.93 µg/L	31.137	797.93 ppb	31.137	3.90%
Pb 220.353†	4554.3	1198.6 µg/L	47.53	1198.6 ppb	47.53	3.97%
S 181.975 Axial†	393.6	1252.8 µg/L	57.87	1252.8 ppb	57.87	4.62%
Sb 206.836†	-5.9	-6.4079 µg/L	4.75123	-6.4079 ppb	4.75123	74.15%
Se 196.026†	-102.7	196.02 µg/L	10.024	196.02 ppb	10.024	5.11%
SiO2†	471442.1	85112 µg/L	1473.4	85112 ppb	1473.4	1.73%
Si 251.611†	578060.7	39299 µg/L	663.7	39299 ppb	663.7	1.69%
Sn 189.927†	-13.1	-0.7816 µg/L	3.31574	-0.7816 ppb	3.31574	424.21%
Sr 421.552†	41625.0	247.46 µg/L	0.939	247.46 ppb	0.939	0.38%
Ti 334.940†	1058739.9	2475.9 µg/L	54.09	2475.9 ppb	54.09	2.18%
Tl 190.801†	-13.2	23.788 µg/L	3.8977	23.788 ppb	3.8977	16.39%
U 409.014†	-1733.3	-173.62 µg/L	5.058	-173.62 ppb	5.058	2.91%
V 292.402†	8126.4	83.863 µg/L	3.1944	83.863 ppb	3.1944	3.81%
Zn 213.857†	22847.7	520.86 µg/L	13.026	520.86 ppb	13.026	2.50%



Sequence No.: 22

Sample ID: 247336002|955136|1

Analyst: JWW

Initial Sample Wt:

Dilution:

Autosampler Location: 335

Date Collected: 3/16/2010 23:14:50

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 247336002|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc.	Analysis Time
1	Sc RADIAL	95689.5	95689.5	98.9 %			23:15:21
1	Al 396.153Radial†	36840.9	37383.3	17845 µg/L		17845 ppb	23:15:21
1	Ca 317.933Radial†	13949.3	13724.2	4994.5 µg/L		4994.5 ppb	23:15:21
1	Fe 238.204 Radial†	5948.0	6004.3	71017 µg/L		71017 ppb	23:15:41
1	K 766.490 Radial†	10686.2	10323.6	4817.8 µg/L		4817.8 ppb	23:15:21
1	Mg 279.077 IEC†	282.9	278.2	3591.5 µg/L		3591.5 ppb	23:15:41
1	Na 589.592 Radial†	6395.4	6288.2	3138.5 µg/L		3138.5 ppb	23:15:21
1	Sr 421.552†	6178.4	6109.9	36.323 µg/L		36.323 ppb	23:15:21
1	Sc 361.383	2037452.8	2037452.8	97.341 %			23:16:46
1	Y 371.029	1498065.3	1498065.3	104.55 %			23:16:46
1	Ag 328.068†	-1119.9	-690.3	0.1739 µg/L		0.1739 ppb	23:16:51
1	As 188.979†	9.9	13.4	10.465 µg/L		10.465 ppb	23:17:12
1	B 249.677†	574.3	290.6	-23.848 µg/L		-23.848 ppb	23:16:51
1	Ba 233.527†	8184.2	8416.2	184.13 µg/L		184.13 ppb	23:16:51
1	Be 313.107†	10057.9	11491.5	5.9033 µg/L		5.9033 ppb	23:16:51
1	Cd 226.502†	226.1	402.9	1.5617 µg/L		1.5617 ppb	23:17:12
1	Co 228.616†	279.8	239.4	5.6438 µg/L		5.6438 ppb	23:17:12
1	Cr 267.716†	640.0	577.3	12.580 µg/L		12.580 ppb	23:17:12
1	Cu 324.752†	5753.0	1533.5	23.367 µg/L		23.367 ppb	23:16:51
1	Mn 257.610†	760639.0	782103.8	2354.5 µg/L		2354.5 ppb	23:16:46
1	Mo 202.031†	77.0	74.0	10.023 µg/L		10.023 ppb	23:17:12
1	Ni 231.604†	551.6	189.7	11.553 µg/L		11.553 ppb	23:17:12
1	P 214.914†	538.7	281.0	413.04 µg/L		413.04 ppb	23:17:12
1	Pb 220.353†	211.1	186.7	51.678 µg/L		51.678 ppb	23:17:12
1	S 181.975 Axial†	27.9	6.1	19.531 µg/L		19.531 ppb	23:17:12
1	Sb 206.836†	12.2	-10.1	-9.1518 µg/L		-9.1518 ppb	23:17:12
1	Se 196.026†	-38.4	-66.7	159.93 µg/L		159.93 ppb	23:17:12
1	SiO2†	360032.7	367087.7	66272 µg/L		66272 ppb	23:16:46
1	Si 251.611†	438629.3	450186.9	30605 µg/L		30605 ppb	23:16:46
1	Sn 189.927†	7.4	15.1	6.0398 µg/L		6.0398 ppb	23:17:12
1	Ti 334.940†	926638.9	952528.4	2227.2 µg/L		2227.2 ppb	23:16:46
1	Tl 190.801†	-59.4	-26.9	12.018 µg/L		12.018 ppb	23:17:12
1	U 409.014†	-1904.8	-1951.0	-187.33 µg/L		-187.33 ppb	23:16:46
1	V 292.402†	3303.8	3281.8	29.632 µg/L		29.632 ppb	23:16:51
1	Zn 213.857†	19116.4	18629.8	425.28 µg/L		425.28 ppb	23:16:51
2	Sc RADIAL	95805.7	95805.7	99.0 %			23:15:46
2	Al 396.153Radial†	36903.7	37401.5	17854 µg/L		17854 ppb	23:15:46
2	Ca 317.933Radial†	14020.8	13779.3	5014.6 µg/L		5014.6 ppb	23:15:46
2	Fe 238.204 Radial†	5964.5	6013.7	71128 µg/L		71128 ppb	23:16:07
2	K 766.490 Radial†	10666.0	10290.0	4802.2 µg/L		4802.2 ppb	23:15:46
2	Mg 279.077 IEC†	286.5	281.5	3634.5 µg/L		3634.5 ppb	23:16:07
2	Na 589.592 Radial†	6462.1	6347.8	3168.2 µg/L		3168.2 ppb	23:15:46
2	Sr 421.552†	6212.3	6136.6	36.481 µg/L		36.481 ppb	23:15:46
2	Sc 361.383	2038970.6	2038970.6	97.414 %			23:17:20
2	Y 371.029	1499740.6	1499740.6	104.67 %			23:17:20
2	Ag 328.068†	-1153.0	-723.4	-0.0845 µg/L		-0.0845 ppb	23:17:25
2	As 188.979†	7.8	11.2	7.2058 µg/L		7.2058 ppb	23:17:46
2	B 249.677†	567.6	283.3	-24.238 µg/L		-24.238 ppb	23:17:25
2	Ba 233.527†	8159.4	8384.5	183.44 µg/L		183.44 ppb	23:17:25
2	Be 313.107†	9895.0	11316.6	5.8009 µg/L		5.8009 ppb	23:17:25
2	Cd 226.502†	223.9	400.5	1.4923 µg/L		1.4923 ppb	23:17:46
2	Co 228.616†	286.5	246.0	5.9291 µg/L		5.9291 ppb	23:17:46
2	Cr 267.716†	628.0	564.4	12.299 µg/L		12.299 ppb	23:17:46
2	Cu 324.752†	5733.0	1508.6	23.225 µg/L		23.225 ppb	23:17:25
2	Mn 257.610†	759788.3	780648.9	2350.2 µg/L		2350.2 ppb	23:17:20
2	Mo 202.031†	77.8	74.7	10.094 µg/L		10.094 ppb	23:17:46
2	Ni 231.604†	546.9	184.5	11.259 µg/L		11.259 ppb	23:17:46
2	P 214.914†	527.4	269.0	393.04 µg/L		393.04 ppb	23:17:46
2	Pb 220.353†	198.7	173.8	48.291 µg/L		48.291 ppb	23:17:46

2	S 181.975 Axial†	30.9	9.2	29.278 µg/L	29.278 ppb	23:17:46
2	Sb 206.836†	15.6	-6.7	-6.0910 µg/L	-6.0910 ppb	23:17:46
2	Se 196.026†	-47.3	-75.9	151.65 µg/L	151.65 ppb	23:17:46
2	SiO2†	359911.1	366687.5	66200 µg/L	66200 ppb	23:17:20
2	Si 251.611†	438517.3	449736.6	30575 µg/L	30575 ppb	23:17:20
2	Sn 189.927†	11.2	18.9	7.5288 µg/L	7.5288 ppb	23:17:46
2	Ti 334.940†	926861.5	952048.3	2226.0 µg/L	2226.0 ppb	23:17:20
2	Tl 190.801†	-55.6	-23.0	15.771 µg/L	15.771 ppb	23:17:46
2	U 409.014†	-2023.9	-2071.9	-198.31 µg/L	-198.31 ppb	23:17:20
2	V 292.402†	3288.1	3263.1	29.386 µg/L	29.386 ppb	23:17:25
2	Zn 213.857†	19043.9	18540.7	423.23 µg/L	423.23 ppb	23:17:25
3	Sc RADIAL	95750.4	95750.4	98.9 %		23:16:12
3	Al 396.153Radial†	36940.7	37460.4	17882 µg/L	17882 ppb	23:16:12
3	Ca 317.933Radial†	14007.5	13774.1	5012.7 µg/L	5012.7 ppb	23:16:12
3	Fe 238.204 Radial†	5967.6	6020.4	71207 µg/L	71207 ppb	23:16:33
3	K 766.490 Radial†	10660.2	10290.4	4802.3 µg/L	4802.3 ppb	23:16:12
3	Mg 279.077 IEC†	282.9	278.0	3588.7 µg/L	3588.7 ppb	23:16:33
3	Na 589.592 Radial†	6471.4	6360.9	3174.8 µg/L	3174.8 ppb	23:16:12
3	Sr 421.552†	6222.6	6150.6	36.565 µg/L	36.565 ppb	23:16:12
3	Sc 361.383	2031915.4	2031915.4	97.076 %		23:17:53
3	Y 371.029	1490484.8	1490484.8	104.02 %		23:17:53
3	Ag 328.068†	-1081.7	-654.1	0.4657 µg/L	0.4657 ppb	23:17:59
3	As 188.979†	9.2	12.7	9.3681 µg/L	9.3681 ppb	23:18:19
3	B 249.677†	533.4	250.1	-25.786 µg/L	-25.786 ppb	23:17:59
3	Ba 233.527†	7777.9	8020.5	175.47 µg/L	175.47 ppb	23:17:59
3	Be 313.107†	9259.1	10696.8	5.4708 µg/L	5.4708 ppb	23:17:59
3	Cd 226.502†	190.7	367.0	0.6864 µg/L	0.6864 ppb	23:18:19
3	Co 228.616†	256.5	216.1	4.8312 µg/L	4.8312 ppb	23:18:19
3	Cr 267.716†	579.7	516.9	11.265 µg/L	11.265 ppb	23:18:19
3	Cu 324.752†	5647.4	1440.8	22.798 µg/L	22.798 ppb	23:17:59
3	Mn 257.610†	729611.0	752270.8	2264.9 µg/L	2264.9 ppb	23:17:53
3	Mo 202.031†	61.2	58.0	8.4402 µg/L	8.4402 ppb	23:18:19
3	Ni 231.604†	521.9	160.8	9.9310 µg/L	9.9310 ppb	23:18:19
3	P 214.914†	500.2	242.9	349.71 µg/L	349.71 ppb	23:18:19
3	Pb 220.353†	180.9	156.2	43.665 µg/L	43.665 ppb	23:18:19
3	S 181.975 Axial†	28.3	6.6	21.029 µg/L	21.029 ppb	23:18:19
3	Sb 206.836†	18.3	-3.9	-3.5733 µg/L	-3.5733 ppb	23:18:19
3	Se 196.026†	-37.9	-66.3	160.92 µg/L	160.92 ppb	23:18:19
3	SiO2†	349590.7	357339.2	64512 µg/L	64512 ppb	23:17:53
3	Si 251.611†	426042.1	438448.6	29807 µg/L	29807 ppb	23:17:53
3	Sn 189.927†	6.5	14.1	5.6562 µg/L	5.6562 ppb	23:18:19
3	Ti 334.940†	886531.5	913807.5	2136.6 µg/L	2136.6 ppb	23:17:53
3	Tl 190.801†	-63.1	-30.8	7.0297 µg/L	7.0297 ppb	23:18:19
3	U 409.014†	-1872.3	-1922.9	-184.80 µg/L	-184.80 ppb	23:17:53
3	V 292.402†	3121.7	3103.4	27.489 µg/L	27.489 ppb	23:17:59
3	Zn 213.857†	18161.4	17699.5	403.87 µg/L	403.87 ppb	23:17:59

Mean Data: 247336002|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2036112.9	97.277 %	%	0.1774			0.18%
Sc RADIAL	95748.5	98.9 %	%	0.06			0.06%
Y 371.029	1496096.9	104.41 %	%	0.344			0.33%
Ag 328.068†	-689.3	0.1850 µg/L	µg/L	0.27528	0.1850 ppb	0.27528	148.76%
Al 396.153Radial†	37415.1	17861 µg/L	µg/L	19.3	17861 ppb	19.3	0.11%
As 188.979†	12.5	9.0128 µg/L	µg/L	1.65820	9.0128 ppb	1.65820	18.40%
B 249.677†	274.7	-24.624 µg/L	µg/L	1.0252	-24.624 ppb	1.0252	4.16%
Ba 233.527†	8273.7	181.01 µg/L	µg/L	4.810	181.01 ppb	4.810	2.66%
Be 313.107†	11168.3	5.7250 µg/L	µg/L	0.22600	5.7250 ppb	0.22600	3.95%
Ca 317.933Radial†	13759.2	5007.3 µg/L	µg/L	11.07	5007.3 ppb	11.07	0.22%
Cd 226.502†	390.1	1.2468 µg/L	µg/L	0.48654	1.2468 ppb	0.48654	39.02%
Co 228.616†	233.9	5.4680 µg/L	µg/L	0.56964	5.4680 ppb	0.56964	10.42%
Cr 267.716†	552.9	12.048 µg/L	µg/L	0.6924	12.048 ppb	0.6924	5.75%
Cu 324.752†	1494.3	23.130 µg/L	µg/L	0.2966	23.130 ppb	0.2966	1.28%
Fe 238.204 Radial†	6012.8	71117 µg/L	µg/L	95.5	71117 ppb	95.5	0.13%
K 766.490 Radial†	10301.4	4807.5 µg/L	µg/L	8.99	4807.5 ppb	8.99	0.19%
Mg 279.077 IEC†	279.2	3604.9 µg/L	µg/L	25.65	3604.9 ppb	25.65	0.71%
Mn 257.610†	771674.5	2323.2 µg/L	µg/L	50.55	2323.2 ppb	50.55	2.18%
Mo 202.031†	68.9	9.5190 µg/L	µg/L	0.93496	9.5190 ppb	0.93496	9.82%
Na 589.592 Radial†	6332.3	3160.5 µg/L	µg/L	19.34	3160.5 ppb	19.34	0.61%

Ni 231.604†	178.3	10.914 µg/L	0.8643	10.914 ppb	0.8643	7.92%
P 214.914†	264.3	385.26 µg/L	32.374	385.26 ppb	32.374	8.40%
Pb 220.353†	172.2	47.878 µg/L	4.0225	47.878 ppb	4.0225	8.40%
S 181.975 Axial†	7.3	23.279 µg/L	5.2489	23.279 ppb	5.2489	22.55%
Sb 206.836†	-6.9	-6.2720 µg/L	2.79363	-6.2720 ppb	2.79363	44.54%
Se 196.026†	-69.6	157.50 µg/L	5.091	157.50 ppb	5.091	3.23%
SiO2†	363704.8	65662 µg/L	995.9	65662 ppb	995.9	1.52%
Si 251.611†	446124.0	30329 µg/L	452.2	30329 ppb	452.2	1.49%
Sn 189.927†	16.0	6.4083 µg/L	0.98918	6.4083 ppb	0.98918	15.44%
Sr 421.552†	6132.4	36.456 µg/L	0.1229	36.456 ppb	0.1229	0.34%
Ti 334.940†	939461.4	2196.6 µg/L	51.95	2196.6 ppb	51.95	2.37%
Tl 190.801†	-26.9	11.606 µg/L	4.3850	11.606 ppb	4.3850	37.78%
U 409.014†	-1981.9	-190.15 µg/L	7.185	-190.15 ppb	7.185	3.78%
V 292.402†	3216.1	28.836 µg/L	1.1725	28.836 ppb	1.1725	4.07%
Zn 213.857†	18290.0	417.46 µg/L	11.817	417.46 ppb	11.817	2.83%

Sequence No.: 23

Sample ID: 247336003|955136|1

Analyst: JWW

Initial Sample Wt:

Dilution:

Autosampler Location: 336

Date Collected: 3/16/2010 23:18:29

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 247336003|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97016.7	97016.7	100	%		23:18:59
1	Al 396.153Radial†	86386.5	86302.5	41198	µg/L	41198 ppb	23:18:59
1	Ca 317.933Radial†	37125.9	36653.2	13339	µg/L	13339 ppb	23:18:59
1	Fe 238.204 Radial†	9126.8	9093.4	107550	µg/L	107550 ppb	23:19:19
1	K 766.490 Radial†	15315.1	14793.7	6904.0	µg/L	6904.0 ppb	23:18:59
1	Mg 279.077 IEC†	545.5	536.3	6954.4	µg/L	6954.4 ppb	23:19:19
1	Na 589.592 Radial†	3795.0	3605.5	1799.5	µg/L	1799.5 ppb	23:18:59
1	Sr 421.552†	21236.0	21046.6	125.12	µg/L	125.12 ppb	23:18:59
1	Sc 361.383	2049882.4	2049882.4	97.935	%		23:20:25
1	Y 371.029	1477078.9	1477078.9	103.09	%		23:20:25
1	Ag 328.068†	-1417.4	-987.1	1.0192	µg/L	1.0192 ppb	23:20:30
1	As 188.979†	16.2	19.8	14.296	µg/L	14.296 ppb	23:20:51
1	B 249.677†	881.4	600.6	-28.800	µg/L	-28.800 ppb	23:20:30
1	Ba 233.527†	22797.9	23287.0	509.47	µg/L	509.47 ppb	23:20:30
1	Be 313.107†	11162.7	12556.9	6.5114	µg/L	6.5114 ppb	23:20:30
1	Cd 226.502†	419.2	598.6	2.1118	µg/L	2.1118 ppb	23:20:51
1	Co 228.616†	578.3	542.4	18.561	µg/L	18.561 ppb	23:20:51
1	Cr 267.716†	1906.2	1866.2	40.653	µg/L	40.653 ppb	23:20:51
1	Cu 324.752†	8922.7	4734.1	51.142	µg/L	51.142 ppb	23:20:30
1	Mn 257.610†	868654.8	887659.1	2673.7	µg/L	2673.7 ppb	23:20:25
1	Mo 202.031†	52.4	48.4	8.8719	µg/L	8.8719 ppb	23:20:51
1	Ni 231.604†	1002.7	647.0	37.658	µg/L	37.658 ppb	23:20:51
1	P 214.914†	676.5	418.4	615.93	µg/L	615.93 ppb	23:20:51
1	Pb 220.353†	434.7	413.7	113.50	µg/L	113.50 ppb	23:20:51
1	S 181.975 Axial†	148.6	129.2	411.23	µg/L	411.23 ppb	23:20:51
1	Sb 206.836†	17.4	-4.9	-4.9634	µg/L	-4.9634 ppb	23:20:51
1	Se 196.026†	-91.9	-121.2	221.61	µg/L	221.61 ppb	23:20:51
1	SiO2†	461032.9	467974.9	84486	µg/L	84486 ppb	23:20:25
1	Si 251.611†	562591.2	574030.5	39025	µg/L	39025 ppb	23:20:25
1	Sn 189.927†	-2.4	5.0	2.7760	µg/L	2.7760 ppb	23:20:51
1	Ti 334.940†	951934.0	972584.7	2273.9	µg/L	2273.9 ppb	23:20:25
1	Tl 190.801†	-55.9	-23.0	21.519	µg/L	21.519 ppb	23:20:51
1	U 409.014†	-1854.4	-1887.7	-187.17	µg/L	-187.17 ppb	23:20:25
1	V 292.402†	8587.2	8656.0	88.490	µg/L	88.490 ppb	23:20:30
1	Zn 213.857†	16497.2	15836.2	358.89	µg/L	358.89 ppb	23:20:30
2	Sc RADIAL	96586.0	96586.0	99.8	%		23:19:25
2	Al 396.153Radial†	85974.9	86274.3	41185	µg/L	41185 ppb	23:19:25
2	Ca 317.933Radial†	37009.1	36701.3	13356	µg/L	13356 ppb	23:19:25
2	Fe 238.204 Radial†	9168.2	9175.5	108520	µg/L	108520 ppb	23:19:45
2	K 766.490 Radial†	15264.8	14811.4	6912.2	µg/L	6912.2 ppb	23:19:25
2	Mg 279.077 IEC†	553.3	546.5	7088.2	µg/L	7088.2 ppb	23:19:45
2	Na 589.592 Radial†	3796.0	3623.4	1808.4	µg/L	1808.4 ppb	23:19:25
2	Sr 421.552†	21105.5	21010.3	124.90	µg/L	124.90 ppb	23:19:25
2	Sc 361.383	2040480.1	2040480.1	97.486	%		23:20:59
2	Y 371.029	1470431.6	1470431.6	102.62	%		23:20:59
2	Ag 328.068†	-1410.6	-986.8	1.0976	µg/L	1.0976 ppb	23:21:04
2	As 188.979†	17.1	20.8	15.702	µg/L	15.702 ppb	23:21:25
2	B 249.677†	800.8	522.1	-32.869	µg/L	-32.869 ppb	23:21:04
2	Ba 233.527†	22930.1	23529.9	514.78	µg/L	514.78 ppb	23:21:04
2	Be 313.107†	11395.8	12848.5	6.6829	µg/L	6.6829 ppb	23:21:04
2	Cd 226.502†	417.6	598.9	2.0100	µg/L	2.0100 ppb	23:21:25
2	Co 228.616†	575.8	542.6	18.571	µg/L	18.571 ppb	23:21:25
2	Cr 267.716†	1887.2	1855.6	40.423	µg/L	40.423 ppb	23:21:25
2	Cu 324.752†	8870.8	4722.9	51.251	µg/L	51.251 ppb	23:21:04
2	Mn 257.610†	864118.1	887092.5	2672.1	µg/L	2672.1 ppb	23:20:59
2	Mo 202.031†	54.2	50.5	9.1175	µg/L	9.1175 ppb	23:21:25
2	Ni 231.604†	1005.1	654.1	38.072	µg/L	38.072 ppb	23:21:25
2	P 214.914†	677.0	422.1	621.25	µg/L	621.25 ppb	23:21:25
2	Pb 220.353†	437.5	418.7	114.82	µg/L	114.82 ppb	23:21:25

2	S 181.975 Axial†	150.6	132.0	420.05 µg/L	420.05 ppb	23:21:25
2	Sb 206.836†	13.9	-8.5	-8.1545 µg/L	-8.1545 ppb	23:21:25
2	Se 196.026†	-79.7	-109.1	235.96 µg/L	235.96 ppb	23:21:25
2	SiO2†	459015.7	468075.0	84504 µg/L	84504 ppb	23:20:59
2	Si 251.611†	559734.0	573746.6	39005 µg/L	39005 ppb	23:20:59
2	Sn 189.927†	-5.7	1.6	1.4525 µg/L	1.4525 ppb	23:21:25
2	Ti 334.940†	947371.5	972383.5	2273.4 µg/L	2273.4 ppb	23:20:59
2	Tl 190.801†	-59.4	-26.8	17.881 µg/L	17.881 ppb	23:21:25
2	U 409.014†	-1902.6	-1945.9	-192.58 µg/L	-192.58 ppb	23:20:59
2	V 292.402†	8560.8	8669.3	88.520 µg/L	88.520 ppb	23:21:04
2	Zn 213.857†	16493.3	15909.9	360.53 µg/L	360.53 ppb	23:21:04
3	Sc RADIAL	96824.6	96824.6	100 %		23:19:51
3	Al 396.153Radial†	85896.3	85983.3	41046 µg/L	41046 ppb	23:19:51
3	Ca 317.933Radial†	36983.1	36583.9	13314 µg/L	13314 ppb	23:19:51
3	Fe 238.204 Radial†	9159.8	9144.4	108160 µg/L	108160 ppb	23:20:11
3	K 766.490 Radial†	15336.0	14844.9	6927.8 µg/L	6927.8 ppb	23:19:51
3	Mg 279.077 IEC†	552.2	544.0	7056.1 µg/L	7056.1 ppb	23:20:11
3	Na 589.592 Radial†	3767.1	3585.1	1789.3 µg/L	1789.3 ppb	23:19:51
3	Sr 421.552†	21171.8	21024.4	124.99 µg/L	124.99 ppb	23:19:51
3	Sc 361.383	2042733.0	2042733.0	97.593 %		23:21:32
3	Y 371.029	1468061.1	1468061.1	102.46 %		23:21:32
3	Ag 328.068†	-1319.7	-892.1	1.7898 µg/L	1.7898 ppb	23:21:38
3	As 188.979†	14.1	17.6	11.100 µg/L	11.100 ppb	23:21:58
3	B 249.677†	784.3	504.3	-33.495 µg/L	-33.495 ppb	23:21:38
3	Ba 233.527†	21706.4	22250.1	486.78 µg/L	486.78 ppb	23:21:38
3	Be 313.107†	10558.3	11977.5	6.2064 µg/L	6.2064 ppb	23:21:38
3	Cd 226.502†	360.3	539.8	0.6424 µg/L	0.6424 ppb	23:21:58
3	Co 228.616†	521.7	486.5	16.353 µg/L	16.353 ppb	23:21:58
3	Cr 267.716†	1707.3	1669.2	36.364 µg/L	36.364 ppb	23:21:58
3	Cu 324.752†	8672.8	4510.0	49.791 µg/L	49.791 ppb	23:21:38
3	Mn 257.610†	834960.0	856237.7	2579.3 µg/L	2579.3 ppb	23:21:32
3	Mo 202.031†	45.6	41.6	8.2289 µg/L	8.2289 ppb	23:21:58
3	Ni 231.604†	946.6	593.0	34.643 µg/L	34.643 ppb	23:21:58
3	P 214.914†	636.0	379.2	550.62 µg/L	550.62 ppb	23:21:58
3	Pb 220.353†	397.9	377.5	104.02 µg/L	104.02 ppb	23:21:58
3	S 181.975 Axial†	140.4	121.3	386.02 µg/L	386.02 ppb	23:21:58
3	Sb 206.836†	16.8	-5.5	-5.4282 µg/L	-5.4282 ppb	23:21:58
3	Se 196.026†	-59.3	-88.1	254.56 µg/L	254.56 ppb	23:21:58
3	SiO2†	446798.8	455037.4	82151 µg/L	82151 ppb	23:21:32
3	Si 251.611†	545268.9	558291.6	37955 µg/L	37955 ppb	23:21:32
3	Sn 189.927†	1.4	8.8	4.2671 µg/L	4.2671 ppb	23:21:58
3	Ti 334.940†	909727.3	932739.1	2180.7 µg/L	2180.7 ppb	23:21:32
3	Tl 190.801†	-59.6	-27.0	16.519 µg/L	16.519 ppb	23:21:58
3	U 409.014†	-1803.1	-1841.8	-183.08 µg/L	-183.08 ppb	23:21:32
3	V 292.402†	8071.3	8158.0	82.524 µg/L	82.524 ppb	23:21:38
3	Zn 213.857†	15735.0	15114.2	342.25 µg/L	342.25 ppb	23:21:38

Mean Data: 247336003|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2044365.2	97.671 %	0.2345			0.24%
Sc RADIAL	96809.1	100 %	0.2			0.22%
Y 371.029	1471857.2	102.72 %	0.326			0.32%
Ag 328.068†	-955.3	1.3022 µg/L	0.42410	1.3022 ppb	0.42410	32.57%
Al 396.153Radial†	86186.7	41143 µg/L	84.3	41143 ppb	84.3	0.20%
As 188.979†	19.4	13.699 µg/L	2.3582	13.699 ppb	2.3582	17.21%
B 249.677†	542.3	-31.721 µg/L	2.5488	-31.721 ppb	2.5488	8.03%
Ba 233.527†	23022.4	503.68 µg/L	14.871	503.68 ppb	14.871	2.95%
Be 313.107†	12461.0	6.4669 µg/L	0.24133	6.4669 ppb	0.24133	3.73%
Ca 317.933Radial†	36646.2	13336 µg/L	21.5	13336 ppb	21.5	0.16%
Cd 226.502†	579.1	1.5881 µg/L	0.82055	1.5881 ppb	0.82055	51.67%
Co 228.616†	523.8	17.828 µg/L	1.2777	17.828 ppb	1.2777	7.17%
Cr 267.716†	1797.0	39.147 µg/L	2.4123	39.147 ppb	2.4123	6.16%
Cu 324.752†	4655.7	50.728 µg/L	0.8129	50.728 ppb	0.8129	1.60%
Fe 238.204 Radial†	9137.8	108080 µg/L	490.2	108080 ppb	490.2	0.45%
K 766.490 Radial†	14816.7	6914.7 µg/L	12.12	6914.7 ppb	12.12	0.18%
Mg 279.077 IEC†	542.3	7032.9 µg/L	69.83	7032.9 ppb	69.83	0.99%
Mn 257.610†	876996.5	2641.7 µg/L	54.03	2641.7 ppb	54.03	2.05%
Mo 202.031†	46.8	8.7394 µg/L	0.45886	8.7394 ppb	0.45886	5.25%
Na 589.592 Radial†	3604.6	1799.1 µg/L	9.55	1799.1 ppb	9.55	0.53%

Ni 231.604†	631.4	36.791 µg/L	1.8720	36.791 ppb	1.8720	5.09%
P 214.914†	406.6	595.93 µg/L	39.331	595.93 ppb	39.331	6.60%
Pb 220.353†	403.3	110.78 µg/L	5.892	110.78 ppb	5.892	5.32%
S 181.975 Axial†	127.5	405.77 µg/L	17.660	405.77 ppb	17.660	4.35%
Sb 206.836†	-6.3	-6.1820 µg/L	1.72393	-6.1820 ppb	1.72393	27.89%
Se 196.026†	-106.1	237.38 µg/L	16.522	237.38 ppb	16.522	6.96%
SiO2†	463695.8	83714 µg/L	1353.8	83714 ppb	1353.8	1.62%
Si 251.611†	568689.6	38662 µg/L	612.3	38662 ppb	612.3	1.58%
Sn 189.927†	5.1	2.8319 µg/L	1.40813	2.8319 ppb	1.40813	49.72%
Sr 421.552†	21027.1	125.00 µg/L	0.109	125.00 ppb	0.109	0.09%
Ti 334.940†	959235.8	2242.7 µg/L	53.66	2242.7 ppb	53.66	2.39%
Tl 190.801†	-25.6	18.640 µg/L	2.5845	18.640 ppb	2.5845	13.87%
U 409.014†	-1891.8	-187.61 µg/L	4.770	-187.61 ppb	4.770	2.54%
V 292.402†	8494.4	86.511 µg/L	3.4533	86.511 ppb	3.4533	3.99%
Zn 213.857†	15620.1	353.89 µg/L	10.115	353.89 ppb	10.115	2.86%

Sequence No.: 24  
 Sample ID: 247336004|955136|1  
 Analyst: JWW  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 337  
 Date Collected: 3/16/2010 23:22:07  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 247336004|955136|1

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97135.3	97135.3	100 %		23:22:38
1	Al 396.153Radial†	87835.2	87640.8	41836 µg/L	41836 ppb	23:22:38
1	Ca 317.933Radial†	177932.4	176911.6	64382 µg/L	64382 ppb	23:22:38
1	Fe 238.204 Radial†	9450.6	9404.9	111240 µg/L	111240 ppb	23:22:58
1	K 766.490 Radial†	18744.9	18192.6	8490.2 µg/L	8490.2 ppb	23:22:38
1	Mg 279.077 IEC†	607.2	597.0	7752.2 µg/L	7752.2 ppb	23:22:58
1	Na 589.592 Radial†	5563.2	5362.7	2676.6 µg/L	2676.6 ppb	23:22:38
1	Sr 421.552†	55665.3	55327.1	328.91 µg/L	328.91 ppb	23:22:38
1	Sc 361.383	2018623.9	2018623.9	96.441 %		23:24:03
1	Y 371.029	1452283.8	1452283.8	101.35 %		23:24:03
1	Ag 328.068†	-1384.6	-975.4	1.5328 µg/L	1.5328 ppb	23:24:09
1	As 188.979†	32.2	36.6	32.481 µg/L	32.481 ppb	23:24:29
1	B 249.677†	1041.7	780.8	-22.534 µg/L	-22.534 ppb	23:24:09
1	Ba 233.527†	24317.1	25222.8	551.84 µg/L	551.84 ppb	23:24:09
1	Be 313.107†	11297.5	12873.2	6.6251 µg/L	6.6251 ppb	23:24:09
1	Cd 226.502†	503.6	692.8	3.9427 µg/L	3.9427 ppb	23:24:29
1	Co 228.616†	618.2	592.9	20.366 µg/L	20.366 ppb	23:24:29
1	Cr 267.716†	2226.4	2228.3	48.541 µg/L	48.541 ppb	23:24:29
1	Cu 324.752†	13464.7	9584.8	83.517 µg/L	83.517 ppb	23:24:09
1	Mn 257.610†	885244.0	918595.3	2766.9 µg/L	2766.9 ppb	23:24:03
1	Mo 202.031†	367.0	375.4	41.378 µg/L	41.378 ppb	23:24:29
1	Ni 231.604†	1132.4	797.2	46.131 µg/L	46.131 ppb	23:24:29
1	P 214.914†	1013.1	778.1	1206.9 µg/L	1206.9 ppb	23:24:29
1	Pb 220.353†	774.4	772.8	207.80 µg/L	207.80 ppb	23:24:29
1	S 181.975 Axial†	552.9	550.8	1752.9 µg/L	1752.9 ppb	23:24:29
1	Sb 206.836†	16.1	-6.1	-6.3292 µg/L	-6.3292 ppb	23:24:29
1	Se 196.026†	-105.0	-136.2	213.35 µg/L	213.35 ppb	23:24:29
1	SiO2†	493523.6	508954.3	91884 µg/L	91884 ppb	23:24:03
1	Si 251.611†	602597.6	624408.5	42450 µg/L	42450 ppb	23:24:03
1	Sn 189.927†	-29.8	-23.4	-3.3793 µg/L	-3.3793 ppb	23:24:29
1	Ti 334.940†	1015458.3	1053504.6	2463.9 µg/L	2463.9 ppb	23:24:03
1	Tl 190.801†	-49.7	-17.4	17.815 µg/L	17.815 ppb	23:24:29
1	U 409.014†	-1799.7	-1860.3	-188.30 µg/L	-188.30 ppb	23:24:09
1	V 292.402†	10148.8	10410.9	109.01 µg/L	109.01 ppb	23:24:09
1	Zn 213.857†	20388.4	20131.8	457.48 µg/L	457.48 ppb	23:24:09
2	Sc RADIAL	96954.4	96954.4	100 %		23:23:04
2	Al 396.153Radial†	87674.7	87643.8	41838 µg/L	41838 ppb	23:23:04
2	Ca 317.933Radial†	178071.0	177380.6	64553 µg/L	64553 ppb	23:23:04
2	Fe 238.204 Radial†	9482.4	9454.2	111820 µg/L	111820 ppb	23:23:24
2	K 766.490 Radial†	18660.7	18143.4	8467.2 µg/L	8467.2 ppb	23:23:04
2	Mg 279.077 IEC†	607.4	598.4	7769.2 µg/L	7769.2 ppb	23:23:24
2	Na 589.592 Radial†	5567.0	5376.9	2683.6 µg/L	2683.6 ppb	23:23:04
2	Sr 421.552†	55750.5	55515.6	330.03 µg/L	330.03 ppb	23:23:04
2	Sc 361.383	2025600.1	2025600.1	96.775 %		23:24:36
2	Y 371.029	1457144.1	1457144.1	101.69 %		23:24:36
2	Ag 328.068†	-1448.3	-1036.3	1.0943 µg/L	1.0943 ppb	23:24:42
2	As 188.979†	31.9	36.2	31.726 µg/L	31.726 ppb	23:25:03
2	B 249.677†	1163.4	902.8	-17.302 µg/L	-17.302 ppb	23:24:42
2	Ba 233.527†	24518.6	25344.1	554.50 µg/L	554.50 ppb	23:24:42
2	Be 313.107†	11345.1	12882.0	6.6296 µg/L	6.6296 ppb	23:24:42
2	Cd 226.502†	472.3	658.7	3.0636 µg/L	3.0636 ppb	23:25:03
2	Co 228.616†	612.0	584.3	19.991 µg/L	19.991 ppb	23:25:03
2	Cr 267.716†	2175.3	2167.5	47.220 µg/L	47.220 ppb	23:25:03
2	Cu 324.752†	13605.5	9682.3	84.263 µg/L	84.263 ppb	23:24:42
2	Mn 257.610†	890403.6	920765.6	2773.4 µg/L	2773.4 ppb	23:24:36
2	Mo 202.031†	372.0	379.3	41.782 µg/L	41.782 ppb	23:25:03
2	Ni 231.604†	1102.6	762.4	44.185 µg/L	44.185 ppb	23:25:03
2	P 214.914†	1015.7	777.1	1204.7 µg/L	1204.7 ppb	23:25:03
2	Pb 220.353†	759.9	755.0	203.16 µg/L	203.16 ppb	23:25:03

2	S 181.975 Axial†	557.0	553.0	1760.0 µg/L	1760.0 ppb	23:25:03
2	Sb 206.836†	14.1	-8.2	-8.1935 µg/L	-8.1935 ppb	23:25:03
2	Se 196.026†	-99.3	-129.9	221.08 µg/L	221.08 ppb	23:25:03
2	SiO2†	494574.7	508278.0	91762 µg/L	91762 ppb	23:24:36
2	Si 251.611†	603631.9	623325.4	42376 µg/L	42376 ppb	23:24:36
2	Sn 189.927†	-33.5	-27.2	-4.8405 µg/L	-4.8405 ppb	23:25:03
2	Ti 334.940†	1019756.5	1054319.7	2465.8 µg/L	2465.8 ppb	23:24:36
2	Tl 190.801†	-40.7	-7.9	27.100 µg/L	27.100 ppb	23:25:03
2	U 409.014†	-1878.9	-1935.7	-195.24 µg/L	-195.24 ppb	23:24:42
2	V 292.402†	10253.3	10482.7	109.78 µg/L	109.78 ppb	23:24:42
2	Zn 213.857†	20650.4	20329.8	462.02 µg/L	462.02 ppb	23:24:42
3	Sc RADIAL	96738.0	96738.0	99.9 %		23:23:30
3	Al 396.153Radial†	87640.3	87805.1	41915 µg/L	41915 ppb	23:23:30
3	Ca 317.933Radial†	177350.4	177057.3	64435 µg/L	64435 ppb	23:23:30
3	Fe 238.204 Radial†	9529.8	9522.7	112630 µg/L	112630 ppb	23:23:50
3	K 766.490 Radial†	18538.8	18063.1	8429.7 µg/L	8429.7 ppb	23:23:30
3	Mg 279.077 IEC†	605.5	597.8	7761.0 µg/L	7761.0 ppb	23:23:50
3	Na 589.592 Radial†	5597.0	5419.3	2704.8 µg/L	2704.8 ppb	23:23:30
3	Sr 421.552†	55805.0	55694.5	331.10 µg/L	331.10 ppb	23:23:30
3	Sc 361.383	2030016.9	2030016.9	96.986 %		23:25:10
3	Y 371.029	1459201.6	1459201.6	101.84 %		23:25:10
3	Ag 328.068†	-1381.0	-963.7	1.6871 µg/L	1.6871 ppb	23:25:16
3	As 188.979†	31.2	35.4	30.490 µg/L	30.490 ppb	23:25:36
3	B 249.677†	997.3	729.0	-25.622 µg/L	-25.622 ppb	23:25:16
3	Ba 233.527†	23272.7	24004.5	525.19 µg/L	525.19 ppb	23:25:16
3	Be 313.107†	10685.8	12176.7	6.2492 µg/L	6.2492 ppb	23:25:16
3	Cd 226.502†	422.7	606.4	1.7255 µg/L	1.7255 ppb	23:25:36
3	Co 228.616†	564.3	533.8	18.003 µg/L	18.003 ppb	23:25:36
3	Cr 267.716†	1952.6	1933.0	42.114 µg/L	42.114 ppb	23:25:36
3	Cu 324.752†	13100.0	9130.5	80.811 µg/L	80.811 ppb	23:25:16
3	Mn 257.610†	864261.3	891808.9	2686.4 µg/L	2686.4 ppb	23:25:10
3	Mo 202.031†	328.9	334.0	37.327 µg/L	37.327 ppb	23:25:36
3	Ni 231.604†	1042.5	698.0	40.586 µg/L	40.586 ppb	23:25:36
3	P 214.914†	951.3	708.5	1090.6 µg/L	1090.6 ppb	23:25:36
3	Pb 220.353†	708.4	700.3	188.80 µg/L	188.80 ppb	23:25:36
3	S 181.975 Axial†	517.0	510.5	1624.8 µg/L	1624.8 ppb	23:25:36
3	Sb 206.836†	12.0	-10.3	-10.097 µg/L	-10.097 ppb	23:25:36
3	Se 196.026†	-90.2	-120.3	232.70 µg/L	232.70 ppb	23:25:36
3	SiO2†	480512.2	492666.4	88944 µg/L	88944 ppb	23:25:10
3	Si 251.611†	586575.7	604381.9	41088 µg/L	41088 ppb	23:25:10
3	Sn 189.927†	-22.3	-15.6	-0.3161 µg/L	-0.3161 ppb	23:25:36
3	Ti 334.940†	984902.0	1016089.3	2376.4 µg/L	2376.4 ppb	23:25:10
3	Tl 190.801†	-44.2	-11.4	22.733 µg/L	22.733 ppb	23:25:36
3	U 409.014†	-1647.1	-1692.5	-173.26 µg/L	-173.26 ppb	23:25:16
3	V 292.402†	9615.8	9802.3	101.62 µg/L	101.62 ppb	23:25:16
3	Zn 213.857†	19635.7	19237.1	436.85 µg/L	436.85 ppb	23:25:16

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Mean Data: 247336004|955136|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2024747.0	96.734 %	0.2744			0.28%
Sc RADIAL	96942.6	100 %	0.2			0.21%
Y 371.029	1456209.8	101.63 %	0.248			0.24%
Ag 328.068†	-991.8	1.4381 µg/L	0.30756	1.4381 ppb	0.30756	21.39%
Al 396.153Radial†	87696.6	41863 µg/L	44.9	41863 ppb	44.9	0.11%
As 188.979†	36.1	31.566 µg/L	1.0051	31.566 ppb	1.0051	3.18%
B 249.677†	804.2	-21.819 µg/L	4.2061	-21.819 ppb	4.2061	19.28%
Ba 233.527†	24857.1	543.84 µg/L	16.212	543.84 ppb	16.212	2.98%
Be 313.107†	12644.0	6.5013 µg/L	0.21831	6.5013 ppb	0.21831	3.36%
Ca 317.933Radial†	177116.5	64456 µg/L	87.4	64456 ppb	87.4	0.14%
Cd 226.502†	652.6	2.9106 µg/L	1.11649	2.9106 ppb	1.11649	38.36%
Co 228.616†	570.3	19.454 µg/L	1.2699	19.454 ppb	1.2699	6.53%
Cr 267.716†	2109.6	45.958 µg/L	3.3938	45.958 ppb	3.3938	7.38%
Cu 324.752†	9465.8	82.864 µg/L	1.8161	82.864 ppb	1.8161	2.19%
Fe 238.204 Radial†	9460.6	111900 µg/L	699.9	111900 ppb	699.9	0.63%
K 766.490 Radial†	18133.1	8462.4 µg/L	30.51	8462.4 ppb	30.51	0.36%
Mg 279.077 IEC†	597.7	7760.8 µg/L	8.51	7760.8 ppb	8.51	0.11%
Mn 257.610†	910389.9	2742.2 µg/L	48.44	2742.2 ppb	48.44	1.77%
Mo 202.031†	362.9	40.162 µg/L	2.4635	40.162 ppb	2.4635	6.13%
Na 589.592 Radial†	5386.3	2688.3 µg/L	14.70	2688.3 ppb	14.70	0.55%



Ni 231.604†	752.5	43.634 µg/L	2.8132	43.634 ppb	2.8132	6.45%
P 214.914†	754.6	1167.4 µg/L	66.53	1167.4 ppb	66.53	5.70%
Pb 220.353†	742.7	199.92 µg/L	9.907	199.92 ppb	9.907	4.96%
S 181.975 Axial†	538.1	1712.5 µg/L	76.08	1712.5 ppb	76.08	4.44%
Sb 206.836†	-8.2	-8.2066 µg/L	1.88398	-8.2066 ppb	1.88398	22.96%
Se 196.026†	-128.8	222.38 µg/L	9.739	222.38 ppb	9.739	4.38%
SiO2†	503299.5	90864 µg/L	1663.6	90864 ppb	1663.6	1.83%
Si 251.611†	617371.9	41971 µg/L	765.7	41971 ppb	765.7	1.82%
Sn 189.927†	-22.1	-2.8453 µg/L	2.30894	-2.8453 ppb	2.30894	81.15%
Sr 421.552†	55512.4	330.01 µg/L	1.092	330.01 ppb	1.092	0.33%
Ti 334.940†	1041304.5	2435.4 µg/L	51.07	2435.4 ppb	51.07	2.10%
Tl 190.801†	-12.3	22.549 µg/L	4.6448	22.549 ppb	4.6448	20.60%
U 409.014†	-1829.5	-185.60 µg/L	11.237	-185.60 ppb	11.237	6.05%
V 292.402†	10232.0	106.80 µg/L	4.505	106.80 ppb	4.505	4.22%
Zn 213.857†	19899.6	452.12 µg/L	13.418	452.12 ppb	13.418	2.97%

Sequence No.: 25

Sample ID: 247336005|955136|1

Analyst: JWJ

Initial Sample Wt:

Dilution:

Autosampler Location: 338

Date Collected: 3/16/2010 23:25:46

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 247336005|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	97437.3	97437.3	101 %		23:26:16
1	Al 396.153Radial†	61742.9	61451.0	29335 µg/L	29335 ppb	23:26:16
1	Ca 317.933Radial†	100231.4	99178.5	36093 µg/L	36093 ppb	23:26:16
1	Fe 238.204 Radial†	7245.4	7185.2	84985 µg/L	84985 ppb	23:26:36
1	K 766.490 Radial†	11405.0	10843.7	5060.6 µg/L	5060.6 ppb	23:26:16
1	Mg 279.077 IEC†	455.9	444.8	5773.5 µg/L	5773.5 ppb	23:26:36
1	Na 589.592 Radial†	5200.7	4985.5	2488.3 µg/L	2488.3 ppb	23:26:16
1	Sr 421.552†	32095.7	31742.5	188.70 µg/L	188.70 ppb	23:26:16
1	Sc 361.383	2027019.9	2027019.9	96.843 %		23:27:41
1	Y 371.029	1478344.2	1478344.2	103.17 %		23:27:41
1	Ag 328.068†	-1267.1	-848.2	0.2389 µg/L	0.2389 ppb	23:27:47
1	As 188.979†	19.2	23.1	19.228 µg/L	19.228 ppb	23:28:07
1	B 249.677†	759.5	484.9	-22.290 µg/L	-22.290 ppb	23:27:47
1	Ba 233.527†	18185.3	18786.7	411.00 µg/L	411.00 ppb	23:27:47
1	Be 313.107†	13239.9	14830.4	7.9174 µg/L	7.9174 ppb	23:27:47
1	Cd 226.502†	322.6	503.7	2.4202 µg/L	2.4202 ppb	23:28:07
1	Co 228.616†	439.8	406.0	13.095 µg/L	13.095 ppb	23:28:07
1	Cr 267.716†	1425.5	1391.7	30.318 µg/L	30.318 ppb	23:28:07
1	Cu 324.752†	11505.4	7503.8	64.989 µg/L	64.989 ppb	23:27:47
1	Mn 257.610†	875695.0	904933.0	2724.4 µg/L	2724.4 ppb	23:27:41
1	Mo 202.031†	139.1	138.5	16.935 µg/L	16.935 ppb	23:28:07
1	Ni 231.604†	1248.3	912.1	52.243 µg/L	52.243 ppb	23:28:07
1	P 214.914†	749.4	501.4	766.81 µg/L	766.81 ppb	23:28:07
1	Pb 220.353†	311.2	291.2	80.086 µg/L	80.086 ppb	23:28:07
1	S 181.975 Axial†	314.9	302.6	963.05 µg/L	963.05 ppb	23:28:07
1	Sb 206.836†	17.2	-5.0	-5.1219 µg/L	-5.1219 ppb	23:28:07
1	Se 196.026†	-66.2	-95.7	172.34 µg/L	172.34 ppb	23:28:07
1	SiO2†	449782.0	461666.8	83347 µg/L	83347 ppb	23:27:41
1	Si 251.611†	548789.7	566258.2	38496 µg/L	38496 ppb	23:27:41
1	Sn 189.927†	-12.5	-5.5	0.9935 µg/L	0.9935 ppb	23:28:07
1	Ti 334.940†	865012.2	893792.1	2090.1 µg/L	2090.1 ppb	23:27:41
1	Tl 190.801†	-51.2	-18.7	15.507 µg/L	15.507 ppb	23:28:07
1	U 409.014†	-1667.1	-1715.6	-169.79 µg/L	-169.79 ppb	23:27:47
1	V 292.402†	6505.3	6605.1	67.204 µg/L	67.204 ppb	23:28:07
1	Zn 213.857†	23226.4	22974.8	524.29 µg/L	524.29 ppb	23:27:47
2	Sc RADIAL	97466.1	97466.1	101 %		23:26:42
2	Al 396.153Radial†	61879.7	61568.7	29391 µg/L	29391 ppb	23:26:42
2	Ca 317.933Radial†	100688.8	99603.3	36248 µg/L	36248 ppb	23:26:42
2	Fe 238.204 Radial†	7266.2	7203.7	85204 µg/L	85204 ppb	23:27:02
2	K 766.490 Radial†	11533.5	10968.0	5118.6 µg/L	5118.6 ppb	23:26:42
2	Mg 279.077 IEC†	457.1	445.9	5787.5 µg/L	5787.5 ppb	23:27:02
2	Na 589.592 Radial†	5166.7	4950.2	2470.6 µg/L	2470.6 ppb	23:26:42
2	Sr 421.552†	32245.1	31881.5	189.53 µg/L	189.53 ppb	23:26:42
2	Sc 361.383	2022122.4	2022122.4	96.609 %		23:28:14
2	Y 371.029	1474079.5	1474079.5	102.88 %		23:28:14
2	Ag 328.068†	-1350.4	-937.6	-0.4642 µg/L	-0.4642 ppb	23:28:20
2	As 188.979†	26.2	30.3	29.854 µg/L	29.854 ppb	23:28:41
2	B 249.677†	768.1	495.7	-21.915 µg/L	-21.915 ppb	23:28:20
2	Ba 233.527†	17999.2	18639.4	407.78 µg/L	407.78 ppb	23:28:20
2	Be 313.107†	13128.0	14747.7	7.8684 µg/L	7.8684 ppb	23:28:20
2	Cd 226.502†	312.9	494.5	2.1756 µg/L	2.1756 ppb	23:28:41
2	Co 228.616†	427.6	394.5	12.598 µg/L	12.598 ppb	23:28:41
2	Cr 267.716†	1423.8	1393.6	30.358 µg/L	30.358 ppb	23:28:41
2	Cu 324.752†	11450.5	7475.8	64.847 µg/L	64.847 ppb	23:28:20
2	Mn 257.610†	873446.7	904795.7	2724.0 µg/L	2724.0 ppb	23:28:14
2	Mo 202.031†	151.4	151.6	18.235 µg/L	18.235 ppb	23:28:41
2	Ni 231.604†	1220.1	886.0	50.783 µg/L	50.783 ppb	23:28:41
2	P 214.914†	751.1	505.1	772.67 µg/L	772.67 ppb	23:28:41
2	Pb 220.353†	312.7	293.5	80.718 µg/L	80.718 ppb	23:28:41

2	S 181.975 Axial†	323.7	312.5	994.65 µg/L	994.65 ppb	23:28:41
2	Sb 206.836†	15.5	-6.7	-6.5885 µg/L	-6.5885 ppb	23:28:41
2	Se 196.026†	-54.4	-83.6	184.33 µg/L	184.33 ppb	23:28:41
2	SiO2†	448446.3	461409.2	83301 µg/L	83301 ppb	23:28:14
2	Si 251.611†	547000.5	565778.7	38464 µg/L	38464 ppb	23:28:14
2	Sn 189.927†	-29.7	-23.3	-5.9378 µg/L	-5.9378 ppb	23:28:41
2	Ti 334.940†	863366.7	894252.1	2091.2 µg/L	2091.2 ppb	23:28:14
2	Tl 190.801†	-51.1	-18.8	15.430 µg/L	15.430 ppb	23:28:41
2	U 409.014†	-1741.2	-1796.5	-177.17 µg/L	-177.17 ppb	23:28:20
2	V 292.402†	6456.1	6570.4	66.769 µg/L	66.769 ppb	23:28:41
2	Zn 213.857†	23119.5	22922.2	523.08 µg/L	523.08 ppb	23:28:20
3	Sc RADIAL	97020.2	97020.2	100 %		23:27:08
3	Al 396.153Radial†	61434.6	61407.1	29314 µg/L	29314 ppb	23:27:08
3	Ca 317.933Radial†	99665.6	99042.1	36044 µg/L	36044 ppb	23:27:08
3	Fe 238.204 Radial†	7250.4	7221.1	85410 µg/L	85410 ppb	23:27:28
3	K 766.490 Radial†	11382.9	10870.4	5073.0 µg/L	5073.0 ppb	23:27:08
3	Mg 279.077 IEC†	450.3	441.2	5725.1 µg/L	5725.1 ppb	23:27:28
3	Na 589.592 Radial†	5177.7	4984.7	2487.9 µg/L	2487.9 ppb	23:27:08
3	Sr 421.552†	32060.4	31844.3	189.31 µg/L	189.31 ppb	23:27:08
3	Sc 361.383	2033050.2	2033050.2	97.131 %		23:28:48
3	Y 371.029	1479718.5	1479718.5	103.27 %		23:28:48
3	Ag 328.068†	-1168.3	-742.7	1.0559 µg/L	1.0559 ppb	23:28:53
3	As 188.979†	19.3	23.1	19.170 µg/L	19.170 ppb	23:29:14
3	B 249.677†	741.0	463.6	-23.487 µg/L	-23.487 ppb	23:28:53
3	Ba 233.527†	17195.1	17711.4	387.47 µg/L	387.47 ppb	23:28:53
3	Be 313.107†	12455.9	13982.7	7.4495 µg/L	7.4495 ppb	23:28:53
3	Cd 226.502†	266.3	444.7	0.9646 µg/L	0.9646 ppb	23:29:14
3	Co 228.616†	386.7	350.1	10.856 µg/L	10.856 ppb	23:29:14
3	Cr 267.716†	1249.4	1206.1	26.275 µg/L	26.275 ppb	23:29:14
3	Cu 324.752†	11089.6	7040.5	62.043 µg/L	62.043 ppb	23:28:53
3	Mn 257.610†	849750.3	875539.7	2636.1 µg/L	2636.1 ppb	23:28:48
3	Mo 202.031†	133.4	132.2	16.332 µg/L	16.332 ppb	23:29:14
3	Ni 231.604†	1145.3	802.2	46.086 µg/L	46.086 ppb	23:29:14
3	P 214.914†	699.9	448.2	678.39 µg/L	678.39 ppb	23:29:14
3	Pb 220.353†	278.4	256.5	70.992 µg/L	70.992 ppb	23:29:14
3	S 181.975 Axial†	296.8	283.0	900.59 µg/L	900.59 ppb	23:29:14
3	Sb 206.836†	25.0	3.0	2.0588 µg/L	2.0588 ppb	23:29:14
3	Se 196.026†	-55.8	-84.8	183.95 µg/L	183.95 ppb	23:29:14
3	SiO2†	438070.8	448232.1	80922 µg/L	80922 ppb	23:28:48
3	Si 251.611†	534247.7	549605.8	37364 µg/L	37364 ppb	23:28:48
3	Sn 189.927†	-14.5	-7.5	0.2111 µg/L	0.2111 ppb	23:29:14
3	Ti 334.940†	834683.5	859918.0	2010.9 µg/L	2010.9 ppb	23:28:48
3	Tl 190.801†	-43.3	-10.5	22.569 µg/L	22.569 ppb	23:29:14
3	U 409.014†	-1562.9	-1603.3	-159.65 µg/L	-159.65 ppb	23:28:53
3	V 292.402†	5733.3	5790.4	57.529 µg/L	57.529 ppb	23:29:14
3	Zn 213.857†	22089.3	21732.9	495.72 µg/L	495.72 ppb	23:28:53

Mean Data: 247336005|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2027397.5	96.861 %		0.2615			0.27%
Sc RADIAL	97307.9	101 %		0.3			0.26%
Y 371.029	1477380.7	103.11 %		0.205			0.20%
Ag 328.068†	-842.8	0.2769 µg/L		0.76077	0.2769 ppb	0.76077	274.78%
Al 396.153Radial†	61475.6	29346 µg/L		39.9	29346 ppb	39.9	0.14%
As 188.979†	25.5	22.751 µg/L		6.1517	22.751 ppb	6.1517	27.04%
B 249.677†	481.4	-22.564 µg/L		0.8209	-22.564 ppb	0.8209	3.64%
Ba 233.527†	18379.2	402.09 µg/L		12.759	402.09 ppb	12.759	3.17%
Be 313.107†	14520.3	7.7451 µg/L		0.25716	7.7451 ppb	0.25716	3.32%
Ca 317.933Radial†	99274.6	36128 µg/L		106.5	36128 ppb	106.5	0.29%
Cd 226.502†	481.0	1.8535 µg/L		0.77942	1.8535 ppb	0.77942	42.05%
Co 228.616†	383.5	12.183 µg/L		1.1755	12.183 ppb	1.1755	9.65%
Cr 267.716†	1330.5	28.983 µg/L		2.3457	28.983 ppb	2.3457	8.09%
Cu 324.752†	7340.0	63.959 µg/L		1.6616	63.959 ppb	1.6616	2.60%
Fe 238.204 Radial†	7203.4	85199 µg/L		212.4	85199 ppb	212.4	0.25%
K 766.490 Radial†	10894.0	5084.0 µg/L		30.53	5084.0 ppb	30.53	0.60%
Mg 279.077 IEC†	444.0	5762.0 µg/L		32.77	5762.0 ppb	32.77	0.57%
Mn 257.610†	895089.5	2694.8 µg/L		50.87	2694.8 ppb	50.87	1.89%
Mo 202.031†	140.8	17.167 µg/L		0.9729	17.167 ppb	0.9729	5.67%
Na 589.592 Radial†	4973.5	2482.3 µg/L		10.07	2482.3 ppb	10.07	0.41%

Ni 231.604†	866.8	49.704 µg/L	3.2172	49.704 ppb	3.2172	6.47%
P 214.914†	484.9	739.29 µg/L	52.823	739.29 ppb	52.823	7.15%
Pb 220.353†	280.4	77.265 µg/L	5.4420	77.265 ppb	5.4420	7.04%
S 181.975 Axial†	299.4	952.76 µg/L	47.868	952.76 ppb	47.868	5.02%
Sb 206.836†	-2.9	-3.2172 µg/L	4.62765	-3.2172 ppb	4.62765	143.84%
Se 196.026†	-88.0	180.21 µg/L	6.818	180.21 ppb	6.818	3.78%
SiO2†	457102.7	82523 µg/L	1387.1	82523 ppb	1387.1	1.68%
Si 251.611†	560547.6	38108 µg/L	644.4	38108 ppb	644.4	1.69%
Sn 189.927†	-12.1	-1.5777 µg/L	3.79617	-1.5777 ppb	3.79617	240.61%
Sr 421.552†	31822.7	189.18 µg/L	0.428	189.18 ppb	0.428	0.23%
Ti 334.940†	882654.1	2064.1 µg/L	46.04	2064.1 ppb	46.04	2.23%
Tl 190.801†	-16.0	17.835 µg/L	4.0997	17.835 ppb	4.0997	22.99%
U 409.014†	-1705.1	-168.87 µg/L	8.799	-168.87 ppb	8.799	5.21%
V 292.402†	6322.0	63.834 µg/L	5.4647	63.834 ppb	5.4647	8.56%
Zn 213.857†	22543.3	514.36 µg/L	16.160	514.36 ppb	16.160	3.14%

Sequence No.: 26

Sample ID: 247336006|955136|1

Analyst: JWW

Initial Sample Wt:

Dilution:

Autosampler Location: 339

Date Collected: 3/16/2010 23:29:24

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 247336006|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	95459.7	95459.7	98.6 %		23:29:54
1	Al 396.153Radial†	59168.8	60111.6	28695 µg/L	28695 ppb	23:29:54
1	Ca 317.933Radial†	47244.1	47516.3	17292 µg/L	17292 ppb	23:29:54
1	Fe 238.204 Radial†	7749.7	7845.6	92796 µg/L	92796 ppb	23:30:14
1	K 766.490 Radial†	11828.1	11507.3	5370.3 µg/L	5370.3 ppb	23:29:54
1	Mg 279.077 IEC†	426.6	424.5	5496.9 µg/L	5496.9 ppb	23:30:14
1	Na 589.592 Radial†	4850.8	4737.7	2364.6 µg/L	2364.6 ppb	23:29:54
1	Sr 421.552†	17256.4	17357.1	103.19 µg/L	103.19 ppb	23:29:54
1	Sc 361.383	2042594.2	2042594.2	97.587 %		23:31:20
1	Y 371.029	1504595.0	1504595.0	105.01 %		23:31:20
1	Ag 328.068†	-1380.7	-954.6	-0.0463 µg/L	-0.0463 ppb	23:31:25
1	As 188.979†	16.2	19.8	15.706 µg/L	15.706 ppb	23:31:46
1	B 249.677†	732.7	451.4	-27.896 µg/L	-27.896 ppb	23:31:25
1	Ba 233.527†	14162.9	14521.5	317.72 µg/L	317.72 ppb	23:31:25
1	Be 313.107†	13042.2	14523.6	7.5143 µg/L	7.5143 ppb	23:31:25
1	Cd 226.502†	339.8	518.8	1.8683 µg/L	1.8683 ppb	23:31:46
1	Co 228.616†	402.7	364.6	10.087 µg/L	10.087 ppb	23:31:46
1	Cr 267.716†	1158.7	1107.1	24.125 µg/L	24.125 ppb	23:31:46
1	Cu 324.752†	7616.1	3427.7	39.834 µg/L	39.834 ppb	23:31:25
1	Mn 257.610†	816869.1	837757.6	2523.0 µg/L	2523.0 ppb	23:31:20
1	Mo 202.031†	88.1	85.2	11.956 µg/L	11.956 ppb	23:31:46
1	Ni 231.604†	752.8	394.5	23.317 µg/L	23.317 ppb	23:31:46
1	P 214.914†	779.2	526.0	803.96 µg/L	803.96 ppb	23:31:46
1	Pb 220.353†	379.3	358.5	97.901 µg/L	97.901 ppb	23:31:46
1	S 181.975 Axial†	154.8	136.1	432.98 µg/L	432.98 ppb	23:31:46
1	Sb 206.836†	13.3	-9.1	-8.4727 µg/L	-8.4727 ppb	23:31:46
1	Se 196.026†	-52.9	-81.5	212.63 µg/L	212.63 ppb	23:31:46
1	SiO2†	408826.6	416157.3	75131 µg/L	75131 ppb	23:31:20
1	Si 251.611†	498786.4	510697.5	34719 µg/L	34719 ppb	23:31:20
1	Sn 189.927†	-10.7	-3.5	-0.0932 µg/L	-0.0932 ppb	23:31:46
1	Ti 334.940†	1115702.0	1143871.0	2674.6 µg/L	2674.6 ppb	23:31:20
1	Tl 190.801†	-59.9	-27.3	16.763 µg/L	16.763 ppb	23:31:46
1	U 409.014†	-2226.6	-2275.9	-220.60 µg/L	-220.60 ppb	23:31:20
1	V 292.402†	6155.1	6195.0	61.264 µg/L	61.264 ppb	23:31:25
1	Zn 213.857†	22404.5	21949.7	500.51 µg/L	500.51 ppb	23:31:25
2	Sc RADIAL	95787.3	95787.3	99.0 %		23:30:20
2	Al 396.153Radial†	59370.1	60109.8	28694 µg/L	28694 ppb	23:30:20
2	Ca 317.933Radial†	47278.7	47387.5	17245 µg/L	17245 ppb	23:30:20
2	Fe 238.204 Radial†	7703.0	7771.6	91920 µg/L	91920 ppb	23:30:40
2	K 766.490 Radial†	11840.5	11478.9	5357.0 µg/L	5357.0 ppb	23:30:20
2	Mg 279.077 IEC†	429.3	425.8	5515.1 µg/L	5515.1 ppb	23:30:40
2	Na 589.592 Radial†	4809.5	4679.2	2335.4 µg/L	2335.4 ppb	23:30:20
2	Sr 421.552†	17356.2	17398.1	103.43 µg/L	103.43 ppb	23:30:20
2	Sc 361.383	2027377.2	2027377.2	96.860 %		23:31:54
2	Y 371.029	1494976.2	1494976.2	104.33 %		23:31:54
2	Ag 328.068†	-1283.3	-864.7	0.6016 µg/L	0.6016 ppb	23:31:59
2	As 188.979†	13.7	17.4	12.203 µg/L	12.203 ppb	23:32:20
2	B 249.677†	680.0	402.7	-29.653 µg/L	-29.653 ppb	23:31:59
2	Ba 233.527†	14037.0	14500.5	317.26 µg/L	317.26 ppb	23:31:59
2	Be 313.107†	12985.7	14565.6	7.5389 µg/L	7.5389 ppb	23:31:59
2	Cd 226.502†	339.2	520.7	2.0131 µg/L	2.0131 ppb	23:32:20
2	Co 228.616†	400.0	364.9	10.104 µg/L	10.104 ppb	23:32:20
2	Cr 267.716†	1133.1	1089.6	23.743 µg/L	23.743 ppb	23:32:20
2	Cu 324.752†	7610.2	3480.3	40.013 µg/L	40.013 ppb	23:31:59
2	Mn 257.610†	807670.6	834543.7	2513.2 µg/L	2513.2 ppb	23:31:54
2	Mo 202.031†	94.5	92.4	12.639 µg/L	12.639 ppb	23:32:20
2	Ni 231.604†	740.2	387.3	22.901 µg/L	22.901 ppb	23:32:20
2	P 214.914†	768.8	521.4	796.95 µg/L	796.95 ppb	23:32:20
2	Pb 220.353†	366.5	348.2	95.203 µg/L	95.203 ppb	23:32:20

2	S 181.975 Axial†	153.3	135.7	431.87 µg/L	431.87 ppb	23:32:20
2	Sb 206.836†	9.6	-12.9	-11.847 µg/L	-11.847 ppb	23:32:20
2	Se 196.026†	-62.7	-92.1	199.91 µg/L	199.91 ppb	23:32:20
2	SiO2†	405693.4	416066.9	75115 µg/L	75115 ppb	23:31:54
2	Si 251.611†	495219.1	510850.9	34730 µg/L	34730 ppb	23:31:54
2	Sn 189.927†	3.1	10.6	5.3968 µg/L	5.3968 ppb	23:32:20
2	Ti 334.940†	1107541.5	1144027.2	2675.0 µg/L	2675.0 ppb	23:31:54
2	Tl 190.801†	-61.7	-29.6	14.380 µg/L	14.380 ppb	23:32:20
2	U 409.014†	-2184.3	-2249.3	-218.06 µg/L	-218.06 ppb	23:31:54
2	V 292.402†	6027.5	6110.6	60.387 µg/L	60.387 ppb	23:31:59
2	Zn 213.857†	22211.6	21922.9	499.93 µg/L	499.93 ppb	23:31:59
3	Sc RADIAL	95263.6	95263.6	98.4 %		23:30:46
3	Al 396.153Radial†	59078.0	60142.9	28710 µg/L	28710 ppb	23:30:46
3	Ca 317.933Radial†	47017.7	47384.9	17244 µg/L	17244 ppb	23:30:46
3	Fe 238.204 Radial†	7712.9	7824.4	92545 µg/L	92545 ppb	23:31:06
3	K 766.490 Radial†	11756.4	11459.2	5347.8 µg/L	5347.8 ppb	23:30:46
3	Mg 279.077 IEC†	429.5	428.3	5547.7 µg/L	5547.7 ppb	23:31:06
3	Na 589.592 Radial†	4798.3	4694.5	2343.0 µg/L	2343.0 ppb	23:30:46
3	Sr 421.552†	17259.8	17396.6	103.42 µg/L	103.42 ppb	23:30:46
3	Sc 361.383	2038244.5	2038244.5	97.379 %		23:32:28
3	Y 371.029	1494946.4	1494946.4	104.33 %		23:32:28
3	Ag 328.068†	-1252.1	-825.5	0.9353 µg/L	0.9353 ppb	23:32:33
3	As 188.979†	13.6	17.2	11.926 µg/L	11.926 ppb	23:32:54
3	B 249.677†	681.3	400.3	-30.088 µg/L	-30.088 ppb	23:32:33
3	Ba 233.527†	13365.0	13733.1	300.47 µg/L	300.47 ppb	23:32:33
3	Be 313.107†	12144.4	13630.2	7.0314 µg/L	7.0314 ppb	23:32:33
3	Cd 226.502†	279.3	457.4	0.4357 µg/L	0.4357 ppb	23:32:54
3	Co 228.616†	375.3	337.3	9.1456 µg/L	9.1456 ppb	23:32:54
3	Cr 267.716†	1062.8	1011.1	22.034 µg/L	22.034 ppb	23:32:54
3	Cu 324.752†	7407.1	3229.8	38.494 µg/L	38.494 ppb	23:32:33
3	Mn 257.610†	784667.1	806475.1	2428.9 µg/L	2428.9 ppb	23:32:28
3	Mo 202.031†	85.5	82.6	11.692 µg/L	11.692 ppb	23:32:54
3	Ni 231.604†	708.8	351.0	20.872 µg/L	20.872 ppb	23:32:54
3	P 214.914†	744.6	492.3	748.29 µg/L	748.29 ppb	23:32:54
3	Pb 220.353†	354.5	333.8	91.426 µg/L	91.426 ppb	23:32:54
3	S 181.975 Axial†	143.8	125.1	398.07 µg/L	398.07 ppb	23:32:54
3	Sb 206.836†	15.8	-6.5	-6.1443 µg/L	-6.1443 ppb	23:32:54
3	Se 196.026†	-52.2	-80.9	212.32 µg/L	212.32 ppb	23:32:54
3	SiO2†	396405.4	404295.8	72990 µg/L	72990 ppb	23:32:28
3	Si 251.611†	483064.2	495642.9	33696 µg/L	33696 ppb	23:32:28
3	Sn 189.927†	-4.2	3.1	2.4755 µg/L	2.4755 ppb	23:32:54
3	Ti 334.940†	1067442.3	1096752.2	2564.5 µg/L	2564.5 ppb	23:32:28
3	Tl 190.801†	-59.8	-27.3	15.401 µg/L	15.401 ppb	23:32:54
3	U 409.014†	-2125.9	-2177.3	-211.61 µg/L	-211.61 ppb	23:32:28
3	V 292.402†	5701.9	5743.1	55.964 µg/L	55.964 ppb	23:32:33
3	Zn 213.857†	21226.9	20789.4	473.82 µg/L	473.82 ppb	23:32:33

Mean Data: 247336006|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2036072.0	97.275 %		0.3745			0.38%
Sc RADIAL	95503.5	98.7 %		0.27			0.28%
Y 371.029	1498172.5	104.56 %		0.388			0.37%
Ag 328.068†	-881.6	0.4968 µg/L		0.49913	0.4968 ppb	0.49913	100.46%
Al 396.153Radial†	60121.4	28700 µg/L		8.9	28700 ppb	8.9	0.03%
As 188.979†	18.1	13.278 µg/L		2.1069	13.278 ppb	2.1069	15.87%
B 249.677†	418.1	-29.212 µg/L		1.1606	-29.212 ppb	1.1606	3.97%
Ba 233.527†	14251.7	311.81 µg/L		9.830	311.81 ppb	9.830	3.15%
Be 313.107†	14239.8	7.3615 µg/L		0.28617	7.3615 ppb	0.28617	3.89%
Ca 317.933Radial†	47429.6	17261 µg/L		27.3	17261 ppb	27.3	0.16%
Cd 226.502†	499.0	1.4391 µg/L		0.87194	1.4391 ppb	0.87194	60.59%
Co 228.616†	355.6	9.7788 µg/L		0.54845	9.7788 ppb	0.54845	5.61%
Cr 267.716†	1069.3	23.301 µg/L		1.1134	23.301 ppb	1.1134	4.78%
Cu 324.752†	3379.3	39.447 µg/L		0.8299	39.447 ppb	0.8299	2.10%
Fe 238.204 Radial†	7813.9	92420 µg/L		451.1	92420 ppb	451.1	0.49%
K 766.490 Radial†	11481.8	5358.4 µg/L		11.29	5358.4 ppb	11.29	0.21%
Mg 279.077 IEC†	426.2	5519.9 µg/L		25.75	5519.9 ppb	25.75	0.47%
Mn 257.610†	826258.8	2488.4 µg/L		51.72	2488.4 ppb	51.72	2.08%
Mo 202.031†	86.7	12.096 µg/L		0.4888	12.096 ppb	0.4888	4.04%
Na 589.592 Radial†	4703.8	2347.7 µg/L		15.14	2347.7 ppb	15.14	0.64%

Ni 231.604†	377.6	22.363 µg/L	1.3081	22.363 ppb	1.3081	5.85%
P 214.914†	513.2	783.07 µg/L	30.321	783.07 ppb	30.321	3.87%
Pb 220.353†	346.8	94.843 µg/L	3.2525	94.843 ppb	3.2525	3.43%
S 181.975 Axial†	132.3	420.97 µg/L	19.841	420.97 ppb	19.841	4.71%
Sb 206.836†	-9.5	-8.8212 µg/L	2.86714	-8.8212 ppb	2.86714	32.50%
Se 196.026†	-84.8	208.29 µg/L	7.258	208.29 ppb	7.258	3.48%
SiO2†	412173.3	74412 µg/L	1231.7	74412 ppb	1231.7	1.66%
Si 251.611†	505730.4	34381 µg/L	593.9	34381 ppb	593.9	1.73%
Sn 189.927†	3.4	2.5930 µg/L	2.74687	2.5930 ppb	2.74687	105.93%
Sr 421.552†	17384.0	103.35 µg/L	0.138	103.35 ppb	0.138	0.13%
Ti 334.940†	1128216.8	2638.0 µg/L	63.72	2638.0 ppb	63.72	2.42%
Tl 190.801†	-28.1	15.515 µg/L	1.1955	15.515 ppb	1.1955	7.71%
U 409.014†	-2234.2	-216.76 µg/L	4.632	-216.76 ppb	4.632	2.14%
V 292.402†	6016.2	59.205 µg/L	2.8409	59.205 ppb	2.8409	4.80%
Zn 213.857†	21554.0	491.42 µg/L	15.248	491.42 ppb	15.248	3.10%

Sequence No.: 27  
 Sample ID: 247336007|955136|1  
 Analyst: JWW  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 340  
 Date Collected: 3/16/2010 23:33:03  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 247336007|955136|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	96941.3	96941.3	100 %		23:33:34
1	Al 396.153Radial†	96677.1	96643.8	46135 µg/L	46135 ppb	23:33:34
1	Ca 317.933Radial†	51375.1	50908.7	18527 µg/L	18527 ppb	23:33:34
1	Fe 238.204 Radial†	8328.3	8303.2	98207 µg/L	98207 ppb	23:33:54
1	K 766.490 Radial†	17016.5	16504.3	7702.3 µg/L	7702.3 ppb	23:33:34
1	Mg 279.077 IEC†	562.3	553.4	7191.0 µg/L	7191.0 ppb	23:33:54
1	Na 589.592 Radial†	4439.2	4251.6	2122.0 µg/L	2122.0 ppb	23:33:34
1	Sr 421.552†	26247.6	26066.7	154.96 µg/L	154.96 ppb	23:33:34
1	Sc 361.383	2040531.2	2040531.2	97.488 %		23:35:00
1	Y 371.029	1474655.5	1474655.5	102.92 %		23:35:00
1	Ag 328.068†	-1320.7	-894.5	1.1270 µg/L	1.1270 ppb	23:35:05
1	As 188.979†	22.8	26.7	25.007 µg/L	25.007 ppb	23:35:26
1	B 249.677†	896.9	620.7	-23.016 µg/L	-23.016 ppb	23:35:05
1	Ba 233.527†	27567.3	28286.0	618.82 µg/L	618.82 ppb	23:35:05
1	Be 313.107†	11749.6	13211.2	6.8136 µg/L	6.8136 ppb	23:35:05
1	Cd 226.502†	385.6	566.1	2.3996 µg/L	2.3996 ppb	23:35:26
1	Co 228.616†	578.4	545.2	18.231 µg/L	18.231 ppb	23:35:26
1	Cr 267.716†	1787.3	1753.1	38.200 µg/L	38.200 ppb	23:35:26
1	Cu 324.752†	10510.1	6404.2	60.293 µg/L	60.293 ppb	23:35:05
1	Mn 257.610†	929197.8	953826.9	2872.0 µg/L	2872.0 ppb	23:35:00
1	Mo 202.031†	59.4	55.8	9.2520 µg/L	9.2520 ppb	23:35:26
1	Ni 231.604†	1067.7	718.3	41.537 µg/L	41.537 ppb	23:35:26
1	P 214.914†	715.6	461.6	695.57 µg/L	695.57 ppb	23:35:26
1	Pb 220.353†	445.4	426.7	117.13 µg/L	117.13 ppb	23:35:26
1	S 181.975 Axial†	201.7	184.3	586.60 µg/L	586.60 ppb	23:35:26
1	Sb 206.836†	18.3	-3.9	-4.1142 µg/L	-4.1142 ppb	23:35:26
1	Se 196.026†	-63.2	-92.2	218.43 µg/L	218.43 ppb	23:35:26
1	SiO2†	475322.2	484789.8	87522 µg/L	87522 ppb	23:35:00
1	Si 251.611†	580428.8	594960.3	40448 µg/L	40448 ppb	23:35:00
1	Sn 189.927†	-16.1	-9.1	-2.1620 µg/L	-2.1620 ppb	23:35:26
1	Ti 334.940†	1037519.9	1064830.3	2489.7 µg/L	2489.7 ppb	23:35:00
1	Tl 190.801†	-60.1	-27.5	17.407 µg/L	17.407 ppb	23:35:26
1	U 409.014†	-2127.7	-2176.7	-212.42 µg/L	-212.42 ppb	23:35:00
1	V 292.402†	9585.0	9719.6	102.21 µg/L	102.21 ppb	23:35:05
1	Zn 213.857†	18911.0	18389.4	418.07 µg/L	418.07 ppb	23:35:05
2	Sc RADIAL	97039.6	97039.6	100 %		23:34:00
2	Al 396.153Radial†	97216.4	97083.9	46345 µg/L	46345 ppb	23:34:00
2	Ca 317.933Radial†	51469.9	50951.3	18542 µg/L	18542 ppb	23:34:00
2	Fe 238.204 Radial†	8339.0	8305.4	98234 µg/L	98234 ppb	23:34:20
2	K 766.490 Radial†	17016.8	16487.4	7694.4 µg/L	7694.4 ppb	23:34:00
2	Mg 279.077 IEC†	564.0	554.5	7205.2 µg/L	7205.2 ppb	23:34:20
2	Na 589.592 Radial†	4484.0	4291.8	2142.1 µg/L	2142.1 ppb	23:34:00
2	Sr 421.552†	26291.6	26084.1	155.07 µg/L	155.07 ppb	23:34:00
2	Sc 361.383	2030952.2	2030952.2	97.030 %		23:35:33
2	Y 371.029	1464917.3	1464917.3	102.24 %		23:35:33
2	Ag 328.068†	-1310.6	-890.5	1.1614 µg/L	1.1614 ppb	23:35:39
2	As 188.979†	19.8	23.7	20.626 µg/L	20.626 ppb	23:35:59
2	B 249.677†	871.7	599.0	-24.012 µg/L	-24.012 ppb	23:35:39
2	Ba 233.527†	27588.6	28441.4	622.22 µg/L	622.22 ppb	23:35:39
2	Be 313.107†	11797.6	13317.5	6.8762 µg/L	6.8762 ppb	23:35:39
2	Cd 226.502†	372.3	554.3	2.1159 µg/L	2.1159 ppb	23:35:59
2	Co 228.616†	581.4	551.2	18.489 µg/L	18.489 ppb	23:35:59
2	Cr 267.716†	1773.3	1747.3	38.076 µg/L	38.076 ppb	23:35:59
2	Cu 324.752†	10478.6	6422.7	60.418 µg/L	60.418 ppb	23:35:39
2	Mn 257.610†	925498.5	954509.9	2874.1 µg/L	2874.1 ppb	23:35:33
2	Mo 202.031†	71.1	68.1	10.473 µg/L	10.473 ppb	23:35:59
2	Ni 231.604†	1055.1	710.5	41.098 µg/L	41.098 ppb	23:35:59
2	P 214.914†	715.2	464.7	700.73 µg/L	700.73 ppb	23:35:59
2	Pb 220.353†	436.4	419.6	115.29 µg/L	115.29 ppb	23:35:59



2	S 181.975 Axial†	205.9	189.7	603.70 µg/L	603.70 ppb	23:35:59
2	Sb 206.836†	18.4	-3.8	-3.9849 µg/L	-3.9849 ppb	23:35:59
2	Se 196.026†	-74.6	-104.2	207.23 µg/L	207.23 ppb	23:35:59
2	SiO2†	473251.9	484955.8	87552 µg/L	87552 ppb	23:35:33
2	Si 251.611†	577044.1	594280.1	40401 µg/L	40401 ppb	23:35:33
2	Sn 189.927†	-7.9	-0.7	1.1127 µg/L	1.1127 ppb	23:35:59
2	Ti 334.940†	1032558.6	1064736.8	2489.5 µg/L	2489.5 ppb	23:35:33
2	Tl 190.801†	-64.4	-32.3	12.809 µg/L	12.809 ppb	23:35:59
2	U 409.014†	-2181.7	-2242.6	-218.41 µg/L	-218.41 ppb	23:35:33
2	V 292.402†	9548.5	9728.4	102.31 µg/L	102.31 ppb	23:35:39
2	Zn 213.857†	18811.6	18378.5	417.82 µg/L	417.82 ppb	23:35:39
3	Sc RADIAL	97306.3	97306.3	101 %		23:34:26
3	Al 396.153Radial†	97111.8	96714.2	46168 µg/L	46168 ppb	23:34:26
3	Ca 317.933Radial†	51630.9	50970.7	18549 µg/L	18549 ppb	23:34:26
3	Fe 238.204 Radial†	8344.6	8288.2	98030 µg/L	98030 ppb	23:34:46
3	K 766.490 Radial†	17126.1	16549.6	7723.4 µg/L	7723.4 ppb	23:34:26
3	Mg 279.077 IEC†	563.3	552.3	7176.7 µg/L	7176.7 ppb	23:34:46
3	Na 589.592 Radial†	4479.8	4275.4	2133.9 µg/L	2133.9 ppb	23:34:26
3	Sr 421.552†	26373.8	26094.0	155.13 µg/L	155.13 ppb	23:34:26
3	Sc 361.383	2047982.6	2047982.6	97.844 %		23:36:07
3	Y 371.029	1477315.4	1477315.4	103.10 %		23:36:07
3	Ag 328.068†	-1271.2	-839.0	1.5045 µg/L	1.5045 ppb	23:36:13
3	As 188.979†	18.2	21.9	17.994 µg/L	17.994 ppb	23:36:33
3	B 249.677†	832.7	551.7	-26.061 µg/L	-26.061 ppb	23:36:13
3	Ba 233.527†	26038.9	26621.1	582.40 µg/L	582.40 ppb	23:36:13
3	Be 313.107†	11044.7	12446.9	6.4006 µg/L	6.4006 ppb	23:36:13
3	Cd 226.502†	319.8	497.4	0.7828 µg/L	0.7828 ppb	23:36:33
3	Co 228.616†	537.9	501.7	16.562 µg/L	16.562 ppb	23:36:33
3	Cr 267.716†	1582.8	1537.5	33.506 µg/L	33.506 ppb	23:36:33
3	Cu 324.752†	10160.1	6007.3	57.667 µg/L	57.667 ppb	23:36:13
3	Mn 257.610†	902653.9	923230.2	2780.0 µg/L	2780.0 ppb	23:36:07
3	Mo 202.031†	70.0	66.4	10.299 µg/L	10.299 ppb	23:36:33
3	Ni 231.604†	1004.3	649.5	37.679 µg/L	37.679 ppb	23:36:33
3	P 214.914†	675.3	417.7	623.14 µg/L	623.14 ppb	23:36:33
3	Pb 220.353†	415.0	393.9	108.56 µg/L	108.56 ppb	23:36:33
3	S 181.975 Axial†	185.1	166.6	530.27 µg/L	530.27 ppb	23:36:33
3	Sb 206.836†	15.6	-6.8	-6.5939 µg/L	-6.5939 ppb	23:36:33
3	Se 196.026†	-64.6	-93.4	216.74 µg/L	216.74 ppb	23:36:33
3	SiO2†	464699.2	472158.8	85242 µg/L	85242 ppb	23:36:07
3	Si 251.611†	567243.8	579318.5	39384 µg/L	39384 ppb	23:36:07
3	Sn 189.927†	-9.2	-2.0	0.5974 µg/L	0.5974 ppb	23:36:33
3	Ti 334.940†	1001720.8	1024370.2	2395.1 µg/L	2395.1 ppb	23:36:07
3	Tl 190.801†	-62.0	-29.2	14.543 µg/L	14.543 ppb	23:36:33
3	U 409.014†	-2182.7	-2225.0	-216.79 µg/L	-216.79 ppb	23:36:07
3	V 292.402†	8936.9	9021.5	93.981 µg/L	93.981 ppb	23:36:13
3	Zn 213.857†	17910.8	17296.6	392.94 µg/L	392.94 ppb	23:36:13

Mean Data: 247336007|955136|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2039822.0	97.454 %	0.4079			0.42%
Sc RADIAL	97095.8	100 %	0.2			0.19%
Y 371.029	1472296.1	102.75 %	0.456			0.44%
Ag 328.068†	-874.7	1.2643 µg/L	0.20873	1.2643 ppb	0.20873	16.51%
Al 396.153Radial†	96814.0	46216 µg/L	112.9	46216 ppb	112.9	0.24%
As 188.979†	24.1	21.209 µg/L	3.5430	21.209 ppb	3.5430	16.70%
B 249.677†	590.5	-24.363 µg/L	1.5526	-24.363 ppb	1.5526	6.37%
Ba 233.527†	27782.8	607.81 µg/L	22.077	607.81 ppb	22.077	3.63%
Be 313.107†	12991.9	6.6968 µg/L	0.25842	6.6968 ppb	0.25842	3.86%
Ca 317.933Radial†	50943.6	18539 µg/L	11.5	18539 ppb	11.5	0.06%
Cd 226.502†	539.3	1.7661 µg/L	0.86328	1.7661 ppb	0.86328	48.88%
Co 228.616†	532.7	17.761 µg/L	1.0461	17.761 ppb	1.0461	5.89%
Cr 267.716†	1679.3	36.594 µg/L	2.6750	36.594 ppb	2.6750	7.31%
Cu 324.752†	6278.1	59.459 µg/L	1.5534	59.459 ppb	1.5534	2.61%
Fe 238.204 Radial†	8298.9	98157 µg/L	110.8	98157 ppb	110.8	0.11%
K 766.490 Radial†	16513.8	7706.7 µg/L	15.00	7706.7 ppb	15.00	0.19%
Mg 279.077 IEC†	553.4	7191.0 µg/L	14.28	7191.0 ppb	14.28	0.20%
Mn 257.610†	943855.6	2842.0 µg/L	53.70	2842.0 ppb	53.70	1.89%
Mo 202.031†	63.4	10.008 µg/L	0.6605	10.008 ppb	0.6605	6.60%
Na 589.592 Radial†	4272.9	2132.6 µg/L	10.09	2132.6 ppb	10.09	0.47%

Ni 231.604†	692.8	40.105 µg/L	2.1124	40.105 ppb	2.1124	5.27%
P 214.914†	448.0	673.15 µg/L	43.381	673.15 ppb	43.381	6.44%
Pb 220.353†	413.4	113.66 µg/L	4.515	113.66 ppb	4.515	3.97%
S 181.975 Axial†	180.2	573.52 µg/L	38.423	573.52 ppb	38.423	6.70%
Sb 206.836†	-4.8	-4.8977 µg/L	1.47042	-4.8977 ppb	1.47042	30.02%
Se 196.026†	-96.6	214.13 µg/L	6.041	214.13 ppb	6.041	2.82%
SiO2†	480634.8	86772 µg/L	1325.3	86772 ppb	1325.3	1.53%
Si 251.611†	589519.7	40078 µg/L	601.0	40078 ppb	601.0	1.50%
Sn 189.927†	-3.9	-0.1506 µg/L	1.76083	-0.1506 ppb	1.76083	>999.9%
Sr 421.552†	26081.6	155.05 µg/L	0.082	155.05 ppb	0.082	0.05%
Ti 334.940†	1051312.4	2458.1 µg/L	54.56	2458.1 ppb	54.56	2.22%
Tl 190.801†	-29.7	14.920 µg/L	2.3222	14.920 ppb	2.3222	15.56%
U 409.014†	-2214.8	-215.87 µg/L	3.098	-215.87 ppb	3.098	1.44%
V 292.402†	9489.8	99.499 µg/L	4.7792	99.499 ppb	4.7792	4.80%
Zn 213.857†	18021.5	409.61 µg/L	14.437	409.61 ppb	14.437	3.52%

User canceled analysis.

## =====

## Analysis Begun

Start Time: 3/16/2010 23:48:05

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\031610.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb

=====

Sequence No.: 28

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/16/2010 23:48:08

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

User canceled analysis.

## =====

## Analysis Begun

Start Time: 3/16/2010 23:49:10

Plasma On Time: 3/12/2010 12:50:39

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\031610.sif

Batch ID:

Results Data Set: 031610B

Results Library: c:\pe\optimal\Results\Results.mdb

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Sequence No.: 28

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/16/2010 23:49:10

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

## =====

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	93848.4	93848.4	97.0 %		23:49:41
1	Al 396.153Radial†	10872.0	11331.9	5397.9 µg/L	5397.9 ppb	23:49:41
1	Ca 317.933Radial†	14761.2	14838.4	5400.0 µg/L	5400.0 ppb	23:49:41
1	Fe 238.204 Radial†	454.2	456.5	5410.7 µg/L	5410.7 ppb	23:50:01
1	K 766.490 Radial†	11671.7	11551.9	5391.1 µg/L	5391.1 ppb	23:49:41
1	Mg 279.077 IEC†	404.7	409.3	5400.1 µg/L	5400.1 ppb	23:50:01
1	Na 589.592 Radial†	20733.6	21202.5	10582 µg/L	10582 ppb	23:49:41
1	Sr 421.552†	86710.4	89287.2	530.80 µg/L	530.80 ppb	23:49:41
1	Sc 361.383	2024001.8	2024001.8	96.698 %		23:51:05
1	Y 371.029	1382578.4	1382578.4	96.490 %		23:51:05
1	Ag 328.068†	64512.0	67174.9	543.43 µg/L	543.43 ppb	23:51:11
1	As 188.979†	361.7	377.3	555.26 µg/L	555.26 ppb	23:51:31
1	B 249.677†	11828.9	11933.4	539.63 µg/L	539.63 ppb	23:51:11
1	Ba 233.527†	24230.3	25066.0	549.19 µg/L	549.19 ppb	23:51:11
1	Be 313.107†	894267.5	925959.8	543.85 µg/L	543.85 ppb	23:51:05
1	Cd 226.502†	22185.6	23113.7	549.36 µg/L	549.36 ppb	23:51:11
1	Co 228.616†	12423.1	12799.2	549.25 µg/L	549.25 ppb	23:51:11
1	Cr 267.716†	24867.9	25636.8	557.93 µg/L	557.93 ppb	23:51:11
1	Cu 324.752†	85557.4	84102.0	550.33 µg/L	550.33 ppb	23:51:11
1	Mn 257.610†	179060.5	185861.3	558.55 µg/L	558.55 ppb	23:51:05
1	Mo 202.031†	5538.4	5722.4	566.44 µg/L	566.44 ppb	23:51:31
1	Ni 231.604†	9799.7	9757.4	546.68 µg/L	546.68 ppb	23:51:11
1	P 214.914†	1901.8	1694.3	2760.8 µg/L	2760.8 ppb	23:51:31
1	Pb 220.353†	2090.9	2132.1	559.68 µg/L	559.68 ppb	23:51:31
1	S 181.975 Axial†	350.9	340.4	1083.3 µg/L	1083.3 ppb	23:51:31
1	Sb 206.836†	629.4	628.2	563.24 µg/L	563.24 ppb	23:51:31

1	Se 196.026†	592.4	585.3	562.80 µg/L	562.80 ppb	23:51:31
1	SiO2†	34414.2	32809.4	5923.3 µg/L	5923.3 ppb	23:51:11
1	Si 251.611†	39741.9	40674.7	2765.2 µg/L	2765.2 ppb	23:51:11
1	Sn 189.927†	1408.5	1464.1	570.54 µg/L	570.54 ppb	23:51:31
1	Ti 334.940†	224409.2	232648.6	543.68 µg/L	543.68 ppb	23:51:05
1	Tl 190.801†	509.1	560.6	552.77 µg/L	552.77 ppb	23:51:31
1	U 409.014†	5811.3	6015.5	545.12 µg/L	545.12 ppb	23:51:11
1	V 292.402†	45263.5	46696.6	556.75 µg/L	556.75 ppb	23:51:11
1	Zn 213.857†	24395.0	24219.1	553.75 µg/L	553.75 ppb	23:51:11
2	Sc RADIAL	93615.1	93615.1	96.7 %		23:50:07
2	Al 396.153Radial†	10826.7	11313.0	5389.0 µg/L	5389.0 ppb	23:50:07
2	Ca 317.933Radial†	14692.5	14805.2	5387.9 µg/L	5387.9 ppb	23:50:07
2	Fe 238.204 Radial†	454.5	457.9	5427.6 µg/L	5427.6 ppb	23:50:27
2	K 766.490 Radial†	11537.6	11443.4	5340.4 µg/L	5340.4 ppb	23:50:07
2	Mg 279.077 IEC†	401.9	407.6	5376.9 µg/L	5376.9 ppb	23:50:27
2	Na 589.592 Radial†	20737.0	21259.3	10611 µg/L	10611 ppb	23:50:07
2	Sr 421.552†	86477.2	89269.0	530.69 µg/L	530.69 ppb	23:50:07
2	Sc 361.383	2019887.9	2019887.9	96.502 %		23:51:38
2	Y 371.029	1377487.8	1377487.8	96.135 %		23:51:38
2	Ag 328.068†	64555.7	67356.0	544.91 µg/L	544.91 ppb	23:51:44
2	As 188.979†	366.1	382.7	563.22 µg/L	563.22 ppb	23:52:04
2	B 249.677†	11856.0	11986.5	542.03 µg/L	542.03 ppb	23:51:44
2	Ba 233.527†	24203.4	25089.2	549.70 µg/L	549.70 ppb	23:51:44
2	Be 313.107†	891228.2	924693.8	543.10 µg/L	543.10 ppb	23:51:38
2	Cd 226.502†	22221.0	23197.1	551.34 µg/L	551.34 ppb	23:51:44
2	Co 228.616†	12427.9	12830.3	550.59 µg/L	550.59 ppb	23:51:44
2	Cr 267.716†	24825.5	25645.2	558.11 µg/L	558.11 ppb	23:51:44
2	Cu 324.752†	85495.4	84217.9	551.10 µg/L	551.10 ppb	23:51:44
2	Mn 257.610†	178379.4	185532.6	557.57 µg/L	557.57 ppb	23:51:38
2	Mo 202.031†	5474.6	5667.9	561.06 µg/L	561.06 ppb	23:52:04
2	Ni 231.604†	9815.8	9794.7	548.77 µg/L	548.77 ppb	23:51:44
2	P 214.914†	1878.6	1674.3	2727.3 µg/L	2727.3 ppb	23:52:04
2	Pb 220.353†	2069.7	2114.5	555.03 µg/L	555.03 ppb	23:52:04
2	S 181.975 Axial†	352.1	342.3	1089.5 µg/L	1089.5 ppb	23:52:04
2	Sb 206.836†	635.1	635.4	569.57 µg/L	569.57 ppb	23:52:04
2	Se 196.026†	594.5	588.8	566.07 µg/L	566.07 ppb	23:52:04
2	SiO2†	34523.2	32994.9	5956.8 µg/L	5956.8 ppb	23:51:44
2	Si 251.611†	39838.9	40859.0	2777.7 µg/L	2777.7 ppb	23:51:44
2	Sn 189.927†	1386.4	1444.1	562.76 µg/L	562.76 ppb	23:52:04
2	Ti 334.940†	223562.1	232243.4	542.73 µg/L	542.73 ppb	23:51:38
2	Tl 190.801†	515.3	568.1	560.05 µg/L	560.05 ppb	23:52:04
2	U 409.014†	5796.7	6012.6	544.86 µg/L	544.86 ppb	23:51:44
2	V 292.402†	45359.3	46891.2	559.00 µg/L	559.00 ppb	23:51:44
2	Zn 213.857†	24417.0	24293.2	555.45 µg/L	555.45 ppb	23:51:44
3	Sc RADIAL	94082.5	94082.5	97.2 %		23:50:33
3	Al 396.153Radial†	10866.9	11298.8	5384.1 µg/L	5384.1 ppb	23:50:33
3	Ca 317.933Radial†	14791.1	14831.2	5397.4 µg/L	5397.4 ppb	23:50:33
3	Fe 238.204 Radial†	452.0	453.1	5369.4 µg/L	5369.4 ppb	23:50:53
3	K 766.490 Radial†	11676.7	11527.2	5379.5 µg/L	5379.5 ppb	23:50:33
3	Mg 279.077 IEC†	405.5	409.1	5395.8 µg/L	5395.8 ppb	23:50:53
3	Na 589.592 Radial†	20831.0	21249.5	10606 µg/L	10606 ppb	23:50:33
3	Sr 421.552†	86920.5	89280.9	530.76 µg/L	530.76 ppb	23:50:33
3	Sc 361.383	2030161.9	2030161.9	96.993 %		23:52:11
3	Y 371.029	1383575.9	1383575.9	96.560 %		23:52:11
3	Ag 328.068†	60582.8	62921.5	508.88 µg/L	508.88 ppb	23:52:17
3	As 188.979†	307.2	319.9	470.67 µg/L	470.67 ppb	23:52:38
3	B 249.677†	11089.6	11134.1	503.26 µg/L	503.26 ppb	23:52:17
3	Ba 233.527†	22084.1	22777.3	499.02 µg/L	499.02 ppb	23:52:17
3	Be 313.107†	835409.2	862470.5	506.56 µg/L	506.56 ppb	23:52:11
3	Cd 226.502†	20143.6	20938.7	497.61 µg/L	497.61 ppb	23:52:17
3	Co 228.616†	11183.9	11482.6	492.69 µg/L	492.69 ppb	23:52:17
3	Cr 267.716†	21726.6	22320.0	485.75 µg/L	485.75 ppb	23:52:17
3	Cu 324.752†	77730.8	75764.3	495.87 µg/L	495.87 ppb	23:52:17
3	Mn 257.610†	167934.6	173828.5	522.39 µg/L	522.39 ppb	23:52:11
3	Mo 202.031†	4597.2	4734.6	468.70 µg/L	468.70 ppb	23:52:38
3	Ni 231.604†	8897.7	8796.7	492.86 µg/L	492.86 ppb	23:52:17
3	P 214.914†	1638.0	1416.4	2303.6 µg/L	2303.6 ppb	23:52:38
3	Pb 220.353†	1807.1	1832.9	481.10 µg/L	481.10 ppb	23:52:38
3	S 181.975 Axial†	309.8	296.9	944.85 µg/L	944.85 ppb	23:52:38
3	Sb 206.836†	544.5	538.7	482.60 µg/L	482.60 ppb	23:52:38
3	Se 196.026†	535.7	525.0	505.97 µg/L	505.97 ppb	23:52:38

3	SiO2†	32098.7	30314.2	5472.8 µg/L	5472.8 ppb	23:52:17
3	Si 251.611†	36785.6	37502.1	2549.5 µg/L	2549.5 ppb	23:52:17
3	Sn 189.927†	1140.4	1183.1	461.17 µg/L	461.17 ppb	23:52:38
3	Ti 334.940†	208436.4	215476.3	503.53 µg/L	503.53 ppb	23:52:11
3	Tl 190.801†	458.4	506.7	499.75 µg/L	499.75 ppb	23:52:38
3	U 409.014†	5151.9	5317.5	481.75 µg/L	481.75 ppb	23:52:17
3	V 292.402†	40418.1	41559.0	495.12 µg/L	495.12 ppb	23:52:17
3	Zn 213.857†	22019.9	21693.8	495.94 µg/L	495.94 ppb	23:52:17

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2024683.9	96.731 %	0.2470			0.26%
Sc RADIAL	93848.7	97.0 %	0.24			0.25%
Y 371.029	1381214.0	96.395 %	0.2279			0.24%
Ag 328.068†	65817.5	532.41 µg/L	20.389	532.41 ppb	20.389	3.83%
QC value within limits for Ag 328.068 Recovery = 106.48%						
Al 396.153Radial†	11314.6	5390.3 µg/L	7.00	5390.3 ppb	7.00	0.13%
QC value within limits for Al 396.153Radial Recovery = 107.81%						
As 188.979†	360.0	529.72 µg/L	51.291	529.72 ppb	51.291	9.68%
QC value within limits for As 188.979 Recovery = 105.94%						
B 249.677†	11684.7	528.31 µg/L	21.724	528.31 ppb	21.724	4.11%
QC value within limits for B 249.677 Recovery = 105.66%						
Ba 233.527†	24310.8	532.64 µg/L	29.111	532.64 ppb	29.111	5.47%
QC value within limits for Ba 233.527 Recovery = 106.53%						
Be 313.107†	904374.7	531.17 µg/L	21.317	531.17 ppb	21.317	4.01%
QC value within limits for Be 313.107 Recovery = 106.23%						
Ca 317.933Radial†	14824.9	5395.1 µg/L	6.35	5395.1 ppb	6.35	0.12%
QC value within limits for Ca 317.933Radial Recovery = 107.90%						
Cd 226.502†	22416.5	532.77 µg/L	30.466	532.77 ppb	30.466	5.72%
QC value within limits for Cd 226.502 Recovery = 106.55%						
Co 228.616†	12370.7	530.84 µg/L	33.051	530.84 ppb	33.051	6.23%
QC value within limits for Co 228.616 Recovery = 106.17%						
Cr 267.716†	24534.0	533.93 µg/L	41.724	533.93 ppb	41.724	7.81%
QC value within limits for Cr 267.716 Recovery = 106.79%						
Cu 324.752†	81361.4	532.43 µg/L	31.668	532.43 ppb	31.668	5.95%
QC value within limits for Cu 324.752 Recovery = 106.49%						
Fe 238.204 Radial†	455.8	5402.6 µg/L	29.92	5402.6 ppb	29.92	0.55%
QC value within limits for Fe 238.204 Radial Recovery = 108.05%						
K 766.490 Radial†	11507.5	5370.3 µg/L	26.55	5370.3 ppb	26.55	0.49%
QC value within limits for K 766.490 Radial Recovery = 107.41%						
Mg 279.077 IEC†	408.7	5390.9 µg/L	12.34	5390.9 ppb	12.34	0.23%
QC value within limits for Mg 279.077 IEC Recovery = 107.82%						
Mn 257.610†	181740.8	546.17 µg/L	20.602	546.17 ppb	20.602	3.77%
QC value within limits for Mn 257.610 Recovery = 109.23%						
Mo 202.031†	5375.0	532.07 µg/L	54.941	532.07 ppb	54.941	10.33%
QC value within limits for Mo 202.031 Recovery = 106.41%						
Na 589.592 Radial†	21237.1	10600 µg/L	15.2	10600 ppb	15.2	0.14%
QC value within limits for Na 589.592 Radial Recovery = 106.00%						
Ni 231.604†	9449.6	529.44 µg/L	31.693	529.44 ppb	31.693	5.99%
QC value within limits for Ni 231.604 Recovery = 105.89%						
P 214.914†	1595.0	2597.2 µg/L	254.85	2597.2 ppb	254.85	9.81%
QC value within limits for P 214.914 Recovery = 103.89%						
Pb 220.353†	2026.5	531.94 µg/L	44.086	531.94 ppb	44.086	8.29%
QC value within limits for Pb 220.353 Recovery = 106.39%						
S 181.975 Axial†	326.5	1039.2 µg/L	81.77	1039.2 ppb	81.77	7.87%
QC value within limits for S 181.975 Axial Recovery = 103.92%						
Sb 206.836†	600.7	538.47 µg/L	48.489	538.47 ppb	48.489	9.00%
QC value within limits for Sb 206.836 Recovery = 107.69%						
Se 196.026†	566.4	544.95 µg/L	33.795	544.95 ppb	33.795	6.20%
QC value within limits for Se 196.026 Recovery = 108.99%						
SiO2†	32039.5	5784.3 µg/L	270.27	5784.3 ppb	270.27	4.67%
QC value within limits for SiO2 Recovery = 108.17%						
Si 251.611†	39678.6	2697.5 µg/L	128.30	2697.5 ppb	128.30	4.76%
QC value within limits for Si 251.611 Recovery = 107.90%						
Sn 189.927†	1363.8	531.49 µg/L	61.022	531.49 ppb	61.022	11.48%
QC value within limits for Sn 189.927 Recovery = 106.30%						
Sr 421.552†	89279.1	530.75 µg/L	0.055	530.75 ppb	0.055	0.01%
QC value within limits for Sr 421.552 Recovery = 106.15%						
Ti 334.940†	226789.4	529.98 µg/L	22.915	529.98 ppb	22.915	4.32%

QC value within limits for Ti 334.940 Recovery = 106.00%						
Tl 190.801†	545.1	537.52 µg/L	32.910	537.52 ppb	32.910	6.12%
QC value within limits for Tl 190.801 Recovery = 107.50%						
U 409.014†	5781.9	523.91 µg/L	36.512	523.91 ppb	36.512	6.97%
QC value within limits for U 409.014 Recovery = 104.78%						
V 292.402†	45048.9	536.96 µg/L	36.247	536.96 ppb	36.247	6.75%
QC value within limits for V 292.402 Recovery = 107.39%						
Zn 213.857†	23402.0	535.05 µg/L	33.879	535.05 ppb	33.879	6.33%
QC value within limits for Zn 213.857 Recovery = 107.01%						
All analyte(s) passed QC.						

Sequence No.: 29

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 3/16/2010 23:52:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	92222.5	92222.5	95.3 %		23:53:18
1	Al 396.153Radial†	-104.4	9.7	4.5893 µg/L	4.5893 ppb	23:53:18
1	Ca 317.933Radial†	356.0	-11.7	-4.2441 µg/L	-4.2441 ppb	23:53:38
1	Fe 238.204 Radial†	15.7	4.5	53.228 µg/L	53.228 ppb	23:53:38
1	K 766.490 Radial†	454.5	-8.3	-3.8845 µg/L	-3.8845 ppb	23:53:18
1	Mg 279.077 IEC†	6.5	-1.2	-15.949 µg/L	-15.949 ppb	23:53:38
1	Na 589.592 Radial†	175.7	3.8	1.8877 µg/L	1.8877 ppb	23:53:18
1	Sr 421.552†	142.9	10.5	0.0624 µg/L	0.0624 ppb	23:53:18
1	Sc 361.383	2006002.8	2006002.8	95.838 %		23:54:40
1	Y 371.029	1373039.2	1373039.2	95.824 %		23:54:40
1	Ag 328.068†	-492.5	-53.6	-0.4266 µg/L	-0.4266 ppb	23:54:46
1	As 188.979†	-4.3	-1.2	-1.8144 µg/L	-1.8144 ppb	23:55:07
1	B 249.677†	344.7	60.3	2.7086 µg/L	2.7086 ppb	23:54:46
1	Ba 233.527†	-6.7	1.5	0.0317 µg/L	0.0317 ppb	23:55:07
1	Be 313.107†	-973.3	143.3	0.0840 µg/L	0.0840 ppb	23:54:46
1	Cd 226.502†	-169.0	-5.8	-0.1433 µg/L	-0.1433 ppb	23:55:07
1	Co 228.616†	38.6	-7.8	-0.3334 µg/L	-0.3334 ppb	23:55:07
1	Cr 267.716†	12.0	-67.7	-1.4722 µg/L	-1.4722 ppb	23:54:46
1	Cu 324.752†	4328.8	140.1	0.9251 µg/L	0.9251 ppb	23:54:46
1	Mn 257.610†	-681.8	-24.4	-0.0691 µg/L	-0.0691 ppb	23:55:07
1	Mo 202.031†	27.0	23.0	2.2807 µg/L	2.2807 ppb	23:55:07
1	Ni 231.604†	352.7	-8.9	-0.5002 µg/L	-0.5002 ppb	23:55:07
1	P 214.914†	258.4	-2.8	-4.7042 µg/L	-4.7042 ppb	23:55:07
1	Pb 220.353†	28.2	-0.8	-0.1916 µg/L	-0.1916 ppb	23:55:07
1	S 181.975 Axial†	18.2	-3.5	-11.209 µg/L	-11.209 ppb	23:55:07
1	Sb 206.836†	27.9	6.4	5.7766 µg/L	5.7766 ppb	23:55:07
1	Se 196.026†	24.2	-2.1	-1.7549 µg/L	-1.7549 ppb	23:55:07
1	SiO2†	2896.0	242.1	43.699 µg/L	43.699 ppb	23:54:46
1	Si 251.611†	543.4	142.9	9.7124 µg/L	9.7124 ppb	23:55:07
1	Sn 189.927†	-1.6	5.8	2.2587 µg/L	2.2587 ppb	23:55:07
1	Ti 334.940†	-350.6	211.4	0.4955 µg/L	0.4955 ppb	23:54:46
1	Tl 190.801†	-27.0	6.0	5.8406 µg/L	5.8406 ppb	23:55:07
1	U 409.014†	-41.7	-37.7	-3.4335 µg/L	-3.4335 ppb	23:54:46
1	V 292.402†	107.3	-0.3	0.0000 µg/L	0.0000 ppb	23:54:46
1	Zn 213.857†	723.3	-254.2	-5.8531 µg/L	-5.8531 ppb	23:55:07
2	Sc RADIAL	94179.2	94179.2	97.3 %		23:53:44
2	Al 396.153Radial†	-120.1	-4.1	-2.0085 µg/L	-2.0085 ppb	23:53:44
2	Ca 317.933Radial†	345.7	-30.0	-10.916 µg/L	-10.916 ppb	23:54:04
2	Fe 238.204 Radial†	12.9	1.3	15.633 µg/L	15.633 ppb	23:54:04
2	K 766.490 Radial†	489.5	17.7	8.2491 µg/L	8.2491 ppb	23:53:44
2	Mg 279.077 IEC†	11.3	3.6	47.199 µg/L	47.199 ppb	23:54:04
2	Na 589.592 Radial†	188.1	12.7	6.3595 µg/L	6.3595 ppb	23:53:44
2	Sr 421.552†	135.1	-0.6	-0.0033 µg/L	-0.0033 ppb	23:53:44
2	Sc 361.383	2016493.2	2016493.2	96.340 %		23:55:13
2	Y 371.029	1380433.7	1380433.7	96.340 %		23:55:13
2	Ag 328.068†	-456.6	-13.7	-0.1094 µg/L	-0.1094 ppb	23:55:18
2	As 188.979†	2.4	5.8	8.5486 µg/L	8.5486 ppb	23:55:39
2	B 249.677†	291.1	2.8	0.1192 µg/L	0.1192 ppb	23:55:18
2	Ba 233.527†	-6.4	1.8	0.0398 µg/L	0.0398 ppb	23:55:39
2	Be 313.107†	-991.8	129.3	0.0758 µg/L	0.0758 ppb	23:55:18
2	Cd 226.502†	-162.0	2.4	0.0560 µg/L	0.0560 ppb	23:55:39
2	Co 228.616†	43.2	-3.2	-0.1374 µg/L	-0.1374 ppb	23:55:39
2	Cr 267.716†	47.6	-30.8	-0.6698 µg/L	-0.6698 ppb	23:55:18
2	Cu 324.752†	4333.6	121.5	0.7967 µg/L	0.7967 ppb	23:55:18
2	Mn 257.610†	-670.8	-9.3	-0.0303 µg/L	-0.0303 ppb	23:55:39
2	Mo 202.031†	24.3	20.1	1.9868 µg/L	1.9868 ppb	23:55:39
2	Ni 231.604†	377.7	15.2	0.8512 µg/L	0.8512 ppb	23:55:39
2	P 214.914†	265.1	2.8	4.5215 µg/L	4.5215 ppb	23:55:39
2	Pb 220.353†	26.4	-2.8	-0.7289 µg/L	-0.7289 ppb	23:55:39

2	S 181.975 Axial†	20.0	-1.7	-5.5179 µg/L	-5.5179 ppb	23:55:39
2	Sb 206.836†	26.3	4.6	4.1645 µg/L	4.1645 ppb	23:55:39
2	Se 196.026†	23.4	-3.0	-2.8489 µg/L	-2.8489 ppb	23:55:39
2	SiO2†	2864.5	193.5	34.942 µg/L	34.942 ppb	23:55:18
2	Si 251.611†	554.8	151.8	10.322 µg/L	10.322 ppb	23:55:39
2	Sn 189.927†	-1.4	6.0	2.3468 µg/L	2.3468 ppb	23:55:39
2	Ti 334.940†	-291.0	275.2	0.6395 µg/L	0.6395 ppb	23:55:18
2	Tl 190.801†	-32.3	0.6	0.6170 µg/L	0.6170 ppb	23:55:39
2	U 409.014†	-27.6	-22.9	-2.0797 µg/L	-2.0797 ppb	23:55:18
2	V 292.402†	103.1	-5.3	-0.0525 µg/L	-0.0525 ppb	23:55:18
2	Zn 213.857†	745.3	-235.2	-5.4248 µg/L	-5.4248 ppb	23:55:39
3	Sc RADIAL	94855.6	94855.6	98.0 %		23:54:10
3	Al 396.153Radial†	-113.8	3.2	1.4735 µg/L	1.4735 ppb	23:54:10
3	Ca 317.933Radial†	355.0	-23.0	-8.3778 µg/L	-8.3778 ppb	23:54:30
3	Fe 238.204 Radial†	11.8	0.1	0.9453 µg/L	0.9453 ppb	23:54:30
3	K 766.490 Radial†	588.0	114.7	53.522 µg/L	53.522 ppb	23:54:10
3	Mg 279.077 IEC†	8.4	0.6	8.2423 µg/L	8.2423 ppb	23:54:30
3	Na 589.592 Radial†	156.1	-21.3	-10.627 µg/L	-10.627 ppb	23:54:10
3	Sr 421.552†	122.8	-14.2	-0.0842 µg/L	-0.0842 ppb	23:54:10
3	Sc 361.383	2009878.4	2009878.4	96.024 %		23:55:45
3	Y 371.029	1375162.5	1375162.5	95.973 %		23:55:45
3	Ag 328.068†	-521.9	-83.3	-0.6695 µg/L	-0.6695 ppb	23:55:50
3	As 188.979†	-2.4	0.8	1.1725 µg/L	1.1725 ppb	23:56:11
3	B 249.677†	312.3	25.9	1.1765 µg/L	1.1765 ppb	23:55:50
3	Ba 233.527†	-7.4	0.7	0.0156 µg/L	0.0156 ppb	23:56:11
3	Be 313.107†	-919.5	201.3	0.1180 µg/L	0.1180 ppb	23:55:50
3	Cd 226.502†	-168.6	-5.0	-0.1191 µg/L	-0.1191 ppb	23:56:11
3	Co 228.616†	46.6	0.5	0.0219 µg/L	0.0219 ppb	23:56:11
3	Cu 267.716†	92.4	16.0	0.3483 µg/L	0.3483 ppb	23:55:50
3	Cr 324.752†	4323.9	126.3	0.8251 µg/L	0.8251 ppb	23:55:50
3	Mn 257.610†	-655.4	4.4	0.0127 µg/L	0.0127 ppb	23:56:11
3	Mo 202.031†	23.8	19.7	1.9464 µg/L	1.9464 ppb	23:56:11
3	Ni 231.604†	366.3	4.6	0.2572 µg/L	0.2572 ppb	23:56:11
3	P 214.914†	259.8	-1.8	-3.1174 µg/L	-3.1174 ppb	23:56:11
3	Pb 220.353†	18.9	-10.5	-2.7332 µg/L	-2.7332 ppb	23:56:11
3	S 181.975 Axial†	17.6	-4.2	-13.254 µg/L	-13.254 ppb	23:56:11
3	Sb 206.836†	28.9	7.4	6.6254 µg/L	6.6254 ppb	23:56:11
3	Se 196.026†	28.7	2.6	2.4407 µg/L	2.4407 ppb	23:56:11
3	SiO2†	2855.9	194.4	35.104 µg/L	35.104 ppb	23:55:50
3	Si 251.611†	562.9	162.1	11.021 µg/L	11.021 ppb	23:56:11
3	Sn 189.927†	-7.4	-0.3	-0.1205 µg/L	-0.1205 ppb	23:56:11
3	Ti 334.940†	-298.3	266.5	0.6225 µg/L	0.6225 ppb	23:55:50
3	Tl 190.801†	-25.5	7.6	7.4080 µg/L	7.4080 ppb	23:56:11
3	U 409.014†	-58.3	-54.9	-4.9835 µg/L	-4.9835 ppb	23:55:50
3	V 292.402†	97.7	-10.6	-0.1141 µg/L	-0.1141 ppb	23:55:50
3	Zn 213.857†	732.4	-246.2	-5.6704 µg/L	-5.6704 ppb	23:56:11

-----  
Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2010791.5	96.067 %	0.2534			0.26%
Sc RADIAL	93752.4	96.9 %	1.41			1.46%
Y 371.029	1376211.8	96.046 %	0.2657			0.28%
Ag 328.068†	-50.2	-0.4018 µg/L	0.28085	-0.4018 ppb	0.28085	69.90%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	2.9	1.3514 µg/L	3.30062	1.3514 ppb	3.30062	244.23%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.8	2.6356 µg/L	5.33416	2.6356 ppb	5.33416	202.39%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	29.7	1.3348 µg/L	1.30196	1.3348 ppb	1.30196	97.54%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	1.3	0.0290 µg/L	0.01233	0.0290 ppb	0.01233	42.45%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	158.0	0.0926 µg/L	0.02240	0.0926 ppb	0.02240	24.19%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-21.6	-7.8461 µg/L	3.36770	-7.8461 ppb	3.36770	42.92%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-2.8	-0.0688 µg/L	0.10878	-0.0688 ppb	0.10878	158.12%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-3.5	-0.1496 µg/L	0.17800	-0.1496 ppb	0.17800	118.97%



QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	-27.5 -0.5979 µg/L	0.91237 -0.5979 ppb	0.91237 152.60%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	129.3 0.8489 µg/L	0.06743 0.8489 ppb	0.06743 7.94%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	2.0 23.269 µg/L	26.9645 23.269 ppb	26.9645 115.88%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	41.3 19.295 µg/L	30.2553 19.295 ppb	30.2553 156.80%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	1.0 13.164 µg/L	31.8604 13.164 ppb	31.8604 242.03%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	-9.8 -0.0289 µg/L	0.04093 -0.0289 ppb	0.04093 141.51%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	20.9 2.0713 µg/L	0.18249 2.0713 ppb	0.18249 8.81%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	-1.6 -0.7933 µg/L	8.80492 -0.7933 ppb	8.80492 >999.9%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	3.6 0.2028 µg/L	0.67733 0.2028 ppb	0.67733 334.07%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	-0.6 -1.1001 µg/L	4.93261 -1.1001 ppb	4.93261 448.40%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-4.7 -1.2179 µg/L	1.33953 -1.2179 ppb	1.33953 109.99%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	-3.1 -9.9938 µg/L	4.00884 -9.9938 ppb	4.00884 40.11%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	6.1 5.5222 µg/L	1.25004 5.5222 ppb	1.25004 22.64%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-0.8 -0.7210 µg/L	2.79224 -0.7210 ppb	2.79224 387.25%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	210.0 37.915 µg/L	5.0099 37.915 ppb	5.0099 13.21%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	152.3 10.352 µg/L	0.6550 10.352 ppb	0.6550 6.33%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	3.8 1.4950 µg/L	1.39976 1.4950 ppb	1.39976 93.63%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	-1.4 -0.0084 µg/L	0.07344 -0.0084 ppb	0.07344 878.99%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	251.0 0.5859 µg/L	0.07867 0.5859 ppb	0.07867 13.43%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	4.7 4.6218 µg/L	3.55577 4.6218 ppb	3.55577 76.93%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	-38.5 -3.4989 µg/L	1.45298 -3.4989 ppb	1.45298 41.53%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	-5.4 -0.0555 µg/L	0.05712 -0.0555 ppb	0.05712 102.86%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-245.2 -5.6494 µg/L	0.21494 -5.6494 ppb	0.21494 3.80%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

## ICPMS #6 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Wednesday, March 17, 2010 20:03:29

### Sample Description:

Method File: C:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\100313\Sample.214

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		1980.1		1980.137		49.444		2.5
Mg	24.0		32848.9		32848.926		313.690		1.0
Co	58.9		33849.3		33849.262		515.362		1.5
Rh	102.9		60853.6		60853.555		838.505		1.4
In	114.9		73198.9		73198.856		280.778		0.4
Pb	208.0		38710.4		38710.383		483.888		1.3
[> Ba	137.9		69136.1		69136.146		744.699		1.1
[ Ba++	69.0		2219.6		0.032		0.001		2.4
[> Ce	139.9		89897.0		89896.984		836.144		0.9
[ CeO	155.9		1421.7		0.016		0.000		2.7
Bkgd	220.0		13.4		13.400		1.294		9.7

### Current Optimization File Data

Current Value	Description
0.83	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1800.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
30.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	6.3	2627.9
Co	59	21	7.0	34475.9
In	115	21	7.8	68173.9

## ICPMS #6 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	599	2080	0.636
Be	9.0	9.1	2061	2080	0.669
Mg	24.0	24.0	5680	2120	0.624
Mg	25.0	25.0	5912	2080	0.669
Mg	26.0	26.0	6166	2120	0.685
Co	58.9	58.9	14166	2170	0.648
Rh	102.9	102.9	24874	2230	0.717
In	114.9	114.8	27765	2260	0.692
Ce	139.9	139.9	33851	2280	0.756
Pb	206.0	206.0	49924	2420	0.668
Pb	207.0	207.0	50171	2385	0.722
Pb	208.0	208.0	50415	2430	0.721
U	238.1	238.0	57723	2470	0.709

## ICPMS#6 - Summary Report

Sample ID: Blank

Sample Date/Time: Thursday, March 18, 2010 14:02:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\Blank.282

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	ug/L			8
>	Sc	45	ug/L		1002716	
[	Ni	60	ug/L		148	
>	Ge	74	ug/L		277564	
	As	75	ug/L		59	
	Se	77	ug/L		8162	
	Se	82	ug/L		-17	
[	Kr	83	ug/L		110	
>	Lu	175	ug/L		175442	
[	Tl	205	ug/L		357	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
Sc	45	Simple Linear	
Ni	60	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Lu	175	Simple Linear	
Tl	205	Simple Linear	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9					
>	Sc	45					
[	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
[	Kr	83					
>	Lu	175					
[	Tl	205					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Thursday, March 18, 2010 14:06:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\Standard 1.283

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	10.000	ug/L	3.952	3371	0.003
> Sc	45		ug/L		987346	987346.180
[ Ni	60	10.000	ug/L	1.731	9977	0.010
> Ge	74		ug/L		275210	275210.424
[ As	75	10.000	ug/L	5.621	8120	0.029
[ Se	77		ug/L		7301	-0.003
[ Se	82	10.000	ug/L	2.291	689	0.003
[ Kr	83		ug/L		101	-0.000
> Lu	175		ug/L		172314	172314.215
[ Tl	205	10.000	ug/L	1.072	61654	0.356

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Be	9						
> Sc	45						
[ Ni	60						
> Ge	74						
[ As	75						
[ Se	77						
[ Se	82						
[ Kr	83						
> Lu	175						
[ Tl	205						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Thursday, March 18, 2010 14:06:45

## ICPMS#6 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, March 18, 2010 14:10:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\Standard 2.284

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	100.000	ug/L	2.296	32655	0.034
>	Sc 45		ug/L		957721	957720.781
[	Ni 60	100.010	ug/L	0.838	96498	0.101
[>	Ge 74		ug/L		264920	264919.592
	As 75	99.986	ug/L	0.491	76579	0.289
	Se 77		ug/L		11430	0.014
	Se 82	100.021	ug/L	1.963	6930	0.026
[	Kr 83		ug/L		115	0.000
[>	Lu 175		ug/L		168447	168447.407
[	Tl 205	99.966	ug/L	1.012	579886	3.441

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[ Be 9					
> Sc 45					
[ Ni 60					
[> Ge 74					
As 75					
Se 77					
Se 82					
[ Kr 83					
[> Lu 175					
[ Tl 205					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, March 18, 2010 14:14:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 1.285

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	50.029	ug/L	0.792	16672	0.017
>	Sc 45		ug/L		977155	977154.643
[	Ni 60	50.155	ug/L	1.836	49439	0.050
[>	Ge 74		ug/L		266135	266134.595
	As 75	50.672	ug/L	2.887	39009	0.146
	Se 77		ug/L		8835	0.004
	Se 82	52.198	ug/L	4.589	3626	0.014
[	Kr 83		ug/L		113	0.000
[>	Lu 175		ug/L		166872	166872.336
[	Tl 205	51.104	ug/L	2.157	293870	1.759

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[ Be 9	100.058					
> Sc 45		97.5				
[ Ni 60	100.310					
[> Ge 74		95.9				
As 75	101.344					
Se 77						
Se 82	104.397					
[ Kr 83						
[> Lu 175		95.1				
[ Tl 205	102.207					

### QC Out Of Limits

Measurement Type Analyte

MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Thursday, March 18, 2010 14:14:47

## ICPMS#6 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, March 18, 2010 14:18:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 2.286

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	-0.006	ug/L	72.283	6	-0.000
[>	Sc 45		ug/L		1013403	1013403.114
[	Ni 60	0.011	ug/L	25.879	160	0.000
[>	Ge 74		ug/L		271516	271516.411
[	As 75	0.366	ug/L	55.933	344	0.001
[	Se 77		ug/L		7812	-0.001
[	Se 82	0.146	ug/L	86.989	-6	0.000
[	Kr 83		ug/L		102	-0.000
[>	Lu 175		ug/L		173339	173338.740
[	Tl 205	0.093	ug/L	10.393	910	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be 9					
[>	Sc 45		101.1			
[	Ni 60					
[>	Ge 74		97.8			
[	As 75					
[	Se 77					
[	Se 82					
[	Kr 83					
[>	Lu 175		98.8			
[	Tl 205					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2



## ICPMS#6 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, March 18, 2010 14:22:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 3.287

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.582	ug/L	1.932	203	0.000
>	Sc 45		ug/L		983708	983708.129
[	Ni 60	2.199	ug/L	2.510	2321	0.002
[>	Ge 74		ug/L		270365	270365.104
	As 75	6.195	ug/L	5.713	4898	0.018
	Se 77		ug/L		6869	-0.004
	Se 82	6.251	ug/L	3.776	427	0.002
[	Kr 83		ug/L		96	-0.000
[>	Lu 175		ug/L		169529	169528.998
[	Tl 205	1.142	ug/L	0.755	7010	0.039

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be 9	116.401				
>	Sc 45		98.1			
[	Ni 60	109.960				
[>	Ge 74		97.4			
	As 75	123.909				
	Se 77					
	Se 82	125.019				
[	Kr 83					
[>	Lu 175		96.6			
[	Tl 205	114.215				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 3

## ICPMS#6 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, March 18, 2010 14:26:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 4.288

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.108	ug/L	35.436	40	0.000
[>	Sc 45		ug/L		903134	903133.967
[	Ni 60	3.012	ug/L	0.772	2870	0.003
[>	Ge 74		ug/L		248637	248636.874
[	As 75	0.472	ug/L	174.096	392	0.001
[	Se 77		ug/L		6176	-0.005
[	Se 82	-1.408	ug/L	11.884	-107	-0.000
[	Kr 83		ug/L		230	0.001
[>	Lu 175		ug/L		162592	162591.657
[	Tl 205	0.006	ug/L	47.112	366	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be 9					
[>	Sc 45		90.1			
[	Ni 60	111.569				
[>	Ge 74		89.6			
[	As 75					
[	Se 77					
[	Se 82					
[	Kr 83					
[>	Lu 175		92.7			
[	Tl 205					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Thursday, March 18, 2010 14:26:55

## ICPMS#6 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, March 18, 2010 14:30:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasse1.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 5.289

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	20.971	ug/L	2.697	6445	0.007
> Sc	45		ug/L		900634	900634.257
Ni	60	23.189	ug/L	2.248	21141	0.023
> Ge	74		ug/L		244909	244909.097
As	75	22.818	ug/L	1.654	16199	0.066
Se	77		ug/L		7101	-0.000
Se	82	21.803	ug/L	2.853	1385	0.006
Kr	83		ug/L		217	0.000
> Lu	175		ug/L		161232	161232.417
Tl	205	20.594	ug/L	1.739	114618	0.709

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Be	9	104.853					
> Sc	45		89.8				
Ni	60	102.156					
> Ge	74		88.2				
As	75	114.090					
Se	77						
Se	82	109.017					
Kr	83						
> Lu	175		91.9				
Tl	205	102.971					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 14:34:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 6.290

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	48.980 ug/L	1.108	15690	0.017
[>	Sc	45	ug/L		939341	939341.400
[	Ni	60	51.066 ug/L	1.100	48395	0.051
[>	Ge	74	ug/L		260049	260048.866
	As	75	50.284 ug/L	3.076	37832	0.145
	Se	77	ug/L		8540	0.003
	Se	82	52.347 ug/L	1.691	3553	0.014
[	Kr	83	ug/L		99	-0.000
[>	Lu	175	ug/L		166354	166353.978
[	Tl	205	50.518 ug/L	1.757	289630	1.739

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	97.961			
[>	Sc	45		93.7		
[	Ni	60	102.133			
[>	Ge	74		93.7		
	As	75	100.569			
	Se	77				
	Se	82	104.694			
[	Kr	83				
[>	Lu	175		94.8		
[	Tl	205	101.037			

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, March 18, 2010 14:34:58

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 14:38:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 7.291

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.006 ug/L	114.463	6	-0.000
[>	Sc	45	ug/L		1029057	1029057.313
[	Ni	60	0.006 ug/L	520.310	156	0.000
[>	Ge	74	ug/L		264785	264784.527
[	As	75	0.312 ug/L	75.357	294	0.001
[	Se	77	ug/L		7594	-0.001
[	Se	82	0.159 ug/L	100.200	-5	0.000
[	Kr	83	ug/L		96	-0.000
[>	Lu	175	ug/L		168539	168539.079
[	Tl	205	0.095 ug/L	10.218	893	0.003

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
[>	Sc	45	102.6			
[	Ni	60				
[>	Ge	74	95.4			
[	As	75				
[	Se	77				
[	Se	82				
[	Kr	83				
[>	Lu	175	96.1			
[	Tl	205				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, March 18, 2010 14:39:03

## ICPMS#6 - Summary Report

Sample ID: 1202047715

Sample Date/Time: Thursday, March 18, 2010 14:42:27

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\1202047715.292

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	-0.005	ug/L	135.911	6	-0.000
>	Sc 45		ug/L		1029197	1029197.141
[	Ni 60	0.017	ug/L	24.915	170	0.000
>	Ge 74		ug/L		276249	276248.748
	As 75	0.383	ug/L	26.272	365	0.001
	Se 77		ug/L		4656	-0.013
	Se 82	0.289	ug/L	122.824	4	0.000
[	Kr 83		ug/L		88	-0.000
>	Lu 175		ug/L		181702	181702.410
[	Tl 205	0.047	ug/L	6.102	664	0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[ Be 9					
> Sc 45		102.6			
[ Ni 60					
> Ge 74		99.5			
As 75					
Se 77					
Se 82					
[ Kr 83					
> Lu 175		103.6			
[ Tl 205					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047715

Report Date/Time: Thursday, March 18, 2010 14:43:06

## ICPMS#6 - Summary Report

Sample ID: 1202047720

Sample Date/Time: Thursday, March 18, 2010 14:46:30

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 955138|40|rmj

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\1202047720.293

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	16.529 ug/L	14.067	6250	0.006
[>	Sc	45	ug/L		1120721	1120720.978
[	Ni	60	29.688 ug/L	13.474	33257	0.030
[>	Ge	74	ug/L		263292	263291.658
[	As	75	27.426 ug/L	2.694	20919	0.079
[	Se	77	ug/L		9713	0.007
[	Se	82	72.579 ug/L	3.992	4990	0.019
[	Kr	83	ug/L		107	0.000
[>	Lu	175	ug/L		168700	168699.847
[	Tl	205	31.764 ug/L	1.534	184741	1.093

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9						
[>	Sc	45		111.8				
[	Ni	60						
[>	Ge	74		94.9				
[	As	75						
[	Se	77						
[	Se	82						
[	Kr	83						
[>	Lu	175		96.2				
[	Tl	205						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 14:50:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 6.294

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	49.224 ug/L	0.722	15806	0.017
>	Sc	45	ug/L		941372	941371.857
[	Ni	60	51.309 ug/L	0.734	48732	0.052
[>	Ge	74	ug/L		258211	258211.473
	As	75	51.545 ug/L	0.496	38507	0.149
	Se	77	ug/L		8484	0.003
	Se	82	52.088 ug/L	1.673	3510	0.014
[	Kr	83	ug/L		102	-0.000
[>	Lu	175	ug/L		166085	166084.849
[	Tl	205	51.195 ug/L	3.198	292897	1.762

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9	98.448				
>	Sc	45		93.9			
[	Ni	60	102.619				
[>	Ge	74		93.0			
	As	75	103.091				
	Se	77					
	Se	82	104.176				
[	Kr	83					
[>	Lu	175		94.7			
[	Tl	205	102.391				

### QC Out Of Limits

Measurement Type Analyte

Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 14:54:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 7.295

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	-0.002	ug/L	463.078	7	-0.000
>	Sc 45		ug/L		1048580	1048579.705
[	Ni 60	-0.014	ug/L	214.183	137	-0.000
>	Ge 74		ug/L		265932	265932.363
	As 75	-0.128	ug/L	82.139	-42	-0.000
	Se 77		ug/L		7458	-0.001
	Se 82	0.271	ug/L	40.845	3	0.000
[	Kr 83		ug/L		85	-0.000
>	Lu 175		ug/L		167257	167256.764
[	Tl 205	0.100	ug/L	4.295	915	0.003

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be 9				
>	Sc 45	104.6			
[	Ni 60				
>	Ge 74	95.8			
	As 75				
	Se 77				
	Se 82				
[	Kr 83				
>	Lu 175	95.3			
[	Tl 205				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, March 18, 2010 14:55:15

## ICPMS#6 - Summary Report

Sample ID: 1202047716

Sample Date/Time: Thursday, March 18, 2010 15:02:43

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 955138[2]rm]

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\1202047716.297

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.394 ug/L	2.962	1199	0.001
[>	Sc	45	ug/L		1029681	1029680.668
[	Ni	60	32.084 ug/L	2.472	33379	0.032
[>	Ge	74	ug/L		255283	255283.128
[	As	75	7.762 ug/L	4.900	5776	0.022
[	Se	77	ug/L		3486	-0.016
[	Se	82	-0.346 ug/L	145.648	-39	-0.000
[	Kr	83	ug/L		262	0.001
[>	Lu	175	ug/L		178608	178608.114
[	Tl	205	0.652 ug/L	2.171	4371	0.022

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9			
[>	Sc	45	102.7		
[	Ni	60			
[>	Ge	74	92.0		
[	As	75			
[	Se	77			
[	Se	82			
[	Kr	83			
[>	Lu	175	101.8		
[	Tl	205			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047716

Report Date/Time: Thursday, March 18, 2010 15:03:22

## ICPMS#6 - Summary Report

Sample ID: 1202047718

Sample Date/Time: Thursday, March 18, 2010 15:06:47

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniasse1.mth

Dataset File: c:\elandata\Dataset\100317\1202047718.298

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	25.304 ug/L	0.359	8858	0.009
[>	Sc	45	ug/L		1025948	1025948.053
[	Ni	60	47.663 ug/L	3.177	49334	0.048
[>	Ge	74	ug/L		254779	254778.918
	As	75	40.835 ug/L	1.848	30106	0.118
	Se	77	ug/L		3764	-0.015
	Se	82	7.276 ug/L	3.120	471	0.002
[	Kr	83	ug/L		250	0.001
[>	Lu	175	ug/L		177507	177506.806
[	Tl	205	44.550 ug/L	2.081	272580	1.533

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
[>	Sc	45	102.3			
[	Ni	60				
[>	Ge	74	91.8			
	As	75				
	Se	77				
	Se	82				
[	Kr	83				
[>	Lu	175	101.2			
[	Tl	205				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047718

Report Date/Time: Thursday, March 18, 2010 15:07:26

## ICPMS#6 - Summary Report

Sample ID: 1202047719

Sample Date/Time: Thursday, March 18, 2010 15:10:51

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 955138|2|rm|

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\1202047719.299

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	25.519	ug/L	1.902	9028	0.009
[ > Sc	45		ug/L		1036898	1036897.889
[ Ni	60	65.590	ug/L	1.971	68562	0.066
[ > Ge	74		ug/L		254159	254158.585
[ As	75	42.116	ug/L	1.505	30982	0.122
[ Se	77		ug/L		3770	-0.015
[ Se	82	7.293	ug/L	3.796	471	0.002
[ Kr	83		ug/L		283	0.001
[ > Lu	175		ug/L		176490	176490.131
[ Tl	205	45.077	ug/L	0.772	274191	1.552

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[ Be	9					
[ > Sc	45		103.4			
[ Ni	60					
[ > Ge	74		91.6			
[ As	75					
[ Se	77					
[ Se	82					
[ Kr	83					
[ > Lu	175		100.6			
[ Tl	205					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202047719

Report Date/Time: Thursday, March 18, 2010 15:11:30

## ICPMS#6 - Summary Report

Sample ID: 1202047717

Sample Date/Time: Thursday, March 18, 2010 15:14:55

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 955138|10|rmj

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\1202047717.300

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.874	ug/L	3.910	287	0.000
[>	Sc 45		ug/L		937778	937778.412
[	Ni 60	7.163	ug/L	1.146	6896	0.007
[>	Ge 74		ug/L		252073	252073.002
[	As 75	1.826	ug/L	20.744	1381	0.005
[	Se 77		ug/L		4301	-0.012
[	Se 82	0.142	ug/L	179.585	-6	0.000
[	Kr 83		ug/L		119	0.000
[>	Lu 175		ug/L		166565	166565.498
[	Tl 205	0.212	ug/L	2.332	1554	0.007

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be 9				
[>	Sc 45		93.5		
[	Ni 60				
[>	Ge 74		90.8		
[	As 75				
[	Se 77				
[	Se 82				
[	Kr 83				
[>	Lu 175		94.9		
[	Tl 205				

### QC Out Of Limits

Measurement Type Analyte

MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336001

Sample Date/Time: Thursday, March 18, 2010 15:18:59

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniasse1.mth

Dataset File: c:\elandata\Dataset\100317\247336001.301

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.940 ug/L	4.941	1041	0.001
>	Sc	45	ug/L		1031510	1031509.507
[	Ni	60	19.500 ug/L	0.790	20388	0.020
>	Ge	74	ug/L		259882	259882.022
	As	75	7.719 ug/L	0.863	5851	0.022
	Se	77	ug/L		3931	-0.014
	Se	82	1.286 ug/L	32.464	71	0.000
[	Kr	83	ug/L		251	0.001
>	Lu	175	ug/L		188577	188577.265
[	Tl	205	0.299 ug/L	2.921	2326	0.010

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9			
>	Sc	45	102.9		
[	Ni	60			
>	Ge	74	93.6		
	As	75			
	Se	77			
	Se	82			
[	Kr	83			
>	Lu	175	107.5		
[	Tl	205			

### QC Out Of Limits

Measurement Type: Analyte      Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 247336001

Report Date/Time: Thursday, March 18, 2010 15:19:38

## ICPMS#6 - Summary Report

Sample ID: 247336002

Sample Date/Time: Thursday, March 18, 2010 15:23:03

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\247336002.302

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	2.253	ug/L	1.030	786	0.001
[> Sc	45		ug/L		1013350	1013349.587
[ Ni	60	5.598	ug/L	1.211	5857	0.006
[> Ge	74		ug/L		265543	265543.439
[ As	75	3.143	ug/L	10.137	2468	0.009
[ Se	77		ug/L		4071	-0.014
[ Se	82	1.768	ug/L	10.987	107	0.000
[ Kr	83		ug/L		224	0.000
[> Lu	175		ug/L		192572	192572.053
[ Tl	205	0.130	ug/L	2.435	1256	0.004

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[ Be	9					
[> Sc	45		101.1			
[ Ni	60					
[> Ge	74		95.7			
[ As	75					
[ Se	77					
[ Se	82					
[ Kr	83					
[> Lu	175		109.8			
[ Tl	205					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336003

Sample Date/Time: Thursday, March 18, 2010 15:27:07

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\247336003.303

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	2.666	ug/L	10.347	1005	0.001
[>	Sc 45		ug/L		1105205	1105205.488
[	Ni 60	16.580	ug/L	10.920	18446	0.017
[>	Ge 74		ug/L		260915	260914.702
[	As 75	6.956	ug/L	5.371	5303	0.020
[	Se 77		ug/L		3635	-0.015
[	Se 82	1.295	ug/L	9.674	73	0.000
[	Kr 83		ug/L		248	0.001
[>	Lu 175		ug/L		188760	188760.190
[	Tl 205	0.347	ug/L	2.995	2638	0.012

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be 9				
[>	Sc 45	110.2			
[	Ni 60				
[>	Ge 74	94.0			
[	As 75				
[	Se 77				
[	Se 82				
[	Kr 83				
[>	Lu 175	107.6			
[	Tl 205				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 15:31:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 6.304

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	51.940	ug/L	2.058	16483	0.018
> Sc	45		ug/L		930545	930545.133
Ni	60	50.485	ug/L	2.380	47392	0.051
> Ge	74		ug/L		253699	253699.479
As	75	51.066	ug/L	1.445	37479	0.148
Se	77		ug/L		7560	0.000
Se	82	51.482	ug/L	2.025	3408	0.013
Kr	83		ug/L		99	-0.000
> Lu	175		ug/L		165998	165998.153
Tl	205	51.398	ug/L	0.793	293994	1.769

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	103.880				
> Sc	45		92.8			
Ni	60	100.971				
> Ge	74		91.4			
As	75	102.131				
Se	77					
Se	82	102.963				
Kr	83					
> Lu	175		94.6			
Tl	205	102.795				

### QC Out Of Limits

Measurement Type Analyte

Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, March 18, 2010 15:31:48

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 15:35:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 7.305

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.002 ug/L	210.089	7	-0.000
[>	Sc	45	ug/L		969201	969200.534
[	Ni	60	-0.010 ug/L	98.208	133	-0.000
[>	Ge	74	ug/L		260178	260178.472
[	As	75	0.086 ug/L	382.340	120	0.000
[	Se	77	ug/L		6466	-0.005
[	Se	82	0.178 ug/L	137.789	-4	0.000
[	Kr	83	ug/L		94	-0.000
[>	Lu	175	ug/L		167160	167159.622
[	Tl	205	0.059 ug/L	9.020	679	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
[>	Sc	45		96.7		
[	Ni	60				
[>	Ge	74		93.7		
[	As	75				
[	Se	77				
[	Se	82				
[	Kr	83				
[>	Lu	175		95.3		
[	Tl	205				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336004

Sample Date/Time: Thursday, March 18, 2010 15:39:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\247336004.306

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.756	ug/L	1.554	967	0.001
Sc	45		ug/L		1020406	1020406.227
Ni	60	38.068	ug/L	3.237	39222	0.038
Ge	74		ug/L		262633	262633.431
As	75	9.132	ug/L	2.619	6988	0.026
Se	77		ug/L		4489	-0.012
Se	82	0.919	ug/L	43.801	47	0.000
Kr	83		ug/L		242	0.001
Lu	175		ug/L		188955	188955.306
Tl	205	0.347	ug/L	3.574	2642	0.012

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Be	9						
Sc	45		101.8				
Ni	60						
Ge	74		94.6				
As	75						
Se	77						
Se	82						
Kr	83						
Lu	175		107.7				
Tl	205						

### QC Out Of Limits

Measurement Type    Analyte    Mass    Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336005

Sample Date/Time: Thursday, March 18, 2010 15:43:21

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\247336005.307

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.912 ug/L	7.627	1026	0.001
>	Sc	45	ug/L		1025636	1025635.813
[	Ni	60	35.394 ug/L	0.996	36668	0.036
>	Ge	74	ug/L		264115	264114.828
	As	75	6.843 ug/L	3.270	5277	0.020
	Se	77	ug/L		3992	-0.014
	Se	82	2.126 ug/L	9.193	131	0.001
[	Kr	83	ug/L		248	0.001
>	Lu	175	ug/L		191634	191633.521
[	Tl	205	0.222 ug/L	2.258	1857	0.008

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9			
>	Sc	45	102.3		
[	Ni	60			
>	Ge	74	95.2		
	As	75			
	Se	77			
	Se	82			
[	Kr	83			
>	Lu	175	109.2		
[	Tl	205			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 247336005

## ICPMS#6 - Summary Report

Sample ID: 247336006

Sample Date/Time: Thursday, March 18, 2010 15:47:26

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniasetl.mth

Dataset File: c:\elandata\Dataset\100317\247336006.308

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.626 ug/L	8.279	976	0.001
[>	Sc	45	ug/L		1087834	1087833.743
[	Ni	60	10.743 ug/L	12.425	11797	0.011
[>	Ge	74	ug/L		263000	262999.525
	As	75	4.896 ug/L	4.259	3774	0.014
	Se	77	ug/L		3723	-0.015
	Se	82	1.321 ug/L	16.217	75	0.000
[	Kr	83	ug/L		239	0.001
[>	Lu	175	ug/L		189294	189294.229
[	Tl	205	0.207 ug/L	0.688	1734	0.007

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
[>	Sc	45	108.5			
[	Ni	60				
[>	Ge	74	94.8			
	As	75				
	Se	77				
	Se	82				
[	Kr	83				
[>	Lu	175	107.9			
[	Tl	205				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336007

Sample Date/Time: Thursday, March 18, 2010 15:51:30

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\beniassetl.mth

Dataset File: c:\elandata\Dataset\100317\247336007.309

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	3.010	ug/L	10.076	1139	0.001
[ > Sc	45		ug/L		1110688	1110688.352
[ Ni	60	21.253	ug/L	14.100	23629	0.021
[ > Ge	74		ug/L		259816	259816.397
[ As	75	7.797	ug/L	6.222	5906	0.023
[ Se	77		ug/L		3504	-0.016
[ Se	82	1.262	ug/L	35.343	70	0.000
[ Kr	83		ug/L		248	0.001
[ > Lu	175		ug/L		189375	189375.082
[ Tl	205	0.393	ug/L	2.099	2943	0.014

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[ Be	9					
[ > Sc	45		110.8			
[ Ni	60					
[ > Ge	74		93.6			
[ As	75					
[ Se	77					
[ Se	82					
[ Kr	83					
[ > Lu	175		107.9			
[ Tl	205					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 16:11:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasset1.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 6.314

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	49.372	ug/L	11.945	16609	0.017
[>	Sc 45		ug/L		996869	996869.230
[	Ni 60	47.646	ug/L	13.436	47377	0.048
[>	Ge 74		ug/L		254220	254219.675
[	As 75	50.912	ug/L	2.140	37440	0.147
[	Se 77		ug/L		7437	-0.000
[	Se 82	52.010	ug/L	2.148	3450	0.014
[	Kr 83		ug/L		103	0.000
[>	Lu 175		ug/L		169300	169300.043
[	Tl 205	50.598	ug/L	1.155	295187	1.742

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[	Be 9	98.744				
[>	Sc 45		99.4			
[	Ni 60	95.292				
[>	Ge 74		91.6			
[	As 75	101.825				
[	Se 77					
[	Se 82	104.020				
[	Kr 83					
[>	Lu 175		96.5			
[	Tl 205	101.197				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, March 18, 2010 16:12:30

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 16:15:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beniasetl.mth

Dataset File: c:\elandata\Dataset\100317\QC Std 7.315

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.001 ug/L	565.864	9	0.000
[>	Sc	45	ug/L		1101326	1101326.234
[	Ni	60	-0.015 ug/L	240.358	141	-0.000
[>	Ge	74	ug/L		259395	259394.510
[	As	75	0.219 ug/L	171.544	222	0.001
[	Se	77	ug/L		6277	-0.005
[	Se	82	0.200 ug/L	150.270	-2	0.000
[	Kr	83	ug/L		90	-0.000
[>	Lu	175	ug/L		171246	171246.051
[	Tl	205	0.049 ug/L	7.986	638	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
[>	Sc	45	109.8			
[	Ni	60				
[>	Ge	74	93.5			
[	As	75				
[	Se	77				
[	Se	82				
[	Kr	83				
[>	Lu	175	97.6			
[	Tl	205				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, March 18, 2010 16:16:35



## ICPMS #6 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Thursday, March 18, 2010 20:21:27

### Sample Description:

Method File: C:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\100317\Sample.360

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		2821.5		2821.479		68.261		2.4
Mg	24.0		35758.7		35758.749		1346.655		3.8
Co	58.9		42116.8		42116.798		437.016		1.0
Rh	102.9		80986.7		80986.732		877.014		1.1
In	114.9		91362.8		91362.829		588.581		0.6
Pb	208.0		47432.4		47432.415		230.141		0.5
[> Ba	137.9		86048.3		86048.319		1038.425		1.2
[ Ba++	69.0		2584.9		0.030		0.001		1.7
[> Ce	139.9		107922.7		107922.731		572.785		0.5
[ CeO	155.9		1790.4		0.017		0.000		1.4
Bkgd	220.0		15.7		15.700		1.565		10.0

### Current Optimization File Data

Current Value	Description
0.81	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1800.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
30.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	6.0	2940.3
Co	59	21	6.8	44782.1
In	115	21	7.5	88589.8

## ICPMS #6 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	591	2080	0.637
Be	9.0	8.9	2030	2080	0.651
Mg	24.0	24.0	5678	2120	0.637
Mg	25.0	25.0	5910	2080	0.705
Mg	26.0	26.1	6188	2120	0.598
Co	58.9	58.9	14164	2170	0.636
Rh	102.9	102.8	24855	2230	0.722
In	114.9	115.0	27783	2260	0.687
Ce	139.9	139.9	33856	2280	0.756
Pb	206.0	206.0	49936	2420	0.666
Pb	207.0	206.9	50159	2385	0.719
Pb	208.0	208.0	50415	2430	0.719
U	238.1	238.1	57729	2470	0.710

## ICPMS#6 - Summary Report

Sample ID: Blank

Sample Date/Time: Thursday, March 18, 2010 21:18:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l.u.mth

Dataset File: c:\elandata\dataset\100318\Blank.007

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		165591	
[ U	238		ug/L		30	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Lu	175					
[ U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Thursday, March 18, 2010 21:21:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\U.mth

Dataset File: c:\elandata\dataset\100318\Standard 1.008

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		167988	167987.912
[	U	238	10.000 ug/L	1.049	88709	0.528

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175				
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, March 18, 2010 21:24:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l.mth

Dataset File: c:\elandata\dataset\100318\Standard 2.009

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		165497	165497.095
[	U	238	99.956 ug/L	1.619	836272	5.053

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recov	Dilution	% Dil	Duplicate	Rel. % Difference
[>	Lu	175									
[	U	238									

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, March 18, 2010 21:27:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l.u.mth

Dataset File: c:\elandata\dataset\100318\QC Std 1.010

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		167381	167380.687
[ U 238	51.382	ug/L	0.906	434854	2.598

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Lu 175		101.1			
[ U 238	102.765				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, March 18, 2010 21:30:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\i.mth

Dataset File: c:\elandata\dataset\100318\QC Std 2.011

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		165122	165121.794
[	U	238	0.007 ug/L	7.393	84	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		99.7		
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, March 18, 2010 21:33:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l.u.mth

Dataset File: c:\elandata\dataset\100318\QC Std 3.012

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		162372	162372.202
[	U	238	0.220 ug/L	2.049	1833	0.011

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recov	Dilution	% Dil	Duplicate	Rel. % Difference
[>	Lu	175				98.1					
[	U	238	109.898								

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, March 18, 2010 21:36:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu.mth

Dataset File: c:\elandata\dataset\100318\QC Std 4.013

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		156484	156483.977
[	U	238	0.001 ug/L	66.164	39	0.000

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		94.5		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, March 18, 2010 21:40:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l.mth

Dataset File: c:\elandata\dataset\100318\QC Std 5.014

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		157922	157921.997
[	U	238	22.292 ug/L	0.428	177995	1.127

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		95.4		
[	U	238	111.458			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 21:43:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Methodu.mth

Dataset File: c:\elandata\dataset\100318\QC Std 6.015

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		161331	161330.985
[ U	238	54.109	ug/L	0.323	441339	2.735

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Lu	175			97.4		
[ U	238	108.217				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 21:46:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\QC Std 7.016

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		157641	157640.614
[	U	238	0.005 ug/L	12.712	71	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		95.2		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202047715

Sample Date/Time: Thursday, March 18, 2010 21:49:18

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\1202047715.017

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		164641	164640.965
[	U	238	0.003 ug/L	16.210	53	0.000

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		99.4		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202047720

Sample Date/Time: Thursday, March 18, 2010 21:52:54

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 955138|40|rmj

Method File: c:\elandata\Method\U.mth

Dataset File: c:\elandata\dataset\100318\1202047720.018

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		164477	164476.859
[	U	238	0.514 ug/L	2.475	4302	0.026

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175		99.3			
[	U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202047716

Sample Date/Time: Thursday, March 18, 2010 22:00:05

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 955138|2|rm|

Method File: c:\elandata\Method\U.mth

Dataset File: c:\elandata\dataset\100318\1202047716.020

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		168989	168988.710
[	U	238	2.726 ug/L	1.044	23316	0.138

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Lu	175		102.1		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202047718

Sample Date/Time: Thursday, March 18, 2010 22:03:41

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\1202047718.021

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		168050	168050.354
[	U	238	28.981 ug/L	0.869	246240	1.465

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		101.5		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 1202047719

Sample Date/Time: Thursday, March 18, 2010 22:07:17

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\U.mth

Dataset File: c:\elandata\dataset\100318\1202047719.022

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		167013	167012.603
[	U 238	29.392	ug/L	0.601	248191	1.486

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dif	Duplicate Rel. % Difference
[>	Lu 175			100.9		
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202047717

Sample Date/Time: Thursday, March 18, 2010 22:10:53

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 955138|10|rmj

Method File: c:\elandata\Method\lu.mth

Dataset File: c:\elandata\dataset\100318\1202047717.023

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		164201	164200.943
[	U 238	0.524	ug/L	2.143	4381	0.027

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Lu 175			99.2		
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336001

Sample Date/Time: Thursday, March 18, 2010 22:14:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rm|

Method File: c:\elandata\Method\l.mth

Dataset File: c:\elandata\dataset\100318\247336001.024

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		178228	178228.340
[	U	238	14.859 ug/L	1.023	133916	0.751

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		107.6		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 22:18:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\QC Std 6.025

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		160825	160824.569
[	U 238	53.891	ug/L	0.238	438172	2.724

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu 175			97.1			
[	U 238	107.781					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 22:21:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu.mth

Dataset File: c:\elandata\dataset\100318\QC Std 7.026

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		159630	159629.838
[ U 238	0.006	ug/L	23.360	81	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Lu 175		96.4			
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336002

Sample Date/Time: Thursday, March 18, 2010 22:24:15

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138[2]rmj

Method File: c:\elandata\Method\l.u.mth

Dataset File: c:\elandata\dataset\100318\247336002.027

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		181387	181387.227
[ U	238	2.920	ug/L	0.948	26805	0.148

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[> Lu	175			109.5		
[ U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336003

Sample Date/Time: Thursday, March 18, 2010 22:27:52

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\247336003.028

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		178701	178700.878
[ U 238	7.359	ug/L	0.980	66512	0.372

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Lu 175		107.9			
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336004

Sample Date/Time: Thursday, March 18, 2010 22:31:28

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\247336004.029

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		177087	177086.645
[	U	238	ug/L	1.317	349125	1.971

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		106.9		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 247336005

Sample Date/Time: Thursday, March 18, 2010 22:35:04

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\l.u.mth

Dataset File: c:\elandata\dataset\100318\247336005.030

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		181155	181155.174
[	U	238	8.681 ug/L	0.631	79537	0.439

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		109.4		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336006

Sample Date/Time: Thursday, March 18, 2010 22:38:41

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\247336006.031

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		183002	183001.567
[	U 238	5.985	ug/L	0.700	55404	0.303

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu 175		110.5			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 247336007

Sample Date/Time: Thursday, March 18, 2010 22:42:18

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 955138|2|rmj

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\247336007.032

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		181114	181113.650
[	U	238	ug/L	0.304	61463	0.339

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		109.4		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, March 18, 2010 22:53:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w.mth

Dataset File: c:\elandata\dataset\100318\QC Std 6.035

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		165207	165206.932
[	U	238	53.819 ug/L	0.330	449506	2.721

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		99.8		
[	U	238	107.638			

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, March 18, 2010 22:56:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu.mth

Dataset File: c:\elandata\dataset\100318\QC Std 7.036

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		163100	163100.326
[	U	238	0.006 ug/L	4.257	75	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		98.5		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

=====  
Analysis BegunLogged In Analyst: Administrator  
Spectrometer Model: FIMS-100, S/N B050-9550Technique: AA FIMS-MHS  
Autosampler Model: S10Sample Information File: C:\data-AA\Administrator\Sample Information\030310S1.SIF  
Batch ID:  
Results Data Set: 030310S2  
Results Library: C:\data-AA\Administrator\Results\Results.mdb=====  
Method Loaded

Method Name: SOIL

Method Last Saved: 3/3/2010 10:11:36

Method Description: 7471A, ILM04 ANALYST JXL

=====  
Sequence No.: 1

Sample ID: Calib Blank

Analyst:

Autosampler Location: 1

Date Collected: 3/3/2010 10:13:42

Data Type: Original

-----  
Replicate Data: Calib Blank

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.00]	0.0003	0.0015	0.0003	10:14:33	Yes
2		[0.00]	0.0004	0.0024	0.0004	10:15:03	Yes
Mean:		[0.00]	0.0003				
SD:		0.00	0.0000				
%RSD:		0.00	10.19				

Auto-zero performed.

=====  
Sequence No.: 2

Sample ID: S0.2

Analyst:

Autosampler Location: 2

Date Collected: 3/3/2010 10:15:22

Data Type: Original

-----  
Replicate Data: S0.2

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.2]	0.0024	0.0159	0.0028	10:16:12	Yes
2		[0.2]	0.0024	0.0153	0.0027	10:16:42	Yes
Mean:		[0.2]	0.0024				
SD:		0.0	0.0000				
%RSD:		0.0	1.30				

Standard number 1 applied. [0.2]

Correlation Coef.: 1.000000 Slope: 0.01199 Intercept: 0.00000

=====  
Sequence No.: 3

Sample ID: S0.5

Analyst:

Autosampler Location: 3

Date Collected: 3/3/2010 10:17:01

Data Type: Original

-----  
Replicate Data: S0.5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.5]	0.0061	0.0370	0.0065	10:17:51	Yes
2		[0.5]	0.0060	0.0364	0.0064	10:18:21	Yes
Mean:		[0.5]	0.0061				
SD:		0.0	0.0000				
%RSD:		0.0	0.79				

Standard number 2 applied. [0.5]

Correlation Coef.: 0.999984 Slope: 0.01215 Intercept: -0.00001

=====  
Sequence No.: 4

Sample ID: S2.0

Analyst:

Autosampler Location: 4

Date Collected: 3/3/2010 10:18:41

Data Type: Original

-----  
Replicate Data: S2.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0247	0.1425	0.0250	10:19:33	Yes
2		[2.0]	0.0247	0.1419	0.0250	10:20:02	Yes
Mean:		[2.0]	0.0247				
SD:		0.0	0.0000				
%RSD:		0.0	0.09				

Standard number 3 applied. [2.0]  
Correlation Coef.: 0.999991 Slope: 0.01236 Intercept: -0.00006

## =====

Sequence No.: 5	Autosampler Location: 5
Sample ID: S5.0	Date Collected: 3/3/2010 10:20:22
Analyst:	Data Type: Original

-----  
Replicate Data: S5.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0611	0.3501	0.0614	10:21:14	Yes
2		[5.0]	0.0613	0.3482	0.0616	10:21:44	Yes
Mean:		[5.0]	0.0612				
SD:		0.0	0.0002				
%RSD:		0.0	0.27				

Standard number 4 applied. [5.0]  
Correlation Coef.: 0.999992 Slope: 0.01225 Intercept: 0.00001

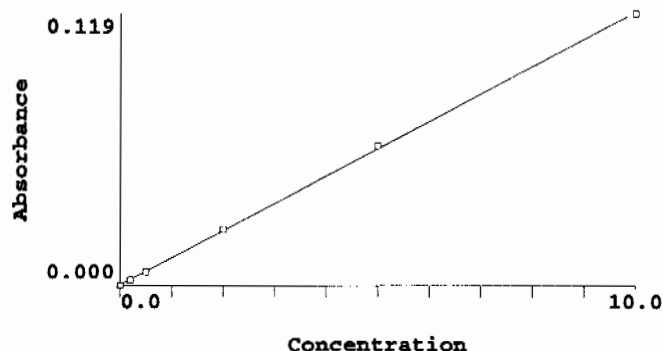
## =====

Sequence No.: 6	Autosampler Location: 6
Sample ID: S10.0	Date Collected: 3/3/2010 10:22:04
Analyst:	Data Type: Original

-----  
Replicate Data: S10.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1193	0.6832	0.1197	10:22:54	Yes
2		[10.0]	0.1180	0.6676	0.1183	10:23:24	Yes
Mean:		[10.0]	0.1186				
SD:		0.0	0.0010				
%RSD:		0.0	0.82				

Standard number 5 applied. [10.0]  
Correlation Coef.: 0.999871 Slope: 0.01190 Intercept: 0.00040

-----  
Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.034	0.00	10.2
S0.2	0.0024	0.2	0.168	0.00	1.3
S0.5	0.0061	0.5	0.477	0.00	0.8
S2.0	0.0247	2.0	2.041	0.00	0.1

S5.0 0.0612 5.0 5.109 0.00 0.3  
S10.0 0.1186 10.0 9.939 0.00 0.8  
Correlation Coef.: 0.999871 Slope: 0.01190 Intercept: 0.00040

Sequence No.: 7

Sample ID: ICV

Analyst:

Autosampler Location: 9

Date Collected: 3/3/2010 10:23:43

Data Type: Original

## Replicate Data: ICV

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.247	5.247	0.0628	0.3568	0.0632	10:24:34	Yes
2	5.221	5.221	0.0625	0.3522	0.0629	10:25:04	Yes
Mean:	5.234	5.234	0.0627				
SD:	0.018	0.018	0.0002				
%RSD:	0.349	0.349	0.35				

QC value within limits for Hg 253.7 Recovery = 104.68%  
All analyte(s) passed QC.

Sequence No.: 8

Sample ID: ICB

Analyst:

Autosampler Location: 10

Date Collected: 3/3/2010 10:25:24

Data Type: Original

## Replicate Data: ICB

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.019	-0.019	0.0002	0.0031	0.0005	10:26:15	Yes
2	-0.018	-0.018	0.0002	0.0031	0.0005	10:26:45	Yes
Mean:	-0.019	-0.019	0.0002				
SD:	0.000	0.000	0.0000				
%RSD:	2.119	2.119	2.61				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 9

Sample ID: CRDL

Analyst:

Autosampler Location: 11

Date Collected: 3/3/2010 10:27:05

Data Type: Original

## Replicate Data: CRDL

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.181	0.181	0.0026	0.0161	0.0029	10:27:57	Yes
2	0.184	0.184	0.0026	0.0166	0.0029	10:28:27	Yes
Mean:	0.182	0.182	0.0026				
SD:	0.002	0.002	0.0000				
%RSD:	0.919	0.919	0.78				

QC value within limits for Hg 253.7 Recovery = 91.22%  
All analyte(s) passed QC.

Sequence No.: 10

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 3/3/2010 10:28:47

Data Type: Original

## Replicate Data: CCV

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.204	5.204	0.0623	0.3526	0.0627	10:29:37	Yes
2	5.190	5.190	0.0621	0.3480	0.0625	10:30:07	Yes
Mean:	5.197	5.197	0.0622				
SD:	0.011	0.011	0.0001				
%RSD:	0.202	0.202	0.20				

QC value within limits for Hg 253.7 Recovery = 103.94%  
All analyte(s) passed QC.



Sequence No.: 11  
Sample ID: CCB  
Analyst:

Autosampler Location: 8  
Date Collected: 3/3/2010 10:30:26  
Data Type: Original

## Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0001	0.0021	0.0004	10:31:17	Yes
2	-0.028	-0.028	0.0001	0.0023	0.0004	10:31:47	Yes
Mean:	-0.028	-0.028	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	2.065	2.065	10.10				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 12  
Sample ID: 1202056217|958773|1  
Analyst: JXL

Autosampler Location: 12  
Date Collected: 3/3/2010 10:32:06  
Data Type: Original

## Replicate Data: 1202056217|958773|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.033	-0.033	0.0000	0.0021	0.0004	10:32:58	Yes
2	-0.035	-0.035	-0.0000	0.0018	0.0003	10:33:28	Yes
Mean:	-0.034	-0.034	-0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.031	5.031	>999.9%				

Sequence No.: 13  
Sample ID: 1202056218|958773|1  
Analyst: JXL

Autosampler Location: 13  
Date Collected: 3/3/2010 10:33:48  
Data Type: Original

## Replicate Data: 1202056218|958773|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.121	2.121	0.0256	0.1448	0.0260	10:34:39	Yes
2	2.111	2.111	0.0255	0.1431	0.0259	10:35:09	Yes
Mean:	2.116	2.116	0.0256				
SD:	0.007	0.007	0.0001				
%RSD:	0.328	0.328	0.32				

Sequence No.: 14  
Sample ID: 246960001|958773|1  
Analyst: JXL

Autosampler Location: 14  
Date Collected: 3/3/2010 10:35:29  
Data Type: Original

## Replicate Data: 246960001|958773|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.944	0.944	0.0116	0.0670	0.0120	10:36:20	Yes
2	0.929	0.929	0.0115	0.0650	0.0118	10:36:50	Yes
Mean:	0.937	0.937	0.0115				
SD:	0.011	0.011	0.0001				
%RSD:	1.137	1.137	1.10				

Sequence No.: 15  
Sample ID: 1202056219|958773|1  
Analyst: JXL

Autosampler Location: 15  
Date Collected: 3/3/2010 10:37:09  
Data Type: Original

## Replicate Data: 1202056219|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
------	------------	---------	---------	------	------	------	------

-----  
Replicate Data: 246960003|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.376	0.376	0.0049	0.0290	0.0052	10:46:16	Yes
2	0.374	0.374	0.0048	0.0286	0.0052	10:46:46	Yes
Mean:	0.375	0.375	0.0049				
SD:	0.002	0.002	0.0000				
%RSD:	0.430	0.430	0.39				

=====

Sequence No.: 21  
Sample ID: 246960004|958773|1  
Analyst: JXLAutosampler Location: 21  
Date Collected: 3/3/2010 10:47:05  
Data Type: Original-----  
Replicate Data: 246960004|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.263	0.263	0.0035	0.0213	0.0039	10:47:56	Yes
2	0.264	0.264	0.0035	0.0215	0.0039	10:48:26	Yes
Mean:	0.264	0.264	0.0035				
SD:	0.001	0.001	0.0000				
%RSD:	0.260	0.260	0.23				

=====

Sequence No.: 22  
Sample ID: CCV  
Analyst:Autosampler Location: 7  
Date Collected: 3/3/2010 10:48:45  
Data Type: Original-----  
Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.389	5.389	0.0645	0.3604	0.0649	10:49:35	Yes
2	5.345	5.345	0.0640	0.3545	0.0643	10:50:05	Yes
Mean:	5.367	5.367	0.0642				
SD:	0.031	0.031	0.0004				
%RSD:	0.580	0.580	0.58				

QC value within limits for Hg 253.7 Recovery = 107.34%  
All analyte(s) passed QC.

=====

Sequence No.: 23  
Sample ID: CCB  
Analyst:Autosampler Location: 8  
Date Collected: 3/3/2010 10:50:24  
Data Type: Original-----  
Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.031	-0.031	0.0000	0.0019	0.0004	10:51:15	Yes
2	-0.033	-0.033	0.0000	0.0015	0.0003	10:51:45	Yes
Mean:	-0.032	-0.032	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	4.469	4.469	93.69				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

=====

Sequence No.: 24  
Sample ID: 246960005|958773|1  
Analyst: JXLAutosampler Location: 22  
Date Collected: 3/3/2010 10:52:04  
Data Type: Original-----  
Replicate Data: 246960005|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.488	0.488	0.0062	0.0362	0.0065	10:52:55	Yes
2	0.482	0.482	0.0061	0.0353	0.0065	10:53:25	Yes

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	1.192	1.192	0.0146	0.0820	0.0149	11:01:20	Yes
2	1.179	1.179	0.0144	0.0812	0.0148	11:01:50	Yes
Mean:	1.186	1.186	0.0145				
SD:	0.009	0.009	0.0001				
%RSD:	0.760	0.760	0.74				

Sequence No.: 30

Autosampler Location: 28

Sample ID: 246960011|958773|1

Date Collected: 3/3/2010 11:02:09

Analyst: JXL

Data Type: Original

Replicate Data: 246960011|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.441	0.441	0.0057	0.0327	0.0060	11:03:00	Yes
2	0.436	0.436	0.0056	0.0321	0.0059	11:03:29	Yes
Mean:	0.439	0.439	0.0056				
SD:	0.004	0.004	0.0000				
%RSD:	0.803	0.803	0.75				

Sequence No.: 31

Autosampler Location: 29

Sample ID: 246960012|958773|1

Date Collected: 3/3/2010 11:03:49

Analyst: JXL

Data Type: Original

Replicate Data: 246960012|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.718	0.718	0.0089	0.0511	0.0093	11:04:40	Yes
2	0.713	0.713	0.0089	0.0507	0.0092	11:05:09	Yes
Mean:	0.716	0.716	0.0089				
SD:	0.003	0.003	0.0000				
%RSD:	0.483	0.483	0.46				

Sequence No.: 32

Autosampler Location: 30

Sample ID: 246960013|958773|1

Date Collected: 3/3/2010 11:05:29

Analyst: JXL

Data Type: Original

Replicate Data: 246960013|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.647	0.647	0.0081	0.0460	0.0084	11:06:20	Yes
2	0.637	0.637	0.0080	0.0452	0.0083	11:06:50	Yes
Mean:	0.642	0.642	0.0080				
SD:	0.007	0.007	0.0001				
%RSD:	1.135	1.135	1.08				

Sequence No.: 33

Autosampler Location: 31

Sample ID: 246960014|958773|1

Date Collected: 3/3/2010 11:07:09

Analyst: JXL

Data Type: Original

Replicate Data: 246960014|958773|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.707	0.707	0.0088	0.0501	0.0092	11:07:59	Yes
2	0.710	0.710	0.0088	0.0496	0.0092	11:08:29	Yes
Mean:	0.708	0.708	0.0088				
SD:	0.002	0.002	0.0000				
%RSD:	0.247	0.247	0.24				

Sequence No.: 34

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/3/2010 11:08:48

Analyst:

Data Type: Original

-----  
Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.271	5.271	0.0631	0.3492	0.0634	11:09:38	Yes
2	5.231	5.231	0.0626	0.3449	0.0630	11:10:08	Yes
Mean:	5.251	5.251	0.0629				
SD:	0.028	0.028	0.0003				
%RSD:	0.539	0.539	0.54				

QC value within limits for Hg 253.7 Recovery = 105.01%  
All analyte(s) passed QC.

Sequence No.: 35

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/3/2010 11:10:27

Analyst:

Data Type: Original

-----  
Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.036	-0.036	-0.0000	0.0014	0.0003	11:11:18	Yes
2	-0.039	-0.039	-0.0001	0.0012	0.0003	11:11:48	Yes
Mean:	-0.037	-0.037	-0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.352	5.352	59.05				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 36

Autosampler Location: 32

Sample ID: 1202056583|958957|1

Date Collected: 3/3/2010 11:12:07

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 1202056583|958957|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.032	-0.032	0.0000	0.0016	0.0004	11:12:58	Yes
2	-0.038	-0.038	-0.0000	0.0014	0.0003	11:13:28	Yes
Mean:	-0.035	-0.035	-0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	11.21	11.21	341.06				

Sequence No.: 37

Autosampler Location: 33

Sample ID: 1202056584|958957|1

Date Collected: 3/3/2010 11:13:47

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 1202056584|958957|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.237	2.237	0.0270	0.1503	0.0274	11:14:38	Yes
2	2.230	2.230	0.0269	0.1479	0.0273	11:15:08	Yes
Mean:	2.233	2.233	0.0270				
SD:	0.005	0.005	0.0001				
%RSD:	0.229	0.229	0.23				

Sequence No.: 38

Autosampler Location: 34

Sample ID: 248088001|958957|1

Date Collected: 3/3/2010 11:15:28

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 248088001|958957|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.409	0.409	0.0053	0.0306	0.0056	11:16:19	Yes

## Replicate Data: 1202056586|958957|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.433	2.433	0.0293	0.1633	0.0297	11:24:46	Yes
2	2.411	2.411	0.0291	0.1600	0.0294	11:25:16	Yes
Mean:	2.422	2.422	0.0292				
SD:	0.016	0.016	0.0002				
%RSD:	0.643	0.643	0.63				

Sequence No.: 44

Sample ID: 1202056588|958957|1

Analyst: JXL

Autosampler Location: 40

Date Collected: 3/3/2010 11:25:36

Data Type: Original

## Replicate Data: 1202056588|958957|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.412	2.412	0.0291	0.1622	0.0294	11:26:27	Yes
2	2.422	2.422	0.0292	0.1620	0.0296	11:26:57	Yes
Mean:	2.417	2.417	0.0292				
SD:	0.007	0.007	0.0001				
%RSD:	0.294	0.294	0.29				

Sequence No.: 45

Sample ID: 1202056587|958957|5

Analyst: JXL

Autosampler Location: 41

Date Collected: 3/3/2010 11:27:16

Data Type: Original

## Replicate Data: 1202056587|958957|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.022	0.022	0.0007	0.0050	0.0010	11:28:07	Yes
2	0.023	0.023	0.0007	0.0049	0.0010	11:28:37	Yes
Mean:	0.023	0.023	0.0007				
SD:	0.001	0.001	0.0000				
%RSD:	2.240	2.240	0.90				

Sequence No.: 46

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 3/3/2010 11:28:56

Data Type: Original

## Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.342	5.342	0.0640	0.3540	0.0643	11:29:47	Yes
2	5.306	5.306	0.0635	0.3490	0.0639	11:30:17	Yes
Mean:	5.324	5.324	0.0637				
SD:	0.026	0.026	0.0003				
%RSD:	0.483	0.483	0.48				

QC value within limits for Hg 253.7 Recovery = 106.48%  
All analyte(s) passed QC.

Sequence No.: 47

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 3/3/2010 11:30:36

Data Type: Original

## Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.037	-0.037	-0.0000	0.0009	0.0003	11:31:27	Yes
2	-0.037	-0.037	-0.0000	0.0010	0.0003	11:31:57	Yes
Mean:	-0.037	-0.037	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.764	0.764	9.47				

QC value within limits for Hg 253.7 Recovery = Not calculated

-----  
Replicate Data: 247123004|958623|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.024	-0.024	0.0001	0.0025	0.0005	11:48:14	Yes
2	-0.027	-0.027	0.0001	0.0022	0.0004	11:48:44	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	8.103	8.103	25.24				

Sequence No.: 58

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/3/2010 11:49:04

Analyst:

Data Type: Original  
-----

## Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.438	5.438	0.0651	0.3542	0.0654	11:49:55	Yes
2	5.431	5.431	0.0650	0.3514	0.0654	11:50:25	Yes
Mean:	5.435	5.435	0.0651				
SD:	0.005	0.005	0.0001				
%RSD:	0.086	0.086	0.09				

QC value within limits for Hg 253.7 Recovery = 108.69%

All analyte(s) passed QC.  
-----

Sequence No.: 59

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/3/2010 11:50:43

Analyst:

Data Type: Original  
-----

## Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.025	-0.025	0.0001	0.0028	0.0004	11:51:34	Yes
2	-0.033	-0.033	0.0000	0.0019	0.0004	11:52:04	Yes
Mean:	-0.029	-0.029	0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	18.63	18.63	115.75				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.  
-----

Sequence No.: 60

Autosampler Location: 52

Sample ID: 247249001|958623|1

Date Collected: 3/3/2010 11:52:23

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 247249001|958623|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.114	0.114	0.0018	0.0116	0.0021	11:53:15	Yes
2	0.106	0.106	0.0017	0.0107	0.0020	11:53:44	Yes
Mean:	0.110	0.110	0.0017				
SD:	0.006	0.006	0.0001				
%RSD:	5.589	5.589	4.28				

Sequence No.: 61

Autosampler Location: 53

Sample ID: 247249002|958623|1

Date Collected: 3/3/2010 11:54:04

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 247249002|958623|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	1.208	1.208	0.0148	0.0816	0.0151	11:54:55	Yes
2	1.203	1.203	0.0147	0.0804	0.0151	11:55:25	Yes
Mean:	1.205	1.205	0.0147				

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.420	0.420	0.0054	0.0307	0.0057	12:03:18	Yes
2	0.418	0.418	0.0054	0.0306	0.0057	12:03:48	Yes
Mean:	0.419	0.419	0.0054				
SD:	0.002	0.002	0.0000				
%RSD:	0.365	0.365	0.34				

Sequence No.: 67

Autosampler Location: 59

Sample ID: 247255003|958623|1

Date Collected: 3/3/2010 12:04:08

Analyst: JXL

Data Type: Original

Replicate Data: 247255003|958623|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.687	0.687	0.0086	0.0477	0.0089	12:05:00	Yes
2	0.674	0.674	0.0084	0.0470	0.0088	12:05:29	Yes
Mean:	0.680	0.680	0.0085				
SD:	0.009	0.009	0.0001				
%RSD:	1.348	1.348	1.28				

Sequence No.: 68

Autosampler Location: 60

Sample ID: 247255004|958623|1

Date Collected: 3/3/2010 12:05:49

Analyst: JXL

Data Type: Original

Replicate Data: 247255004|958623|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.034	0.034	0.0008	0.0058	0.0012	12:06:41	Yes
2	0.031	0.031	0.0008	0.0058	0.0011	12:07:11	Yes
Mean:	0.033	0.033	0.0008				
SD:	0.002	0.002	0.0000				
%RSD:	6.599	6.599	3.25				

Sequence No.: 69

Autosampler Location: 61

Sample ID: 247255005|958623|1

Date Collected: 3/3/2010 12:07:31

Analyst: JXL

Data Type: Original

Replicate Data: 247255005|958623|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.513	0.513	0.0065	0.0365	0.0068	12:08:23	Yes
2	0.500	0.500	0.0064	0.0351	0.0067	12:08:53	Yes
Mean:	0.507	0.507	0.0064				
SD:	0.009	0.009	0.0001				
%RSD:	1.750	1.750	1.64				

Sequence No.: 70

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/3/2010 12:09:13

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.604	5.604	0.0671	0.3553	0.0674	12:10:04	Yes
2	5.551	5.551	0.0664	0.3504	0.0668	12:10:34	Yes
Mean:	5.578	5.578	0.0668				
SD:	0.037	0.037	0.0004				
%RSD:	0.666	0.666	0.66				

QC value within limits for Hg 253.7 Recovery = 111.55%  
All analyte(s) passed QC.

Sequence No.: 71

Autosampler Location: 8

Sample ID: CCB  
Analyst:

Date Collected: 3/3/2010 12:10:52  
Data Type: Original

-----  
Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.037	-0.037	-0.0000	0.0008	0.0003	12:11:44	Yes
2	-0.033	-0.033	0.0000	0.0018	0.0004	12:12:14	Yes
Mean:	-0.035	-0.035	-0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	8.653	8.653	249.98				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

## =====

Sequence No.: 72  
Sample ID: 1202055914|958626|1  
Analyst: JXL

Autosampler Location: 62  
Date Collected: 3/3/2010 12:12:33  
Data Type: Original

-----  
Replicate Data: 1202055914|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.023	-0.023	0.0001	0.0024	0.0005	12:13:24	Yes
2	-0.028	-0.028	0.0001	0.0019	0.0004	12:13:54	Yes
Mean:	-0.025	-0.025	0.0001				
SD:	0.004	0.004	0.0000				
%RSD:	13.83	13.83	42.41				

## =====

Sequence No.: 73  
Sample ID: 1202055915|958626|10  
Analyst: JXL

Autosampler Location: 63  
Date Collected: 3/3/2010 12:14:13  
Data Type: Original

-----  
Replicate Data: 1202055915|958626|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.194	4.194	0.0503	0.2680	0.0506	12:15:05	Yes
2	4.192	4.192	0.0503	0.2651	0.0506	12:15:35	Yes
Mean:	4.193	4.193	0.0503				
SD:	0.001	0.001	0.0000				
%RSD:	0.026	0.026	0.03				

## =====

Sequence No.: 74  
Sample ID: 247321001|958626|1  
Analyst: JXL

Autosampler Location: 64  
Date Collected: 3/3/2010 12:15:55  
Data Type: Original

-----  
Replicate Data: 247321001|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.039	0.039	0.0009	0.0063	0.0012	12:16:46	Yes
2	0.035	0.035	0.0008	0.0059	0.0012	12:17:16	Yes
Mean:	0.037	0.037	0.0008				
SD:	0.003	0.003	0.0000				
%RSD:	8.751	8.751	4.59				

## =====

Sequence No.: 75  
Sample ID: 1202055916|958626|1  
Analyst: JXL

Autosampler Location: 65  
Date Collected: 3/3/2010 12:17:36  
Data Type: Original

-----  
Replicate Data: 1202055916|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.033	0.033	0.0008	0.0061	0.0011	12:18:27	Yes
2	0.035	0.035	0.0008	0.0064	0.0012	12:18:57	Yes



Mean: 0.034 0.034 0.0008  
SD: 0.001 0.001 0.0000  
%RSD: 4.188 4.188 2.10

Sequence No.: 76

Sample ID: 1202055917|958626|1

Analyst: JXL

Autosampler Location: 66

Date Collected: 3/3/2010 12:19:17

Data Type: Original

Replicate Data: 1202055917|958626|1

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.449	2.449	0.0295	0.1590	0.0299	12:20:08	Yes
2	2.419	2.419	0.0292	0.1561	0.0295	12:20:38	Yes
Mean:	2.434	2.434	0.0294				
SD:	0.021	0.021	0.0003				
%RSD:	0.869	0.869	0.86				

Sequence No.: 77

Sample ID: 1202055918|958626|5

Analyst: JXL

Autosampler Location: 67

Date Collected: 3/3/2010 12:20:58

Data Type: Original

Replicate Data: 1202055918|958626|5

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.509	2.509	0.0302	0.1631	0.0306	12:21:49	Yes
2	2.477	2.477	0.0299	0.1603	0.0302	12:22:19	Yes
Mean:	2.493	2.493	0.0301				
SD:	0.023	0.023	0.0003				
%RSD:	0.915	0.915	0.90				

Sequence No.: 78

Sample ID: 1202055919|958626|1

Analyst: JXL

Autosampler Location: 68

Date Collected: 3/3/2010 12:22:38

Data Type: Original

Replicate Data: 1202055919|958626|1

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.021	-0.021	0.0002	0.0022	0.0005	12:23:29	Yes
2	-0.019	-0.019	0.0002	0.0027	0.0005	12:23:59	Yes
Mean:	-0.020	-0.020	0.0002				
SD:	0.001	0.001	0.0000				
%RSD:	6.658	6.658	9.50				

Sequence No.: 79

Sample ID: 247321002|958626|1

Analyst: JXL

Autosampler Location: 69

Date Collected: 3/3/2010 12:24:19

Data Type: Original

Replicate Data: 247321002|958626|1

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.397	0.397	0.0051	0.0291	0.0055	12:25:10	Yes
2	0.393	0.393	0.0051	0.0283	0.0054	12:25:40	Yes
Mean:	0.395	0.395	0.0051				
SD:	0.003	0.003	0.0000				
%RSD:	0.766	0.766	0.71				

Sequence No.: 80

Sample ID: 247321003|958626|1

Analyst: JXL

Autosampler Location: 70

Date Collected: 3/3/2010 12:26:00

Data Type: Original

Replicate Data: 247321003|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.285	0.285	0.0038	0.0218	0.0041	12:26:51	Yes
2	0.289	0.289	0.0038	0.0225	0.0042	12:27:21	Yes
Mean:	0.287	0.287	0.0038				
SD:	0.003	0.003	0.0000				
%RSD:	0.970	0.970	0.87				

Sequence No.: 81

Autosampler Location: 71

Sample ID: 247321004|958626|1

Date Collected: 3/3/2010 12:27:41

Analyst: JXL

Data Type: Original

Replicate Data: 247321004|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	19.20	19.20	0.2288	1.2520	0.2292	12:28:32	Yes
Sample concentration is greater than that of the highest standard.							
2	19.15	19.15	0.2282	1.2390	0.2285	12:29:02	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	19.17	19.17	0.2285				
SD:	0.038	0.038	0.0005				
%RSD:	0.199	0.199	0.20				

Sample concentration is greater than that of the highest standard.

Sequence No.: 82

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/3/2010 12:29:22

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.568	5.568	0.0666	0.3581	0.0670	12:30:13	Yes
2	5.585	5.585	0.0668	0.3573	0.0672	12:30:43	Yes
Mean:	5.577	5.577	0.0667				
SD:	0.012	0.012	0.0001				
%RSD:	0.210	0.210	0.21				

QC value within limits for Hg 253.7 Recovery = 111.53%

All analyte(s) passed QC.

Sequence No.: 83

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/3/2010 12:31:01

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.030	-0.030	0.0000	0.0014	0.0004	12:31:52	Yes
2	-0.026	-0.026	0.0001	0.0020	0.0004	12:32:22	Yes
Mean:	-0.028	-0.028	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	10.40	10.40	49.44				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 84

Autosampler Location: 72

Sample ID: 247321005|958626|1

Date Collected: 3/3/2010 12:32:41

Analyst: JXL

Data Type: Original

Replicate Data: 247321005|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.149	0.149	0.0022	0.0133	0.0025	12:33:32	Yes
2	0.154	0.154	0.0022	0.0139	0.0026	12:34:02	Yes

Mean: 0.151 0.151 0.0022  
SD: 0.003 0.003 0.0000  
%RSD: 2.249 2.249 1.84

Sequence No.: 85

Sample ID: 247321006|958626|1

Analyst: JXL

Autosampler Location: 73

Date Collected: 3/3/2010 12:34:23

Data Type: Original

Replicate Data: 247321006|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	8.969	8.969	0.1071	0.5826	0.1075	12:35:15	Yes
2	8.613	8.613	0.1029	0.5544	0.1032	12:35:45	Yes
Mean:	8.791	8.791	0.1050				
SD:	0.252	0.252	0.0030				
%RSD:	2.870	2.870	2.86				

Sequence No.: 86

Sample ID: 247321007|958626|1

Analyst: JXL

Autosampler Location: 74

Date Collected: 3/3/2010 12:36:05

Data Type: Original

Replicate Data: 247321007|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	17.35	17.35	0.2068	1.1389	0.2071	12:36:56	Yes
Sample concentration is greater than that of the highest standard.							
2	17.20	17.20	0.2051	1.1311	0.2054	12:37:26	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	17.28	17.28	0.2059				
SD:	0.102	0.102	0.0012				
%RSD:	0.589	0.589	0.59				
Sample concentration is greater than that of the highest standard.							

Sequence No.: 87

Sample ID: 247325001|958626|1

Analyst: JXL

Autosampler Location: 75

Date Collected: 3/3/2010 12:37:46

Data Type: Original

Replicate Data: 247325001|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	1.270	1.270	0.0155	0.0849	0.0159	12:38:38	Yes
2	1.172	1.172	0.0143	0.0739	0.0147	12:39:07	Yes
Mean:	1.221	1.221	0.0149				
SD:	0.070	0.070	0.0008				
%RSD:	5.695	5.695	5.54				

Sequence No.: 88

Sample ID: 247336001|958626|1

Analyst: JXL

Autosampler Location: 76

Date Collected: 3/3/2010 12:39:27

Data Type: Original

Replicate Data: 247336001|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.209	0.209	0.0029	0.0170	0.0032	12:40:18	Yes
2	0.208	0.208	0.0029	0.0171	0.0032	12:40:48	Yes
Mean:	0.209	0.209	0.0029				
SD:	0.001	0.001	0.0000				
%RSD:	0.303	0.303	0.26				

Sequence No.: 89

Sample ID: 247336002|958626|1

Analyst: JXL

Autosampler Location: 77

Date Collected: 3/3/2010 12:41:08

Data Type: Original

-----  
Replicate Data: 247336002|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.096	0.096	0.0015	0.0098	0.0019	12:42:00	Yes
2	0.104	0.104	0.0016	0.0101	0.0020	12:42:30	Yes
Mean:	0.100	0.100	0.0016				
SD:	0.006	0.006	0.0001				
%RSD:	5.664	5.664	4.24				

Sequence No.: 90

Autosampler Location: 78

Sample ID: 247336003|958626|1

Date Collected: 3/3/2010 12:42:50

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 247336003|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.246	0.246	0.0033	0.0190	0.0037	12:43:42	Yes
2	0.245	0.245	0.0033	0.0195	0.0037	12:44:12	Yes
Mean:	0.246	0.246	0.0033				
SD:	0.001	0.001	0.0000				
%RSD:	0.243	0.243	0.21				

Sequence No.: 91

Autosampler Location: 79

Sample ID: 247336004|958626|1

Date Collected: 3/3/2010 12:44:32

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 247336004|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.288	0.288	0.0038	0.0223	0.0042	12:45:23	Yes
2	0.279	0.279	0.0037	0.0210	0.0041	12:45:53	Yes
Mean:	0.284	0.284	0.0038				
SD:	0.006	0.006	0.0001				
%RSD:	2.080	2.080	1.86				

Sequence No.: 92

Autosampler Location: 80

Sample ID: 247336005|958626|1

Date Collected: 3/3/2010 12:46:13

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 247336005|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.174	0.174	0.0025	0.0148	0.0028	12:47:04	Yes
2	0.179	0.179	0.0025	0.0152	0.0029	12:47:34	Yes
Mean:	0.176	0.176	0.0025				
SD:	0.003	0.003	0.0000				
%RSD:	1.761	1.761	1.48				

Sequence No.: 93

Autosampler Location: 81

Sample ID: 247336006|958626|1

Date Collected: 3/3/2010 12:47:54

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 247336006|958626|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.165	0.165	0.0024	0.0144	0.0027	12:48:45	Yes
2	0.165	0.165	0.0024	0.0143	0.0027	12:49:15	Yes
Mean:	0.165	0.165	0.0024				
SD:	0.000	0.000	0.0000				
%RSD:	0.137	0.137	0.11				

Sequence No.: 94

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 3/3/2010 12:49:35

Data Type: Original

## Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.221	5.221	0.0625	0.3390	0.0629	12:50:25	Yes
2	5.141	5.141	0.0616	0.3320	0.0619	12:50:55	Yes
Mean:	5.181	5.181	0.0620				
SD:	0.056	0.056	0.0007				
%RSD:	1.087	1.087	1.08				

QC value within limits for Hg 253.7 Recovery = 103.62%  
All analyte(s) passed QC.

Sequence No.: 95

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 3/3/2010 12:51:14

Data Type: Original

## Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0000	0.0012	0.0004	12:52:05	Yes
2	-0.036	-0.036	-0.0000	0.0009	0.0003	12:52:35	Yes
Mean:	-0.034	-0.034	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	8.131	8.131	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 96

Sample ID: 247336007|958626|1

Analyst: JXL

Autosampler Location: 82

Date Collected: 3/3/2010 12:52:54

Data Type: Original

## Replicate Data: 247336007|958626|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.308	0.308	0.0041	0.0236	0.0044	12:53:45	Yes
2	0.307	0.307	0.0041	0.0236	0.0044	12:54:15	Yes
Mean:	0.307	0.307	0.0041				
SD:	0.000	0.000	0.0000				
%RSD:	0.083	0.083	0.07				

Sequence No.: 97

Sample ID: 1202055930|958634|1

Analyst: JXL

Autosampler Location: 83

Date Collected: 3/3/2010 12:54:35

Data Type: Original

## Replicate Data: 1202055930|958634|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0001	0.0010	0.0003	12:55:27	Yes
2	-0.041	-0.041	-0.0001	0.0008	0.0003	12:55:57	Yes
Mean:	-0.040	-0.040	-0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	4.047	4.047	25.57				

Sequence No.: 98

Sample ID: 1202055931|958634|10

Analyst: JXL

Autosampler Location: 84

Date Collected: 3/3/2010 12:56:17

Data Type: Original

## Replicate Data: 1202055931|958634|10

Analyst: JXL

Data Type: Original

Replicate Data: 1202055934|958634|5

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.028	-0.028	0.0001	0.0018	0.0004	13:05:35	Yes
2	-0.023	-0.023	0.0001	0.0023	0.0005	13:06:05	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	12.66	12.66	39.33				

Sequence No.: 104

Autosampler Location: 90

Sample ID: 247338002|958634|1

Date Collected: 3/3/2010 13:06:25

Analyst: JXL

Data Type: Original

Replicate Data: 247338002|958634|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.038	-0.038	-0.0000	0.0011	0.0003	13:07:17	Yes
2	-0.037	-0.037	-0.0000	0.0012	0.0003	13:07:47	Yes
Mean:	-0.038	-0.038	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.186	1.186	11.68				

Sequence No.: 105

Autosampler Location: 91

Sample ID: 247338003|958634|1

Date Collected: 3/3/2010 13:08:07

Analyst: JXL

Data Type: Original

Replicate Data: 247338003|958634|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.024	-0.024	0.0001	0.0022	0.0005	13:08:59	Yes
2	-0.027	-0.027	0.0001	0.0019	0.0004	13:09:28	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	9.144	9.144	29.16				

Sequence No.: 106

Autosampler Location: 7

Sample ID: CCV

Date Collected: 3/3/2010 13:09:49

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.198	5.198	0.0622	0.3356	0.0626	13:10:39	Yes
2	5.200	5.200	0.0623	0.3332	0.0626	13:11:09	Yes
Mean:	5.199	5.199	0.0622				
SD:	0.001	0.001	0.0000				
%RSD:	0.029	0.029	0.03				

QC value within limits for Hg 253.7 Recovery = 103.97%  
All analyte(s) passed QC.

Sequence No.: 107

Autosampler Location: 8

Sample ID: CCB

Date Collected: 3/3/2010 13:11:27

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.038	-0.038	-0.0000	0.0008	0.0003	13:12:19	Yes
2	-0.035	-0.035	-0.0000	0.0010	0.0003	13:12:49	Yes
Mean:	-0.036	-0.036	-0.0000				

SD: 0.002 0.002 0.0000  
%RSD: 4.590 4.590 62.09

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 108

Sample ID: 247338004|958634|1

Analyst: JXL

Autosampler Location: 92

Date Collected: 3/3/2010 13:13:08

Data Type: Original

Replicate Data: 247338004|958634|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.019	-0.019	0.0002	0.0027	0.0005	13:13:59	Yes
2	-0.023	-0.023	0.0001	0.0020	0.0005	13:14:29	Yes
Mean:	-0.021	-0.021	0.0002				
SD:	0.003	0.003	0.0000				
%RSD:	12.64	12.64	19.98				

Sequence No.: 109

Sample ID: 247338005|958634|1

Analyst: JXL

Autosampler Location: 93

Date Collected: 3/3/2010 13:14:49

Data Type: Original

Replicate Data: 247338005|958634|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.035	-0.035	-0.0000	0.0017	0.0003	13:15:40	Yes
2	-0.041	-0.041	-0.0001	0.0007	0.0003	13:16:10	Yes
Mean:	-0.038	-0.038	-0.0001				
SD:	0.004	0.004	0.0000				
%RSD:	10.78	10.78	96.78				

Sequence No.: 110

Sample ID: 247338006|958634|1

Analyst: JXL

Autosampler Location: 94

Date Collected: 3/3/2010 13:16:30

Data Type: Original

Replicate Data: 247338006|958634|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.038	-0.038	-0.0001	0.0012	0.0003	13:17:22	Yes
2	-0.037	-0.037	-0.0000	0.0015	0.0003	13:17:52	Yes
Mean:	-0.037	-0.037	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	2.918	2.918	29.66				

Sequence No.: 111

Sample ID: 247338007|958634|1

Analyst: JXL

Autosampler Location: 95

Date Collected: 3/3/2010 13:18:12

Data Type: Original

Replicate Data: 247338007|958634|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.029	-0.029	0.0001	0.0018	0.0004	13:19:04	Yes
2	-0.028	-0.028	0.0001	0.0019	0.0004	13:19:33	Yes
Mean:	-0.029	-0.029	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	3.926	3.926	21.67				

Sequence No.: 112

Sample ID: 247338008|958634|1

Analyst: JXL

Autosampler Location: 96

Date Collected: 3/3/2010 13:19:54

Data Type: Original

# Miscellaneous



# Prep Logbook

## Acid Digestion of Sediments, Sludges, and Soils

<b>Batch ID:</b> 955135.0	Verified by:	Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
<b>Analyst:</b> Anthony Green		LCS	1202047714	Metals Soil LCS SRM ICP/Hg	U1062540-1	.519	g
<b>Method:</b> SW846 3050B		MS	1202047712	Metals Spike Mix I	U1100205-01	.25	mL
<b>Lab SOP:</b> GL-MA-E-009 REV# 19		MS	1202047712	Metals Spike Mix II	U1100205-06	.25	mL
<b>Instrument:</b> BAL-001		MSD	1202047713	Metals Spike Mix I	U1100205-01	.25	mL
		MSD	1202047713	Metals Spike Mix II	U1100205-06	.25	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check	I
1202047709 MB	25-FEB-2010 08:00:00	Soil	0.501	50	99.8004		
1202047714 LCS	25-FEB-2010 08:00:00	Soil	0.519	50	96.33911		
247325001	25-FEB-2010 08:00:00	Soil	0.53	50	94.33962		
1202047710 DUP (247325001)	25-FEB-2010 08:00:00	Soil	0.522	50	95.78544		
1202047711 SDILT (247325001)	25-FEB-2010 08:00:00	Soil	0.53	50	94.33962		
1202047712 MS (247325001)	25-FEB-2010 08:00:00	Soil	0.517	50	96.7118		
1202047713 MSD (247325001)	25-FEB-2010 08:00:00	Soil	0.508	50	98.4252		
247336001	25-FEB-2010 08:00:00	Soil	0.517	50	96.7118		
247336002	25-FEB-2010 08:00:00	Soil	0.515	50	97.08738		
247336003	25-FEB-2010 08:00:00	Soil	0.521	50	95.96929		
247336004	25-FEB-2010 08:00:00	Soil	0.511	50	97.84736		
247336005	25-FEB-2010 08:00:00	Soil	0.505	50	99.0099		
247336006	25-FEB-2010 08:00:00	Soil	0.519	50	96.33911		
247336007	25-FEB-2010 08:00:00	Soil	0.507	50	98.61933		
247347001	25-FEB-2010 08:00:00	Soil	0.542	50	92.25092		
247347002	25-FEB-2010 08:00:00	Soil	0.527	50	94.87666		
247347003	25-FEB-2010 08:00:00	Soil	0.513	50	97.46589		
247347004	25-FEB-2010 08:00:00	Soil	0.502	50	99.60159		
247347005	25-FEB-2010 08:00:00	Soil	0.517	50	96.7118		
247347006	25-FEB-2010 08:00:00	Soil	0.513	50	97.46589		
247347007	25-FEB-2010 08:00:00	Soil	0.506	50	98.81423		
247347008	25-FEB-2010 08:00:00	Soil	0.502	50	99.60159		

Prep Logbook

Batch ID: 955135.0  
Analyst: Anthony Green  
Method: SW846 3050B  
Lab SOP: GL-MA-E-009 REV# 19  
Instrument: BAL-001

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202047714	Metals Soil LCS SRM ICP/Hg	UI062540-1	.519	g
MS	1202047712	Metals Spike Mix I	UI100205-01	.25	mL
MS	1202047712	Metals Spike Mix II	UI100205-06	.25	mL
MSD	1202047713	Metals Spike Mix I	UI100205-01	.25	mL
MSD	1202047713	Metals Spike Mix II	UI100205-06	.25	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check
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1265209	HYDROCHLORIC ACID	10 mL				
1274969	Nitric Acid CONC.	1.25 mL				

Comments:  
Sample 247325001 consist of clumpy, mixed brown soil with rocks.

# Prep Logbook

## Acid Digestion of Sediments, Sludges, and Soils

Batch ID: 955137.0      Verified by: \_\_\_\_\_      Lab SOP: GL-MA-E-009 REV# 19  
 Analyst: Anthony Green      Instrument: BAL-001  
 Method: SW846 3050B

Sample ID	Run Date	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check
1202047715 MB	25-FEB-2010 08:00:00	0.515	50	97.08738	1
1202047720 LCS	25-FEB-2010 08:00:00	0.505	50	99.00099	
247325001	25-FEB-2010 08:00:00	0.505	50	99.00099	
1202047716 DUP (247325001)	25-FEB-2010 08:00:00	0.513	50	97.46589	
1202047717 SDILT (247325001)	25-FEB-2010 08:00:00	0.505	50	99.00099	
1202047718 MS (247325001)	25-FEB-2010 08:00:00	0.502	50	99.60159	
1202047719 MSD (247325001)	25-FEB-2010 08:00:00	0.52	50	96.15385	
247336001	25-FEB-2010 08:00:00	0.508	50	98.4252	
247336002	25-FEB-2010 08:00:00	0.506	50	98.81423	
247336003	25-FEB-2010 08:00:00	0.515	50	97.08738	
247336004	25-FEB-2010 08:00:00	0.508	50	98.4252	
247336005	25-FEB-2010 08:00:00	0.509	50	98.23183	
247336006	25-FEB-2010 08:00:00	0.513	50	97.46589	
247336007	25-FEB-2010 08:00:00	0.526	50	95.05703	
247347001	25-FEB-2010 08:00:00	0.527	50	94.87666	
247347002	25-FEB-2010 08:00:00	0.526	50	95.05703	
247347003	25-FEB-2010 08:00:00	0.513	50	97.46589	
247347004	25-FEB-2010 08:00:00	0.507	50	98.61933	
247347005	25-FEB-2010 08:00:00	0.511	50	97.84736	
247347006	25-FEB-2010 08:00:00	0.527	50	94.87666	
247347007	25-FEB-2010 08:00:00	0.502	50	99.60159	
247347008	25-FEB-2010 08:00:00	0.555	50	90.09009	

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
LCS	1202047720	Metals Soil LCS SRM ICPMS	UI062540-MS	.505	g	Sample 247325001 consist of clumpy, mixed brown soil with rocks.
MS	1202047718	ICP-MS Spike for soil products.	UI090827-A	.5	mL	
MS	1202047718	ICP-MS Spike for Soil Products	UI090827-B	.5	mL	
MSD	1202047719	ICP-MS Spike for soil products.	UI090827-A	.5	mL	
MSD	1202047719	ICP-MS Spike for Soil Products	UI090827-B	.5	mL	
REGNT All		Hydrogen Peroxide 30%	1250038-02	1.5	mL	
REGNT All		Nitric Acid CONC.	1274969	.5	mL	

# Prep Logbook

## Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Batch ID:** 958625.0  
**Analyst:** Tara Griffin  
**Method:** SW846 7471A Prep  
**Lab SOP:** GL-MA-E-010 REV# 23  
**Instrument:** BAL-002

**Verified by:**

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202055915	Metals LCS Soil SRM	UI031809A	.202	g
MS	1202055917	Mercury soil working intermediate standard for MS	WHG100302-14	.3	mL
MSD	1202055919	Mercury soil working intermediate standard for MS	WHG100302-14	.3	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
1202055914 MB	02-MAR-2010 14:35:00	Soil	0.532	30	56.39098	
1202055915 LCS	02-MAR-2010 14:35:00	Soil	0.202	30	148.51485	
247321001	02-MAR-2010 14:35:00	Soil	0.53	30	56.60377	
1202055916 DUP (247321001)	02-MAR-2010 14:35:00	Soil	0.564	30	53.19149	
1202055917 MS (247321001)	02-MAR-2010 14:35:00	Soil	0.53	30	56.60377	
1202055919 MSD (247321001)	02-MAR-2010 14:35:00	Soil	0.541	30	55.45287	
1202055918 SDIL.T (247321001)	02-MAR-2010 14:35:00	Soil	0.53	30	56.60377	
247321002	02-MAR-2010 14:35:00	Soil	0.542	30	55.35055	
247321003	02-MAR-2010 14:35:00	Soil	0.574	30	52.26481	
247321004	02-MAR-2010 14:35:00	Soil	0.518	30	57.91506	
247321005	02-MAR-2010 14:35:00	Soil	0.507	30	59.1716	
247321006	02-MAR-2010 14:35:00	Soil	0.53	30	56.60377	
247321007	02-MAR-2010 14:35:00	Soil	0.531	30	56.49718	
247325001	02-MAR-2010 14:35:00	Soil	0.503	30	59.64215	
247336001	02-MAR-2010 14:35:00	Soil	0.527	30	56.926	
247336002	02-MAR-2010 14:35:00	Soil	0.521	30	57.58157	
247336003	02-MAR-2010 14:35:00	Soil	0.534	30	56.17978	
247336004	02-MAR-2010 14:35:00	Soil	0.581	30	51.63511	
247336005	02-MAR-2010 14:35:00	Soil	0.518	30	57.91506	
247336006	02-MAR-2010 14:35:00	Soil	0.542	30	55.35055	
247336007	02-MAR-2010 14:35:00	Soil	0.522	30	57.47126	

Reagent/Solvent Lot ID	Description	Amount	Comments:
1255532-C	Hg reducing agent	2 mL	Sample 247321001 is a light brown soil.
1274391-I	NITRIC ACID	.375 mL	Digestion Start Date: 02-MAR-10 14:35
1277235-A	Hydrochloric Acid Conc.	1.125 mL	Digestion End Date: 02-MAR-10 15:05

Analytical Logbook version 111-04-2002

GEL Laboratories LLC

### DATA EXCEPTION REPORT

<b>Mo. Day Yr.</b> 17-MAR-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> ICP	<b>Test / Method:</b> SW846 3050B/6010B	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 955136	<b>Sample Numbers:</b> See Below		

Potentially affected work order(s)(SDG): 247325(10-1896),247336(10-1906-1),247347(10-1912)

**Application Issues:**

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

**Specification and Requirements  
Exception Description:**

**DER Disposition:**

1. Failed Recovery for MS/PS:

QC 1202047712MS

2. Failed RPD for DUP:

QC 1202047710DUP

3. Failed Recovery for MSD/PSD:

QC 1202047713MSD

1. The matrix spike recovery failed outside of the control limits for antimony, barium, magnesium, manganese, potassium and zinc due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

2. The sample and sample duplicate % RPD failed outside the control limits for antimony, barium, magnesium, manganese and calcium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

3. The matrix spike duplicate recovery failed outside of the control limits for antimony, barium, magnesium, manganese and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

**Originator's Name:**

Jerry Wigfall

17-MAR-10

**Data Validator/Group Leader:**

Christopher Louviere

17-MAR-10

### DATA EXCEPTION REPORT

<b>Mo. Day Yr.</b> 19-MAR-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> ICP/MS	<b>Test / Method:</b> SW846 3050B/6020	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 955138	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 247325(10-1896), 247336(10-1906-1), 247347(10-1912)			
<b>Application Issues:</b> Failed Recovery for MS/PS Failed RPD for MS/MSD, or PS/PSD Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b> <b>Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/PS: QC 1202047718MS  2. Failed RPD for MS/MSD, or PS/PSD: QC 1202047719MSD  3. Failed Recovery for MSD/PSD: QC 1202047719MSD		The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Ni and Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.  The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for Ni due to possible matrix interference and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

**Originator's Name:**

Rose Jenkins 19-MAR-10

**Data Validator/Group Leader:**

Samantha Jacobs 19-MAR-10

# Standard Logbook

**Serial ID:** UHG1167639-01      **Opened:** 13-AUG-09      **Amount :** 125 mL  
**Name:** MHGSTOCK1      **Received:** 13-AUG-09      **Catalog Number :** PLHG4-2Y  
**Type:** Source Material      **Expires:** 13-AUG-10      **Lot Number :** 15-37HG  
**Employee:** Bryan Davis      **Solvent :** 10% HNO3  
**Supplier:** Spex  
**Description:** Mercury Source Standard #1 1,000 mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

**Serial ID:** UHG1167641-02      **Opened:** 13-AUG-09      **Amount :** 100 mL  
**Name:** MHGSTOCK2      **Received:** 13-AUG-09      **Catalog Number :** AHG1KN-100  
**Type:** Source Material      **Expires:** 13-AUG-10      **Lot Number :** 4905530  
**Employee:** Bryan Davis      **Solvent :** 3% HNO3  
**Supplier:** Ricca Chemical Company  
**Description:** Mercury Source Standard #2 1,000 mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

**Serial ID:** UI031809A      **Opened:** 18-MAR-09      **Catalog Number :** 540  
**Name:** METALSOILSRM      **Received:** 18-MAR-09      **Lot Number :** D061-540  
**Type:** Source Material      **Expires:** 10-OCT-10  
**Employee:** Jamie Johnson  
**Supplier:** ERA  
**Description:** Metals LCS Soil SRM  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

# Standard Logbook

**Serial ID:** UI062540-I      **Opened:** 12-JUN-09      **Amount :** 80 g  
**Name:** ICP SOIL SRM      **Received:** 12-JUN-09      **Lot Number :** D062-540  
**Type:** Source Material      **Expires:** 31-JAN-12  
**Employee:** Bryan Davis  
**Supplier:** ERA  
**Description:** Metals Soil LCS SRM ICP/Hg  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	173 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.7 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Magnesium	4000 mg/kg
Manganese	558 mg/kg	Mercury	8.46 mg/kg
Molybdenum	48.6 mg/kg	Nickel	134 mg/kg
Phosphorous	736 mg/kg	Potassium	4300 mg/kg
Selenium	286 mg/kg	Silica	2591 mg/kg
Silicon	1211 mg/kg	Silver	30.1 mg/kg
Sodium	1020 mg/kg	Strontium	227 mg/kg
Sulfur	385 mg/kg	Thallium	121 mg/kg
Tin	104 mg/kg	Titanium	462 mg/kg
Vanadium	115 mg/kg	Zinc	594 mg/kg

**Serial ID:** UI062540-MS      **Opened:** 12-JUN-09      **Lot Number :** D062-540  
**Name:** ICPMS SOIL SRM      **Received:** 12-JUN-09  
**Type:** Source Material      **Expires:** 31-JAN-12  
**Employee:** Bryan Davis  
**Supplier:** ERA  
**Description:** Metals Soil LCS SRM ICPMS  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	67.4 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.6 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Lithium	10.6 mg/kg
Magnesium	4000 mg/kg	Manganese	558 mg/kg
Mercury	8.46 mg/kg	Molybdenum	48.6 mg/kg
Nickel	134 mg/kg	Phosphorous	755 mg/kg
Potassium	4300 mg/kg	Selenium	286 mg/kg
Silver	30.1 mg/kg	Sodium	1020 mg/kg



# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

**Serial ID:** UI090421-40      **Opened:** 09-OCT-09      **Amount :** 250 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 21-APR-09      **Catalog Number :** HP100052-1  
**Type:** Source Material      **Expires:** 09-OCT-10      **Lot Number :** 0830227  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** ENVIRONMENTAL EXPRESS  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

**Serial ID:** UI090422-40      **Opened:** 04-MAY-09      **Amount :** 500 mL  
**Name:** TRACE ICP ICSA SOLN A      **Received:** 22-APR-09      **Catalog Number :** 160005-01-03  
**Type:** Source Material      **Expires:** 04-MAY-10      **Lot Number :** 1013357  
**Employee:** Helen Camello      **Solvent :** 5%HNO3  
**Supplier:** o2si  
**Description:** TRACE ICP ICSA SOLN A mg/L +/- 0.5% IN 5% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

**Serial ID:** UI090612-02      **Opened:** 12-JUN-09      **Catalog Number :** 060074-06-01  
**Name:** ICPMS Tungsten - 10mg/L      **Received:** 12-JUN-09      **Lot Number :** 1016377  
**Type:** Source Material      **Expires:** 12-JUN-10      **Solvent :** 2% HNO3  
**Employee:** Paul Boyd  
**Supplier:** O2SI  
**Description:** ICPMS Tungsten standard SPIKE - 10mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

# Standard Logbook

**Serial ID:** UI090701-09      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #1      **Received:** 01-JUL-09      **Catalog Number :** 160044-09-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016477  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS CRDL Master Soln #1  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UI090701-10      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #2      **Received:** 01-JUL-09      **Catalog Number :** 160044-08-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016476  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS CRDL Soln #2  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI090701-40      **Opened:** 01-JUL-09      **Amount :** 500 mL  
**Name:** TRACE ICP Stock PQL St      **Received:** 30-JUN-09      **Catalog Number :** 160543-01-03  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016475  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3+TrHF  
**Supplier:** 02si  
**Description:** TRACE ICP Stock PQL Standard  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
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# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

**Serial ID:** UI090827-A      **Opened:** 27-AUG-09      **Catalog Number :** 160067-03  
**Name:** ICP-MS DOE SOIL SPIKE      **Received:** 27-AUG-09      **Lot Number :** 1015749  
**Type:** Source Material      **Expires:** 27-AUG-10  
**Employee:** Francena Armstrong  
**Supplier:** 02si  
**Description:** ICP-MS Spike for soil products.  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

# Standard Logbook

**Serial ID:** UI090827-B      **Opened:** 27-AUG-09      **Catalog Number :** 160067-03  
**Name:** ICP-MS DOE SOIL SPIKE      **Received:** 27-AUG-09      **Lot Number :** 1015749  
**Type:** Source Material      **Expires:** 27-AUG-10  
**Employee:** Francena Armstrong  
**Supplier:** 02si  
**Description:** ICP-MS Spike for Soil Products  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UI090925-40      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX38-500N  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909129  
**Employee:** Helen Camello      **Solvent :** 5%HNO3  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1A 5%HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

**Serial ID:** UI090925-41      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX39-500B  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909130  
**Employee:** Helen Camello      **Solvent :** 5%HNO3,TR.HF  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Vanadium	100 mg/L	Zinc	100 mg/L

**Serial ID:** UI091015-42      **Opened:** 28-OCT-09      **Amount :** 500 mL  
**Name:** SI 1000mg/L      **Received:** 15-OCT-09      **Catalog Number :** 060014-02-03  
**Type:** Source Material      **Expires:** 28-OCT-10      **Lot Number :** 1017581  
**Employee:** Helen Camello      **Solvent :** 0.3%H2O(NH4)2SiF6  
**Supplier:** o2si  
**Description:** Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091102-40      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1A SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-1-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930215  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Std #1A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

**Serial ID:** UI091102-41      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1B SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-2-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930216  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Standard #1B  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

**Serial ID:** UI091102-42      **Opened:** 17-NOV-09      **Amount :** 200 mL  
**Name:** SILICON      **Received:** 02-NOV-09      **Catalog Number :** HP100050-4F  
**Type:** Source Material      **Expires:** 17-NOV-10      **Lot Number :** 0921924  
**Employee:** Helen Camello      **Solvent :** H2O/tr HF  
**Supplier:** ENVIRNMENTAL EXPRESS  
**Description:** SILICON 1000mg/L H2O/tr HF  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091217-12      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master B      **Received:** 17-DEC-09      **Catalog Number :** 160033-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018212  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS ICSAB Master B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

**Serial ID:** UI091217-13      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master C      **Received:** 17-DEC-09      **Catalog Number :** 160033-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1016926  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS ICSAB Master C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
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# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI100205-01      **Opened:** 05-FEB-10      **Lot Number :** 1018514  
**Name:** METALSPIKE-1      **Received:** 05-FEB-10  
**Type:** Source Material      **Expires:** 05-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix I  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

**Serial ID:** UI100205-06      **Opened:** 05-FEB-10      **Lot Number :** 1018515  
**Name:** METALSPIKE-2      **Received:** 05-FEB-10  
**Type:** Source Material      **Expires:** 05-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix II  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

# Standard Logbook

**Serial ID:** UI100217-48      **Opened:** 04-MAR-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSA      **Received:** 17-FEB-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 19-MAR-10      **Lot Number :** 1018878  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

**Serial ID:** UI100310-49.1      **Opened:** 16-MAR-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 12-MAR-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 17-MAR-10      **Lot Number :** 1019142  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Inteferent Check Standard AB  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

**Serial ID:** UI100312-40      **Opened:** 14-MAR-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 12-MAR-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 14-MAR-11      **Lot Number :** 1018981  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION A  
**Comments:** None



# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

**Serial ID:** UI100312-41      **Opened:** 14-MAR-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 12-MAR-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 14-MAR-11      **Lot Number :** 1018981  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

**Serial ID:** UI100317-06      **Opened:** 17-MAR-10      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master A      **Received:** 17-MAR-10      **Catalog Number :** 160055-01  
**Type:** Source Material      **Expires:** 17-MAR-11      **Lot Number :** 1019161  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV SOLN A - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

# Standard Logbook

**Serial ID:** UI100317-07      **Opened:** 17-MAR-10      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master B      **Received:** 17-MAR-10      **Catalog Number :** 160054-02  
**Type:** Source Material      **Expires:** 17-MAR-11      **Lot Number :** 1019162  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln B - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

**Serial ID:** UI100317-08      **Opened:** 17-MAR-10      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master C      **Received:** 17-MAR-10      **Catalog Number :** 160054-03  
**Type:** Source Material      **Expires:** 17-MAR-11      **Lot Number :** 1019163  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln C - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

**Serial ID:** UI100318-11      **Opened:** 18-MAR-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 18-MAR-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 18-MAR-11      **Lot Number :** 1018321  
**Employee:** Paul Boyd      **Solvent :** 2% HNO3  
**Supplier:** 02SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

**Serial ID:** UMS100226-01      **Opened:** 26-FEB-10      **Amount :** 250 mL  
**Name:** ICPMSCaSPIKEB      **Received:** 26-FEB-10      **Catalog Number :** ZGEL-100-250  
**Type:** Source Material      **Expires:** 26-FEB-11      **Lot Number :** 21-104JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UMS100226-02      **Opened:** 26-FEB-10      **Catalog Number :** ZGEL-102-250  
**Name:** ICPMSCaSPIKEA      **Received:** 26-FEB-10      **Lot Number :** 21-103JB  
**Type:** Source Material      **Expires:** 26-FEB-11  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

**Serial ID:** UMS100226-03      **Opened:** 26-FEB-10      **Amount :** 250 ml  
**Name:** ICPMSCaSPIKEC      **Received:** 26-FEB-10      **Catalog Number :** ZGEL-101-250  
**Type:** Source Material      **Expires:** 26-FEB-11      **Lot Number :** 21-102JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution C

# Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

**Serial ID:** IHG100302-01      **Opened:** 02-MAR-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 02-MAR-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 03-MAR-10      **Solvent :** 1mL HNO3 + Type1 H2O  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 1st Source 200 ug/L  
**Comments:** Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** IHG100302-02      **Opened:** 02-MAR-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Intermediate      **Expires:** 03-MAR-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 2nd Source 200 ug/L  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** WHG100302-07      **Opened:** 02-MAR-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALSO.2CRA      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 09-MAR-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working Standard 1st Source CAL S 0.2/CRA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100302-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

**Serial ID:** WHG100302-08      **Opened:** 02-MAR-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALSO.5      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 09-MAR-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL

# Standard Logbook

**Description:** Mercury Working Standard 1st Source CAL S 0.5

**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100302-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

**Serial ID:** WHG100302-09      **Opened:** 02-MAR-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS2.0      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 09-MAR-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL

**Description:** Mercury Working 1st Source CAL S 2.0

**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100302-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

**Serial ID:** WHG100302-10      **Opened:** 02-MAR-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS5.0CCV      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 09-MAR-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL

**Description:** Mercury Working 1st Source CAL S 5.0/CCV

**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100302-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100302-11      **Opened:** 02-MAR-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS10.0      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 09-MAR-10  
**Employee:** Tara Griffin  
**Supplier:** GEL

**Description:** Mercury Working 1st Source CAL S 10.0

**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100302-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

**Serial ID:** WHG100302-12      **Opened:** 02-MAR-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKS5.0ICV      **Received:** 02-MAR-10      **Solvent :** 2% HNO3-1274391  
**Type:** Working      **Expires:** 09-MAR-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL

**Description:** Mercury Working 2nd Source S 5.0/ICV

# Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100302-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100302-14      Opened: 02-MAR-10      Pipet Id : Hg1289245  
 Name: MHGSOILMSSPIKE      Received: 02-MAR-10      Solvent : 2% HNO3-1274391  
 Type: Working      Expires: 09-MAR-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL

Description: Mercury soil working intermediate standard for MS

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100316-42      Opened: 16-MAR-10      Balance Id : 216  
 Name: TRACE ICP 0.1 PPM STD.      Received: 02-NOV-09      Pipet Id : 3581809  
 Type: Working      Expires: 17-MAR-10      Solvent : 3%HCL and 1%HNO3-1285629  
 Employee: Helen Carnello  
 Supplier: GEL

Description: TRACE ICP 0.1 PPM CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100316-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100316-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100316-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100316-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100316-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100316-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100316-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

**Serial ID:** WI100316-43      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1%HNO3 --1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.5/CCV CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090421-40	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

**Serial ID:** WI100316-44      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1 %HNO3-1285629  
**Employee:** Helen Camello  
**Supplier:** o2si  
**Description:** Trace ICP Calibration Standard 1.0ppm  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L



## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

**Serial ID:** WI100316-45      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL and 1%HNO3 -1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP S-10 CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090421-40	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L

**Serial ID:** WI100316-46      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL AND 1%HNO3-1285629  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** Initial Calibration Verification ICP Trace Metals  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L

## Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

**Serial ID:** W100316-47      **Opened:** 16-MAR-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 17-MAR-10      **Solvent :** 3%HCL & 1%HNO3-1285629  
**Employee:** Helen Camello  
**Supplier:** 02si  
**Description:** PQL Working Standard  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

**Serial ID:** WMS100317-04AB      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS Cal Standard 10      **Received:** 17-MAR-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100317-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100317-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100317-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100317-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100317-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100317-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100317-04B      **Opened:** 17-MAR-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 17-MAR-10      **Balance Id :** 40245216  
**Type:** Working      **Expires:** 18-MAR-10      **Pipet Id :** 1758088  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl- 1285348  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100226-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100226-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

**Serial ID:** WMS100317-05B      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 17-MAR-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100317-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100317-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100317-06B      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 17-MAR-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins      **Verified:** 06-MAR-10  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100317-07B      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 17-MAR-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 18-MAR-10      **Pipet Id :** 3541598  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100317-08B      **Opened:** 17-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 17-MAR-10      **Pipet Id :** 3541598/1758088  
**Type:** Working      **Expires:** 18-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100318-04AB    **Opened:** 18-MAR-10    **Balance Id :** 40245216  
**Name:** ICPMS Cal Standard 10    **Received:** 18-MAR-10    **Pipet Id :** 3541598  
**Type:** Working    **Expires:** 19-MAR-10    **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100318-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100318-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100318-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100318-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100318-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100318-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100318-04B      **Opened:** 18-MAR-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 18-MAR-10      **Balance Id :** 40245216  
**Type:** Working      **Expres:** 19-MAR-10      **Pipet Id :** 1758088  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl- 1285348  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090612-02	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS100226-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS100226-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Lead	10 mg/L	.5	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS100226-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS100226-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS100226-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS100226-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

**Serial ID:** WMS100318-05B      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 18-MAR-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100317-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI100317-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI100317-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI100317-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI100317-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI100317-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100318-06B      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 18-MAR-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins      **Verified:** 06-MAR-10  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100318-07B      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSCA      **Received:** 18-MAR-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 19-MAR-10      **Pipet Id :** 3541598  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Supplier:** GEL  
**Description:** ICPMS ICSCA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

**Serial ID:** WMS100318-08B      **Opened:** 18-MAR-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 18-MAR-10      **Pipet Id :** 3541598/1758088  
**Type:** Working      **Expires:** 19-MAR-10      **Solvent :** 2%HNO3/1%HCl - 1285348  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100318-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100318-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100318-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100318-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

Serial ID: 100202      Opened: 02-FEB-10      Lot Number : 200930201  
Name: I-HCL      Received: 02-FEB-10  
Type: Reagent/Solvent      Expires: 02-FEB-11  
Employee: Francena Armstrong  
Supplier: J.T. BAKER  
Description: HYDROCHLORIC ACID  
Comments: None

---

Serial ID: 1100721TCLP      Opened: 16-APR-09      Lot Number : H02026 L  
Name: I-HNO3      Received: 02-APR-09  
Type: Reagent/Solvent      Expires: 02-APR-10  
Employee: Clifford Postell  
Supplier: BAKER  
Description: Nitric Acid CONC.  
Comments: None

---

Serial ID: 1156689-A      Opened: 20-JUL-09      Lot Number : 41226920  
Name: B-KMnO4(VWR)-MER      Received: 20-JUL-09  
Type: Reagent/Solvent      Expires: 20-JUL-10  
Employee: Tara Griffin      Verified: 07-AUG-07  
Supplier: VWR  
Description: Potassium Permanganate  
Comments: None

---

Serial ID: 1228372-A      Opened: 12-NOV-09      Lot Number : 49215936  
Name: B-NH2OH.HCl-MER      Received: 12-NOV-09  
Type: Reagent/Solvent      Expires: 12-NOV-10  
Employee: Tara Griffin  
Supplier: Fisher Scientific  
Description: Hydroxylamine Hydrochloride  
Comments: None

---

Serial ID: 1250038-02      Opened: 04-JAN-10      Lot Number : ZU74081198 mL  
Name: B-H2O2      Received: 04-JAN-10  
Type: Reagent/Solvent      Expires: 04-JAN-11  
Employee: Bryan Davis  
Supplier: EM SCIENCE  
Description: Hydrogen Peroxide 30%  
Comments: None

---

# Standard Logbook

**Serial ID:** 1255532-C      **Opened:** 15-JAN-10      **Balance Id :** BAL-002  
**Name:** B-NaCl.NH2OH.HCl-MER      **Received:** 15-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 15-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Hg reducing agent  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

**Serial ID:** 1265209      **Opened:** 04-FEB-10      **Lot Number :** J02039  
**Name:** I-HCL      **Received:** 04-FEB-10      **Preservative Id :** 5 none  
**Type:** Reagent/Solvent      **Expires:** 04-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** J.T. BAKER  
**Description:** HYDROCHLORIC ACID  
**Comments:** None

**Serial ID:** 1268732      **Opened:** 11-FEB-10      **Lot Number :** H12022 L  
**Name:** I-HNO3      **Received:** 11-FEB-10  
**Type:** Reagent/Solvent      **Expires:** 11-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** BAKER  
**Description:** Nitric Acid CONC.  
**Comments:** None

**Serial ID:** 1274391-1      **Opened:** 24-FEB-10      **Instrument Id :** MERCURY  
**Name:** B-HNO3-MER      **Received:** 24-FEB-10      **Lot Number :** H44025  
**Type:** Reagent/Solvent      **Expires:** 24-FEB-11  
**Employee:** Tara Griffin  
**Supplier:** Mallinckrodt Chemicals  
**Description:** NITRIC ACID  
**Comments:** None

**Serial ID:** 1274969      **Opened:** 24-FEB-10      **Lot Number :** J 04043 L  
**Name:** I-HNO3      **Received:** 24-FEB-10  
**Type:** Reagent/Solvent      **Expires:** 24-FEB-11  
**Employee:** Francena Armstrong  
**Supplier:** BAKER  
**Description:** Nitric Acid CONC.  
**Comments:** None

# Standard Logbook

**Serial ID:** 1277235-A      **Opened:** 01-MAR-10      **Lot Number :** J02039  
**Name:** B-HCl-MER      **Received:** 01-MAR-10  
**Type:** Reagent/Solvent      **Expires:** 01-MAR-11  
**Employee:** Tara Griffin  
**Supplier:** J T Baker  
**Description:** Hydrochloric Acid Conc.  
**Comments:** None

**Serial ID:** 1277238-C      **Opened:** 01-MAR-10      **Balance Id :** BAL-002  
**Name:** B-KMnO4-MER      **Received:** 01-MAR-10  
**Type:** Reagent/Solvent      **Expires:** 20-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** 5% KMnO4 solution  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

**Serial ID:** 1285348      **Opened:** 15-MAR-10      **Solvent :** Type I Water  
**Name:** B-2%HNO3/1%HCl-ICPMS      **Received:** 15-MAR-10  
**Type:** Reagent/Solvent      **Expires:** 22-MAR-10  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** 2%HNO3/1%HCl Solution (Type I Water)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
100202	I-HCL	36.5-38.0	90 mL	9 l	N/A
1100721TCLP	I-HNO3	69.0-70.0	180 mL	9 l	N/A

**Serial ID:** 1285629      **Opened:** 15-MAR-10      **Amount :** 20 L  
**Name:** B-ICP-RINSE SOLN      **Received:** 05-MAR-10      **Lot Number :** H04040+G34050  
**Type:** Reagent/Solvent      **Expires:** 21-MAR-10      **Solvent :** 3%HCL+1%HNO3  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** 3%HCL+1%HNO3 RINSE SOLN.  
**Comments:** None



# **General Chemistry Analysis**

# Case Narrative

**General Chemistry Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1906**

**Method/Analysis Information**

<b>Product:</b>	<b>Cyanide, Total</b>		
<b>Analytical Batch:</b>	955981	<b>Method:</b>	SW9012A Cyanide and Total
<b>Prep Batch :</b>	955979	<b>Method:</b>	SSW846 9010B Prep

**Sample Analysis**

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

<b>Sample ID</b>	<b>Client ID</b>
247335001	RE15-10-8379
1202049704	Method Blank (MB)
1202049706	247203001(RE16-10-11741) Sample Duplicate (DUP)
1202049708	247203001(RE16-10-11741) Matrix Spike (MS)
1202049710	247203001(RE16-10-11741) Matrix Spike Duplicate (MSD)
1202049711	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 12.

**Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

**Calibration Information**

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

**Initial Calibration**

All initial calibration requirements have been met for this SDG.

**Continuing Calibration Blanks**

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

**Calibration Verification Information (CCV)**

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

**Y Intercept Rule**

The absolute value of the intercept is less than 3 times the MDL.

**Quality Control (QC) Information****Method Blank (MB) Statement**

The MB analyzed with this SDG met the acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recovery met the acceptance limits.

**Quality Control (QC) Designation**

The following sample was selected for QC analysis: 247203001 (RE16-10-11741).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The MS/PS recovery for this sample set was within the required acceptance limits.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recovery for this sample set was within the required acceptance limits.

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPD between the spike and spike duplicate met the acceptance limits.

**Duplicate Relative Percent Difference (RPD) Statement**

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202049706 (RE16-10-11741).

**Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

**Holding Times**

All samples in this SDG met the specified holding time.

**Sample Preservation/Integrity**

All the samples from this sample group met the preservation and integrity requirements of the method.

**Sample Dilutions**

The samples in this SDG did not require dilutions.

**Sample Re-analysis**

The samples in this SDG did not require re-analysis.

**Miscellaneous Information****Data Exception (DER) Documentation**

A DER was not required for this SDG.

**Additional Comments**

Additional comments were not required for this SDG.

**Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

### **Method/Analysis Information**

**Product:** Nitrate Nitrite by Cadmium Reduction

**Analytical Batch:** 956483

**Method:** EPA 353.2 Nitrogen and Nitrate/Nitrite

### **Sample Analysis**

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
247335001	RE15-10-8379
1202050857	Method Blank (MB)
1202050858	247335001(RE15-10-8379) Sample Duplicate (DUP)
1202050859	247335001(RE15-10-8379) Post Spike (PS)
1202050860	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

### **SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

### **Calibration Information**

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

### **Continuing Calibration Blanks**

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

### **Y Intercept Rule**

The absolute value of the intercept is less than 3 times the MDL.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MB analyzed with this SDG met the acceptance criteria.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recovery met the acceptance limits.

**Quality Control (QC) Designation**

The following sample was selected for QC analysis: 247335001 (RE15-10-8379).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202050859 (RE15-10-8379).

**Duplicate Relative Percent Difference (RPD) Statement**

The RPD between the sample and its duplicate met the acceptance limits.

**Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

**Holding Times**

All samples in this SDG met the specified holding time.

**Sample Preservation/Integrity**

All the samples from this sample group met the preservation and integrity requirements of the method.

**Sample Dilutions**

The following samples in this sample group were diluted due to matrix interference: 1202050858 (RE15-10-8379), 1202050859 (RE15-10-8379) and 247335001 (RE15-10-8379).

**Sample Re-analysis**

The following samples were re-analyzed due to CCV failure: 1202050857 (MB), 1202050858 (RE15-10-8379), 1202050859 (RE15-10-8379), 1202050860 (LCS) and 247335001 (RE15-10-8379). The following samples were reanalyzed due to PS failure: 1202050858 (RE15-10-8379), 1202050859 (RE15-10-8379) and 247335001 (RE15-10-8379).

**Miscellaneous Information****Data Exception (DER) Documentation**

The following DER was generated for this SDG: 795917 1202050859 (RE15-10-8379).

**Additional Comments**

Additional comments were not required for this SDG.

**Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Review Validation:**

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

**The following data validator verified the information presented in this case narrative:**

Reviewer:  Date: 16Mar10



# Sample Data Summary

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

### Certificate of Analysis Report for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1906 GEL Work Order: 247335

**The Qualifiers in this report are defined as follows:**

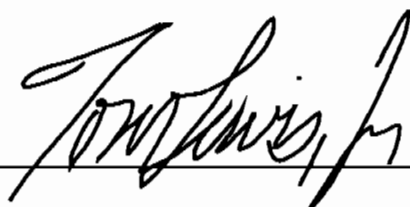
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 11, 2010

Client SDG: 10-1906

Client Sample ID: RE15-10-8379  
Sample ID: 247335001  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "As Received"</i>											
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2	02/23/10	1345	955981	1
<b>Nutrient Analysis</b>											
<i>EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"</i>											
Nitrogen, Nitrate/Nitrite	U	ND	0.100	0.500	mg/L	10	AXH3	02/25/10	1404	956483	2

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1200	955979

### The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	SW846 9012A		
2	EPA 353.2		

# **Quality Control Summary**

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: March 11, 2010

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Los Alamos National Laboratory  
PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 247335

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Flow Injection Analysis</b>											
Batch	955981										
QC1202049706	247203001	DUP									
Cyanide, Total		U	ND	U	ND	ug/L	N/A		AXC2	02/23/10	13:30
QC1202049711	LCS										
Cyanide, Total	50.0				54.3	ug/L	109	(90%-110%)		02/23/10	13:25
QC1202049704	MB										
Cyanide, Total				U	5.00	ug/L				02/23/10	13:24
QC1202049708	247203001	MS									
Cyanide, Total	100	U	ND		109	ug/L	109	(60%-144%)		02/23/10	13:31
QC1202049710	247203001	MSD									
Cyanide, Total	100	U	ND		102	ug/L	6.64	102	(0%-20%)	02/23/10	13:32
<b>Nutrient Analysis</b>											
Batch	956483										
QC1202050858	247335001	DUP									
Nitrogen, Nitrate/Nitrite		U	ND	U	ND	mg/L	N/A		AXH3	02/25/10	14:05
QC1202050860	LCS										
Nitrogen, Nitrate/Nitrite	1.00				0.962	mg/L	96.2	(90%-110%)		02/25/10	13:51
QC1202050857	MB										
Nitrogen, Nitrate/Nitrite				U	0.050	mg/L				02/25/10	13:49
QC1202050859	247335001	PS									
Nitrogen, Nitrate/Nitrite	1.00	U	ND		0.825	mg/L	81.9*	(90%-110%)		02/25/10	14:06

### Notes:

RER is calculated at the 95% confidence level (2-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M Matrix Related Failure

## GEL LABORATORIES LLC

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### QC Summary

Workorder: 247335

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor										
N/A	RPD or %Recovery limits do not apply.										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

# **Instrument QC Data Summary**

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 11-MAR-2010 16:36

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1906

Flow Injection Analysis

Method: SW846 9012A

Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	23-FEB-2010 10:14:06	OM_2-23-2010_10-03-36	149	150	99.3	(90%-110%)	Yes
CCV	23-FEB-2010 13:20:35	OM_2-23-2010_11-19-05	104	100	104	(90%-110%)	Yes
CCV	23-FEB-2010 13:33:13	OM_2-23-2010_11-19-05	104	100	104	(90%-110%)	Yes
CCV	23-FEB-2010 13:45:56	OM_2-23-2010_11-19-05	105	100	105	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	23-FEB-2010 10:15:57	OM_2-23-2010_10-03-36	-1.34	10	Yes
CCB	23-FEB-2010 13:22:26	OM_2-23-2010_11-19-05	-1.39	10	Yes
CCB	23-FEB-2010 13:35:03	OM_2-23-2010_11-19-05	-1.25	10	Yes
CCB	23-FEB-2010 13:47:47	OM_2-23-2010_11-19-05	-1.55	10	Yes



# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 11-MAR-2010 16:36

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1906

Nutrient Analysis

Method: EPA 353.2

Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	25-FEB-2010 10:18:53	OM_2-25-2010_10-08-41	0.978	1	97.8	(90%-110%)	Yes
CCV	25-FEB-2010 13:41:38	OM_2-25-2010_13-40-36	1	1	100	(90%-110%)	Yes
CCV	25-FEB-2010 13:58:24	OM_2-25-2010_13-40-36	0.939	1	93.9	(90%-110%)	Yes
CCV	25-FEB-2010 14:15:11	OM_2-25-2010_13-40-36	0.951	1	95.1	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	25-FEB-2010 10:21:15	OM_2-25-2010_10-08-41	-0.00122	0.05	Yes
CCB	25-FEB-2010 13:44:00	OM_2-25-2010_13-40-36	0.00223	0.05	Yes
CCB	25-FEB-2010 14:00:46	OM_2-25-2010_13-40-36	-0.0013	0.05	Yes
CCB	25-FEB-2010 14:17:33	OM_2-25-2010_13-40-36	-0.0016	0.05	Yes

# Cyanide, Total

# Prep Logbook

## Cyanide Sample Distillation

**Batch ID:** 955979.0  
**Analyst:** Alan Stanley  
**Method:** SW846 9010C Distillation SW846 9010B Prep E  
 Verified by:

EPA 335.4  
 Lab SOP: GL-GC-E-067 REV# 13  
 Instrument: Sartorius Balance B-001

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202049711	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.0125	mL
MS	1202049707	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MS	1202049708	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MSD	1202049709	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MSD	1202049710	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
1202049704 MB	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049711 LCS	23-FEB-2010 12:00:00	Water	25	25	1	>12
246941002	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049705 DUP (246941002)	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049707 MS (246941002)	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049709 MSD (246941002)	23-FEB-2010 12:00:00	Water	25	25	1	>12
247203001	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049706 DUP (247203001)	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049708 MS (247203001)	23-FEB-2010 12:00:00	Water	25	25	1	>12
1202049710 MSD (247203001)	23-FEB-2010 12:00:00	Water	25	25	1	>12
247204001	23-FEB-2010 12:00:00	Waste Water	25	25	1	>12
247244001	23-FEB-2010 12:00:00	Waste Water	25	25	1	>12
247250001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247250002	23-FEB-2010 12:00:00	Water	25	25	1	>12
247256001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247256002	23-FEB-2010 12:00:00	Water	25	25	1	>12
247273001	23-FEB-2010 12:00:00	Waste Water	25	25	1	>12
247322001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247322002	23-FEB-2010 12:00:00	Water	25	25	1	>12
247335001	23-FEB-2010 12:00:00	Water	25	25	1	>12

Analytical Logbook version 1 11-04-2002

GEL Laboratories LLC

# Prep Logbook

**Batch ID:** 955979.0  
**Analyst:** Alan Stanley  
**Method:** SW846 9010C Distillation SW846 9010B Prep E  
 P  
 A  
 33  
 5.  
 3  
 EPA 335.4  
 Lab SOP: GL-GC-E-067 REV# 13  
 Instrument: Sartorius Balance B-001

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202049711	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.0125	mL
MS	1202049707	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MS	1202049708	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MSD	1202049709	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MSD	1202049710	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL

Sample ID	Run Date	Matrix	Initial Volume (mL)	Final Volume (mL)	Prep Factor (mL/mL)	pH Check
247339001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247339002	23-FEB-2010 12:00:00	Water	25	25	1	>12
247350001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247434001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247434002	23-FEB-2010 12:00:00	Water	25	25	1	>12
247559001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247560001	23-FEB-2010 12:00:00	Water	25	25	1	>12
247567001	23-FEB-2010 12:00:00	Water	25	25	1	>12

Reagent/Solvent Lot ID	Description	Amount	Comments:
1260189-C	50% H2SO4 CN Prep	2.5 mL	
1270661-C	Bismuth Nitrate Solution	1.25 mL	
1270663-C	0.8N H3NO3S	1.25 mL	
1270669-C	51% MgCl2 Soln	1 mL	
1273851-C	0.25N Sodium Hydroxide Solution	25 mL	
WCN100223-07	150 ppb CN Distilled ICV Standard	.0375 mL	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	2/23/2010 10:06:57	OM_2-23-2010_10-03-36
150 ppb		1	axc2	2/23/2010 10:07:49	OM_2-23-2010_10-03-36
100 ppb		1	axc2	2/23/2010 10:08:41	OM_2-23-2010_10-03-36
50 ppb		1	axc2	2/23/2010 10:09:34	OM_2-23-2010_10-03-36
10 ppb		1	axc2	2/23/2010 10:10:28	OM_2-23-2010_10-03-36
CRDL 5.0 ppb		1	axc2	2/23/2010 10:11:21	OM_2-23-2010_10-03-36
ICAL-00		1	axc2	2/23/2010 10:12:16	OM_2-23-2010_10-03-36
ICV		1	axc2	2/23/2010 10:14:06	OM_2-23-2010_10-03-36
ICB		1	axc2	2/23/2010 10:15:57	OM_2-23-2010_10-03-36
CRDL		1	axc2	2/23/2010 10:17:46	OM_2-23-2010_10-03-36
1202046146	954516	1	axc2	2/23/2010 10:19:36	OM_2-23-2010_10-03-36
1202046153	954516	25	axc2	2/23/2010 10:20:29	OM_2-23-2010_10-03-36
247172001	954516	1	axc2	2/23/2010 10:21:22	OM_2-23-2010_10-03-36
1202046147	954516	1	axc2	2/23/2010 10:22:15	OM_2-23-2010_10-03-36
1202046149	954516	1	axc2	2/23/2010 10:23:08	OM_2-23-2010_10-03-36
1202046151	954516	1	axc2	2/23/2010 10:24:01	OM_2-23-2010_10-03-36
247172002	954516	1	axc2	2/23/2010 10:24:54	OM_2-23-2010_10-03-36
1202046148	954516	1	axc2	2/23/2010 10:25:46	OM_2-23-2010_10-03-36
1202046150	954516	1	axc2	2/23/2010 10:26:38	OM_2-23-2010_10-03-36
1202046152*	954516	1	axc2	2/23/2010 10:27:31	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 10:28:23	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 10:30:13	OM_2-23-2010_10-03-36
247178001	954516	1	axc2	2/23/2010 10:32:01	OM_2-23-2010_10-03-36
247178002	954516	1	axc2	2/23/2010 10:32:53	OM_2-23-2010_10-03-36
247178003	954516	1	axc2	2/23/2010 10:33:45	OM_2-23-2010_10-03-36
247178004	954516	1	axc2	2/23/2010 10:34:37	OM_2-23-2010_10-03-36
247178005	954516	1	axc2	2/23/2010 10:35:28	OM_2-23-2010_10-03-36
247178006	954516	1	axc2	2/23/2010 10:36:22	OM_2-23-2010_10-03-36
247178007	954516	1	axc2	2/23/2010 10:37:16	OM_2-23-2010_10-03-36
247178008	954516	1	axc2	2/23/2010 10:38:10	OM_2-23-2010_10-03-36
247178009	954516	1	axc2	2/23/2010 10:39:03	OM_2-23-2010_10-03-36
247178010	954516	1	axc2	2/23/2010 10:39:56	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 10:40:48	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 10:42:39	OM_2-23-2010_10-03-36
247178011	954516	1	axc2	2/23/2010 10:44:28	OM_2-23-2010_10-03-36
247181001	954516	1	axc2	2/23/2010 10:45:20	OM_2-23-2010_10-03-36
247181002	954516	1	axc2	2/23/2010 10:46:14	OM_2-23-2010_10-03-36
247187001	954516	1	axc2	2/23/2010 10:47:06	OM_2-23-2010_10-03-36
247187002	954516	1	axc2	2/23/2010 10:47:58	OM_2-23-2010_10-03-36
247187003	954516	1	axc2	2/23/2010 10:48:51	OM_2-23-2010_10-03-36
247197001	954516	1	axc2	2/23/2010 10:49:43	OM_2-23-2010_10-03-36
247197002	954516	1	axc2	2/23/2010 10:50:35	OM_2-23-2010_10-03-36
1202046124	954512	1	axc2	2/23/2010 10:51:27	OM_2-23-2010_10-03-36
1202046131	954512	25	axc2	2/23/2010 10:52:19	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 10:53:12	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 10:55:01	OM_2-23-2010_10-03-36
247108001	954512	1	axc2	2/23/2010 10:56:52	OM_2-23-2010_10-03-36
1202046125	954512	1	axc2	2/23/2010 10:57:45	OM_2-23-2010_10-03-36
1202046127	954512	1	axc2	2/23/2010 10:58:39	OM_2-23-2010_10-03-36
1202046129	954512	1	axc2	2/23/2010 10:59:32	OM_2-23-2010_10-03-36
247108002	954512	1	axc2	2/23/2010 11:00:25	OM_2-23-2010_10-03-36
1202046126	954512	1	axc2	2/23/2010 11:01:19	OM_2-23-2010_10-03-36
1202046128	954512	1	axc2	2/23/2010 11:02:11	OM_2-23-2010_10-03-36
1202046130	954512	1	axc2	2/23/2010 11:03:05	OM_2-23-2010_10-03-36
247108003	954512	1	axc2	2/23/2010 11:03:58	OM_2-23-2010_10-03-36
247108004	954512	1	axc2	2/23/2010 11:04:50	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 11:05:42	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 11:07:33	OM_2-23-2010_10-03-36

247108005*	954512	1	axc2	2/23/2010	11:09:22	OM_2-23-2010_10-03-36
247195001*	954512	1	axc2	2/23/2010	11:10:14	OM_2-23-2010_10-03-36
247195002*	954512	1	axc2	2/23/2010	11:11:05	OM_2-23-2010_10-03-36

Original Run Filename: OM\_2-23-2010\_10-03-36.OMN created 2/23/2010 10:03:36  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_2-23-2010\_10-03-36.OMN last modified 2/23/2010 11:12:14  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M  
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100223-01	1	S1	200	9.53	2/23/2010@10:06:57			200 ppb
WCN100223-02	1	S2	150	7.13	2/23/2010@10:07:49			150 ppb
WCN100223-03	1	S3	100	4.60	2/23/2010@10:08:41			100 ppb
WCN100223-04	1	S4	50.0	2.53	2/23/2010@10:09:34			50 ppb
WCN100223-05	1	S5	10.0	0.617	2/23/2010@10:10:28			10 ppb
WCN100223-06	1	S6	5.00	0.385	2/23/2010@10:11:21			CRDL 5.0 ppb
WCN100223-08	1	S7	0.00	0.0245	2/23/2010@10:12:16			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99966 > 0.99500					
Message			Pass					
Action			Continue					
WCN100223-07	1	S8	149	7.09	2/23/2010@10:14:06			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-0.5 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.5 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100223-08	1	S7	-1.34	0.0341	2/23/2010@10:15:57			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.34 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.34 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100223-06	1	S6	6.77	0.414	2/23/2010@10:17:46			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			6.77 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			6.77 > 2.50					
Message			Pass					
Action			None					
1202046146 954516 MB	1	1	-1.30	0.0360	2/23/2010@10:19:36			
1202046153 LCS	1	2	20.1	1.04	2/23/2010@10:20:29		25.00	
247172001	1	3	-1.33	0.0345	2/23/2010@10:21:22			
1202046147 DUP	1	4	-1.25	0.0384	2/23/2010@10:22:15			
1202046149 MS	1	5	98.6	4.72	2/23/2010@10:23:08			
1202046151 MSD	1	6	101	4.82	2/23/2010@10:24:01			
247172002	1	7	-0.836	0.0578	2/23/2010@10:24:54			
1202046148 DUP	1	8	-1.14	0.0437	2/23/2010@10:25:46			
1202046150 MS	1	9	107	5.10	2/23/2010@10:26:38			
1202046152 MSD	1	10	69.8	3.37	2/23/2010@10:27:31			
WCN100223-03	1	S3	103	4.93	2/23/2010@10:28:23			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			3.0 < 10.0					

Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			3.0 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100223-08	1	S7	-1.28	0.0369	2/23/2010@10:30:13			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.28 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.28 > -5.00					
Message			CCB Passed					
Action			Continue					
247178001	1	11	-1.02	0.0494	2/23/2010@10:32:01			
247178002	1	12	-1.24	0.0391	2/23/2010@10:32:53			
247178003	1	13	-0.195	0.0879	2/23/2010@10:33:45			
247178004	1	14	-1.18	0.0420	2/23/2010@10:34:37			
247178005	1	15	-1.20	0.0409	2/23/2010@10:35:28			
247178006	1	16	-0.310	0.0825	2/23/2010@10:36:22			
247178007	1	17	-0.592	0.0693	2/23/2010@10:37:16			
247178008	1	18	1.40	0.162	2/23/2010@10:38:10			
247178009	1	19	0.677	0.129	2/23/2010@10:39:03			
247178010	1	20	-0.578	0.0699	2/23/2010@10:39:56			
WCN100223-03	1	S3	104	4.96	2/23/2010@10:40:48			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			3.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			3.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100223-08	1	S7	-1.27	0.0375	2/23/2010@10:42:39			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.27 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.27 > -5.00					
Message			CCB Passed					
Action			Continue					
247178011	1	21	-1.34	0.0342	2/23/2010@10:44:28			
247181001	1	22	-1.33	0.0348	2/23/2010@10:45:20			
247181002	1	23	-0.741	0.0623	2/23/2010@10:46:14			
247187001	1	24	-1.57	0.0236	2/23/2010@10:47:06			
247187002	1	25	-1.22	0.0399	2/23/2010@10:47:58			
247187003	1	26	-1.40	0.0315	2/23/2010@10:48:51			
247197001	1	27	-1.38	0.0323	2/23/2010@10:49:43			
247197002	1	28	-1.11	0.0450	2/23/2010@10:50:35			
1202046124 954512 MB	1	29	-1.30	0.0361	2/23/2010@10:51:27			
1202046131 LCS	1	30	16.8	0.885	2/23/2010@10:52:19	25.00		
WCN100223-03	1	S3	104	4.98	2/23/2010@10:53:12			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			4.3 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			4.3 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100223-08	1	S7	-1.30	0.0362	2/23/2010@10:55:01			CCB
Known Conc:			0.00					



DQM Test: > + Concentration Limit						
Result:		-1.30 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.30 > -5.00				
Message		CCB Passed				
Action		Continue				
247108001	1	31	-1.09	0.0462	2/23/2010@10:56:52	
1202046125  DUP	1	32	-1.54	0.0247	2/23/2010@10:57:45	
1202046127  MS	1	33	81.1	3.90	2/23/2010@10:58:39	
1202046129  MSD	1	34	98.3	4.70	2/23/2010@10:59:32	
247108002	1	35	-1.05	0.0481	2/23/2010@11:00:25	
1202046126  DUP	1	36	-0.928	0.0536	2/23/2010@11:01:19	
1202046128  MS	1	37	95.0	4.55	2/23/2010@11:02:11	
1202046130  MSD	1	38	88.6	4.25	2/23/2010@11:03:05	
247108003	1	39	-1.15	0.0430	2/23/2010@11:03:58	
247108004	1	40	-1.94	0.00601	2/23/2010@11:04:50	
WCN100223-03	1	S3	104	4.96	2/23/2010@11:05:42	CCV
Known Conc:		100				
DQM Test: > + Percent Relative Difference						
Result:		3.8 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		3.8 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100223-08	1	S7	-1.19	0.0415	2/23/2010@11:07:33	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.19 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.19 > -5.00				
Message		CCB Passed				
Action		Continue				
247108005	1	41	-2.02	0.00232	2/23/2010@11:09:22	
247195001	1	42	-1.60	0.0222	2/23/2010@11:10:14	
247195002	1	43	-1.50	0.0270	2/23/2010@11:11:05	

Analyte Properties Table for OM\_2-23-2010\_10-03-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Chromatogram showing detector response (Volts) versus Time (s). The plot displays numerous peaks, many of which are labeled with chemical names and retention times. The x-axis ranges from 0.4 to 4075.5 seconds, and the y-axis ranges from 0.00 to 2.38 Volts. Key labeled peaks include WCN100223-0, WCN100223-03, WCN100223-04, WCN100223-05, WCN100223-06, WCN100223-07, WCN100223-08, WCN100223-09, WCN100223-10, WCN100223-11, WCN100223-12, WCN100223-13, WCN100223-14, WCN100223-15, WCN100223-16, WCN100223-17, WCN100223-18, WCN100223-19, WCN100223-20, WCN100223-21, WCN100223-22, WCN100223-23, WCN100223-24, WCN100223-25, WCN100223-26, WCN100223-27, WCN100223-28, WCN100223-29, WCN100223-30, WCN100223-31, WCN100223-32, WCN100223-33, WCN100223-34, WCN100223-35, WCN100223-36, WCN100223-37, WCN100223-38, WCN100223-39, WCN100223-40, WCN100223-41, WCN100223-42, WCN100223-43, WCN100223-44, WCN100223-45, WCN100223-46, WCN100223-47, WCN100223-48, WCN100223-49, WCN100223-50, WCN100223-51, WCN100223-52, WCN100223-53, WCN100223-54, WCN100223-55, WCN100223-56, WCN100223-57, WCN100223-58, WCN100223-59, WCN100223-60, WCN100223-61, WCN100223-62, WCN100223-63, WCN100223-64, WCN100223-65, WCN100223-66, WCN100223-67, WCN100223-68, WCN100223-69, WCN100223-70, WCN100223-71, WCN100223-72, WCN100223-73, WCN100223-74, WCN100223-75, WCN100223-76, WCN100223-77, WCN100223-78, WCN100223-79, WCN100223-80, WCN100223-81, WCN100223-82, WCN100223-83, WCN100223-84, WCN100223-85, WCN100223-86, WCN100223-87, WCN100223-88, WCN100223-89, WCN100223-90, WCN100223-91, WCN100223-92, WCN100223-93, WCN100223-94, WCN100223-95, WCN100223-96, WCN100223-97, WCN100223-98, WCN100223-99, WCN100223-100.

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.53	0.622	-0.6	2/23/2010	10:08:00
2	150	1	7.13	0.468	-0.1	2/23/2010	10:08:52
3	100	1	4.60	0.301	3.8	2/23/2010	10:09:44
4	50.0	1	2.53	0.167	-3.7	2/23/2010	10:10:37
5	10.0	1	0.617	0.0399	-8.7	2/23/2010	10:11:31
6	5.00	1	0.385	0.0238	-15.5	2/23/2010	10:12:24
7	0.00	1	0.0245	0.00128		2/23/2010	10:13:19

Figure 1 is a scatter plot showing the relationship between Peak Area (V.s) on the Y-axis and TCYANIDE concentration, ug/L on the X-axis. The data points show a strong positive linear correlation. The regression equation is  $\text{Area} = 0.0468 * \text{Conc} + 0.0994$ , and the correlation coefficient ( $r$ ) is 0.99966. The text "No Weighting" is also present.

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	2/23/2010 11:22:28	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010 11:24:18	OM_2-23-2010_11-19-05
247108005	954512	1	axc2	2/23/2010 11:26:07	OM_2-23-2010_11-19-05
247195001	954512	1	axc2	2/23/2010 11:26:59	OM_2-23-2010_11-19-05
247195002	954512	1	axc2	2/23/2010 11:27:51	OM_2-23-2010_11-19-05
247195003	954512	1	axc2	2/23/2010 11:28:44	OM_2-23-2010_11-19-05
247195004	954512	1	axc2	2/23/2010 11:29:35	OM_2-23-2010_11-19-05
247195005	954512	1	axc2	2/23/2010 11:30:30	OM_2-23-2010_11-19-05
247195006	954512	1	axc2	2/23/2010 11:31:24	OM_2-23-2010_11-19-05
247195007	954512	1	axc2	2/23/2010 11:32:17	OM_2-23-2010_11-19-05
247195008	954512	1	axc2	2/23/2010 11:33:11	OM_2-23-2010_11-19-05
247195009	954512	1	axc2	2/23/2010 11:34:05	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010 11:34:57	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010 11:36:48	OM_2-23-2010_11-19-05
247195010	954512	1	axc2	2/23/2010 11:38:37	OM_2-23-2010_11-19-05
247195011	954512	1	axc2	2/23/2010 11:39:30	OM_2-23-2010_11-19-05
247195012	954512	1	axc2	2/23/2010 11:40:23	OM_2-23-2010_11-19-05
247195013	954512	1	axc2	2/23/2010 11:41:16	OM_2-23-2010_11-19-05
247195014	954512	1	axc2	2/23/2010 11:42:09	OM_2-23-2010_11-19-05
247195015	954512	1	axc2	2/23/2010 11:43:02	OM_2-23-2010_11-19-05
1202042913	953106	1	axc2	2/23/2010 11:43:55	OM_2-23-2010_11-19-05
1202042920	953106	25	axc2	2/23/2010 11:44:47	OM_2-23-2010_11-19-05
246870010	953106	1	axc2	2/23/2010 11:45:39	OM_2-23-2010_11-19-05
1202042914	953106	1	axc2	2/23/2010 11:46:31	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010 11:47:23	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010 11:49:13	OM_2-23-2010_11-19-05
1202042916	953106	1	axc2	2/23/2010 11:51:03	OM_2-23-2010_11-19-05
1202042918	953106	1	axc2	2/23/2010 11:51:57	OM_2-23-2010_11-19-05
246872001	953106	1	axc2	2/23/2010 11:52:52	OM_2-23-2010_11-19-05
1202042915	953106	1	axc2	2/23/2010 11:53:45	OM_2-23-2010_11-19-05
1202042917	953106	1	axc2	2/23/2010 11:54:39	OM_2-23-2010_11-19-05
1202042919	953106	1	axc2	2/23/2010 11:55:33	OM_2-23-2010_11-19-05
246872002	953106	1	axc2	2/23/2010 11:56:26	OM_2-23-2010_11-19-05
246872003	953106	1	axc2	2/23/2010 11:57:19	OM_2-23-2010_11-19-05
246872004	953106	1	axc2	2/23/2010 11:58:12	OM_2-23-2010_11-19-05
246872005	953106	1	axc2	2/23/2010 11:59:05	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010 11:59:57	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010 12:01:48	OM_2-23-2010_11-19-05
246872006	953106	1	axc2	2/23/2010 12:03:37	OM_2-23-2010_11-19-05
246872007	953106	1	axc2	2/23/2010 12:04:30	OM_2-23-2010_11-19-05
246872008	953106	1	axc2	2/23/2010 12:05:22	OM_2-23-2010_11-19-05
246881001	953106	1	axc2	2/23/2010 12:06:14	OM_2-23-2010_11-19-05
246881002	953106	1	axc2	2/23/2010 12:07:07	OM_2-23-2010_11-19-05
246881003	953106	1	axc2	2/23/2010 12:08:01	OM_2-23-2010_11-19-05
246881004	953106	1	axc2	2/23/2010 12:08:55	OM_2-23-2010_11-19-05
246881005	953106	1	axc2	2/23/2010 12:09:49	OM_2-23-2010_11-19-05
246881006	953106	1	axc2	2/23/2010 12:10:43	OM_2-23-2010_11-19-05
246881007	953106	1	axc2	2/23/2010 12:11:37	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010 12:12:29	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010 12:14:20	OM_2-23-2010_11-19-05
246881008	953106	1	axc2	2/23/2010 12:16:10	OM_2-23-2010_11-19-05
246881009	953106	1	axc2	2/23/2010 12:17:03	OM_2-23-2010_11-19-05
246881010	953106	1	axc2	2/23/2010 12:17:56	OM_2-23-2010_11-19-05
246881011	953106	1	axc2	2/23/2010 12:18:49	OM_2-23-2010_11-19-05
1202046152	954516	1	axc2	2/23/2010 12:19:42	OM_2-23-2010_11-19-05
1202046158	954519	1	axc2	2/23/2010 12:20:35	OM_2-23-2010_11-19-05
1202046165	954519	25	axc2	2/23/2010 12:21:28	OM_2-23-2010_11-19-05
247084001	954519	1	axc2	2/23/2010 12:22:20	OM_2-23-2010_11-19-05

247084002	954519	1	axc2	2/23/2010	12:23:13	OM_2-23-2010_11-19-05
247126001	954519	1	axc2	2/23/2010	12:24:06	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	12:24:58	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	12:26:48	OM_2-23-2010_11-19-05
247126002	954519	1	axc2	2/23/2010	12:28:37	OM_2-23-2010_11-19-05
247126003	954519	1	axc2	2/23/2010	12:29:32	OM_2-23-2010_11-19-05
247136001	954519	1	axc2	2/23/2010	12:30:26	OM_2-23-2010_11-19-05
247136002	954519	1	axc2	2/23/2010	12:31:21	OM_2-23-2010_11-19-05
247141001	954519	1	axc2	2/23/2010	12:32:16	OM_2-23-2010_11-19-05
247141002	954519	1	axc2	2/23/2010	12:33:09	OM_2-23-2010_11-19-05
247141003	954519	1	axc2	2/23/2010	12:34:03	OM_2-23-2010_11-19-05
247186001	954519	1	axc2	2/23/2010	12:34:58	OM_2-23-2010_11-19-05
1202046159	954519	1	axc2	2/23/2010	12:35:51	OM_2-23-2010_11-19-05
1202046161	954519	1	axc2	2/23/2010	12:36:44	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	12:37:37	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	12:38:31	OM_2-23-2010_11-19-05
1202046163	954519	1	axc2	2/23/2010	12:39:24	OM_2-23-2010_11-19-05
247186002	954519	1	axc2	2/23/2010	12:40:17	OM_2-23-2010_11-19-05
1202046160	954519	1	axc2	2/23/2010	12:41:10	OM_2-23-2010_11-19-05
1202046162	954519	1	axc2	2/23/2010	12:42:03	OM_2-23-2010_11-19-05
1202046164	954519	1	axc2	2/23/2010	12:42:55	OM_2-23-2010_11-19-05
247186003	954519	1	axc2	2/23/2010	12:43:49	OM_2-23-2010_11-19-05
247186004	954519	1	axc2	2/23/2010	12:44:43	OM_2-23-2010_11-19-05
247186005	954519	1	axc2	2/23/2010	12:45:38	OM_2-23-2010_11-19-05
247186006	954519	1	axc2	2/23/2010	12:46:32	OM_2-23-2010_11-19-05
247186007	954519	1	axc2	2/23/2010	12:47:26	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	12:48:19	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	12:49:13	OM_2-23-2010_11-19-05
247186008	954519	1	axc2	2/23/2010	12:50:07	OM_2-23-2010_11-19-05
247186009	954519	1	axc2	2/23/2010	12:51:01	OM_2-23-2010_11-19-05
247186010	954519	1	axc2	2/23/2010	12:51:56	OM_2-23-2010_11-19-05
1202046185	954529	1	axc2	2/23/2010	12:52:50	OM_2-23-2010_11-19-05
1202046192	954529	1	axc2	2/23/2010	12:53:43	OM_2-23-2010_11-19-05
246983002	954529	1	axc2	2/23/2010	12:54:37	OM_2-23-2010_11-19-05
247036005	954529	1	axc2	2/23/2010	12:55:30	OM_2-23-2010_11-19-05
1202046186	954529	1	axc2	2/23/2010	12:56:23	OM_2-23-2010_11-19-05
1202046188	954529	1	axc2	2/23/2010	12:57:17	OM_2-23-2010_11-19-05
1202046190	954529	1	axc2	2/23/2010	12:58:09	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	12:59:01	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	12:59:56	OM_2-23-2010_11-19-05
247039001	954529	1	axc2	2/23/2010	13:00:48	OM_2-23-2010_11-19-05
247039002	954529	1	axc2	2/23/2010	13:01:43	OM_2-23-2010_11-19-05
247039003	954529	1	axc2	2/23/2010	13:02:39	OM_2-23-2010_11-19-05
247039004	954529	1	axc2	2/23/2010	13:03:33	OM_2-23-2010_11-19-05
247092001	954529	1	axc2	2/23/2010	13:04:27	OM_2-23-2010_11-19-05
247098001	954529	1	axc2	2/23/2010	13:05:21	OM_2-23-2010_11-19-05
247098002	954529	1	axc2	2/23/2010	13:06:15	OM_2-23-2010_11-19-05
247098003	954529	1	axc2	2/23/2010	13:07:10	OM_2-23-2010_11-19-05
247098004	954529	1	axc2	2/23/2010	13:08:04	OM_2-23-2010_11-19-05
247109001	954529	1	axc2	2/23/2010	13:08:58	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	13:09:50	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	13:10:44	OM_2-23-2010_11-19-05
247109002	954529	1	axc2	2/23/2010	13:11:38	OM_2-23-2010_11-19-05
1202046187	954529	1	axc2	2/23/2010	13:12:31	OM_2-23-2010_11-19-05
1202046189	954529	1	axc2	2/23/2010	13:13:25	OM_2-23-2010_11-19-05
1202046191	954529	1	axc2	2/23/2010	13:14:18	OM_2-23-2010_11-19-05
247127001	954529	1	axc2	2/23/2010	13:15:11	OM_2-23-2010_11-19-05
247139001	954529	1	axc2	2/23/2010	13:16:04	OM_2-23-2010_11-19-05
247179001	954529	1	axc2	2/23/2010	13:16:59	OM_2-23-2010_11-19-05
247182001	954529	1	axc2	2/23/2010	13:17:54	OM_2-23-2010_11-19-05

247183001	954529	1	axc2	2/23/2010	13:18:48	OM_2-23-2010_11-19-05
247192001	954529	1	axc2	2/23/2010	13:19:43	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	13:20:35	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	13:22:26	OM_2-23-2010_11-19-05
1202049704	955981	1	axc2	2/23/2010	13:24:16	OM_2-23-2010_11-19-05
1202049711	955981	1	axc2	2/23/2010	13:25:10	OM_2-23-2010_11-19-05
246941002	955981	1	axc2	2/23/2010	13:26:05	OM_2-23-2010_11-19-05
1202049705	955981	1	axc2	2/23/2010	13:26:59	OM_2-23-2010_11-19-05
1202049707	955981	1	axc2	2/23/2010	13:27:53	OM_2-23-2010_11-19-05
1202049709	955981	1	axc2	2/23/2010	13:28:47	OM_2-23-2010_11-19-05
247203001	955981	1	axc2	2/23/2010	13:29:41	OM_2-23-2010_11-19-05
1202049706	955981	1	axc2	2/23/2010	13:30:34	OM_2-23-2010_11-19-05
1202049708	955981	1	axc2	2/23/2010	13:31:28	OM_2-23-2010_11-19-05
1202049710	955981	1	axc2	2/23/2010	13:32:21	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	13:33:13	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	13:35:03	OM_2-23-2010_11-19-05
247204001	955981	1	axc2	2/23/2010	13:36:52	OM_2-23-2010_11-19-05
247244001	955981	1	axc2	2/23/2010	13:37:47	OM_2-23-2010_11-19-05
247250001	955981	1	axc2	2/23/2010	13:38:42	OM_2-23-2010_11-19-05
247250002	955981	1	axc2	2/23/2010	13:39:37	OM_2-23-2010_11-19-05
247256001	955981	1	axc2	2/23/2010	13:40:32	OM_2-23-2010_11-19-05
247256002	955981	1	axc2	2/23/2010	13:41:27	OM_2-23-2010_11-19-05
247273001	955981	1	axc2	2/23/2010	13:42:22	OM_2-23-2010_11-19-05
247322001	955981	1	axc2	2/23/2010	13:43:15	OM_2-23-2010_11-19-05
247322002	955981	1	axc2	2/23/2010	13:44:09	OM_2-23-2010_11-19-05
247335001	955981	1	axc2	2/23/2010	13:45:04	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	13:45:56	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	13:47:47	OM_2-23-2010_11-19-05
247339001	955981	1	axc2	2/23/2010	13:49:37	OM_2-23-2010_11-19-05
247339002	955981	1	axc2	2/23/2010	13:50:31	OM_2-23-2010_11-19-05
247350001	955981	1	axc2	2/23/2010	13:51:25	OM_2-23-2010_11-19-05
247434001	955981	1	axc2	2/23/2010	13:52:18	OM_2-23-2010_11-19-05
247434002	955981	1	axc2	2/23/2010	13:53:12	OM_2-23-2010_11-19-05
247559001	955981	1	axc2	2/23/2010	13:54:05	OM_2-23-2010_11-19-05
247560001	955981	1	axc2	2/23/2010	13:55:00	OM_2-23-2010_11-19-05
247567001	955981	1	axc2	2/23/2010	13:55:56	OM_2-23-2010_11-19-05
247273001	955981	2	axc2	2/23/2010	13:56:50	OM_2-23-2010_11-19-05
CCV		1	axc2	2/23/2010	13:57:43	OM_2-23-2010_11-19-05
CCB		1	axc2	2/23/2010	13:59:33	OM_2-23-2010_11-19-05

Original Run Filename: OM\_2-23-2010\_11-19-05.OMN created 2/23/2010 11:19:05  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_2-23-2010\_11-19-05.OMN last modified 2/23/2010 14:00:39  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M  
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area (Vs)				
WCN100223-03	1	S3	103	4.91	2/23/2010@11:22:28			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			2.6 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			2.6 < 10.0					
Message			CCV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100223-08	1	S7	-1.61	0.0215	2/23/2010@11:24:18			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.61 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.61 > -5.00					
Message			CCB Passed					
Action			Continue					
247108005[954512]	1	41	-2.38	-0.0147	2/23/2010@11:26:07			
247195001	1	42	-1.98	0.00432	2/23/2010@11:26:59			
247195002	1	43	-1.72	0.0166	2/23/2010@11:27:51			
247195003	1	44	-1.17	0.0424	2/23/2010@11:28:44			
247195004	1	45	-0.745	0.0621	2/23/2010@11:29:35			
247195005	1	46	-1.28	0.0369	2/23/2010@11:30:30			
247195006	1	47	-1.56	0.0240	2/23/2010@11:31:24			
247195007	1	48	-1.45	0.0293	2/23/2010@11:32:17			
247195008	1	49	-3.33	-0.0592	2/23/2010@11:33:11			
247195009	1	50	-1.19	0.0412	2/23/2010@11:34:05			
WCN100223-03	1	S3	102	4.89	2/23/2010@11:34:57			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			2.4 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			2.4 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100223-08	1	S7	-1.39	0.0321	2/23/2010@11:36:48			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.39 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.39 > -5.00					
Message			CCB Passed					
Action			Continue					
247195010	1	51	-0.780	0.0605	2/23/2010@11:38:37			
247195011	1	52	-1.91	0.00734	2/23/2010@11:39:30			
247195012	1	53	-1.44	0.0298	2/23/2010@11:40:23			
247195013	1	54	-1.29	0.0368	2/23/2010@11:41:16			
247195014	1	55	-1.40	0.0315	2/23/2010@11:42:09			

247195015	1	56	-1.32	0.0351	2/23/2010@11:43:02		
1202042913 953106 MB	1	57	-1.34	0.0343	2/23/2010@11:43:55		
1202042920  LCS	1	58	20.7	1.07	2/23/2010@11:44:47	25.00	
246870010	1	59	-1.12	0.0447	2/23/2010@11:45:39		
1202042914  DUP	1	60	-1.41	0.0309	2/23/2010@11:46:31		
WCN100223-03	1	S3	103	4.94	2/23/2010@11:47:23		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			3.4 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			3.4 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100223-08	1	S7	-1.29	0.0368	2/23/2010@11:49:13		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.29 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.29 > -5.00				
Message			CCB Passed				
Action			Continue				
1202042916  MS	1	61	100	4.81	2/23/2010@11:51:03		
1202042918  MSD	1	62	99.6	4.76	2/23/2010@11:51:57		
246872001	1	63	-0.922	0.0539	2/23/2010@11:52:52		
1202042915  DUP	1	64	-0.752	0.0618	2/23/2010@11:53:45		
1202042917  MS	1	65	87.7	4.21	2/23/2010@11:54:39		
1202042919  MSD	1	66	97.7	4.67	2/23/2010@11:55:33		
246872002	1	67	-0.703	0.0641	2/23/2010@11:56:26		
246872003	1	68	-0.152	0.0899	2/23/2010@11:57:19		
246872004	1	69	-2.08	-2.27e-4	2/23/2010@11:58:12		
246872005	1	70	-0.139	0.0905	2/23/2010@11:59:05		
WCN100223-03	1	S3	104	4.98	2/23/2010@11:59:57		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			4.3 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			4.3 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100223-08	1	S7	-1.19	0.0412	2/23/2010@12:01:48		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.19 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.19 > -5.00				
Message			CCB Passed				
Action			Continue				
246872006	1	71	-1.15	0.0433	2/23/2010@12:03:37		
246872007	1	72	-1.05	0.0479	2/23/2010@12:04:30		
246872008	1	73	0.643	0.127	2/23/2010@12:05:22		
246881001	1	74	-2.08	-1.94e-4	2/23/2010@12:06:14		
246881002	1	75	-0.602	0.0689	2/23/2010@12:07:07		
246881003	1	76	-0.887	0.0555	2/23/2010@12:08:01		
246881004	1	77	-0.0611	0.0942	2/23/2010@12:08:55		
246881005	1	78	0.768	0.133	2/23/2010@12:09:49		
246881006	1	79	-0.774	0.0608	2/23/2010@12:10:43		
246881007	1	80	-0.623	0.0678	2/23/2010@12:11:37		
WCN100223-03	1	S3	105	5.00	2/23/2010@12:12:29		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							

		Result:	4.7 < 10.0				
		Message	CCV Passed				
		Action	Continue				
DQM Test: < - Percent Relative Difference							
		Result:	4.7 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100223-08	1	S7	-1.05	0.0478	2/23/2010@12:14:20		CCB
		Known Conc:	0.00				
DQM Test: > + Concentration Limit							
		Result:	-1.05 < 5.00				
		Message	CCB Passed				
		Action	Continue				
DQM Test: < - Concentration Limit							
		Result:	-1.05 > -5.00				
		Message	CCB Passed				
		Action	Continue				
246881008	1	81	-0.812	0.0590	2/23/2010@12:16:10		
246881009	1	82	-0.213	0.0871	2/23/2010@12:17:03		
246881010	1	83	1.65	0.174	2/23/2010@12:17:56		
246881011	1	84	-1.44	0.0294	2/23/2010@12:18:49		
1202046152 954516 MSD	1	10	82.2	3.95	2/23/2010@12:19:42		
1202046158 954519 MB	1	85	-1.23	0.0392	2/23/2010@12:20:35		
1202046165  LCS	1	86	27.6	1.39	2/23/2010@12:21:28	25.00	
247084001	1	87	-0.732	0.0627	2/23/2010@12:22:20		
247084002	1	88	-1.03	0.0489	2/23/2010@12:23:13		
247126001	1	89	-1.40	0.0313	2/23/2010@12:24:06		
WCN100223-03	1	S3	105	5.02	2/23/2010@12:24:58		CCV
		Known Conc:	100				
DQM Test: > + Percent Relative Difference							
		Result:	5.1 < 10.0				
		Message	CCV Passed				
		Action	Continue				
DQM Test: < - Percent Relative Difference							
		Result:	5.1 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100223-08	1	S7	-1.23	0.0392	2/23/2010@12:26:48		CCB
		Known Conc:	0.00				
DQM Test: > + Concentration Limit							
		Result:	-1.23 < 5.00				
		Message	CCB Passed				
		Action	Continue				
DQM Test: < - Concentration Limit							
		Result:	-1.23 > -5.00				
		Message	CCB Passed				
		Action	Continue				
247126002	1	90	-1.37	0.0329	2/23/2010@12:28:37		
247126003	1	91	-0.806	0.0593	2/23/2010@12:29:32		
247136001	1	92	-0.846	0.0574	2/23/2010@12:30:26		
247136002	1	93	-1.49	0.0274	2/23/2010@12:31:21		
247141001	1	94	-1.44	0.0296	2/23/2010@12:32:16		
247141002	1	95	-1.10	0.0454	2/23/2010@12:33:09		
247141003	1	96	1.05	0.146	2/23/2010@12:34:03		
247186001	1	97	-1.11	0.0450	2/23/2010@12:34:58		
1202046159  DUP	1	98	-0.879	0.0558	2/23/2010@12:35:51		
1202046161  MS	1	99	99.4	4.76	2/23/2010@12:36:44		
WCN100223-03	1	S3	104	4.98	2/23/2010@12:37:37		CCV
		Known Conc:	0.00				
WCN100223-08	1	S7	-1.26	0.0382	2/23/2010@12:38:31		CCB
		Known Conc:	0.00				
1202046163  MSD	1	100	82.4	3.96	2/23/2010@12:39:24		
247186002	1	101	-0.608	0.0685	2/23/2010@12:40:17		
1202046160  DUP	1	102	-1.18	0.0415	2/23/2010@12:41:10		
1202046162  MS	1	103	99.3	4.75	2/23/2010@12:42:03		
1202046164  MSD	1	104	99.5	4.76	2/23/2010@12:42:55		
247186003	1	105	-0.780	0.0605	2/23/2010@12:43:49		
247186004	1	106	0.0465	0.0992	2/23/2010@12:44:43		



247186005	1	107	-0.959	0.0521	2/23/2010@12:45:38		
247186006	1	108	-0.485	0.0743	2/23/2010@12:46:32		
247186007	1	109	-1.06	0.0473	2/23/2010@12:47:26		
WCN100223-03	1	S3	103	4.95	2/23/2010@12:48:19		CCV
Known Conc:			0.00				
WCN100223-08	1	S7	-1.16	0.0425	2/23/2010@12:49:13		CCB
Known Conc:			0.00				
247186008	1	110	-1.30	0.0360	2/23/2010@12:50:07		
247186009	1	111	-0.542	0.0716	2/23/2010@12:51:01		
247186010	1	112	-0.994	0.0504	2/23/2010@12:51:56		
1202046185 954529 MB	1	113	-1.55	0.0242	2/23/2010@12:52:50		
1202046192 LCS	1	114	52.8	2.57	2/23/2010@12:53:43		
246983002	1	115	-1.39	0.0319	2/23/2010@12:54:37		
247036005	1	116	0.513	0.121	2/23/2010@12:55:30		
1202046186 DUP	1	117	-1.91	0.00766	2/23/2010@12:56:23		
1202046188 MS	1	118	93.0	4.45	2/23/2010@12:57:17		
1202046190 MSD	1	119	105	5.03	2/23/2010@12:58:09		
WCN100223-03	1	S3	104	4.96	2/23/2010@12:59:01		CCV
Known Conc:			0.00				
WCN100223-08	1	S7	-1.46	0.0288	2/23/2010@12:59:56		CCB
Known Conc:			0.00				
247039001	1	120	-1.15	0.0433	2/23/2010@13:00:48		
247039002	1	121	-1.35	0.0338	2/23/2010@13:01:43		
247039003	1	122	-1.24	0.0391	2/23/2010@13:02:39		
247039004	1	123	-1.49	0.0273	2/23/2010@13:03:33		
247092001	1	124	-2.07	2.59e-4	2/23/2010@13:04:27		
247098001	1	125	-2.08	-2.07e-4	2/23/2010@13:05:21		
247098002	1	126	-1.26	0.0378	2/23/2010@13:06:15		
247098003	1	127	-1.54	0.0247	2/23/2010@13:07:10		
247098004	1	128	-1.58	0.0230	2/23/2010@13:08:04		
247109001	1	129	-1.47	0.0281	2/23/2010@13:08:58		
WCN100223-03	1	S3	103	4.94	2/23/2010@13:09:50		CCV
Known Conc:			0.00				
WCN100223-08	1	S7	-0.806	0.0593	2/23/2010@13:10:44		CCB
Known Conc:			0.00				
247109002	1	130	-1.40	0.0315	2/23/2010@13:11:38		
1202046187 DUP	1	131	-1.64	0.0200	2/23/2010@13:12:31		
1202046189 MS	1	132	108	5.17	2/23/2010@13:13:25		
1202046191 MSD	1	133	86.4	4.14	2/23/2010@13:14:18		
247127001	1	134	-1.37	0.0327	2/23/2010@13:15:11		
247139001	1	135	-1.34	0.0342	2/23/2010@13:16:04		
247179001	1	136	-2.08	-2.07e-4	2/23/2010@13:16:59		
247182001	1	137	-1.43	0.0303	2/23/2010@13:17:54		
247183001	1	138	-1.38	0.0326	2/23/2010@13:18:48		
247192001	1	139	-1.93	0.00645	2/23/2010@13:19:43		
WCN100223-03	1	S3	104	4.98	2/23/2010@13:20:35		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			4.2 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			4.2 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100223-08	1	S7	-1.39	0.0321	2/23/2010@13:22:26		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.39 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.39 > -5.00				
Message			CCB Passed				
Action			Continue				
1202049704 955981 MB	1	140	-2.06	4.71e-4	2/23/2010@13:24:16		
1202049711 LCS	1	141	54.3	2.64	2/23/2010@13:25:10		
246941002	1	142	-1.47	0.0283	2/23/2010@13:26:05		

1202049705	DUP	1	143	-2.02	0.00224	2/23/2010@13:26:59			
1202049707	MS	1	144	108	5.14	2/23/2010@13:27:53			
1202049709	MSD	1	145	115	5.47	2/23/2010@13:28:47			
247203001		1	146	-1.26	0.0380	2/23/2010@13:29:41			
1202049706	DUP	1	147	-2.03	0.00182	2/23/2010@13:30:34			
1202049708	MS	1	148	109	5.22	2/23/2010@13:31:28			
1202049710	MSD	1	149	102	4.89	2/23/2010@13:32:21			
WCN100223-03		1	S3	104	4.99	2/23/2010@13:33:13			CCV
			Known Conc:		100				
DQM Test: > + Percent Relative Difference									
			Result:		4.3 < 10.0				
			Message		CCV Passed				
			Action		Continue				
DQM Test: < - Percent Relative Difference									
			Result:		4.3 < 10.0				
			Message		CCV Passed				
			Action		Continue				
WCN100223-08		1	S7	-1.25	0.0385	2/23/2010@13:35:03			CCB
			Known Conc:		0.00				
DQM Test: > + Concentration Limit									
			Result:		-1.25 < 5.00				
			Message		CCB Passed				
			Action		Continue				
DQM Test: < - Concentration Limit									
			Result:		-1.25 > -5.00				
			Message		CCB Passed				
			Action		Continue				
247204001		1	150	3.39	0.256	2/23/2010@13:36:52			
247244001		1	151	2.20	0.200	2/23/2010@13:37:47			
247250001		1	152	-1.65	0.0198	2/23/2010@13:38:42			
247250002		1	153	-1.43	0.0302	2/23/2010@13:39:37			
247256001		1	154	-1.39	0.0317	2/23/2010@13:40:32			
247256002		1	155	-1.28	0.0369	2/23/2010@13:41:27			
247273001		1	156	247	11.7	2/23/2010@13:42:22			
247322001		1	157	-1.24	0.0389	2/23/2010@13:43:15			
247322002		1	158	-1.40	0.0314	2/23/2010@13:44:09			
247335001		1	159	-1.39	0.0318	2/23/2010@13:45:04			
WCN100223-03		1	S3	105	5.01	2/23/2010@13:45:56			CCV
			Known Conc:		100				
DQM Test: > + Percent Relative Difference									
			Result:		4.9 < 10.0				
			Message		CCV Passed				
			Action		Continue				
DQM Test: < - Percent Relative Difference									
			Result:		4.9 < 10.0				
			Message		CCV Passed				
			Action		Continue				
WCN100223-08		1	S7	-1.55	0.0242	2/23/2010@13:47:47			CCB
			Known Conc:		0.00				
DQM Test: > + Concentration Limit									
			Result:		-1.55 < 5.00				
			Message		CCB Passed				
			Action		Continue				
DQM Test: < - Concentration Limit									
			Result:		-1.55 > -5.00				
			Message		CCB Passed				
			Action		Continue				
247339001		1	160	-1.25	0.0386	2/23/2010@13:49:37			
247339002		1	161	-2.07	1.64e-4	2/23/2010@13:50:31			
247350001		1	162	1.51	0.168	2/23/2010@13:51:25			
247434001		1	163	-1.33	0.0346	2/23/2010@13:52:18			
247434002		1	164	-0.955	0.0523	2/23/2010@13:53:12			
247559001		1	165	-1.30	0.0363	2/23/2010@13:54:05			
247560001		1	166	-1.67	0.0188	2/23/2010@13:55:00			
247567001		1	167	-1.26	0.0379	2/23/2010@13:55:56			
247273001		1	156	131	6.22	2/23/2010@13:56:50		2.00	
WCN100223-03		1	S3	105	5.02	2/23/2010@13:57:43			CCV
			Known Conc:		100				

DQM Test: > + Percent Relative Difference						
Result:		5.1 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		5.1 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100223-08	1	S7	-1.21	0.0401	2/23/2010@13:59:33	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.21 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.21 > -5.00				
Message		CCB Passed				
Action		Continue				

Analyte Properties Table for OM\_2-23-2010\_11-19-05.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

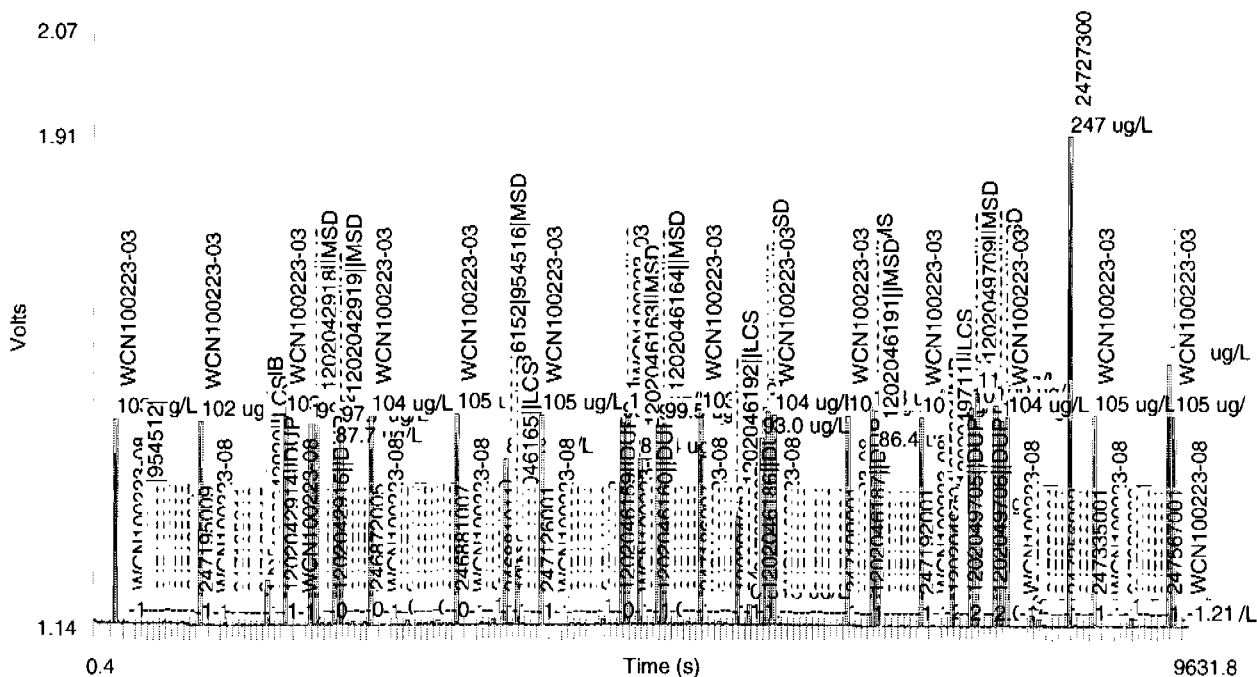
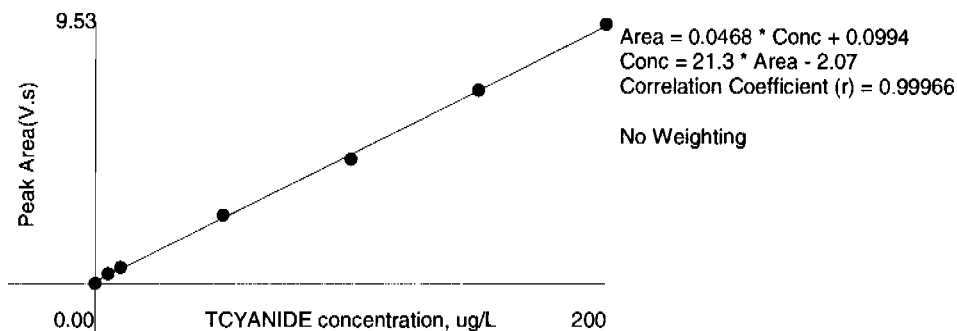


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.53	0.622	-0.6	2/23/2010	10:08:00
2	150	1	7.13	0.468	-0.1	2/23/2010	10:08:52
3	100	1	4.60	0.301	3.8	2/23/2010	10:09:44
4	50.0	1	2.53	0.167	-3.7	2/23/2010	10:10:37
5	10.0	1	0.617	0.0399	-8.7	2/23/2010	10:11:31
6	5.00	1	0.385	0.0238	-15.5	2/23/2010	10:12:24
7	0.00	1	0.0245	0.00128		2/23/2010	10:13:19

Figure 1: TCYANIDE



# **Nitrate Nitrite by Cadmium Reduction**

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
1.5 PPM		1	axh3	2/25/2010 10:10:26	OM_2-25-2010_10-08-41
1.0 PPM		1	axh3	2/25/2010 10:11:38	OM_2-25-2010_10-08-41
0.5 ppm		1	axh3	2/25/2010 10:12:50	OM_2-25-2010_10-08-41
0.1 ppm		1	axh3	2/25/2010 10:14:04	OM_2-25-2010_10-08-41
0.05 ppm		1	axh3	2/25/2010 10:15:17	OM_2-25-2010_10-08-41
ICAL-00		1	axh3	2/25/2010 10:16:31	OM_2-25-2010_10-08-41
1.0 ppm ICV		1	axh3	2/25/2010 10:18:53	OM_2-25-2010_10-08-41
ICB		1	axh3	2/25/2010 10:21:15	OM_2-25-2010_10-08-41
Nitrate 1.0 ppm		1	axh3	2/25/2010 10:23:34	OM_2-25-2010_10-08-41
Nitrite 1.0 ppm		1	axh3	2/25/2010 10:25:54	OM_2-25-2010_10-08-41
1202051741	956913	1	axh3	2/25/2010 10:28:15	OM_2-25-2010_10-08-41
1202051746	956913	1	axh3	2/25/2010 10:29:29	OM_2-25-2010_10-08-41
247772001	956913	250	axh3	2/25/2010 10:30:42	OM_2-25-2010_10-08-41
247772002	956913	250	axh3	2/25/2010 10:31:55	OM_2-25-2010_10-08-41
247772003	956913	100	axh3	2/25/2010 10:33:07	OM_2-25-2010_10-08-41
247772004	956913	250	axh3	2/25/2010 10:34:20	OM_2-25-2010_10-08-41
1202051743	956913	250	axh3	2/25/2010 10:35:33	OM_2-25-2010_10-08-41
1202051745	956913	250	axh3	2/25/2010 10:36:45	OM_2-25-2010_10-08-41
247772006	956913	250	axh3	2/25/2010 10:37:57	OM_2-25-2010_10-08-41
247844003	956913	10	axh3	2/25/2010 10:39:09	OM_2-25-2010_10-08-41
1.0 ppm CCV		1	axh3	2/25/2010 10:40:22	OM_2-25-2010_10-08-41
CCB		1	axh3	2/25/2010 10:42:44	OM_2-25-2010_10-08-41
1202051742	956913	10	axh3	2/25/2010 10:45:04	OM_2-25-2010_10-08-41
1202051744	956913	10	axh3	2/25/2010 10:46:16	OM_2-25-2010_10-08-41
247772004	956913	250	axh3	2/25/2010 10:47:29	OM_2-25-2010_10-08-41
1202051743	956913	250	axh3	2/25/2010 10:48:41	OM_2-25-2010_10-08-41
1202051745	956913	250	axh3	2/25/2010 10:49:54	OM_2-25-2010_10-08-41
247844006	956913	25	axh3	2/25/2010 10:51:06	OM_2-25-2010_10-08-41
247844009	956913	25	axh3	2/25/2010 10:52:18	OM_2-25-2010_10-08-41
247844012	956913	25	axh3	2/25/2010 10:53:29	OM_2-25-2010_10-08-41
247844015	956913	10	axh3	2/25/2010 10:54:42	OM_2-25-2010_10-08-41
247844018	956913	10	axh3	2/25/2010 10:55:55	OM_2-25-2010_10-08-41
1.0 ppm CCV		1	axh3	2/25/2010 10:57:08	OM_2-25-2010_10-08-41
CCB		1	axh3	2/25/2010 10:59:29	OM_2-25-2010_10-08-41
247844022	956913	50	axh3	2/25/2010 11:01:51	OM_2-25-2010_10-08-41
247844025	956913	50	axh3	2/25/2010 11:03:03	OM_2-25-2010_10-08-41
247844029	956913	10	axh3	2/25/2010 11:04:15	OM_2-25-2010_10-08-41
247844032	956913	5	axh3	2/25/2010 11:05:28	OM_2-25-2010_10-08-41
247844035	956913	10	axh3	2/25/2010 11:06:41	OM_2-25-2010_10-08-41
247844038	956913	5	axh3	2/25/2010 11:07:54	OM_2-25-2010_10-08-41
247852001	956913	5	axh3	2/25/2010 11:09:06	OM_2-25-2010_10-08-41
1202050852	956481	1	axh3	2/25/2010 11:10:18	OM_2-25-2010_10-08-41
1202050856	956481	1	axh3	2/25/2010 11:11:30	OM_2-25-2010_10-08-41
247762001	956481	1	axh3	2/25/2010 11:12:42	OM_2-25-2010_10-08-41
1.0 ppm CCV		1	axh3	2/25/2010 11:13:54	OM_2-25-2010_10-08-41
CCB		1	axh3	2/25/2010 11:16:16	OM_2-25-2010_10-08-41
1202050853*	956481	1	axh3	2/25/2010 11:18:36	OM_2-25-2010_10-08-41
1202050854*	956481	1	axh3	2/25/2010 11:19:47	OM_2-25-2010_10-08-41
1202050855*	956481	1	axh3	2/25/2010 11:20:59	OM_2-25-2010_10-08-41
1202050857*	956483	1	axh3	2/25/2010 11:22:12	OM_2-25-2010_10-08-41
1202050860*	956483	1	axh3	2/25/2010 11:23:25	OM_2-25-2010_10-08-41
247335001*	956483	5	axh3	2/25/2010 11:24:38	OM_2-25-2010_10-08-41
1202050858*	956483	5	axh3	2/25/2010 11:25:51	OM_2-25-2010_10-08-41
1202050859*	956483	5	axh3	2/25/2010 11:27:04	OM_2-25-2010_10-08-41
247768002*	956483	25	axh3	2/25/2010 11:28:16	OM_2-25-2010_10-08-41
1202051739*	956483	25	axh3	2/25/2010 11:29:28	OM_2-25-2010_10-08-41
1.0 ppm CCV		1	axh3	2/25/2010 11:30:40	OM_2-25-2010_10-08-41

Original Run Filename: OM\_2-25-2010\_10-08-41.OMN created 2/25/2010 10:08:41  
 Original Run Author's Signature: [lachat]  
 Current Run Filename: OM\_2-25-2010\_10-08-41.OMN last modified 2/25/2010 11:32:02  
 Current Run Author's Signature: [lachat]  
 Description: EPA 353.2  
 Cadmium Column 9056CAJ  
 LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			NO3 + NO2 Conc. (mg/L)	Area (Vs)				
WTR100225-26	1	S9	1.50	15.7	2/25/2010@10:10:26			1.5 PPM
WTR100225-25	1	S10	1.00	10.3	2/25/2010@10:11:38			1.0 PPM
WTR100225-24	1	S11	0.500	5.18	2/25/2010@10:12:50			0.5 ppm
WTR100225-23	1	S12	0.100	1.07	2/25/2010@10:14:04			0.1 ppm
WTR100225-21	1	S13	0.0500	0.530	2/25/2010@10:15:17			0.05 ppm
0.0ppm	1	S15	0.00	-0.0208	2/25/2010@10:16:31			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
Result:			0.99996 > 0.99500					
Message			Calibration Passed					
Action			Continue					
WTR100225-27 ICV	1	S16	0.978	10.2	2/25/2010@10:18:53			1.0 ppm ICV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.978 < 1.10					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.978 > 0.894					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
ICB	1	S15	-0.00122	-0.0225	2/25/2010@10:21:15			ICB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.00122 < 0.0500					
Message			ICB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.00122 > -0.0500					
Message			ICB Passed					
Action			Continue					
WTR100225-22	1	S1	0.955	9.92	2/25/2010@10:23:34			Nitrate 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.955 < 1.10					
Message			Nitrate Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.955 > 0.894					
Message			Nitrate Standard Passed					
Action			Continue					
WTR100225-28	1	S2	0.945	9.82	2/25/2010@10:25:54			Nitrite 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.945 < 1.10					
Message			Nitrite Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.945 > 0.894					
Message			Nitrite Standard Passed					
Action			Continue					
1202051741 956913 MB	1	1	0.00449	0.0370	2/25/2010@10:28:15			
1202051746 LCS	1	2	0.986	10.2	2/25/2010@10:29:29			
247772001	1	3	0.541	5.61	2/25/2010@10:30:42		250.00	
247772002	1	4	0.508	5.27	2/25/2010@10:31:55		250.00	
247772003	1	5	0.122	1.26	2/25/2010@10:33:07		100.00	

247772004	1	6	0.469	4.87	2/25/2010@10:34:20	250.00	
1202051743 DUP	1	7	0.461	4.79	2/25/2010@10:35:33	250.00	
1202051745 PS	1	8	1.34	13.9	2/25/2010@10:36:45	250.00	
247772006	1	9	0.493	5.12	2/25/2010@10:37:57	250.00	
247844003	1	10	0.201	2.08	2/25/2010@10:39:09	10.00	
WTR100225-25 CCV	1	S10	0.992	10.3	2/25/2010@10:40:22		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:		0.992 < 1.10					
Message		CCV Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		0.992 > 0.894					
Message		CCV Passed					
Action		Continue					
CCB	1	S15	-0.00189	-0.0294	2/25/2010@10:42:44		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:		-0.00189 < 0.0500					
Message		CCB Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		-0.00189 > -0.0500					
Message		CCB Passed					
Action		Continue					
1202051742 DUP	1	11	0.197	2.04	2/25/2010@10:45:04	10.00	
1202051744 PS	1	12	1.20	12.5	2/25/2010@10:46:16	10.00	
247772004	1	6	0.437	4.53	2/25/2010@10:47:29	250.00	
1202051743 DUP	1	7	0.461	4.79	2/25/2010@10:48:41	250.00	
1202051745 PS	1	8	1.44	14.9	2/25/2010@10:49:54	250.00	
247844006	1	13	0.0858	0.882	2/25/2010@10:51:06	25.00	
247844009	1	14	0.0942	0.970	2/25/2010@10:52:18	25.00	
247844012	1	15	0.0916	0.942	2/25/2010@10:53:29	25.00	
247844015	1	16	0.217	2.24	2/25/2010@10:54:42	10.00	
247844018	1	17	0.153	1.59	2/25/2010@10:55:55	10.00	
WTR100225-25 CCV	1	S10	0.978	10.2	2/25/2010@10:57:08		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:		0.978 < 1.10					
Message		CCV Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		0.978 > 0.894					
Message		CCV Passed					
Action		Continue					
CCB	1	S15	-0.00126	-0.0228	2/25/2010@10:59:29		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:		-0.00126 < 0.0500					
Message		CCB Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		-0.00126 > -0.0500					
Message		CCB Passed					
Action		Continue					
247844022	1	18	0.199	2.05	2/25/2010@11:01:51	50.00	
247844025	1	19	0.148	1.53	2/25/2010@11:03:03	50.00	
247844029	1	20	0.240	2.49	2/25/2010@11:04:15	10.00	
247844032	1	21	0.433	4.50	2/25/2010@11:05:28	5.00	
247844035	1	22	0.216	2.23	2/25/2010@11:06:41	10.00	
247844038	1	23	0.411	4.27	2/25/2010@11:07:54	5.00	
247852001	1	24	0.0657	0.674	2/25/2010@11:09:06	5.00	
1202050852 956481 MB	1	25	0.00844	0.0780	2/25/2010@11:10:18		
1202050856 LCS	1	26	0.974	10.1	2/25/2010@11:11:30		
247762001	1	27	0.0340	0.344	2/25/2010@11:12:42		
WTR100225-25 CCV	1	S10	0.965	10.0	2/25/2010@11:13:54		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							



		Result:	0.965 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.965 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	-0.0111	-0.125	2/25/2010@11:16:16			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.0111 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.0111 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1202050853	DUP	1	28	0.0380	0.386	2/25/2010@11:18:36		
1202050854	MS	1	29	1.02	10.6	2/25/2010@11:19:47		
1202050855	MSD	1	30	1.11	11.5	2/25/2010@11:20:59		
1202050857	956483 MB	1	31	0.0156	0.153	2/25/2010@11:22:12		
1202050860	LCS	1	32	1.02	10.6	2/25/2010@11:23:25		
247335001		1	33	0.211	2.18	2/25/2010@11:24:38	5.00	
1202050858	DUP	1	34	-0.0352	-0.375	2/25/2010@11:25:51	5.00	
1202050859	PS	1	35	0.196	2.03	2/25/2010@11:27:04	5.00	
247768002		1	39	0.480	4.98	2/25/2010@11:28:16	25.00	
1202051739	DUP	1	40	0.492	5.11	2/25/2010@11:29:28	25.00	
WTR100225-25	CCV	1	S10	1.12	11.6	2/25/2010@11:30:40		1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.12 > 1.10					
		Message	CCV Failed					
		Action	Stop Run					
DQM Test: < - Concentration Limit								
		Result:	1.12 > 0.894					
		Message	CCV Passed					
		Action	Continue					

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	15.7	1.21	-0.4	2/25/2010	10:11:46
2	1.00	1	10.3	0.799	0.9	2/25/2010	10:12:57
3	0.500	1	5.18	0.398	0.2	2/25/2010	10:14:10
4	0.100	1	1.07	0.0824	-3.4	2/25/2010	10:15:23
5	0.0500	1	0.530	0.0397	-3.9	2/25/2010	10:16:37
6	0.00	1	-0.0208	-8.52e-4		2/25/2010	10:17:50

Area = 10.4 \* Conc - 0.00931  
Conc = 0.0962 \* Area + 9.36e-4  
Correlation Coefficient (r) = 0.99996  
No Weighting

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
1.0 ppm CCV		1	axh3	2/25/2010 13:41:38	OM_2-25-2010_13-40-36
CCB		1	axh3	2/25/2010 13:44:00	OM_2-25-2010_13-40-36
1202050853	956481	1	axh3	2/25/2010 13:46:20	OM_2-25-2010_13-40-36
1202050854	956481	1	axh3	2/25/2010 13:47:31	OM_2-25-2010_13-40-36
1202050855	956481	1	axh3	2/25/2010 13:48:43	OM_2-25-2010_13-40-36
1202050857	956483	1	axh3	2/25/2010 13:49:56	OM_2-25-2010_13-40-36
1202050860	956483	1	axh3	2/25/2010 13:51:09	OM_2-25-2010_13-40-36
247335001	956483	10	axh3	2/25/2010 13:52:23	OM_2-25-2010_13-40-36
1202050858	956483	10	axh3	2/25/2010 13:53:35	OM_2-25-2010_13-40-36
1202050859	956483	10	axh3	2/25/2010 13:54:48	OM_2-25-2010_13-40-36
247768002	956483	25	axh3	2/25/2010 13:56:00	OM_2-25-2010_13-40-36
1202051739	956483	25	axh3	2/25/2010 13:57:12	OM_2-25-2010_13-40-36
1.0 ppm CCV		1	axh3	2/25/2010 13:58:24	OM_2-25-2010_13-40-36
CCB		1	axh3	2/25/2010 14:00:46	OM_2-25-2010_13-40-36
1202051740	956483	25	axh3	2/25/2010 14:03:06	OM_2-25-2010_13-40-36
247335001	956483	10	axh3	2/25/2010 14:04:20	OM_2-25-2010_13-40-36
1202050858	956483	10	axh3	2/25/2010 14:05:32	OM_2-25-2010_13-40-36
1202050859	956483	10	axh3	2/25/2010 14:06:45	OM_2-25-2010_13-40-36
247560001	956483	5	axh3	2/25/2010 14:07:57	OM_2-25-2010_13-40-36
247763001	956483	5	axh3	2/25/2010 14:09:10	OM_2-25-2010_13-40-36
247763002	956483	5	axh3	2/25/2010 14:10:23	OM_2-25-2010_13-40-36
247768004	956483	10	axh3	2/25/2010 14:11:35	OM_2-25-2010_13-40-36
247768006	956483	10	axh3	2/25/2010 14:12:47	OM_2-25-2010_13-40-36
247768008	956483	10	axh3	2/25/2010 14:13:58	OM_2-25-2010_13-40-36
1.0 ppm CCV		1	axh3	2/25/2010 14:15:11	OM_2-25-2010_13-40-36
CCB		1	axh3	2/25/2010 14:17:33	OM_2-25-2010_13-40-36
247768010	956483	5	axh3	2/25/2010 14:19:53	OM_2-25-2010_13-40-36
247852002	956483	5	axh3	2/25/2010 14:21:05	OM_2-25-2010_13-40-36
247852003	956483	5	axh3	2/25/2010 14:22:19	OM_2-25-2010_13-40-36
247852004	956483	5	axh3	2/25/2010 14:23:32	OM_2-25-2010_13-40-36
247852005	956483	5	axh3	2/25/2010 14:24:44	OM_2-25-2010_13-40-36
247852006	956483	5	axh3	2/25/2010 14:25:58	OM_2-25-2010_13-40-36
247852007	956483	5	axh3	2/25/2010 14:27:10	OM_2-25-2010_13-40-36
247852008	956483	5	axh3	2/25/2010 14:28:22	OM_2-25-2010_13-40-36
247852009	956483	5	axh3	2/25/2010 14:29:35	OM_2-25-2010_13-40-36
247852010	956483	5	axh3	2/25/2010 14:30:48	OM_2-25-2010_13-40-36
1.0 ppm CCV		1	axh3	2/25/2010 14:32:00	OM_2-25-2010_13-40-36
CCB		1	axh3	2/25/2010 14:34:22	OM_2-25-2010_13-40-36
247852013	956483	5	axh3	2/25/2010 14:36:41	OM_2-25-2010_13-40-36
247852014	956483	5	axh3	2/25/2010 14:37:54	OM_2-25-2010_13-40-36
1202053242	957559	1	axh3	2/25/2010 14:39:06	OM_2-25-2010_13-40-36
1202053247	957559	1	axh3	2/25/2010 14:40:18	OM_2-25-2010_13-40-36
247780001	957559	5	axh3	2/25/2010 14:41:29	OM_2-25-2010_13-40-36
1202053243	957559	5	axh3	2/25/2010 14:42:42	OM_2-25-2010_13-40-36
1202053245	957559	5	axh3	2/25/2010 14:43:54	OM_2-25-2010_13-40-36
247817001	957559	5	axh3	2/25/2010 14:45:09	OM_2-25-2010_13-40-36
1202053246	957559	5	axh3	2/25/2010 14:46:20	OM_2-25-2010_13-40-36
1202053244	957559	5	axh3	2/25/2010 14:47:33	OM_2-25-2010_13-40-36
1.0 ppm CCV		1	axh3	2/25/2010 14:48:45	OM_2-25-2010_13-40-36
CCB		1	axh3	2/25/2010 14:51:07	OM_2-25-2010_13-40-36
247913001	957559	10	axh3	2/25/2010 14:53:28	OM_2-25-2010_13-40-36
1202053328	957559	10	axh3	2/25/2010 14:54:41	OM_2-25-2010_13-40-36
1202053327	957559	10	axh3	2/25/2010 14:55:53	OM_2-25-2010_13-40-36
247829001	957559	5	axh3	2/25/2010 14:57:05	OM_2-25-2010_13-40-36
247913002	957559	10	axh3	2/25/2010 14:58:18	OM_2-25-2010_13-40-36
247949001	957559	5	axh3	2/25/2010 14:59:30	OM_2-25-2010_13-40-36
1.0 ppm CCV		1	axh3	2/25/2010 15:01:49	OM_2-25-2010_13-40-36
CCB		1	axh3	2/25/2010 15:04:11	OM_2-25-2010_13-40-36

Author: lachat

Date : 2/25/2010

Original Run Filename: OM\_2-25-2010\_13-40-36.OMN created 2/25/2010 13:40:36  
 Original Run Author's Signature: [lachat]  
 Current Run Filename: OM\_2-25-2010\_13-40-36.OMN last modified 2/25/2010 15:05:33  
 Current Run Author's Signature: [lachat]  
 Description: EPA 353.2  
 Cadmium Culum 9056CAJ  
 LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			NO3 + NO2 Conc. (mg/L)	Area (Vs)				
WTR100225-25 CCV	1	S10	1.00	10.4	2/25/2010@13:41:38			1.0 ppm CCV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			1.00 < 1.10					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			1.00 > 0.894					
Message			CCV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
CCB	1	S15	0.00223	0.0134	2/25/2010@13:44:00			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.00223 < 0.0500					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.00223 > -0.0500					
Message			CCB Passed					
Action			Continue					
1202050853 956481 DUP	1	28	0.0289	0.291	2/25/2010@13:46:20			
1202050854 MS	1	29	0.901	9.36	2/25/2010@13:47:31			
1202050855 MSD	1	30	0.947	9.84	2/25/2010@13:48:43			
1202050857 956483 MB	1	31	0.00299	0.0213	2/25/2010@13:49:56			
1202050860 LCS	1	32	0.962	9.99	2/25/2010@13:51:09			
247335001	1	33	-0.0102	-0.116	2/25/2010@13:52:23		10.00	
1202050858 DUP	1	34	-0.00794	-0.0923	2/25/2010@13:53:35		10.00	
1202050859 PS	1	35	0.601	6.24	2/25/2010@13:54:48		10.00	
247768002	1	39	0.401	4.16	2/25/2010@13:56:00		25.00	
1202051739 DUP	1	40	0.382	3.96	2/25/2010@13:57:12		25.00	
WTR100225-25 CCV	1	S10	0.939	9.76	2/25/2010@13:58:24			1.0 ppm CCV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.939 < 1.10					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.939 > 0.894					
Message			CCV Passed					
Action			Continue					
CCB	1	S15	-0.00130	-0.0233	2/25/2010@14:00:46			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.00130 < 0.0500					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.00130 > -0.0500					
Message			CCB Passed					
Action			Continue					
1202051740 PS	1	41	1.35	14.0	2/25/2010@14:03:06		25.00	
247335001	1	33	0.00583	0.0509	2/25/2010@14:04:20		10.00	
1202050858 DUP	1	34	0.00661	0.0590	2/25/2010@14:05:32		10.00	
1202050859 PS	1	35	0.825	8.57	2/25/2010@14:06:45		10.00	
247560001	1	36	0.0495	0.505	2/25/2010@14:07:57		5.00	

247763001	1	37	0.0950	0.978	2/25/2010@14:09:10	5.00	
247763002	1	38	0.194	2.00	2/25/2010@14:10:23	5.00	
247768004	1	42	0.399	4.14	2/25/2010@14:11:35	10.00	
247768006	1	43	0.740	7.68	2/25/2010@14:12:47	10.00	
247768008	1	44	0.560	5.82	2/25/2010@14:13:58	10.00	
WTR100225-25 CCV	1	S10	0.951	9.88	2/25/2010@14:15:11		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:			0.951 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.951 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	-0.00160	-0.0264	2/25/2010@14:17:33		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-0.00160 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.00160 > -0.0500				
Message			CCB Passed				
Action			Continue				
247768010	1	45	0.00904	0.0843	2/25/2010@14:19:53	5.00	
247852002	1	46	0.0217	0.216	2/25/2010@14:21:05	5.00	
247852003	1	47	0.0937	0.965	2/25/2010@14:22:19	5.00	
247852004	1	48	0.0848	0.872	2/25/2010@14:23:32	5.00	
247852005	1	49	0.0142	0.138	2/25/2010@14:24:44	5.00	
247852006	1	50	0.0145	0.141	2/25/2010@14:25:58	5.00	
247852007	1	51	0.0486	0.495	2/25/2010@14:27:10	5.00	
247852008	1	52	0.0402	0.408	2/25/2010@14:28:22	5.00	
247852009	1	53	0.0389	0.395	2/25/2010@14:29:35	5.00	
247852010	1	54	0.0411	0.418	2/25/2010@14:30:48	5.00	
WTR100225-25 CCV	1	S10	0.912	9.47	2/25/2010@14:32:00		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:			0.912 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.912 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	-0.00146	-0.0250	2/25/2010@14:34:22		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-0.00146 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.00146 > -0.0500				
Message			CCB Passed				
Action			Continue				
247852013	1	55	0.0828	0.851	2/25/2010@14:36:41	5.00	
247852014	1	56	0.0106	0.100	2/25/2010@14:37:54	5.00	
1202053242 957559 MB	1	57	0.00733	0.0665	2/25/2010@14:39:06		
1202053247 LCS	1	58	0.928	9.64	2/25/2010@14:40:18		
247780001	1	59	0.0147	0.143	2/25/2010@14:41:29	5.00	
1202053243 DUP	1	60	0.0121	0.116	2/25/2010@14:42:42	5.00	
1202053245 PS	1	61	0.913	9.48	2/25/2010@14:43:54	5.00	
247817001	1	63	0.0779	0.800	2/25/2010@14:45:09	5.00	
1202053246 PS	1	64	0.994	10.3	2/25/2010@14:46:20	5.00	
1202053244 DUP	1	65	0.0627	0.642	2/25/2010@14:47:33	5.00	
WTR100225-25 CCV	1	S10	0.901	9.36	2/25/2010@14:48:45		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							

			Result:	0.901 < 1.10				
			Message	CCV Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	0.901 > 0.894				
			Message	CCV Passed				
			Action	Continue				
CCB	1	S15		-1.44e-4	-0.0112	2/25/2010@14:51:07		CCB
			Known Conc:	0.00				
DQM Test: > + Concentration Limit								
			Result:	-1.44e-4 < 0.0500				
			Message	CCB Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	-1.44e-4 > -0.0500				
			Message	CCB Passed				
			Action	Continue				
247913001	1	67		0.184	1.90	2/25/2010@14:53:28		10.00
1202053328  PS	1	68		1.16	12.1	2/25/2010@14:54:41		10.00
1202053327  DUP	1	69		0.174	1.80	2/25/2010@14:55:53		10.00
247829001	1	66		0.191	1.97	2/25/2010@14:57:05		5.00
247913002	1	70		-0.0138	-0.153	2/25/2010@14:58:18		10.00
247949001	1	71		0.154	1.59	2/25/2010@14:59:30		5.00
WTR100225-25 CCV	1	S10		0.936	9.73	2/25/2010@15:01:49		1.0 ppm CCV
			Known Conc:	1.00				
DQM Test: > + Concentration Limit								
			Result:	0.936 < 1.10				
			Message	CCV Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	0.936 > 0.894				
			Message	CCV Passed				
			Action	Continue				
CCB	1	S15		-0.00147	-0.0250	2/25/2010@15:04:11		CCB
			Known Conc:	0.00				
DQM Test: > + Concentration Limit								
			Result:	-0.00147 < 0.0500				
			Message	CCB Passed				
			Action	Continue				
DQM Test: < - Concentration Limit								
			Result:	-0.00147 > -0.0500				
			Message	CCB Passed				
			Action	Continue				

Channel 1 (NO3 + NO2) : Current View

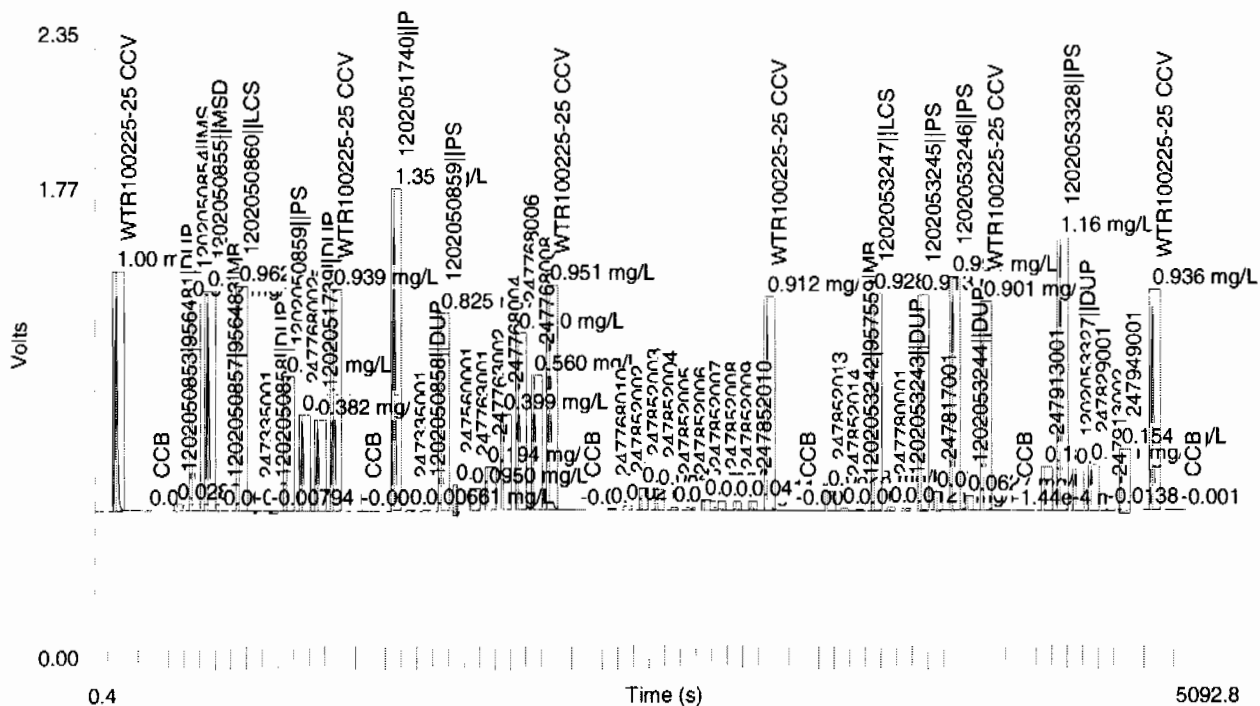
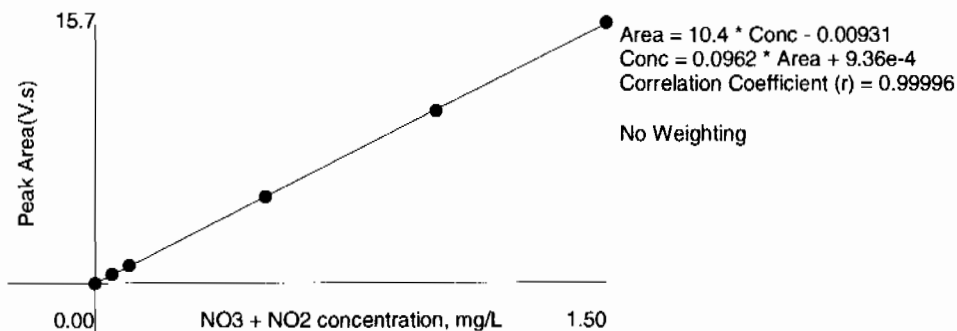


Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	15.7	1.21	-0.4	2/25/2010	10:11:46
2	1.00	1	10.3	0.799	0.9	2/25/2010	10:12:57
3	0.500	1	5.18	0.398	0.2	2/25/2010	10:14:10
4	0.100	1	1.07	0.0824	-3.4	2/25/2010	10:15:23
5	0.0500	1	0.530	0.0397	-3.9	2/25/2010	10:16:37
6	0.00	1	-0.0208	-8.52e-4		2/25/2010	10:17:50

Figure 1: NO3 + NO2



# Miscellaneous



### DATA EXCEPTION REPORT

**Mo.Day Yr.**  
25-FEB-10

**Division:**  
Industrial

**Quality Criteria:**  
Specifications

**Type:**  
Process

**Instrument Type:**  
LACHAT Flow Injection Analyzer

**Test / Method:**  
EPA 353.2

**Matrix Type:**  
Liquid

**Client Code:**  
LANL

**Batch ID:**  
956483

**Sample Numbers:**  
See Below

**Potentially affected work order(s)(SDG):** 247335(10-1906),247560(10-1951),247763,247768,247852

**Application Issues:**

Failed Recovery for MS/PS

**Specification and Requirements  
Exception Description:**

1. Failed Recovery for PS:

QC 1202050859PS

**DER Disposition:**

1. The spike recovery falls outside of the GEL acceptance limits but within the client specified limits.

**Originator's Name:**

Aubrey Kingsbury 25-FEB-10

**Data Validator/Group Leader:**

Julia Hamilton 05-MAR-10

# **General Chemistry Analysis**

# Case Narrative

**General Chemistry Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1906-1**

**Method/Analysis Information**

**Product:** pH

**Analytical Batch:** 954988    **Method:** SW9045C pH

**Sample Analysis**

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

<b>Sample ID</b>	<b>Client ID</b>
247336001	RE15-10-8346
247336002	RE15-10-8347
247336003	RE15-10-8344
247336004	RE15-10-8345
247336005	RE15-10-8342
247336006	RE15-10-8343
247336007	RE15-10-8377
1202047372	247336001(RE15-10-8346) Sample Duplicate (DUP)
1202047373	247359001(RE36-10-7427) Sample Duplicate (DUP)
1202047374	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

**Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

**Calibration Information**

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

**Initial Calibration**

All initial calibration requirements have been met for this SDG.

**Calibration Verification Information (CCV)**

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

### **Quality Control (QC) Information**

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recovery met the acceptance limits.

#### **Quality Control (QC) Designation**

The following samples were selected for QC analysis: 247336001 (RE15-10-8346) and 247359001 (RE36-10-7427).

#### **Duplicate Relative Percent Difference (RPD) Statement**

The RPD between the sample and its duplicate met the acceptance limits.

### **Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

#### **Holding Times**

The following samples from this sample group were received by the lab outside of the method specified holding time: 247336001 (RE15-10-8346), 247336002 (RE15-10-8347), 247336003 (RE15-10-8344), 247336004 (RE15-10-8345), 247336005 (RE15-10-8342), 247336006 (RE15-10-8343) and 247336007 (RE15-10-8377).

#### **Sample Re-analysis**

The samples in this SDG did not require re-analysis.

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

A DER was not required for this SDG.

#### **Additional Comments**

Additional comments were not required for this SDG.

#### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

#### **Method/Analysis Information**

**Product:** Cyanide, Total  
**Analytical Batch:** 955978      **Method:** SW9012A Cyanide and Total  
**Prep Batch :** 955976      **Method:** SSW846 9010B Prep

#### **Sample Analysis**

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

<b>Sample ID</b>	<b>Client ID</b>
247336001	RE15-10-8346
247336002	RE15-10-8347
247336003	RE15-10-8344
247336004	RE15-10-8345
247336005	RE15-10-8342
247336006	RE15-10-8343
247336007	RE15-10-8377
1202049696	Method Blank (MB)
1202049697	247097006(RE46-10-12989) Sample Duplicate (DUP)
1202049698	247097007(RE46-10-13031) Sample Duplicate (DUP)
1202049699	247097006(RE46-10-12989) Matrix Spike (MS)
1202049700	247097007(RE46-10-13031) Matrix Spike (MS)
1202049701	247097006(RE46-10-12989) Matrix Spike Duplicate (MSD)
1202049702	247097007(RE46-10-13031) Matrix Spike Duplicate (MSD)
1202049703	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

#### **SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 12.

#### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

#### **Calibration Information**

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

#### **Initial Calibration**

All initial calibration requirements have been met for this SDG.

#### **Continuing Calibration Blanks**

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

**Calibration Verification Information (CCV)**

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

**Y Intercept Rule**

The absolute value of the intercept is less than 3 times the MDL.

**Quality Control (QC) Information****Method Blank (MB) Statement**

The MB analyzed with this SDG met the acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recovery met the acceptance limits.

**Quality Control (QC) Designation**

The following samples were selected for QC analysis: 247097006 (RE46-10-12989) and 247097007 (RE46-10-13031).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The MS/PS recoveries for this sample set were within the required acceptance limits.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries for this sample set were within the required acceptance limits.

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPDs between the spike and spike duplicate met the acceptance limits.

**Duplicate Relative Percent Difference (RPD) Statement**

The RPD between the sample and its duplicate met the acceptance limits.

**Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

**Holding Times**

All samples in this SDG met the specified holding time.

**Sample Preservation/Integrity**

All the samples from this sample group met the preservation and integrity requirements of the method.

**Sample Dilutions**

The following sample in this sample group was diluted due to high concentration: 1202049703 (LCS).

**Sample Re-analysis**

The samples in this SDG did not require re-analysis.

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

A DER was not required for this SDG.

#### **Additional Comments**

Additional comments were not required for this SDG.

#### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.



### **Method/Analysis Information**

**Product:** Ion Chromatography

**Analytical Batch:** 955448 **Method:** EPA 300.0 Nitrate in Soil

**Prep Batch :** 955446 **Method:** EPA 300.0 PREP

### **Sample Analysis**

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

<b>Sample ID</b>	<b>Client ID</b>
247336001	RE15-10-8346
247336002	RE15-10-8347
247336003	RE15-10-8344
247336004	RE15-10-8345
247336005	RE15-10-8342
247336006	RE15-10-8343
247336007	RE15-10-8377
1202048427	Method Blank (MB)
1202048428	247336001(RE15-10-8346) Sample Duplicate (DUP)
1202048429	247359004(RE36-10-7424) Sample Duplicate (DUP)
1202048430	247336001(RE15-10-8346) Matrix Spike (MS)
1202048431	247359004(RE36-10-7424) Matrix Spike (MS)
1202048432	247336001(RE15-10-8346) Matrix Spike Duplicate (MSD)
1202048433	247359004(RE36-10-7424) Matrix Spike Duplicate (MSD)
1202048434	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC, and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

### **Calibration Information**

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

### **Initial Calibration**

All initial calibration requirements have been met for this SDG.

### **Continuing Calibration Blanks**

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

**Calibration Verification Information (CCV)**

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

**Y Intercept Rule**

The absolute value of the intercept is less than 3 times the MDL.

**Quality Control (QC) Information****Method Blank (MB) Statement**

The MB analyzed with this SDG met the acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recovery met the acceptance limits.

**Quality Control (QC) Designation**

The following samples were selected for QC analysis: 247336001 (RE15-10-8346) and 247359004 (RE36-10-7424).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The MS/PS recoveries for this sample set were within the required acceptance limits.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries for this sample set were within the required acceptance limits.

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPDs between the spike and spike duplicate met the acceptance limits.

**Duplicate Relative Percent Difference (RPD) Statement**

The RPD between the sample and its duplicate met the acceptance limits.

**Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

**Holding Times**

All samples in this SDG met the specified holding time.

**Sample Dilutions**

The samples in this SDG did not require dilutions.

**Sample Re-analysis**

The following samples were re-analyzed due to CCV failure: 1202048429 (RE36-10-7424), 1202048431 (RE36-10-7424), 1202048433 (RE36-10-7424), 247336006 (RE15-10-8343) and 247336007 (RE15-10-8377).

**Miscellaneous Information****Data Exception (DER) Documentation**

A DER was not required for this SDG.

**Manual Integrations**

Manual integrations were not required for the samples in this SDG.

**Additional Comments**

Additional comments were not required for this SDG.

**Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Review Validation:**

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

**The following data validator verified the information presented in this case narrative:**

Reviewer:  Date: 16Mar10

# Sample Data Summary

## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - [www.gel.com](http://www.gel.com)

### Certificate of Analysis Report for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1906-1 GEL Work Order: 247336

**The Qualifiers in this report are defined as follows:**

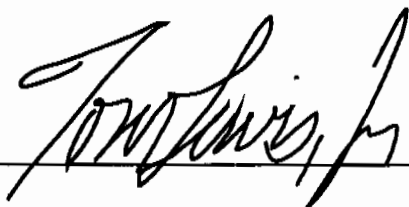
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

A handwritten signature in black ink, appearing to read "Tom Davis, Jr.", is written over a horizontal line.

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## Certificate of Analysis

Company : Los Alamos National Laboratory  
Address : PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8377  
Sample ID: 247336007  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 5.35%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.3C	H	9.17	0.010	0.100	SU	1	TXT1	02/18/10	1636	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	67.8	249	ug/kg	1	AXC2	02/23/10	1550	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.93	0.317	1.06	mg/kg	1	MAR1	03/07/10	1322	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8346  
Sample ID: 247336001  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 10.5%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 20.0C	H	11.4	0.010	0.100	SU	1	TXT1	02/18/10	1621	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	73.1	269	ug/kg	1	AXC2	02/23/10	1541	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.22	0.335	1.12	mg/kg	1	MAR1	03/06/10	2108	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	



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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8347  
Sample ID: 247336002  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 2.74%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.9C	H	9.05	0.010	0.100	SU	1	TXT1	02/18/10	1625	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	62.4	230	ug/kg	1	AXC2	02/23/10	1542	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.308	1.03	mg/kg	1	MAR103	06/10	2303	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8344  
Sample ID: 247336003  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 5.43%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.9C	H	8.77	0.010	0.100	SU	1	TXT1	02/18/10	1627	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.9	264	ug/kg	1	AXC2	02/23/10	1543	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		2.14	0.317	1.06	mg/kg	1	MAR1	03/06/10	2332	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANLER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8345  
Sample ID: 247336004  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 6.26%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 20.1C	H	11.1	0.010	0.100	SU	1	TXT1	02/18/10	1629	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total		1690	72.5	267	ug/kg	1	AXC2	02/23/10	1544	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		2.24	0.320	1.07	mg/kg	1	MAR1	03/07/10	0001	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8342  
Sample ID: 247336005  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 5.4%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.8C	H	10.4	0.010	0.100	SU	1	TXT1	02/18/10	1631	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	70.5	259	ug/kg	1	AXC2	02/23/10	1545	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.317	1.06	mg/kg	1	MAR1	03/07/10	0030	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: March 13, 2010

Client SDG: 10-1906-1

Client Sample ID: RE15-10-8343  
Sample ID: 247336006  
Matrix: S  
Collect Date: 12-FEB-10 12:00  
Receive Date: 18-FEB-10  
Collector: Client  
Moisture: 4.13%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Electrode Analysis</b>											
<i>SW9045C pH "As Received"</i>											
pH at Temp 19.2C	H	10.0	0.010	0.100	SU	1	TXT1	02/18/10	1632	954988	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	64.5	237	ug/kg	1	AXC2	02/23/10	1545	955978	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.64	0.313	1.04	mg/kg	1	MAR1	03/07/10	1253	955448	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	03/06/10	1050	955446
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/23/10	1424	955976

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

# **Quality Control Summary**

# GEL LABORATORIES LLC

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## QC Summary

Report Date: March 13, 2010

Page 1 of 3

Los Alamos National Laboratory  
PO Box 1663  
TA-03, SM271, Drop Pt. 02U, Rm111  
Los Alamos, New Mexico  
Ms. Joylene Valdez

Contact:

Workorder: 247336

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Electrode Analysis</b>											
Batch	954988										
QC1202047372	247336001	DUP									
pH		H	11.4	H	11.2	SU	1.33	(0%-10%)	TXT1	02/18/10	16:22
QC1202047373	247359001	DUP									
pH		H	5.29	H	5.30	SU	0.189	(0%-10%)		02/18/10	16:41
QC1202047374	LCS										
pH	7.00				7.02	SU		100 (95%-105%)		02/18/10	16:06
<b>Flow Injection Analysis</b>											
Batch	955978										
QC1202049697	247097006	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	02/23/10	15:28
QC1202049698	247097007	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			02/23/10	15:31
QC1202049703	LCS										
Cyanide, Total	67900				59000	ug/kg		86.9 (32%-157%)		02/23/10	15:26
QC1202049696	MB										
Cyanide, Total				U	250	ug/kg				02/23/10	15:25
QC1202049699	247097006	MS									
Cyanide, Total	5600	U	ND		6210	ug/kg		111 (26%-158%)		02/23/10	15:29
QC1202049700	247097007	MS									
Cyanide, Total	4960	U	ND		3720	ug/kg		75 (26%-158%)		02/23/10	15:32
QC1202049701	247097006	MSD									
Cyanide, Total	5600	U	ND		5930	ug/kg	4.61	106 (0%-30%)		02/23/10	15:30
QC1202049702	247097007	MSD									
Cyanide, Total	5460	U	ND		4350	ug/kg	15.6	79.7 (0%-30%)		02/23/10	15:33
<b>Ion Chromatography</b>											
Batch	955448										
QC1202048428	247336001	DUP									
Nitrate-N			1.22		1.21	mg/kg	0.643 ^	(+/-1.12)	MARI	03/06/10	21:36
QC1202048429	247359004	DUP									
Nitrate-N			1.33		1.24	mg/kg	6.74 ^	(+/-1.09)		03/07/10	15:47
QC1202048434	LCS										
Nitrate-N	50.0				51.7	mg/kg		103 (90%-110%)		03/06/10	20:39
QC1202048427	MB										
Nitrate-N				U	1.00	mg/kg				03/06/10	20:10
QC1202048430	247336001	MS									
Nitrate-N	55.9		1.22		57.1	mg/kg		100 (90%-110%)		03/06/10	22:05
QC1202048431	247359004	MS									
Nitrate-N	54.7		1.33		55.5	mg/kg		99 (90%-110%)		03/07/10	16:16
QC1202048432	247336001	MSD									
Nitrate-N	55.9		1.22		57.1	mg/kg	0.0176	100 (0%-20%)		03/06/10	22:34
QC1202048433	247359004	MSD									
Nitrate-N	54.7		1.33		55.6	mg/kg	0.230	99.2 (0%-20%)		03/07/10	16:44

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### QC Summary

Workorder: 247336

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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Notes:

RER is calculated at the 95% confidence level (2-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- h Preparation or preservation holding time was exceeded



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### QC Summary

Workorder: 247336

Page 3 of 3

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

# **Instrument QC Data Summary**

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 13-MAR-2010 14:12

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1906-1

Flow Injection Analysis

Method: SW846 9012A

Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	23-FEB-2010 10:14:06	OM_2-23-2010_10-03-36	149	150	99.3	(90%-110%)	Yes
CCV	23-FEB-2010 15:21:55	OM_2-23-2010_15-18-32	98.8	100	98.8	(90%-110%)	Yes
CCV	23-FEB-2010 15:34:22	OM_2-23-2010_15-18-32	102	100	102	(90%-110%)	Yes
CCV	23-FEB-2010 15:46:47	OM_2-23-2010_15-18-32	103	100	103	(90%-110%)	Yes
CCV	23-FEB-2010 15:59:11	OM_2-23-2010_15-18-32	103	100	103	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	23-FEB-2010 10:15:57	OM_2-23-2010_10-03-36	-1.34	10	Yes
CCB	23-FEB-2010 15:23:45	OM_2-23-2010_15-18-32	-2.06	10	Yes
CCB	23-FEB-2010 15:36:12	OM_2-23-2010_15-18-32	-1.62	10	Yes
CCB	23-FEB-2010 15:48:38	OM_2-23-2010_15-18-32	-1.7	10	Yes
CCB	23-FEB-2010 16:01:01	OM_2-23-2010_15-18-32	-1.21	10	Yes

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 13-MAR-2010 14:12

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1906-1**

Ion Chromatography

Method: EPA 300.0

Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
<b>ICV</b>	<b>06-MAR-2010 16:18:00</b>	<b>100306</b>	<b>5.1399</b>	<b>5</b>	<b>103</b>	<b>(90%-110%)</b>	<b>Yes</b>
CCV	06-MAR-2010 19:12:00	100306	8.1813	7.5	109	(90%-110%)	Yes
CCV	07-MAR-2010 00:59:00	100306	5.1735	5	103	(90%-110%)	Yes
CCV	07-MAR-2010 06:17:00	100306	8.3311	7.5	111	(90%-110%)	No
<b>ICV</b>	<b>07-MAR-2010 11:55:00</b>	<b>100307</b>	<b>5.1275</b>	<b>5</b>	<b>103</b>	<b>(90%-110%)</b>	<b>Yes</b>
CCV	07-MAR-2010 17:13:00	100307	8.0441	7.5	107	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
<b>ICB</b>	<b>06-MAR-2010 16:47:00</b>	<b>100306</b>	<b>0</b>	<b>0.1</b>	<b>Yes</b>
CCB	06-MAR-2010 19:41:00	100306	0	0.1	Yes
CCB	07-MAR-2010 01:28:00	100306	0	0.1	Yes
CCB	07-MAR-2010 06:46:00	100306	0	0.1	Yes
<b>ICB</b>	<b>07-MAR-2010 12:24:00</b>	<b>100307</b>	<b>0</b>	<b>0.1</b>	<b>Yes</b>
CCB	07-MAR-2010 17:42:00	100307	0	0.1	Yes

# Cyanide, Total

# Prep Logbook

## Cyanide Sample Distillation

Batch ID: 955976.0		Verified by:		Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
Analyst:	Alan Stanley			LCS	1202049703	Total Cyanide Solid LCS	URF1200957-01	.25	g
Method:	SW846 9010C Distillation	SW846 9010B Prep		MS	1202049699	Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
Lab SOP:	GL-GC-E-067 REV# 13			MS	1202049700	MS, ICV Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
Instrument:	Sartorius Balance B-001			MSD	1202049701	MS, ICV Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
				MSD	1202049702	MS, ICV Secondary source standard for CN and phenol. Used to spike LCS.	URF1269274-02	.025	mL
Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1			
1202049696 MB	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12			
1202049703 LCS	23-FEB-2010 14:24:00	Soil	0.25	25	100	>12			
247097006	23-FEB-2010 14:24:00	Soil	0.52	25	48.07692	>12			
1202049697 DUP (247097006)	23-FEB-2010 14:24:00	Soil	0.56	25	44.64286	>12			
1202049699 MS (247097006)	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12			
1202049701 MSD (247097006)	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12			
247097007	23-FEB-2010 14:24:00	Soil	0.56	25	44.64286	>12			
1202049698 DUP (247097007)	23-FEB-2010 14:24:00	Soil	0.53	25	47.16981	>12			
1202049700 MS (247097007)	23-FEB-2010 14:24:00	Soil	0.55	25	45.45455	>12			
1202049702 MSD (247097007)	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12			
247097008	23-FEB-2010 14:24:00	Soil	0.54	25	46.2963	>12			
247097009	23-FEB-2010 14:24:00	Soil	0.58	25	43.10345	>12			
247295001	23-FEB-2010 14:24:00	Solid	0.52	25	48.07692	>12			
247297001	23-FEB-2010 14:24:00	Solid	0.5	25	50	>12			
247336001	23-FEB-2010 14:24:00	Soil	0.52	25	48.07692	>12			
247336002	23-FEB-2010 14:24:00	Soil	0.56	25	44.64286	>12			
247336003	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12			
247336004	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12			
247336005	23-FEB-2010 14:24:00	Soil	0.51	25	49.01961	>12			
247336006	23-FEB-2010 14:24:00	Soil	0.55	25	45.45455	>12			
247336007	23-FEB-2010 14:24:00	Soil	0.53	25	47.16981	>12			

Analytical Logbook version 1 11-04-2002

GEL Laboratories LLC

# Prep Logbook

**Batch ID:** 955976.0  
**Analyst:** Alan Stanley  
**Method:** SW846 9010C Distillation SW846 9010B Prep  
**Lab SOP:** GL-GC-E-067 REV# 13  
**Instrument:** Sartorius Balance B-001

Verified by:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202049703	Total Cyanide Solid LCS	URF1200957-01	.25	g
MS	1202049699	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MS	1202049700	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MSD	1202049701	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL
MSD	1202049702	Secondary source standard for CN and phenol. Used to spike LCS, MS, ICV	URF1269274-02	.025	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check 1
247338001	23-FEB-2010 14:24:00	Soil	0.52	25	48.07692	>12
247338002	23-FEB-2010 14:24:00	Soil	0.55	25	45.45455	>12
247338003	23-FEB-2010 14:24:00	Soil	0.53	25	47.16981	>12
247338004	23-FEB-2010 14:24:00	Soil	0.5	25	50	>12
247338005	23-FEB-2010 14:24:00	Soil	0.51	25	49.01961	>12
247338006	23-FEB-2010 14:24:00	Soil	0.58	25	43.10345	>12
247381001	23-FEB-2010 14:24:00	Misc Solid	0.55	25	45.45455	>12

## Comments:

Reagent/Solvent Lot ID	Description	Amount
1260189-C	50% H2SO4 CN Prep	2.5 mL
1270661-C	Bismuth Nitrate Solution	1.25 mL
1270663-C	0.8N H3NO3S	1.25 mL
1270669-C	51% MgCl2 Soln	1 mL
1273851-C	0.25N Sodium Hydroxide Solution	25 mL
WCN100223-07	150 ppb CN Distilled ICV Standard	.0375 mL

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	2/23/2010 10:06:57	OM_2-23-2010_10-03-36
150 ppb		1	axc2	2/23/2010 10:07:49	OM_2-23-2010_10-03-36
100 ppb		1	axc2	2/23/2010 10:08:41	OM_2-23-2010_10-03-36
50 ppb		1	axc2	2/23/2010 10:09:34	OM_2-23-2010_10-03-36
10 ppb		1	axc2	2/23/2010 10:10:28	OM_2-23-2010_10-03-36
CRDL 5.0 ppb		1	axc2	2/23/2010 10:11:21	OM_2-23-2010_10-03-36
ICAL-00		1	axc2	2/23/2010 10:12:16	OM_2-23-2010_10-03-36
ICV		1	axc2	2/23/2010 10:14:06	OM_2-23-2010_10-03-36
ICB		1	axc2	2/23/2010 10:15:57	OM_2-23-2010_10-03-36
CRDL		1	axc2	2/23/2010 10:17:46	OM_2-23-2010_10-03-36
1202046146	954516	1	axc2	2/23/2010 10:19:36	OM_2-23-2010_10-03-36
1202046153	954516	25	axc2	2/23/2010 10:20:29	OM_2-23-2010_10-03-36
247172001	954516	1	axc2	2/23/2010 10:21:22	OM_2-23-2010_10-03-36
1202046147	954516	1	axc2	2/23/2010 10:22:15	OM_2-23-2010_10-03-36
1202046149	954516	1	axc2	2/23/2010 10:23:08	OM_2-23-2010_10-03-36
1202046151	954516	1	axc2	2/23/2010 10:24:01	OM_2-23-2010_10-03-36
247172002	954516	1	axc2	2/23/2010 10:24:54	OM_2-23-2010_10-03-36
1202046148	954516	1	axc2	2/23/2010 10:25:46	OM_2-23-2010_10-03-36
1202046150	954516	1	axc2	2/23/2010 10:26:38	OM_2-23-2010_10-03-36
1202046152*	954516	1	axc2	2/23/2010 10:27:31	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 10:28:23	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 10:30:13	OM_2-23-2010_10-03-36
247178001	954516	1	axc2	2/23/2010 10:32:01	OM_2-23-2010_10-03-36
247178002	954516	1	axc2	2/23/2010 10:32:53	OM_2-23-2010_10-03-36
247178003	954516	1	axc2	2/23/2010 10:33:45	OM_2-23-2010_10-03-36
247178004	954516	1	axc2	2/23/2010 10:34:37	OM_2-23-2010_10-03-36
247178005	954516	1	axc2	2/23/2010 10:35:28	OM_2-23-2010_10-03-36
247178006	954516	1	axc2	2/23/2010 10:36:22	OM_2-23-2010_10-03-36
247178007	954516	1	axc2	2/23/2010 10:37:16	OM_2-23-2010_10-03-36
247178008	954516	1	axc2	2/23/2010 10:38:10	OM_2-23-2010_10-03-36
247178009	954516	1	axc2	2/23/2010 10:39:03	OM_2-23-2010_10-03-36
247178010	954516	1	axc2	2/23/2010 10:39:56	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 10:40:48	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 10:42:39	OM_2-23-2010_10-03-36
247178011	954516	1	axc2	2/23/2010 10:44:28	OM_2-23-2010_10-03-36
247181001	954516	1	axc2	2/23/2010 10:45:20	OM_2-23-2010_10-03-36
247181002	954516	1	axc2	2/23/2010 10:46:14	OM_2-23-2010_10-03-36
247187001	954516	1	axc2	2/23/2010 10:47:06	OM_2-23-2010_10-03-36
247187002	954516	1	axc2	2/23/2010 10:47:58	OM_2-23-2010_10-03-36
247187003	954516	1	axc2	2/23/2010 10:48:51	OM_2-23-2010_10-03-36
247197001	954516	1	axc2	2/23/2010 10:49:43	OM_2-23-2010_10-03-36
247197002	954516	1	axc2	2/23/2010 10:50:35	OM_2-23-2010_10-03-36
1202046124	954512	1	axc2	2/23/2010 10:51:27	OM_2-23-2010_10-03-36
1202046131	954512	25	axc2	2/23/2010 10:52:19	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 10:53:12	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 10:55:01	OM_2-23-2010_10-03-36
247108001	954512	1	axc2	2/23/2010 10:56:52	OM_2-23-2010_10-03-36
1202046125	954512	1	axc2	2/23/2010 10:57:45	OM_2-23-2010_10-03-36
1202046127	954512	1	axc2	2/23/2010 10:58:39	OM_2-23-2010_10-03-36
1202046129	954512	1	axc2	2/23/2010 10:59:32	OM_2-23-2010_10-03-36
247108002	954512	1	axc2	2/23/2010 11:00:25	OM_2-23-2010_10-03-36
1202046126	954512	1	axc2	2/23/2010 11:01:19	OM_2-23-2010_10-03-36
1202046128	954512	1	axc2	2/23/2010 11:02:11	OM_2-23-2010_10-03-36
1202046130	954512	1	axc2	2/23/2010 11:03:05	OM_2-23-2010_10-03-36
247108003	954512	1	axc2	2/23/2010 11:03:58	OM_2-23-2010_10-03-36
247108004	954512	1	axc2	2/23/2010 11:04:50	OM_2-23-2010_10-03-36
CCV		1	axc2	2/23/2010 11:05:42	OM_2-23-2010_10-03-36
CCB		1	axc2	2/23/2010 11:07:33	OM_2-23-2010_10-03-36



247108005*	954512	1	axc2	2/23/2010	11:09:22	OM_2-23-2010_10-03-36
247195001*	954512	1	axc2	2/23/2010	11:10:14	OM_2-23-2010_10-03-36
247195002*	954512	1	axc2	2/23/2010	11:11:05	OM_2-23-2010_10-03-36

Original Run Filename: OM\_2-23-2010\_10-03-36.OMN created 2/23/2010 10:03:36  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_2-23-2010\_10-03-36.OMN last modified 2/23/2010 11:12:14  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M  
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE Conc. (ug/L)	Area (Vs)				
WCN100223-01	1	S1	200	9.53	2/23/2010@10:06:57			200 ppb
WCN100223-02	1	S2	150	7.13	2/23/2010@10:07:49			150 ppb
WCN100223-03	1	S3	100	4.60	2/23/2010@10:08:41			100 ppb
WCN100223-04	1	S4	50.0	2.53	2/23/2010@10:09:34			50 ppb
WCN100223-05	1	S5	10.0	0.617	2/23/2010@10:10:28			10 ppb
WCN100223-06	1	S6	5.00	0.385	2/23/2010@10:11:21			CRDL 5.0 ppb
WCN100223-08	1	S7	0.00	0.0245	2/23/2010@10:12:16			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99966 > 0.99500					
Message			Pass					
Action			Continue					
WCN100223-07	1	S8	149	7.09	2/23/2010@10:14:06			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-0.5 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.5 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100223-08	1	S7	-1.34	0.0341	2/23/2010@10:15:57			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.34 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.34 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100223-06	1	S6	6.77	0.414	2/23/2010@10:17:46			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			6.77 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			6.77 > 2.50					
Message			Pass					
Action			None					
1202046146 954516 MB	1	1	-1.30	0.0360	2/23/2010@10:19:36			
1202046153 LCS	1	2	20.1	1.04	2/23/2010@10:20:29		25.00	
247172001	1	3	-1.33	0.0345	2/23/2010@10:21:22			
1202046147 DUP	1	4	-1.25	0.0384	2/23/2010@10:22:15			
1202046149 MS	1	5	98.6	4.72	2/23/2010@10:23:08			
1202046151 MSD	1	6	101	4.82	2/23/2010@10:24:01			
247172002	1	7	-0.836	0.0578	2/23/2010@10:24:54			
1202046148 DUP	1	8	-1.14	0.0437	2/23/2010@10:25:46			
1202046150 MS	1	9	107	5.10	2/23/2010@10:26:38			
1202046152 MSD	1	10	69.8	3.37	2/23/2010@10:27:31			
WCN100223-03	1	S3	103	4.93	2/23/2010@10:28:23			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			3.0 < 10.0					

		Message	CCV Passed				
		Action	Continue				
DQM Test: < - Percent Relative Difference							
		Result:	3.0 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100223-08	1	S7	-1.28	0.0369	2/23/2010@10:30:13		CCB
		Known Conc:	0.00				
DQM Test: > + Concentration Limit							
		Result:	-1.28 < 5.00				
		Message	CCB Passed				
		Action	Continue				
DQM Test: < - Concentration Limit							
		Result:	-1.28 > -5.00				
		Message	CCB Passed				
		Action	Continue				
247178001	1	11	-1.02	0.0494	2/23/2010@10:32:01		
247178002	1	12	-1.24	0.0391	2/23/2010@10:32:53		
247178003	1	13	-0.195	0.0879	2/23/2010@10:33:45		
247178004	1	14	-1.18	0.0420	2/23/2010@10:34:37		
247178005	1	15	-1.20	0.0409	2/23/2010@10:35:28		
247178006	1	16	-0.310	0.0825	2/23/2010@10:36:22		
247178007	1	17	-0.592	0.0693	2/23/2010@10:37:16		
247178008	1	18	1.40	0.162	2/23/2010@10:38:10		
247178009	1	19	0.677	0.129	2/23/2010@10:39:03		
247178010	1	20	-0.578	0.0699	2/23/2010@10:39:56		
WCN100223-03	1	S3	104	4.96	2/23/2010@10:40:48		CCV
		Known Conc:	100				
DQM Test: > + Percent Relative Difference							
		Result:	3.7 < 10.0				
		Message	CCV Passed				
		Action	Continue				
DQM Test: < - Percent Relative Difference							
		Result:	3.7 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100223-08	1	S7	-1.27	0.0375	2/23/2010@10:42:39		CCB
		Known Conc:	0.00				
DQM Test: > + Concentration Limit							
		Result:	-1.27 < 5.00				
		Message	CCB Passed				
		Action	Continue				
DQM Test: < - Concentration Limit							
		Result:	-1.27 > -5.00				
		Message	CCB Passed				
		Action	Continue				
247178011	1	21	-1.34	0.0342	2/23/2010@10:44:28		
247181001	1	22	-1.33	0.0348	2/23/2010@10:45:20		
247181002	1	23	-0.741	0.0623	2/23/2010@10:46:14		
247187001	1	24	-1.57	0.0236	2/23/2010@10:47:06		
247187002	1	25	-1.22	0.0399	2/23/2010@10:47:58		
247187003	1	26	-1.40	0.0315	2/23/2010@10:48:51		
247197001	1	27	-1.38	0.0323	2/23/2010@10:49:43		
247197002	1	28	-1.11	0.0450	2/23/2010@10:50:35		
1202046124 954512 MB	1	29	-1.30	0.0361	2/23/2010@10:51:27		
1202046131 LCS	1	30	16.8	0.885	2/23/2010@10:52:19	25.00	
WCN100223-03	1	S3	104	4.98	2/23/2010@10:53:12		CCV
		Known Conc:	100				
DQM Test: > + Percent Relative Difference							
		Result:	4.3 < 10.0				
		Message	CCV Passed				
		Action	Continue				
DQM Test: < - Percent Relative Difference							
		Result:	4.3 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100223-08	1	S7	-1.30	0.0362	2/23/2010@10:55:01		CCB
		Known Conc:	0.00				

DQM Test: > + Concentration Limit						
Result:		-1.30 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.30 > -5.00				
Message		CCB Passed				
Action		Continue				
247108001	1	31	-1.09	0.0462	2/23/2010@10:56:52	
1202046125	DUP	1	32	-1.54	0.0247	2/23/2010@10:57:45
1202046127	MS	1	33	81.1	3.90	2/23/2010@10:58:39
1202046129	MSD	1	34	98.3	4.70	2/23/2010@10:59:32
247108002		1	35	-1.05	0.0481	2/23/2010@11:00:25
1202046126	DUP	1	36	-0.928	0.0536	2/23/2010@11:01:19
1202046128	MS	1	37	95.0	4.55	2/23/2010@11:02:11
1202046130	MSD	1	38	88.6	4.25	2/23/2010@11:03:05
247108003		1	39	-1.15	0.0430	2/23/2010@11:03:58
247108004		1	40	-1.94	0.00601	2/23/2010@11:04:50
WCN100223-03		1	S3	104	4.96	2/23/2010@11:05:42
Known Conc:			100			
DQM Test: > + Percent Relative Difference						
Result:		3.8 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		3.8 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100223-08	1	S7	-1.19	0.0415	2/23/2010@11:07:33	CCB
Known Conc:			0.00			
DQM Test: > + Concentration Limit						
Result:		-1.19 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.19 > -5.00				
Message		CCB Passed				
Action		Continue				
247108005	1	41	-2.02	0.00232	2/23/2010@11:09:22	
247195001	1	42	-1.60	0.0222	2/23/2010@11:10:14	
247195002	1	43	-1.50	0.0270	2/23/2010@11:11:05	

Analyte Properties Table for OM\_2-23-2010\_10-03-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

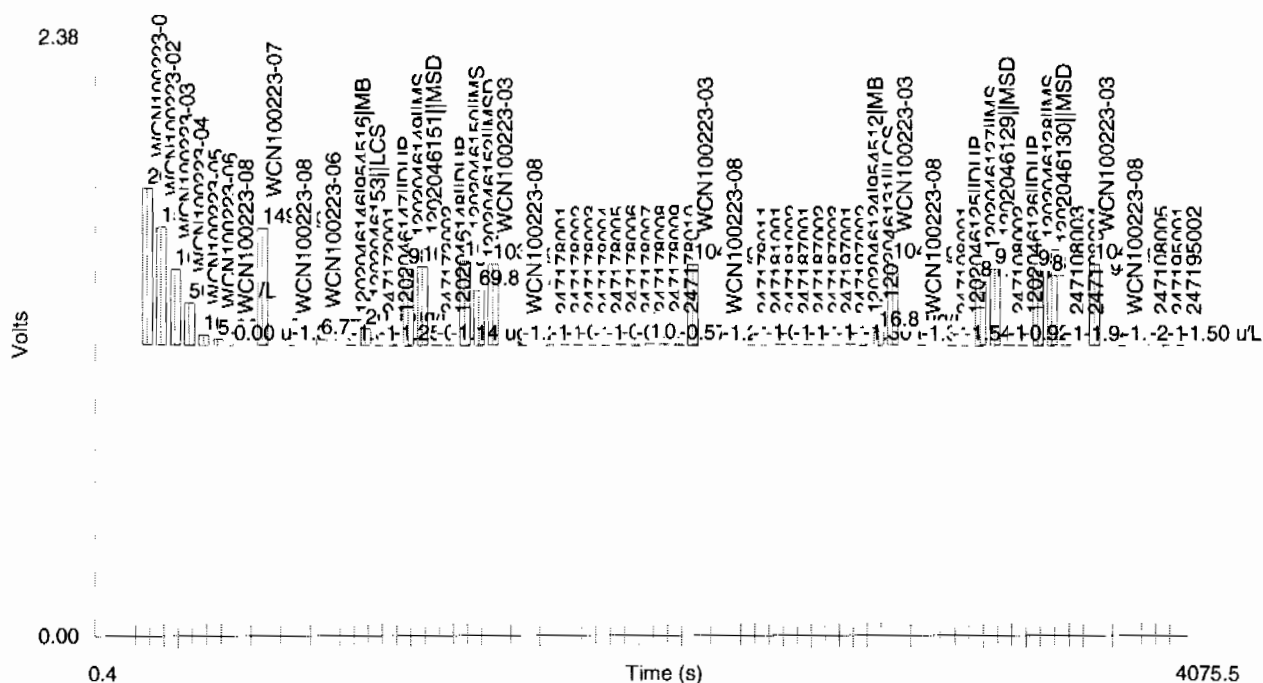
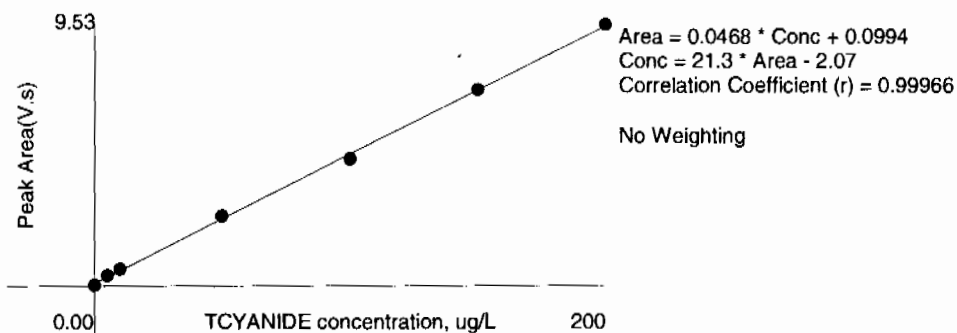


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.53	0.622	-0.6	2/23/2010	10:08:00
2	150	1	7.13	0.468	-0.1	2/23/2010	10:08:52
3	100	1	4.60	0.301	3.8	2/23/2010	10:09:44
4	50.0	1	2.53	0.167	-3.7	2/23/2010	10:10:37
5	10.0	1	0.617	0.0399	-8.7	2/23/2010	10:11:31
6	5.00	1	0.385	0.0238	-15.5	2/23/2010	10:12:24
7	0.00	1	0.0245	0.00128		2/23/2010	10:13:19

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	2/23/2010 15:21:55	OM_2-23-2010_15-18-32
CCB		1	axc2	2/23/2010 15:23:45	OM_2-23-2010_15-18-32
1202049696	955978	1	axc2	2/23/2010 15:25:34	OM_2-23-2010_15-18-32
1202049703	955978	25	axc2	2/23/2010 15:26:28	OM_2-23-2010_15-18-32
247097006	955978	1	axc2	2/23/2010 15:27:21	OM_2-23-2010_15-18-32
1202049697	955978	1	axc2	2/23/2010 15:28:14	OM_2-23-2010_15-18-32
1202049699	955978	1	axc2	2/23/2010 15:29:07	OM_2-23-2010_15-18-32
1202049701	955978	1	axc2	2/23/2010 15:30:00	OM_2-23-2010_15-18-32
247097007	955978	1	axc2	2/23/2010 15:30:52	OM_2-23-2010_15-18-32
1202049698	955978	1	axc2	2/23/2010 15:31:45	OM_2-23-2010_15-18-32
1202049700	955978	1	axc2	2/23/2010 15:32:37	OM_2-23-2010_15-18-32
1202049702	955978	1	axc2	2/23/2010 15:33:30	OM_2-23-2010_15-18-32
CCV		1	axc2	2/23/2010 15:34:22	OM_2-23-2010_15-18-32
CCB		1	axc2	2/23/2010 15:36:12	OM_2-23-2010_15-18-32
247097008	955978	1	axc2	2/23/2010 15:38:01	OM_2-23-2010_15-18-32
247097009	955978	1	axc2	2/23/2010 15:38:53	OM_2-23-2010_15-18-32
247295001	955978	1	axc2	2/23/2010 15:39:44	OM_2-23-2010_15-18-32
247297001	955978	1	axc2	2/23/2010 15:40:36	OM_2-23-2010_15-18-32
247336001	955978	1	axc2	2/23/2010 15:41:28	OM_2-23-2010_15-18-32
247336002	955978	1	axc2	2/23/2010 15:42:21	OM_2-23-2010_15-18-32
247336003	955978	1	axc2	2/23/2010 15:43:15	OM_2-23-2010_15-18-32
247336004	955978	1	axc2	2/23/2010 15:44:08	OM_2-23-2010_15-18-32
247336005	955978	1	axc2	2/23/2010 15:45:01	OM_2-23-2010_15-18-32
247336006	955978	1	axc2	2/23/2010 15:45:54	OM_2-23-2010_15-18-32
CCV		1	axc2	2/23/2010 15:46:47	OM_2-23-2010_15-18-32
CCB		1	axc2	2/23/2010 15:48:38	OM_2-23-2010_15-18-32
247336007	955978	1	axc2	2/23/2010 15:50:27	OM_2-23-2010_15-18-32
247338001	955978	1	axc2	2/23/2010 15:51:20	OM_2-23-2010_15-18-32
247338002	955978	1	axc2	2/23/2010 15:52:12	OM_2-23-2010_15-18-32
247338003	955978	1	axc2	2/23/2010 15:53:05	OM_2-23-2010_15-18-32
247338004	955978	1	axc2	2/23/2010 15:53:58	OM_2-23-2010_15-18-32
247338005*	955978	1	axc2	2/23/2010 15:54:50	OM_2-23-2010_15-18-32
247338006	955978	1	axc2	2/23/2010 15:55:42	OM_2-23-2010_15-18-32
247381001	955978	1	axc2	2/23/2010 15:56:34	OM_2-23-2010_15-18-32
1202049693	955974	1	axc2	2/23/2010 15:57:26	OM_2-23-2010_15-18-32
1202049695	955974	1	axc2	2/23/2010 15:58:18	OM_2-23-2010_15-18-32
CCV		1	axc2	2/23/2010 15:59:11	OM_2-23-2010_15-18-32
CCB		1	axc2	2/23/2010 16:01:01	OM_2-23-2010_15-18-32
247273002	955974	1	axc2	2/23/2010 16:02:51	OM_2-23-2010_15-18-32
1202049694	955974	1	axc2	2/23/2010 16:03:45	OM_2-23-2010_15-18-32
247295001	955974	1	axc2	2/23/2010 16:04:38	OM_2-23-2010_15-18-32
247297001	955974	1	axc2	2/23/2010 16:05:32	OM_2-23-2010_15-18-32
247381001	955974	1	axc2	2/23/2010 16:06:26	OM_2-23-2010_15-18-32
247338005	955978	1	axc2	2/23/2010 16:07:18	OM_2-23-2010_15-18-32
247273002*	955974	10	axc2	2/23/2010 16:08:12	OM_2-23-2010_15-18-32
1202049694	955974	10	axc2	2/23/2010 16:09:06	OM_2-23-2010_15-18-32
247273002	955974	10	axc2	2/23/2010 16:10:00	OM_2-23-2010_15-18-32
CCV		1	axc2	2/23/2010 16:10:52	OM_2-23-2010_15-18-32
CCB		1	axc2	2/23/2010 16:12:43	OM_2-23-2010_15-18-32

Author: axc2

Date : 2/23/2010

Original Run Filename: OM\_2-23-2010\_15-18-32.OMN created 2/23/2010 15:18:32  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_2-23-2010\_15-18-32.OMN last modified 2/23/2010 16:13:48  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M  
 Liquid LCS nominal 50 ug/L

AX12

2/23/10

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area (Vs)				
WCN100223-03	1	S3	98.8	4.73	2/23/2010@15:21:55			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-1.2 < 10.0					
Message			CCV Passed	✓				
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-1.2 < 10.0					
Message			CCV Passed	✓				
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100223-08	1	S7	-2.06	3.57e-4	2/23/2010@15:23:45			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-2.06 < 5.00					
Message			CCB Passed	✓				
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-2.06 > -5.00					
Message			CCB Passed	✓				
Action			Continue					
1202049696 955978 MB	1	1	-1.14	0.0437	2/23/2010@15:25:34			
1202049703  LCS	1	2	23.6	1.20	2/23/2010@15:26:28		25.00	
247097006	1	3	-1.24	0.0391	2/23/2010@15:27:21			
1202049697  DUP	1	4	-1.27	0.0374	2/23/2010@15:28:14			
1202049699  MS	1	5	111	5.28	2/23/2010@15:29:07			
1202049701  MSD	1	6	106	5.05	2/23/2010@15:30:00			
247097007	1	7	-0.267	0.0845	2/23/2010@15:30:52			
1202049698  DUP	1	8	-0.329	0.0816	2/23/2010@15:31:45			
1202049700  MS	1	9	75.0	3.61	2/23/2010@15:32:37			
1202049702  MSD	1	10	79.7	3.83	2/23/2010@15:33:30			
WCN100223-03	1	S3	102	4.85	2/23/2010@15:34:22			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.5 < 10.0					
Message			CCV Passed	✓				
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			1.5 < 10.0					
Message			CCV Passed	✓				
Action			Continue					
WCN100223-08	1	S7	-1.62	0.0213	2/23/2010@15:36:12			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.62 < 5.00					
Message			CCB Passed	✓				
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.62 > -5.00					
Message			CCB Passed	✓				
Action			Continue					
247097008	1	11	8.14	0.478	2/23/2010@15:38:01			
247097009	1	12	0.0168	0.0978	2/23/2010@15:38:53			
247295001	1	13	1.80	0.182	2/23/2010@15:39:44			
247297001	1	14	2.56	0.217	2/23/2010@15:40:36			
247336001	1	15	-0.146	0.0902	2/23/2010@15:41:28			

AN2  
2/23/10

247336002	1	16	-1.26	0.0378	2/23/2010@15:42:21		
247336003	1	17	-1.03	0.0488	2/23/2010@15:43:15		
247336004	1	18	31.6	1.58	2/23/2010@15:44:08		
247336005	1	19	0.631	0.127	2/23/2010@15:45:01		
247336006	1	20	-0.800	0.0596	2/23/2010@15:45:54		
WCN100223-03	1	S3	103	4.93	2/23/2010@15:46:47		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			3.1 < 10.0				
Message			CCV Passed	✓			
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			3.1 < 10.0				
Message			CCV Passed	✓			
Action			Continue				
WCN100223-08	1	S7	-1.70	0.0172	2/23/2010@15:48:38		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.70 < 5.00				
Message			CCB Passed	✓			
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.70 > -5.00				
Message			CCB Passed	✓			
Action			Continue				
247336007	1	21	-1.16	0.0425	2/23/2010@15:50:27		
247338001	1	22	-1.62	0.0213	2/23/2010@15:51:20		
247338002	1	23	-1.49	0.0271	2/23/2010@15:52:12		
247338003	1	24	-1.32	0.0353	2/23/2010@15:53:05		
247338004	1	25	-1.55	0.0246	2/23/2010@15:53:58		
247338005	1	26	4.12	0.290	2/23/2010@15:54:50		
247338006	1	27	-1.67	0.0190	2/23/2010@15:55:42		
247381001	1	28	8.79	0.509	2/23/2010@15:56:34		
1202049693 955974 MB	1	29	-1.62	0.0211	2/23/2010@15:57:26		
1202049695 LCS	1	30	-1.61	0.0215	2/23/2010@15:58:18		
WCN100223-03	1	S3	103	4.94	2/23/2010@15:59:11		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			3.4 < 10.0				
Message			CCV Passed	✓			
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			3.4 < 10.0				
Message			CCV Passed	✓			
Action			Continue				
WCN100223-08	1	S7	-1.21	0.0403	2/23/2010@16:01:01		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.21 < 5.00				
Message			CCB Passed	✓			
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.21 > -5.00				
Message			CCB Passed	✓			
Action			Continue				
247273002	1	31	1.01e+3	47.4	2/23/2010@16:02:51		
1202049694 DUP	1	32	678	31.9	2/23/2010@16:03:45		
247295001	1	33	3.22	0.248	2/23/2010@16:04:38		
247297001	1	34	6.99	0.425	2/23/2010@16:05:32		
247381001	1	35	98.3	4.70	2/23/2010@16:06:26		
247338005 955978	1	26	-1.27	0.0376	2/23/2010@16:07:18		
247273002 955974	1	31	149	7.10	2/23/2010@16:08:12	10.00	
1202049694 DUP	1	32	91.7	4.39	2/23/2010@16:09:06	10.00	
247273002	1	31	111	5.29	2/23/2010@16:10:00	1000	
WCN100223-03	1	S3	103	4.93	2/23/2010@16:10:52		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			3.2 < 10.0				

AN2  
2/23/10



Author: axc2

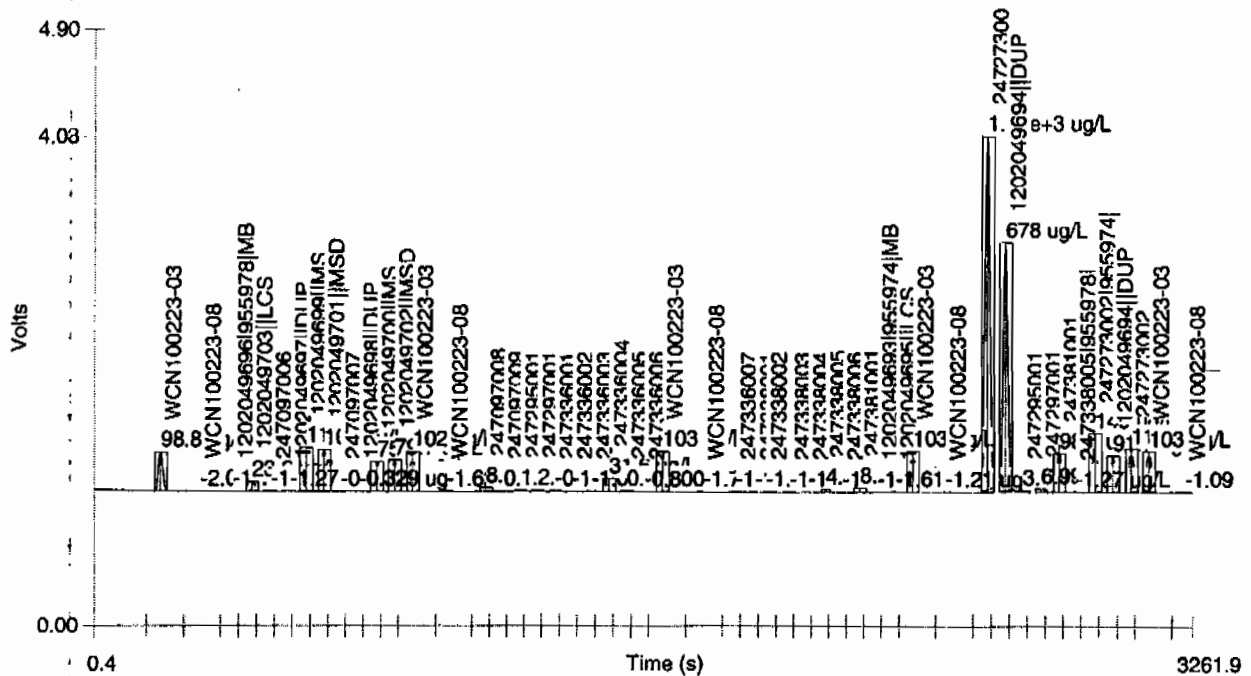
ANZ  
2/23/10  
Date : 2/23/2010

Message		CCV Passed	✓			
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		3.2 < 10.0				
Message		CCV Passed	✓			
Action		Continue				
WCN100223-08	1	S7	-1.09	0.0459	2/23/2010@16:12:43	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.09 < 5.00				
Message		CCB Passed	✓			
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.09 > -5.00	✓			
Message		CCB Passed				
Action		Continue				

Analyte Properties Table for OM\_2-23-2010\_15-18-32.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View



Author: pxc2

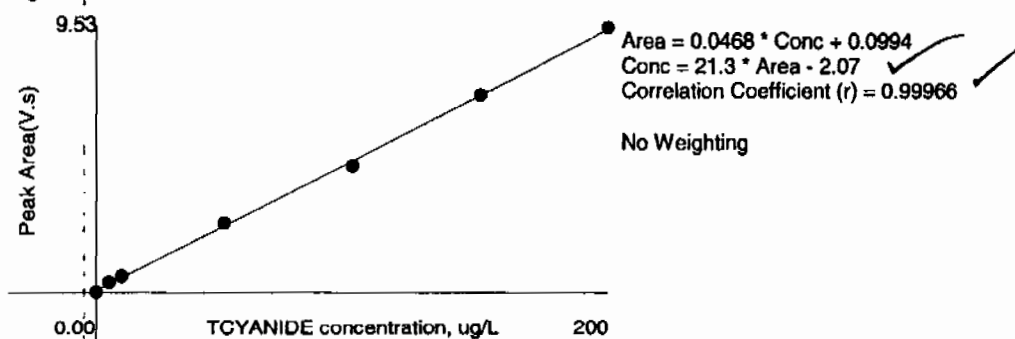
Date : 2/23/2010

File  
2123110

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.53	0.622	-0.6	2/23/2010	10:08:00
2	150	1	7.13	0.468	-0.1	2/23/2010	10:08:52
3	100	1	4.60	0.301	3.8	2/23/2010	10:09:44
4	50.0	1	2.53	0.167	-3.7	2/23/2010	10:10:37
5	10.0	1	0.617	0.0399	-8.7	2/23/2010	10:11:31
6	5.00	1	0.385	0.0238	-15.5	2/23/2010	10:12:24
7	0.00	1	0.0245	0.00128		2/23/2010	10:13:19

Figure 1: TCYANIDE



# **Ion Chromatography**

# Prep Logbook

## Ion Chromatography (IC)

Batch ID: 955446.0  
 Verified by: Mary Sherwood  
 Analyst: EPA 300.0 PREP  
 Method: GL-GC-E-086 REV# 17  
 Lab SOP: Sartorius Balance B-001  
 Instrument:

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1202048434	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MS	1202048430	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MS	1202048431	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MSD	1202048432	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL
MSD	1202048433	GEL-ANION-4C Spiking Solution	UIC100224SPK	.8	mL

Sample ID	Run Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)	pH Check
1202048427 MB	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048434 LCS	06-MAR-2010 10:50:00	Soil	4	40	10	
247336001	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048428 DUP (247336001)	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048430 MS (247336001)	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048432 MSD (247336001)	06-MAR-2010 10:50:00	Soil	4	40	10	
247336002	06-MAR-2010 10:50:00	Soil	4	40	10	
247336003	06-MAR-2010 10:50:00	Soil	4	40	10	
247336004	06-MAR-2010 10:50:00	Soil	4	40	10	
247336005	06-MAR-2010 10:50:00	Soil	4	40	10	
247336006	06-MAR-2010 10:50:00	Soil	4	40	10	
247336007	06-MAR-2010 10:50:00	Soil	4	40	10	
247359001	06-MAR-2010 10:50:00	Soil	4	40	10	
247359002	06-MAR-2010 10:50:00	Soil	4	40	10	
247359003	06-MAR-2010 10:50:00	Soil	4	40	10	
247359004	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048429 DUP (247359004)	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048431 MS (247359004)	06-MAR-2010 10:50:00	Soil	4	40	10	
1202048433 MSD (247359004)	06-MAR-2010 10:50:00	Soil	4	40	10	

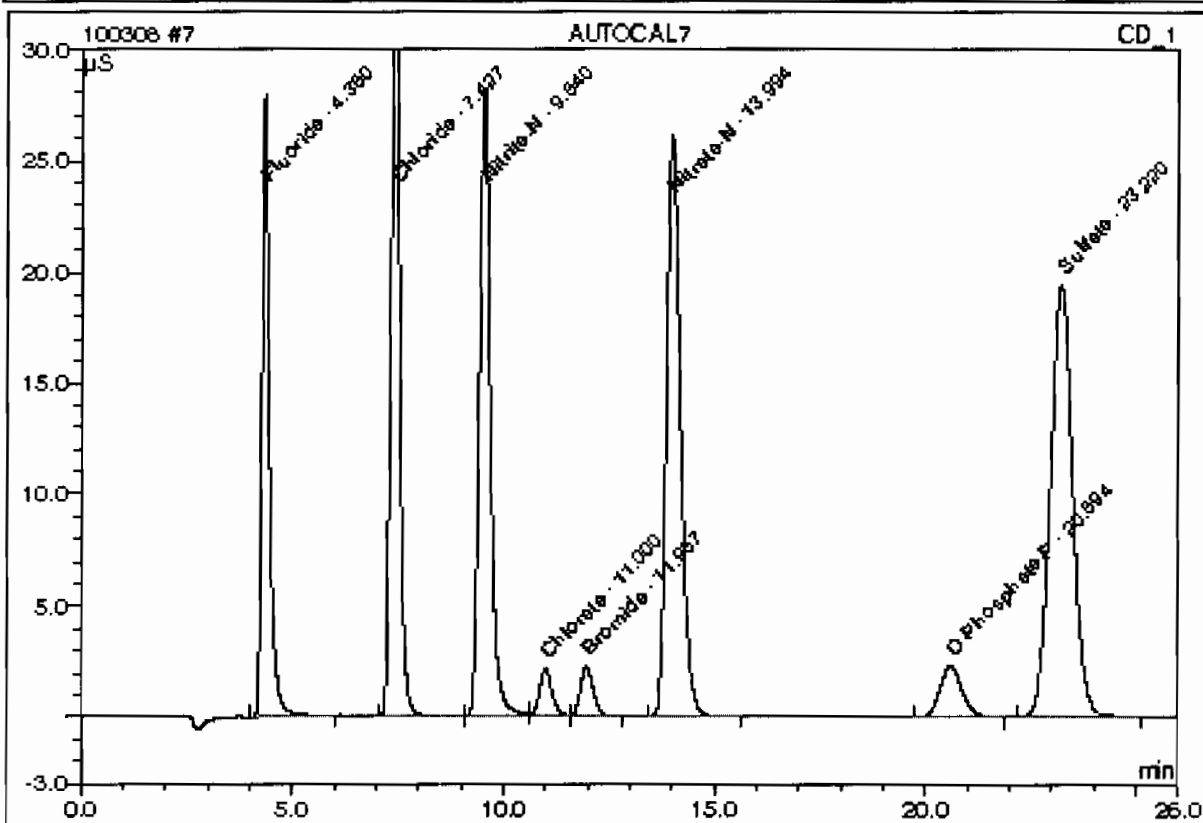
Reagent/Solvent Lot ID	Description	Amount	Comments:
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This is runlog for Sequence 100308.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	02/26/10 14:11		1	100308	MAR1
ICAL-06	02/26/10 14:40		1	100308	MAR1
ICAL-05	02/26/10 15:09		1	100308	MAR1
ICAL-04	02/26/10 15:38		1	100308	MAR1
ICAL-03	02/26/10 16:07		1	100308	MAR1
ICAL-02	02/26/10 16:36		1	100308	MAR1
ICAL-01	02/26/10 17:04		1	100308	MAR1

**7 AUTOCAL7**

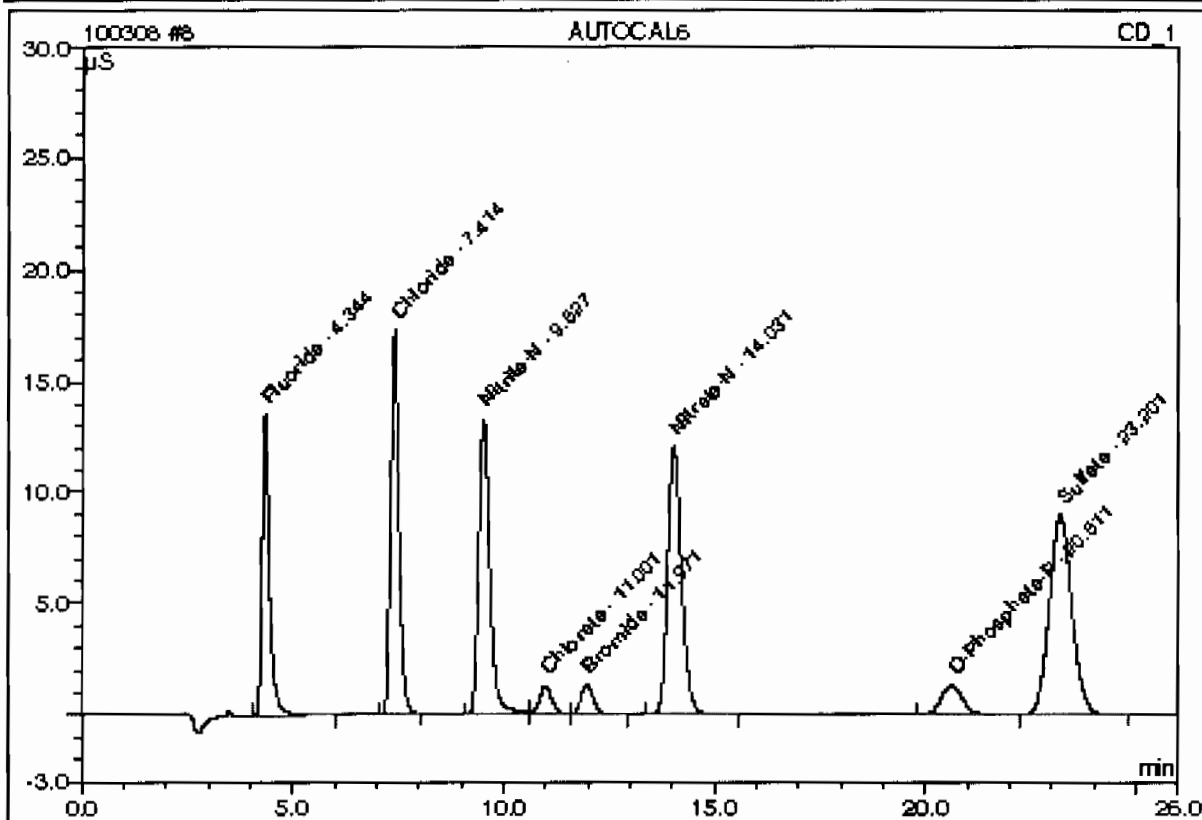
Sample Name:	AUTOCAL7	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 14:11	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.35	Fluoride	10.0000	10.0855		5.77442	12.08
2	7.43	Chloride	20.0000	20.3596		8.66452	18.13
3	9.54	Nitrite-N	10.0000	10.0633		8.38569	17.54
4	11.00	Chlorate	5.0000	4.9969		0.72891	1.52
5	11.97	Bromide	5.0000	4.9428		0.76589	1.60
6	13.99	Nitrate-N	10.0000	10.1518		10.17864	21.30
7	20.59	O-Phosphate-P	5.0000	5.0680		1.40399	2.94
8	23.22	Sulfate	40.0000	40.5177		11.89615	24.89
Total:				106.1856	0.000	47.798	100.00

**8 AUTOCAL6**

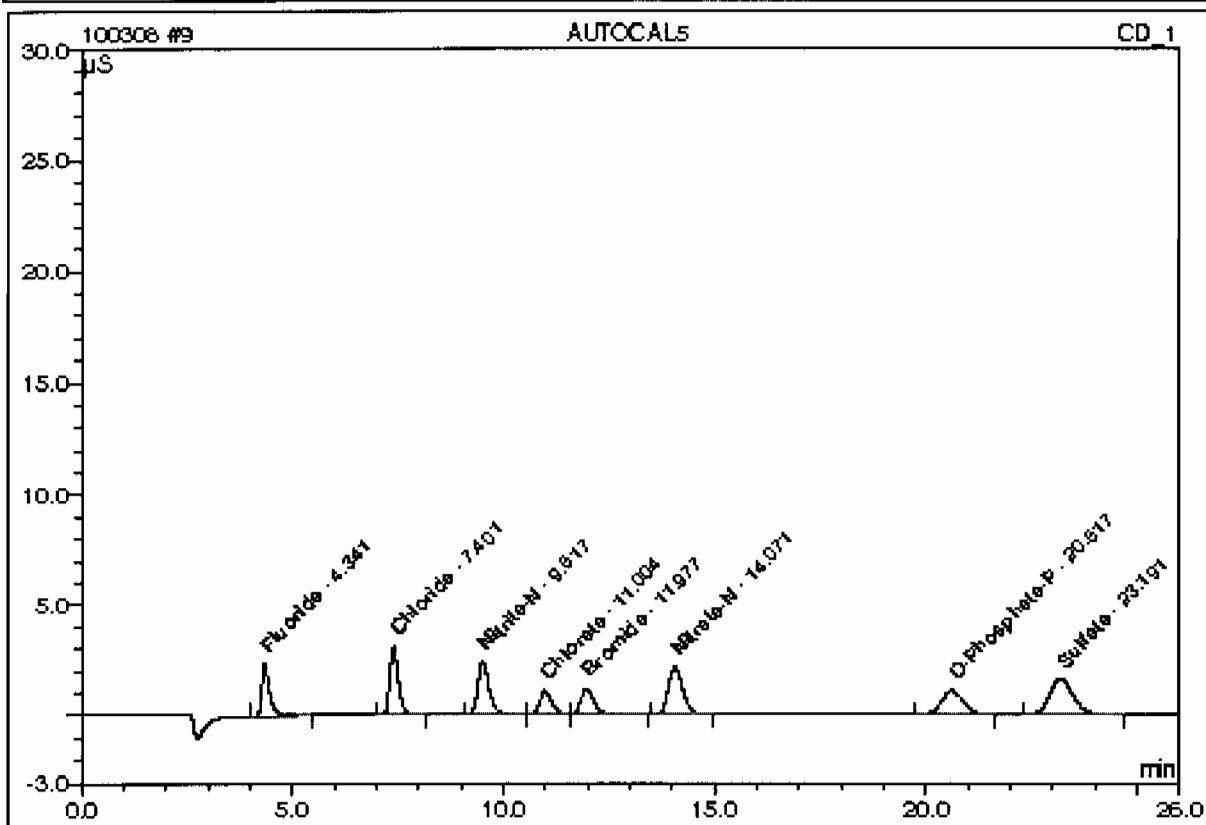
Sample Name:	AUTOCAL6	Injection Volume:	1.0
Vial Number:	4	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 14:40	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	5.0000	4.8384		2.75186	12.16
2	7.41	Chloride	10.0000	9.2955		3.91334	17.29
3	9.53	Nitrite-N	5.0000	4.8856		4.04396	17.86
4	11.00	Chlorate	3.0000	3.0905		0.44848	1.98
5	11.97	Bromide	3.0000	2.9623		0.45913	2.03
6	14.03	Nitrate-N	5.0000	4.7080		4.67150	20.63
7	20.61	O-Phosphate-P	3.0000	2.9576		0.80102	3.54
8	23.20	Sulfate	20.0000	19.0177		5.55000	24.51
Total:				51.7555	0.000	22.639	100.00

**9 AUTOCAL5**

Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:09	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056

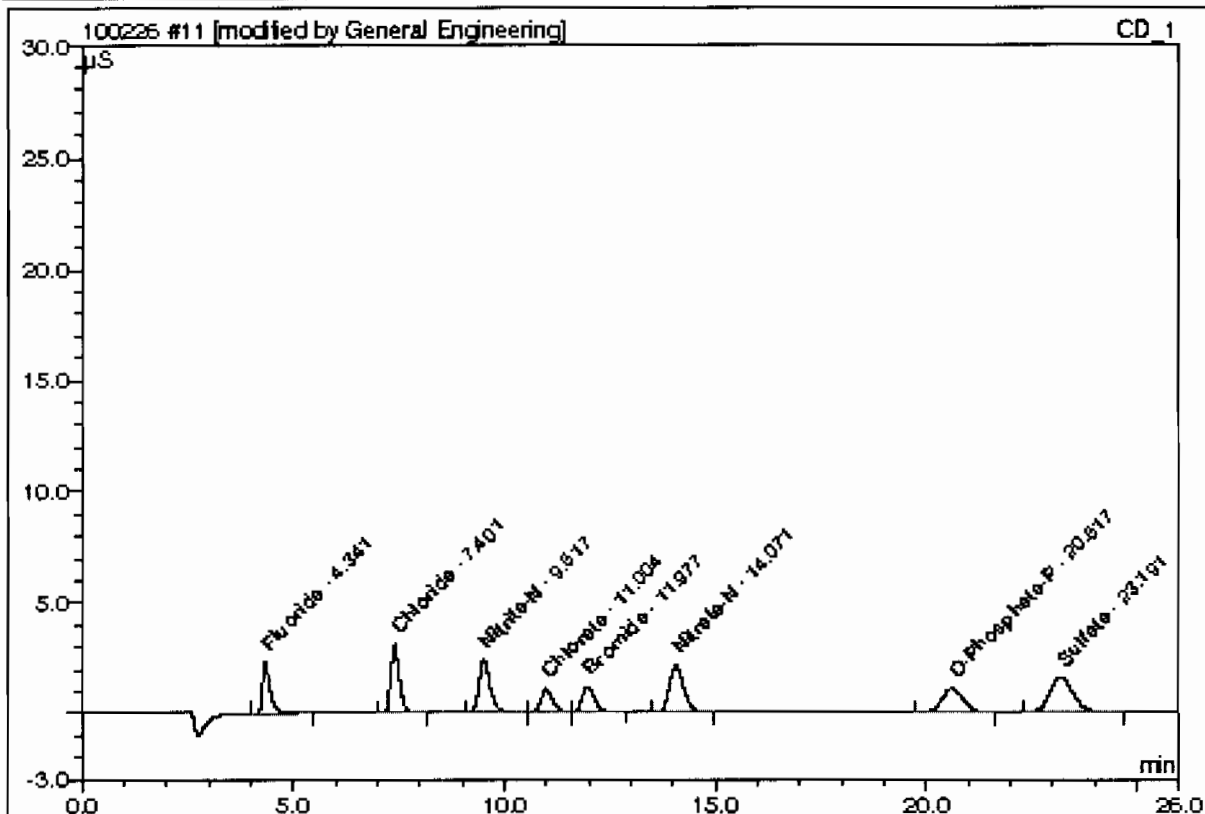


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	1.0000	0.9456		0.50948	9.66
2	7.40	Chloride	2.0000	1.8831		0.73030	13.85
3	9.52	Nitrite-N	1.0000	0.9352		0.73136	13.87
4	11.00	Chlorate	2.5000	2.4073		0.34799	6.60
5	11.98	Bromide	2.5000	2.6793		0.41530	7.88
6	14.07	Nitrate-N	1.0000	0.9238		0.84323	15.99
7	20.62	O-Phosphate-P	2.5000	2.4571		0.65802	12.48
8	23.19	Sulfate	4.0000	3.7265		1.03648	19.66
Total:				15.9578	0.000	5.272	100.00



**11 AUTOCAL5**

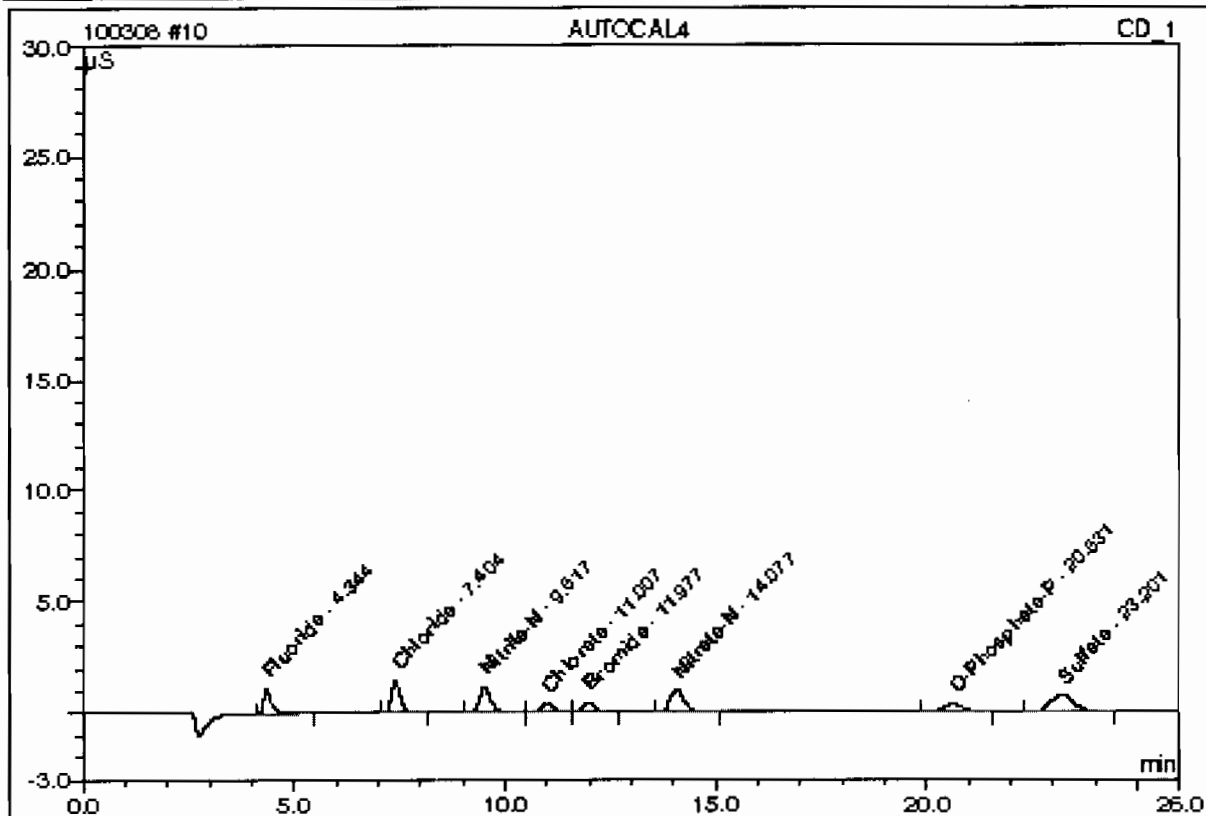
Sample Name:	AUTOCAL5	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:09	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.34	Fluoride	1.0000	0.9456		0.50946	9.72
2	7.40	Chloride	2.0000	1.8831		0.73030	13.93
3	9.52	Nitrite-N	1.0000	0.9315		0.72762	13.88
4	11.00	Chlorate	2.5000	2.3673		0.34093	6.50
5	11.98	Bromide	2.5000	2.5838		0.39739	7.58
6	14.07	Nitrate-N	1.0000	0.9238		0.84323	16.08
7	20.62	O-Phosphate-P	2.5000	2.4544		0.65802	12.55
8	23.19	Sulfate	4.0000	3.7873		1.03648	19.77
Total:				15.8767	0.000	5.243	100.00

**10 AUTOCAL4**

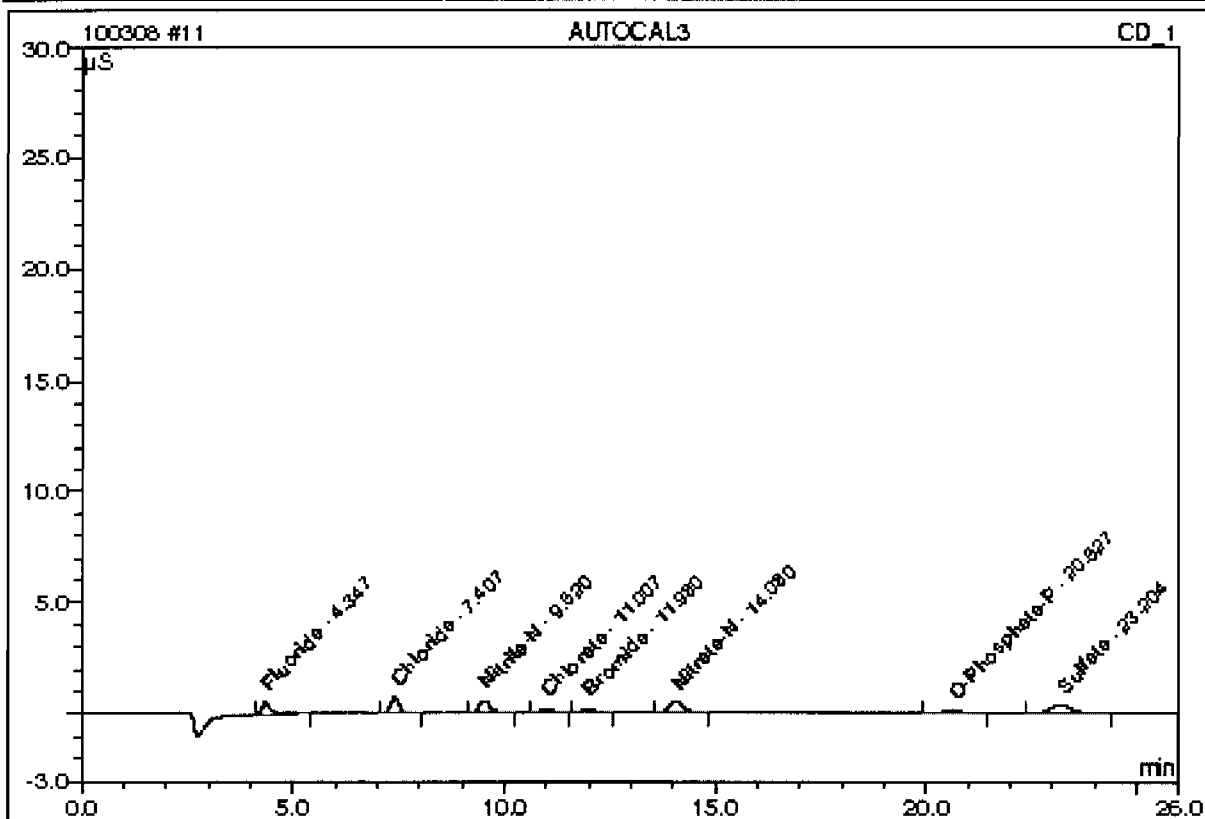
Sample Name:	AUTOCAL4	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 15:38	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;0056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area $\mu\text{S} \cdot \text{min}$	Rel. Area %
1	4.34	Fluoride	0.5000	0.4893		0.24663	10.36
2	7.40	Chloride	1.0000	0.9971		0.34985	14.69
3	9.52	Nitrate-N	0.5000	0.4888		0.35700	14.99
4	11.01	Chlorate	1.0000	0.9788		0.13787	5.79
5	11.98	Bromide	1.0000	0.9719		0.15086	6.34
6	14.08	Nitrate-N	0.5000	0.4953		0.40975	17.21
7	20.63	O-Phosphate-P	1.0000	0.9259		0.22053	9.26
8	23.20	Sulfate	2.0000	1.9380		0.50858	21.36
Total:				7.2852	0.000	2.381	100.00

**11 AUTOCAL3**

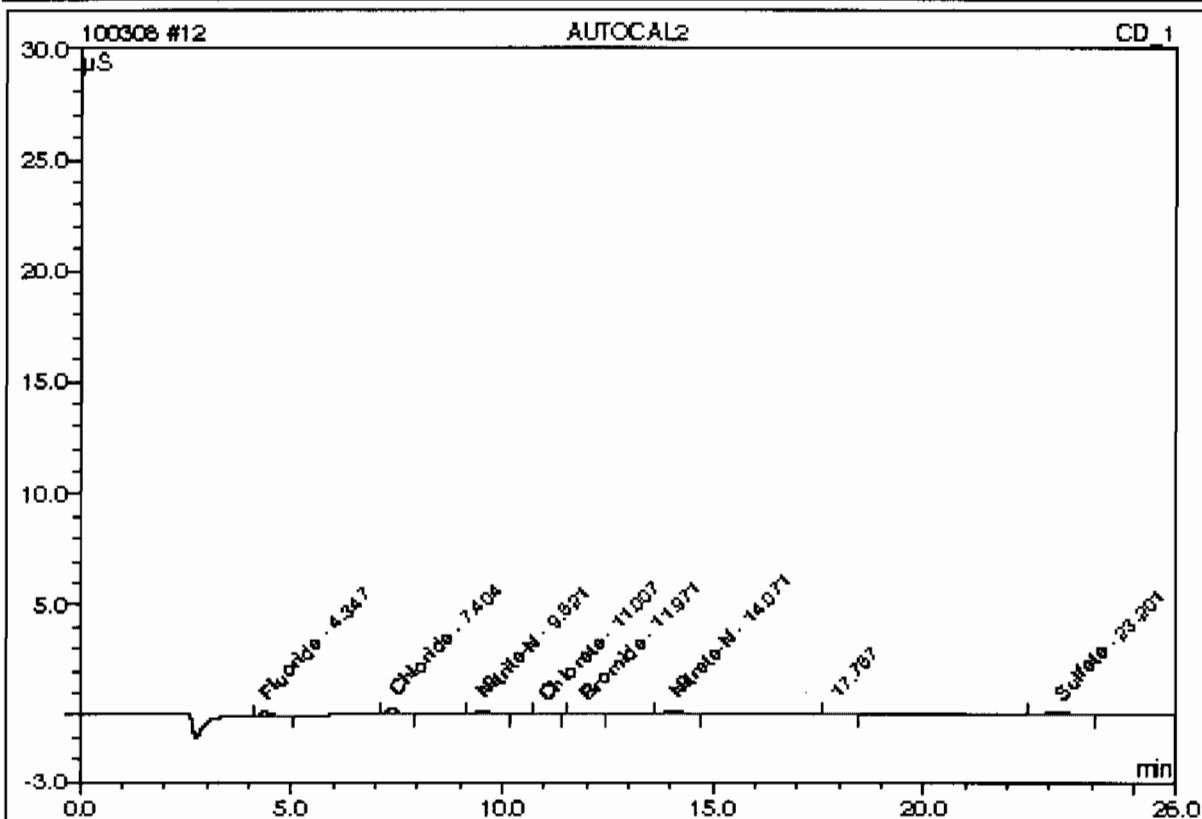
Sample Name:	AUTOCAL3	Injection Volume:	1.0
Vial Number:	7	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:07	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GLGCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.2500	0.2826		0.12755	10.86
2	7.41	Chloride	0.5000	0.6142		0.18541	15.79
3	9.52	Nitrite-N	0.2500	0.2696		0.17315	14.75
4	11.01	Chlorate	0.5000	0.5000		0.06743	5.74
5	11.98	Bromide	0.5000	0.4657		0.07246	6.17
6	14.08	Nitrate-N	0.2500	0.2969		0.20912	17.81
7	20.63	O-Phosphate-P	0.5000	0.4374		0.08097	6.90
8	23.20	Sulfate	1.0000	1.0893		0.25806	21.98
Total:				3.9557	0.000	1.174	100.00

**12 AUTOCAL2**

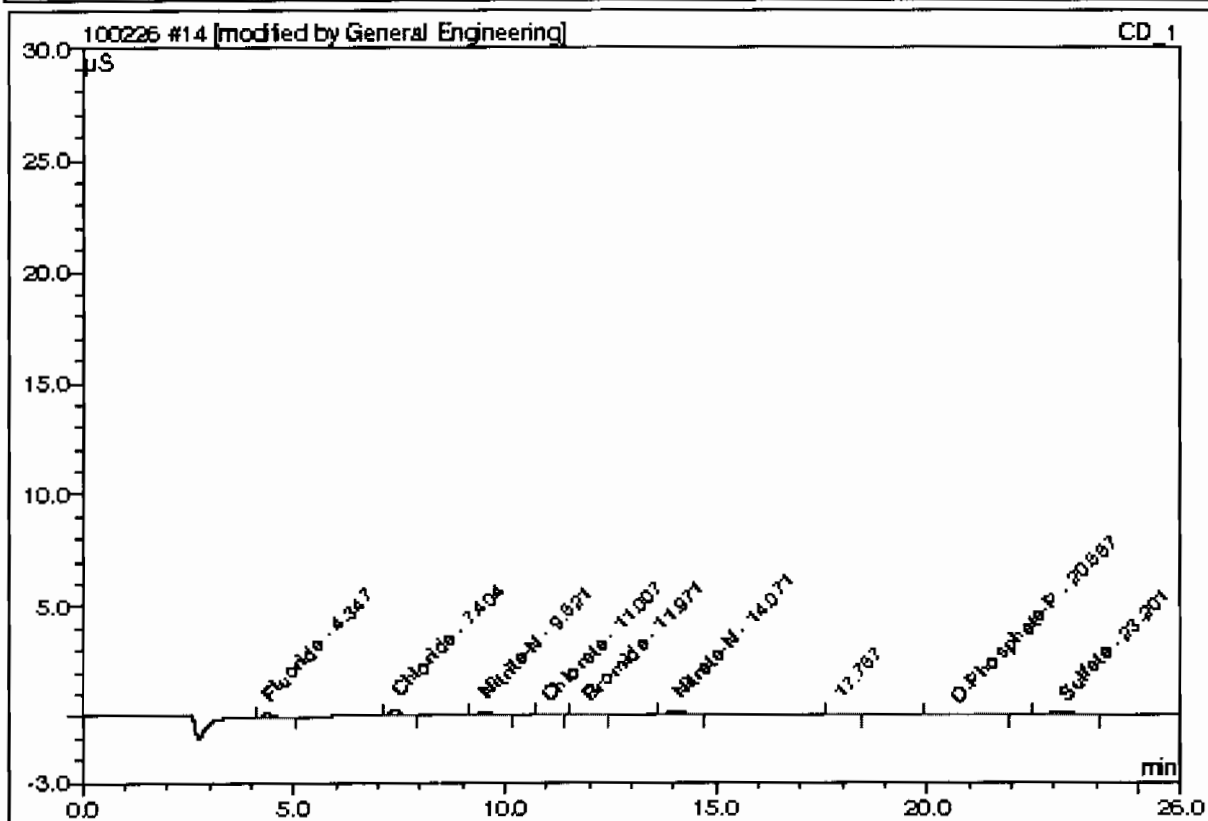
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.1000	0.1475		0.04972	10.74
2	7.40	Chloride	0.2000	0.3681		0.07973	17.22
3	9.52	Nitrite-N	0.1000	0.1444		0.06824	14.74
4	11.01	Chlorate	0.2000	0.1849		0.02108	4.55
5	11.97	Bromide	0.2000	0.1801		0.02821	6.10
6	14.07	Nitrate-N	0.1000	0.1840		0.09485	20.49
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
8	23.20	Sulfate	0.4000	0.5852		0.10336	22.33
Total:				1.7742	0.000	0.445	96.18

**14 AUTOCAL2**

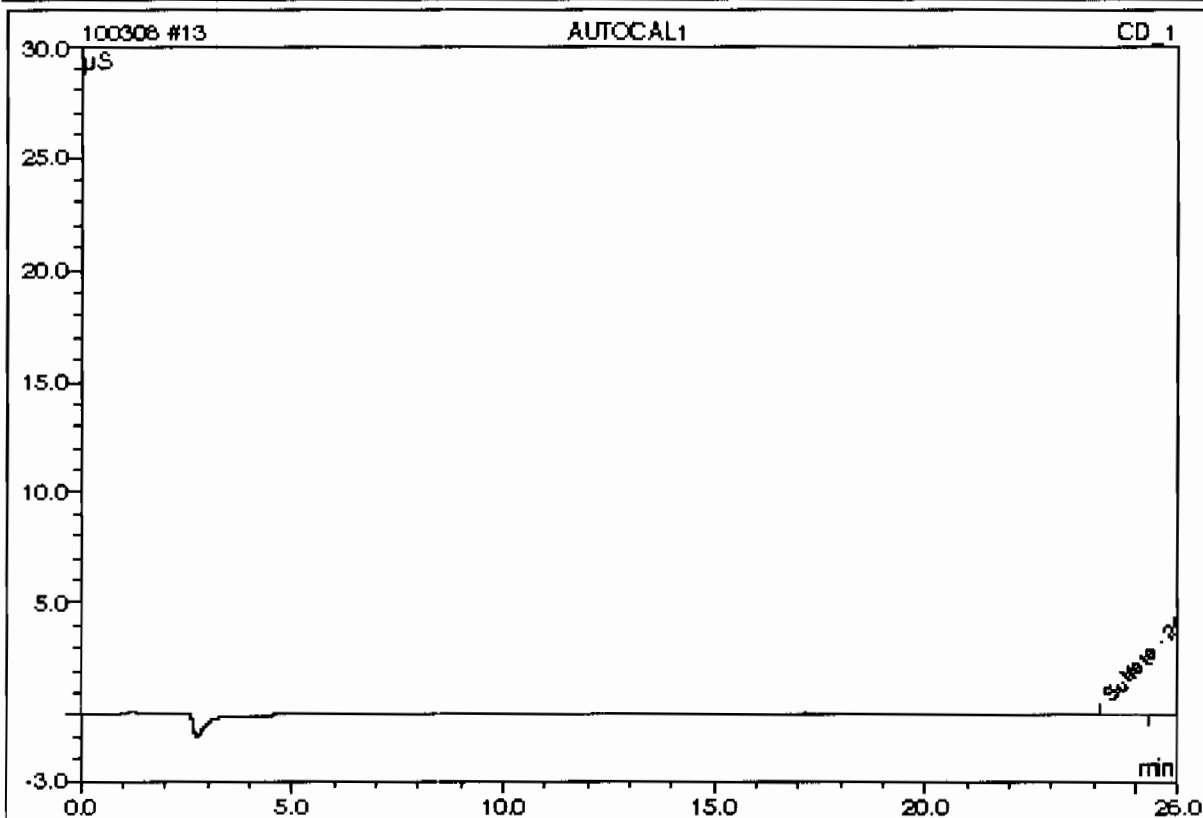
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	8	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 16:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	0.1000	0.1475		0.04972	10.26
2	7.40	Chloride	0.2000	0.3681		0.07973	16.45
3	9.52	Nitrite-N	0.1000	0.1452		0.06824	14.08
4	11.01	Chlorate	0.2000	0.1890		0.02108	4.35
5	11.97	Bromide	0.2000	0.1899		0.02821	5.82
6	14.07	Nitrate-N	0.1000	0.1840		0.09485	19.57
8	20.66	O-Phosphate-P	0.2000	0.2223		0.02173	4.48
9	23.20	Sulfate	0.4000	0.6333		0.10336	21.33
Total:				2.0793	0.000	0.467	96.35

**13 AUTOCAL1**

Sample Name:	AUTOCAL1	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 17:04	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
1	24.32	Sulfate	0.0000	0.3305		0.03410	100.00
Total:				0.3305	0.000	0.034	100.00

**13 AUTOCAL1**

Sample Name: AUTOCAL1

Vial Number: 9

Sample Type: standard

Control Program: AS23

Quantif. Method: 100225an

Recording Time: 2/26/2010 17:04

Run Time (min): 26.00

Injection Volume: 1.0

Channel: CD\_1

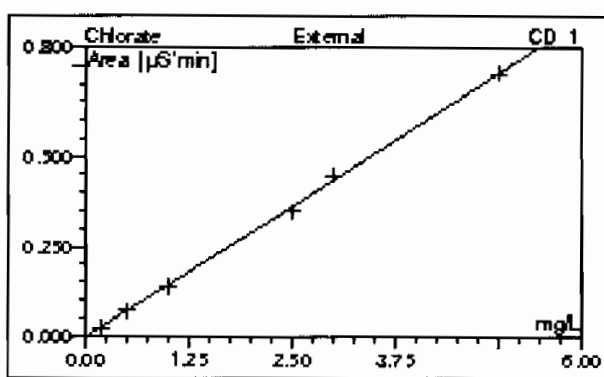
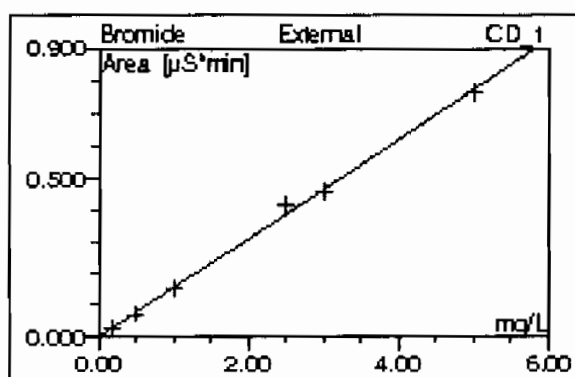
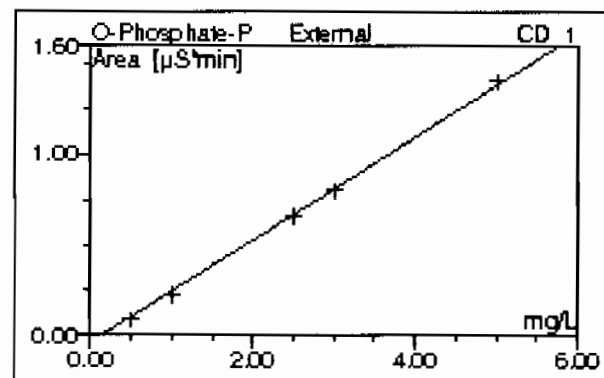
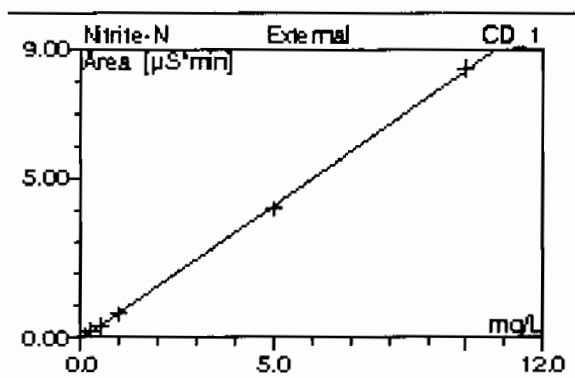
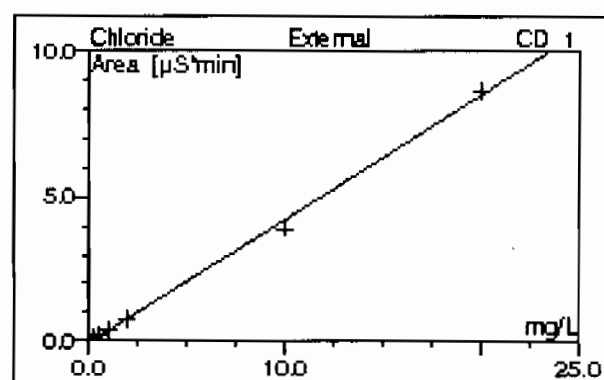
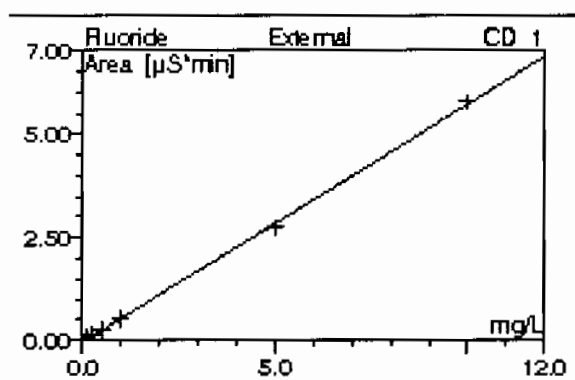
Dilution Factor: 1.0000

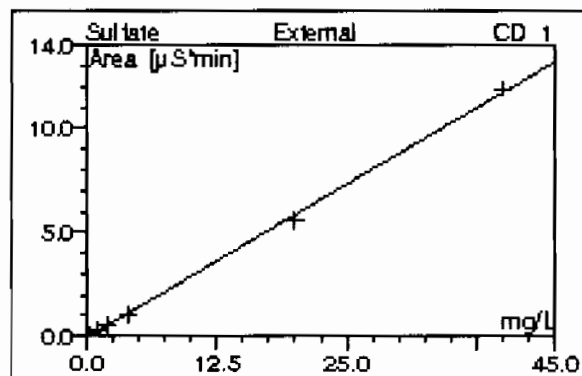
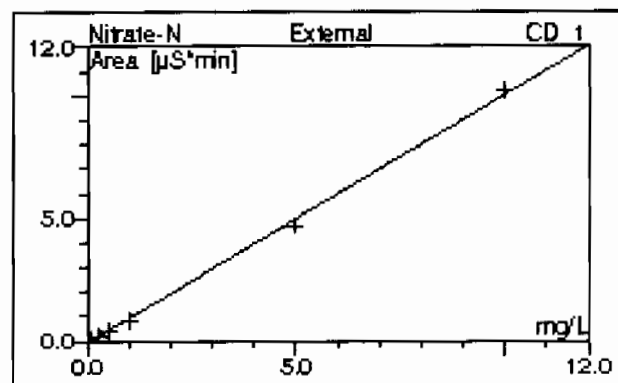
Sample Weight: 1.0000

Sample Amount: 1.0000

Analyst: MAR1

Column: AS23-002712; GL GCED86;300;9056





No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	OLO#	99.9498	-0.0352	0.5760	0.0000
n.a.	n.a.	Chloride	OLO#	99.7865	-0.0783	0.4294	0.0000
n.a.	n.a.	Nitrite-N	OLO#	99.9701	-0.0529	0.8385	0.0000
n.a.	n.a.	Chlorate	OLO#	99.8968	-0.0061	0.1471	0.0000
n.a.	n.a.	Bromide	OLO#	99.7662	0.0003	0.1549	0.0000
n.a.	n.a.	Nitrate-N	OLO#	99.8450	-0.0913	1.0116	0.0000
n.a.	n.a.	O-Phosphate-P	OLO#	99.8686	-0.0440	0.2857	0.0000
1	24.32	Sulfate	OLO#	99.8943	-0.0635	0.2952	0.0000
Average:				99.8722	-0.0464	0.4673	0.0000

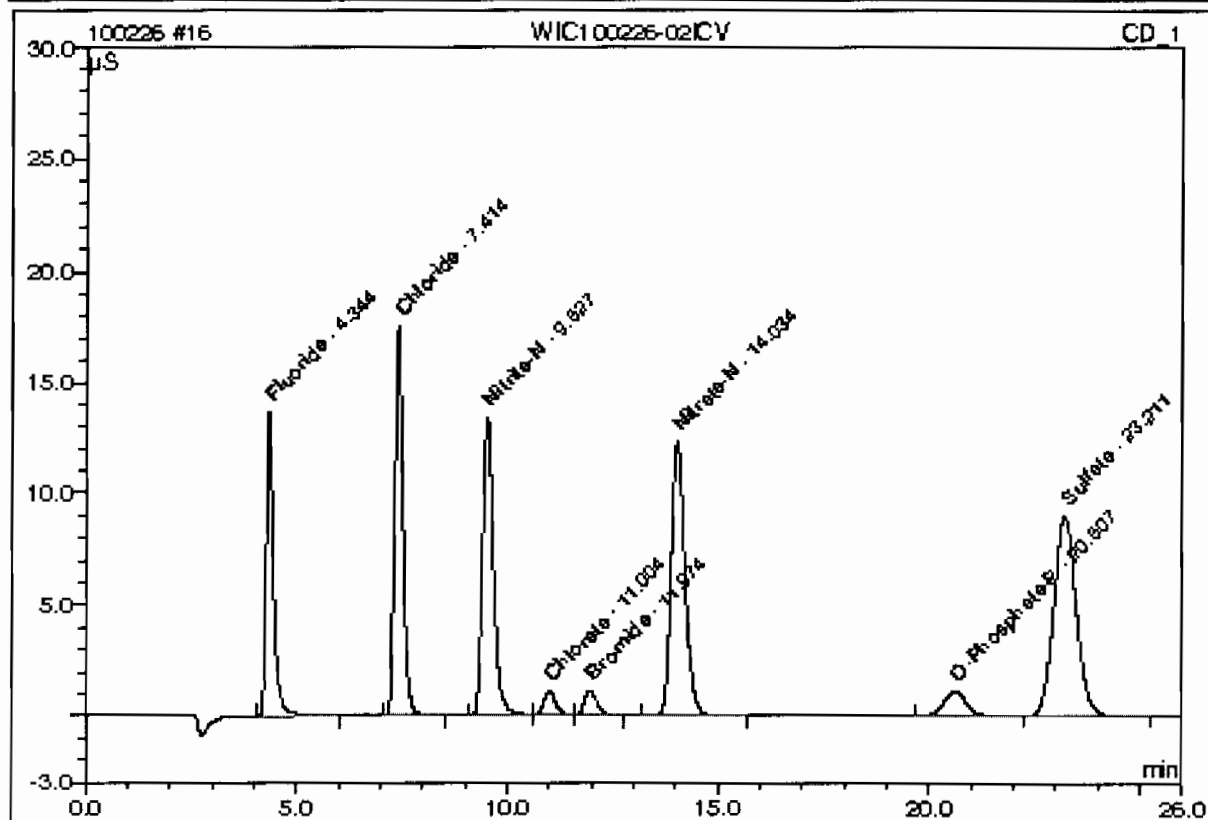


This is runlog for Sequence 100226.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	02/26/10 13:14		1	100226	MAR1
BLK	02/26/10 13:42		1	100226	MAR1
ICAL-07	02/26/10 14:11		1	100226	MAR1
ICAL-06	02/26/10 14:40		1	100226	MAR1
ICAL-05	02/26/10 15:09		1	100226	MAR1
ICAL-04	02/26/10 15:38		1	100226	MAR1
ICAL-03	02/26/10 16:07		1	100226	MAR1
ICAL-02	02/26/10 16:36		1	100226	MAR1
ICAL-01	02/26/10 17:04		1	100226	MAR1
ICV	02/26/10 17:33		1	100226	MAR1
ICB	02/26/10 18:02		1	100226	MAR1
1202055176	02/26/10 18:31	958323 1		100226	MAR1
1202055181	02/26/10 18:59	958323 1		100226	MAR1
248133001	02/26/10 19:28	958323 1		100226	MAR1
1202055177	02/26/10 19:57	958323 1		100226	MAR1
1202055179	02/26/10 20:26	958323 1		100226	MAR1
248133002	02/26/10 20:55	958323 1		100226	MAR1
248133003	02/26/10 21:24	958323 1		100226	MAR1
248133005	02/26/10 21:53	958323 1		100226	MAR1
248133006	02/26/10 22:22	958323 1		100226	MAR1
248133007	02/26/10 22:50	958323 1		100226	MAR1
CVH	02/26/10 23:19		1	100226	MAR1
CCB	02/26/10 23:48		1	100226	MAR1

**16 WIC100226-02ICV**

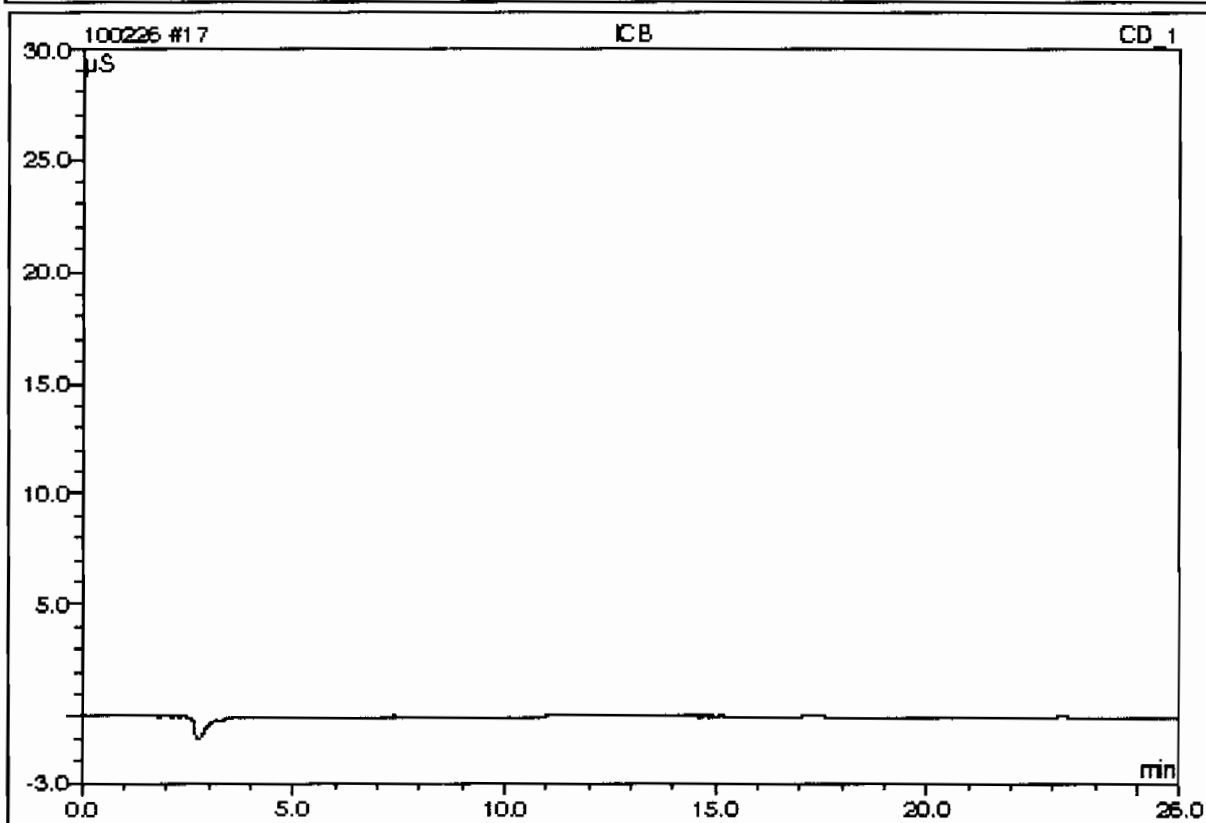
Sample Name:	WIC100226-02ICV	Injection Volume:	1.0
Vial Number:	10	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 17:33	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	n.a.	4.8533		2.76044	12.27
2	7.41	Chloride	n.a.	9.4181		3.96602	17.63
3	9.53	Nitrite-N	n.a.	4.8245		3.99229	17.75
4	11.00	Chlorate	n.a.	2.4815		0.35771	1.59
5	11.97	Bromide	n.a.	2.4889		0.38276	1.70
6	14.03	Nitrate-N	n.a.	4.7766		4.74087	21.07
7	20.61	O-Phosphate-P	n.a.	2.7182		0.73321	3.26
8	23.21	Sulfate	n.a.	19.0842		5.56215	24.73
Total:				50.6453	0.000	22.495	100.00

**17 ICB**

Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	11	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	2/26/2010 18:02	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9058



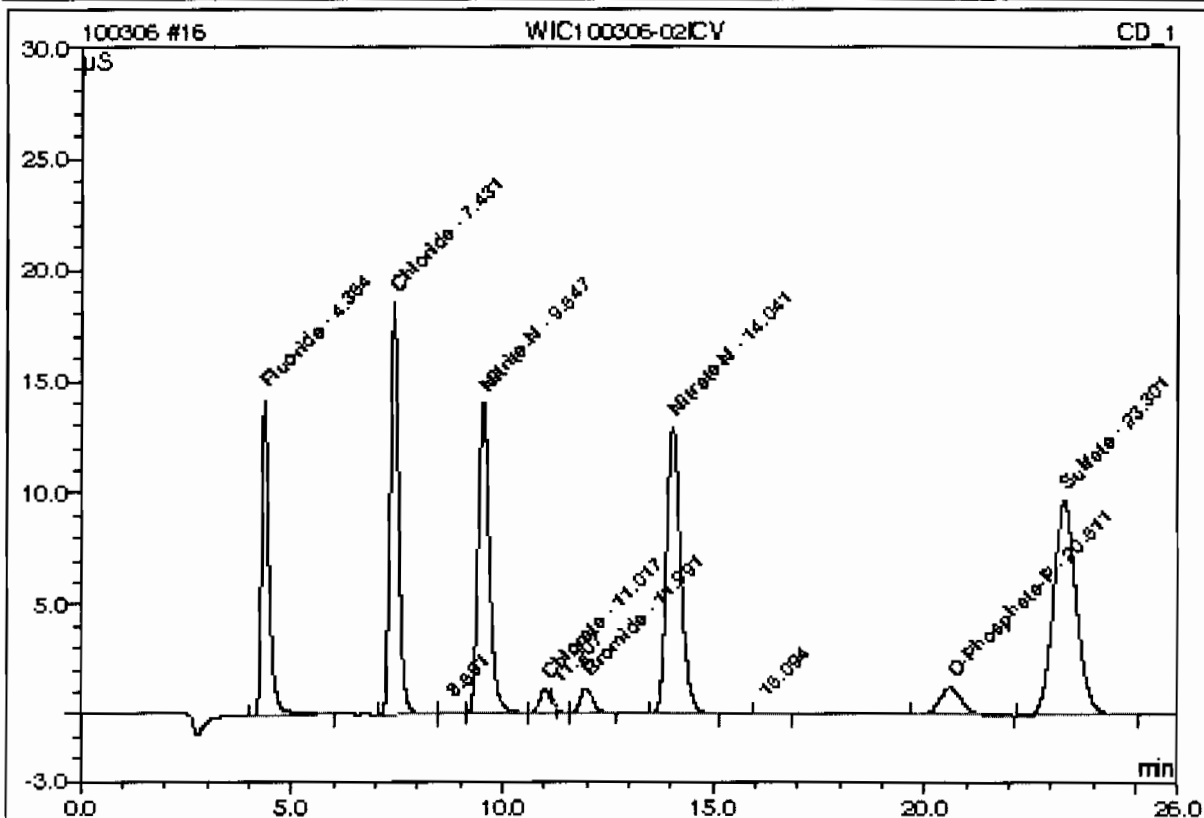
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 100306.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	03/06/10 15:21		1	100306	MAR1
BLK	03/06/10 15:50		1	100306	MAR1
ICV	03/06/10 16:18		1	100306	MAR1
ICB	03/06/10 16:47		1	100306	MAR1
247094002	03/06/10 17:16	957884	2	100306	GXM3
1202054075	03/06/10 17:45	957884	2	100306	GXM3
1202054077	03/06/10 18:14	957884	2	100306	GXM3
1202054079	03/06/10 18:43	957884	2	100306	GXM3
CVH	03/06/10 19:12		1	100306	GXM3
CCB	03/06/10 19:41		1	100306	GXM3
1202048427	03/06/10 20:10	955448	1	100306	MAR1
1202048434	03/06/10 20:39	955448	1	100306	MAR1
247336001	03/06/10 21:08	955448	1	100306	MAR1
1202048428	03/06/10 21:36	955448	1	100306	MAR1
1202048430	03/06/10 22:05	955448	1	100306	MAR1
1202048432	03/06/10 22:34	955448	1	100306	MAR1
247336002	03/06/10 23:03	955448	1	100306	MAR1
247336003	03/06/10 23:32	955448	1	100306	MAR1

**16 WIC100306-02ICV**

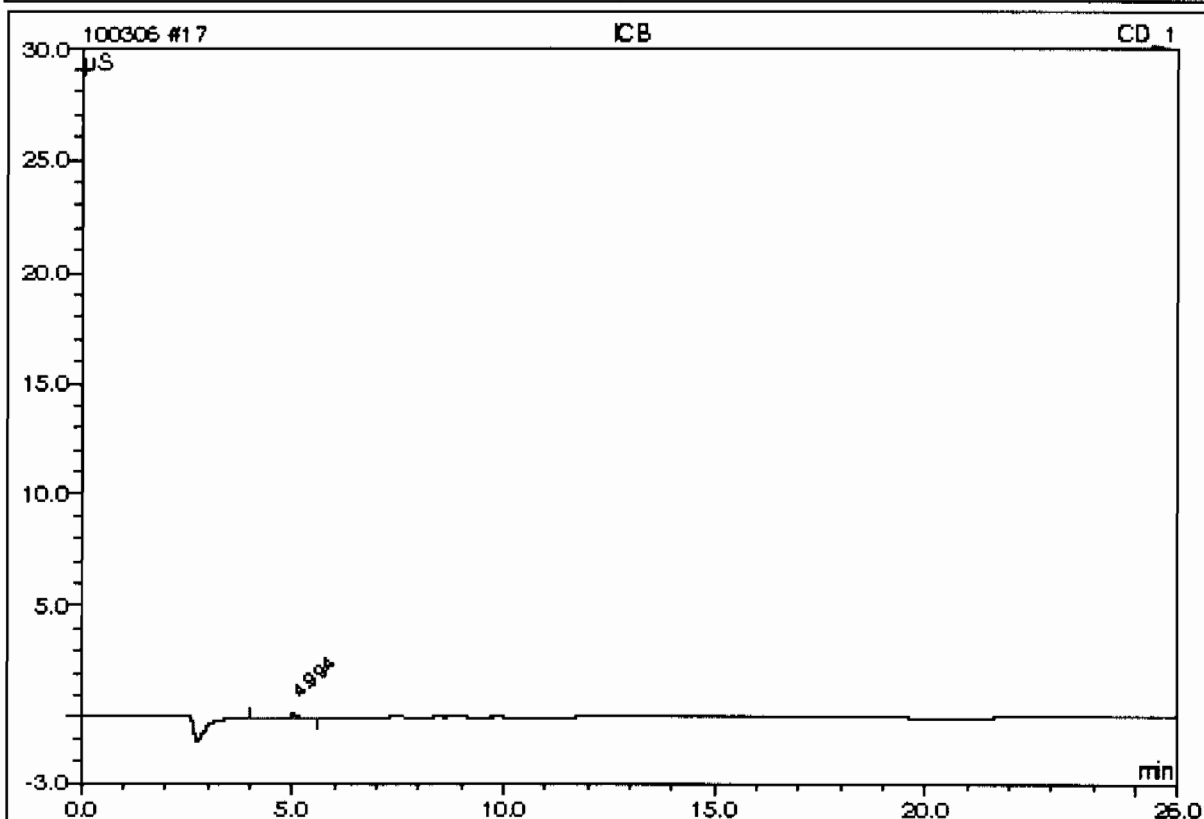
Sample Name:	WIC100306-02ICV	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 16:18	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	5.2090		2.96537	12.15
2	7.43	Chloride	n.a.	10.2406		4.31919	17.70
4	9.55	Nitrite-N	n.a.	5.1863		4.29577	17.60
5	11.02	Chlorate	n.a.	2.5947		0.37432	1.53
7	11.99	Bromide	n.a.	2.5507		0.39229	1.61
8	14.04	Nitrate-N	n.a.	5.1399		5.10842	20.93
10	20.61	O-Phosphate-P	n.a.	2.8430		0.76879	3.15
11	23.30	Sulfate	n.a.	20.9933		6.12696	25.10
Total:				54.7575	0.000	24.351	99.77

**17 ICB**

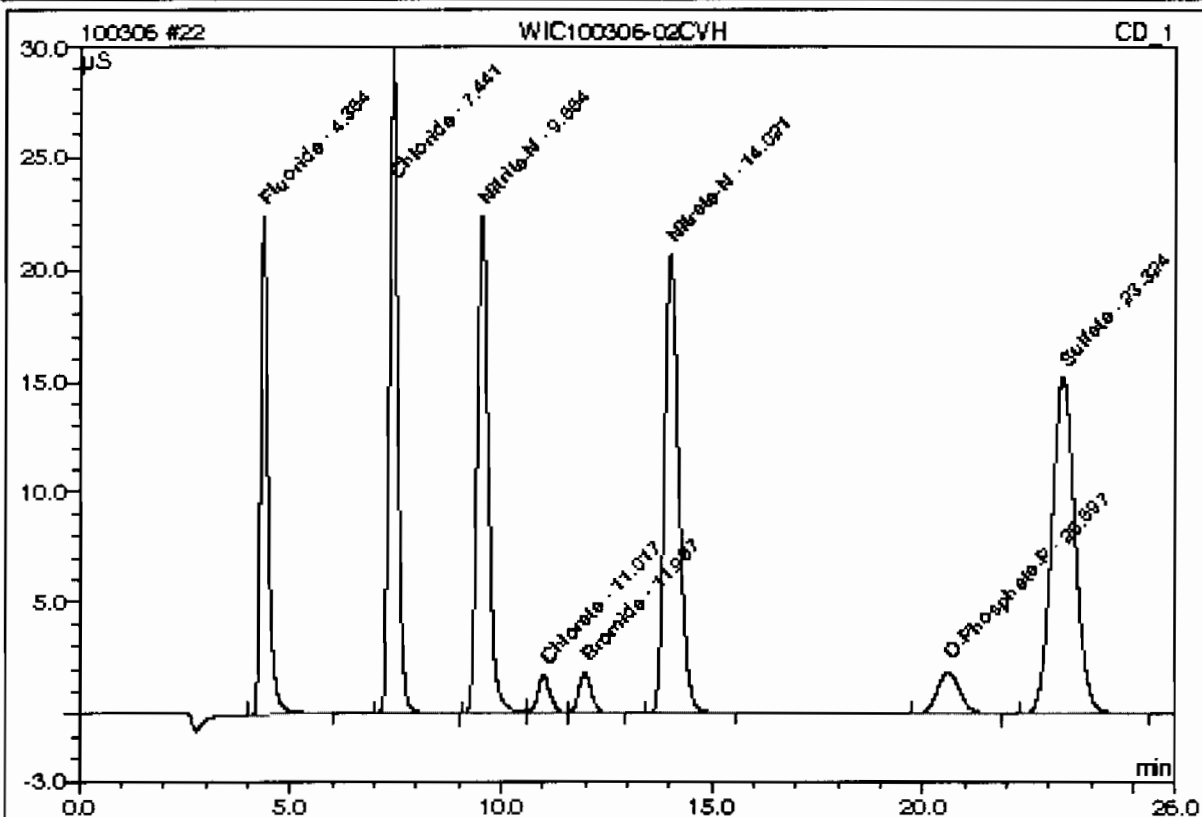
Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	4	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 16:47	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;0056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

**22 WIC100306-02CVH**

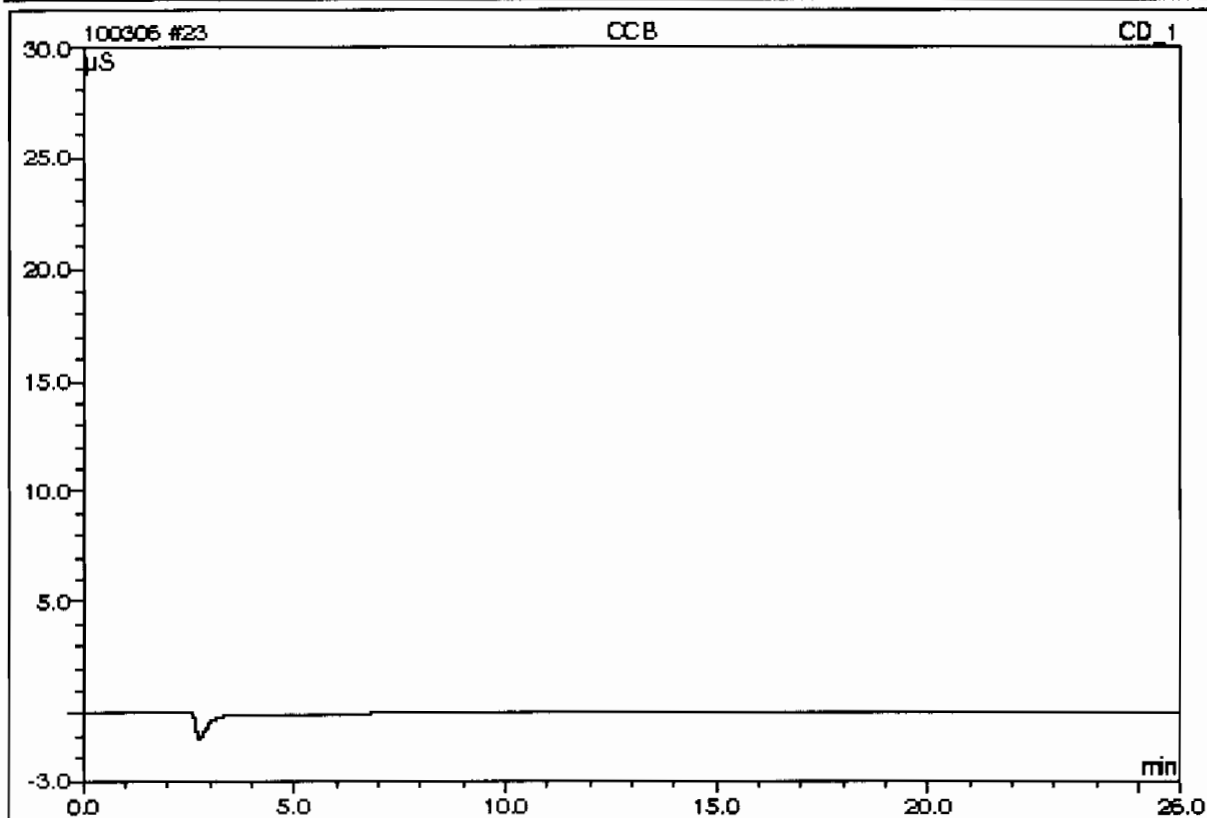
Sample Name:	WIC100306-02CVH	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 19:12	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	8.1568		4.66339	12.08
2	7.44	Chloride	n.a.	16.3534		6.94417	17.99
3	9.55	Nitrite-N	n.a.	8.2062		6.82828	17.69
4	11.02	Chlorate	n.a.	3.9565		0.57427	1.49
5	11.99	Bromide	n.a.	3.9972		0.61535	1.59
6	14.02	Nitrate-N	n.a.	8.1813		8.18518	21.20
7	20.60	O-Phosphate-P	n.a.	4.2403		1.16711	3.02
8	23.32	Sulfate	n.a.	32.8219		9.62653	24.94
Total:				85.9136	0.000	38.604	100.00

**23 CCB**

Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	10	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 19:41	Analyst:	GXM3
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056

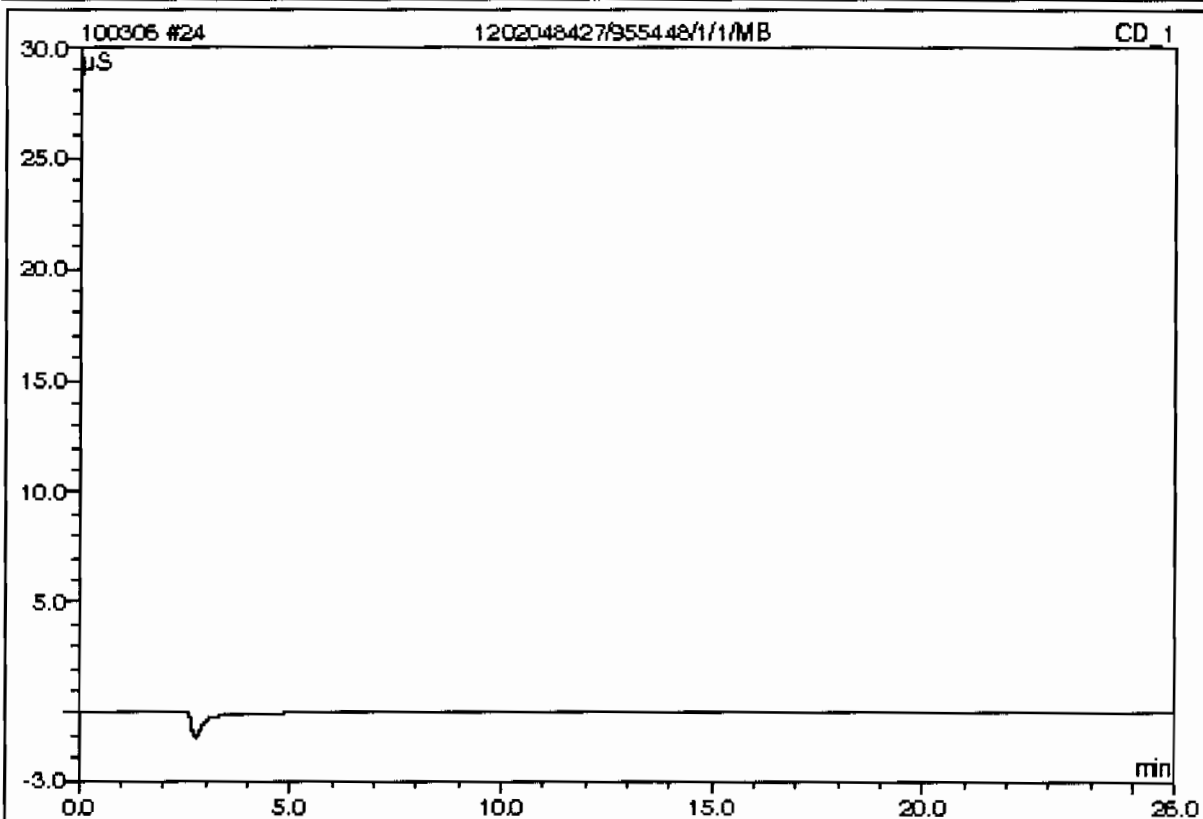


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00



**24 1202048427/955448/1/1/MB**

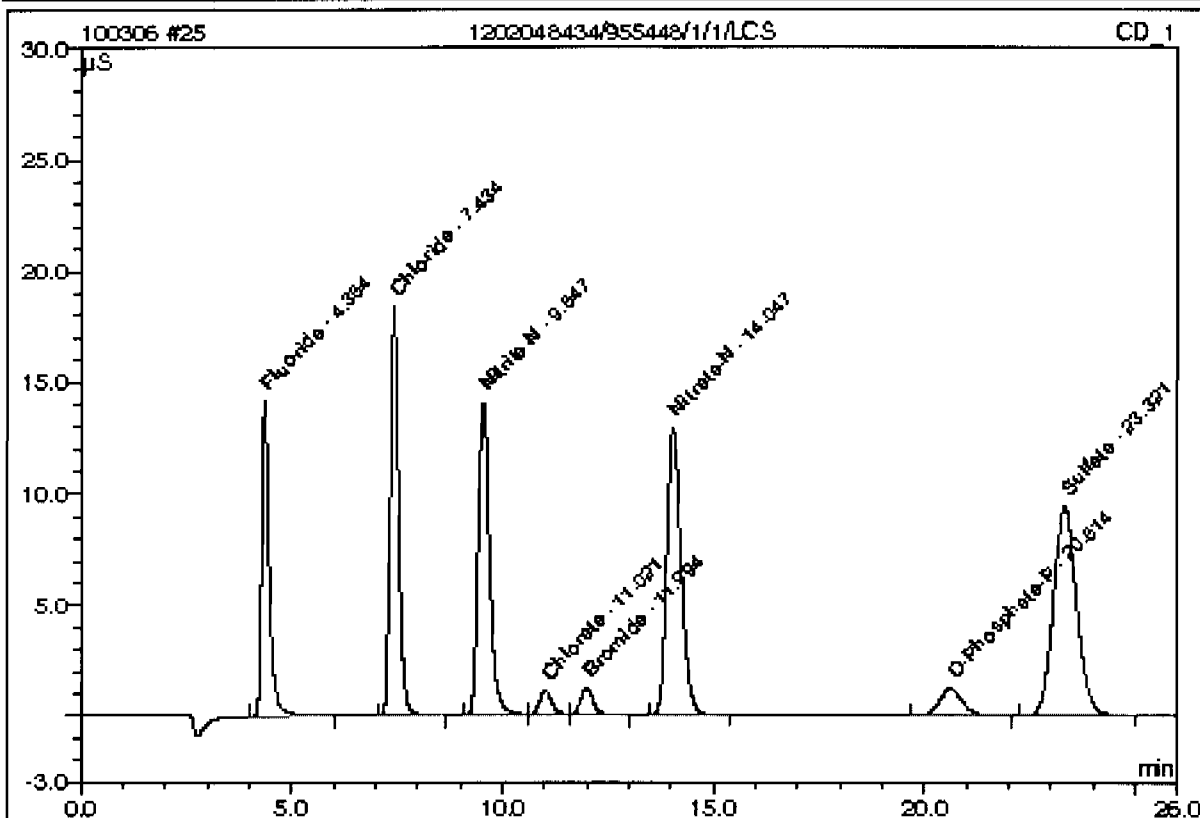
Sample Name:	1202048427/955448/1/1/MB	Injection Volume:	1.0
Vial Number:	11	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/8/2010 20:10	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

**25 1202048434/955448/1/1/LCS**

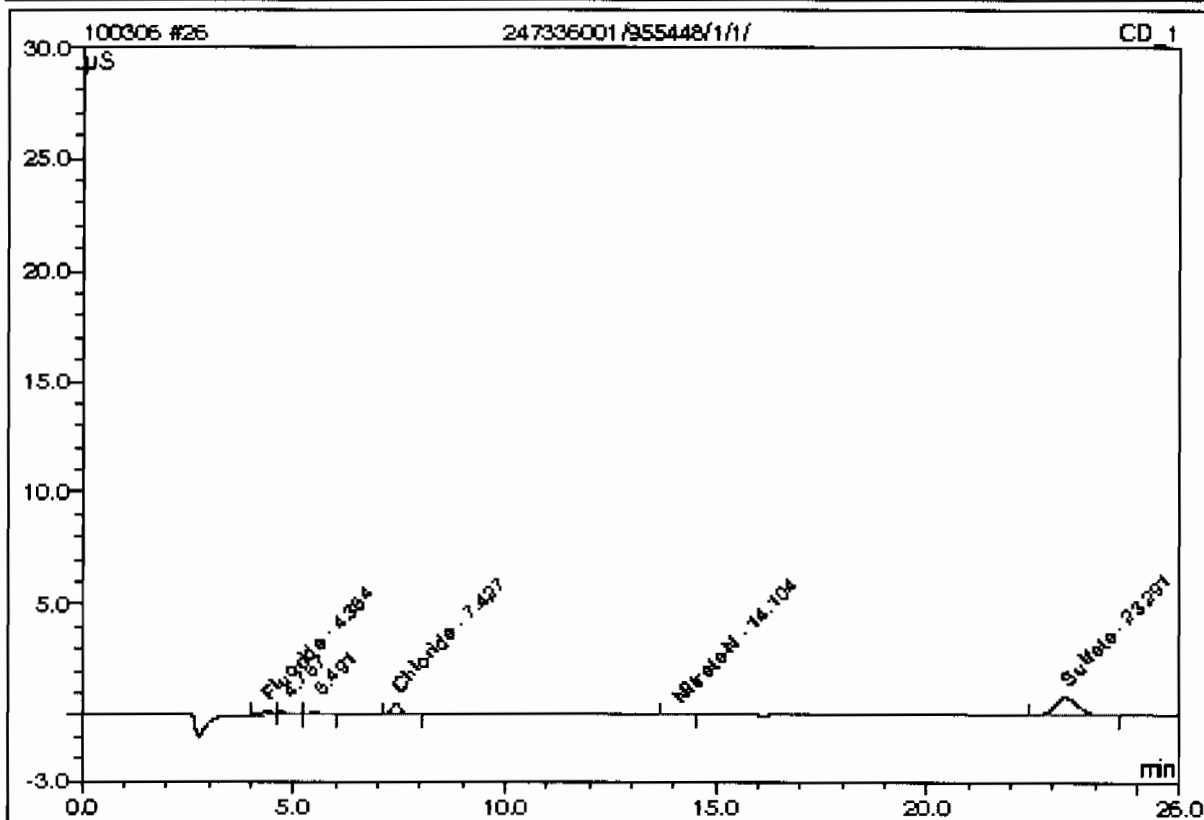
Sample Name:	1202048434/955448/1/1/LCS	Injection Volume:	1.0
Vial Number:	12	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 20:39	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	5.2119		2.96703	12.19
2	7.43	Chloride	n.a.	10.2298		4.31456	17.72
3	9.55	Nitrite-N	n.a.	5.2063		4.31253	17.71
4	11.02	Chlorate	n.a.	2.7028		0.39019	1.60
5	11.99	Bromide	n.a.	2.7379		0.42115	1.73
6	14.05	Nitrate-N	n.a.	5.1705		5.13936	21.11
7	20.61	O-Phosphate-P	n.a.	2.8426		0.76667	3.16
8	23.32	Sulfate	n.a.	20.6770		6.03340	24.78
Total:				54.7788	0.000	24.347	100.00

**26 247336001/955448/1/1/**

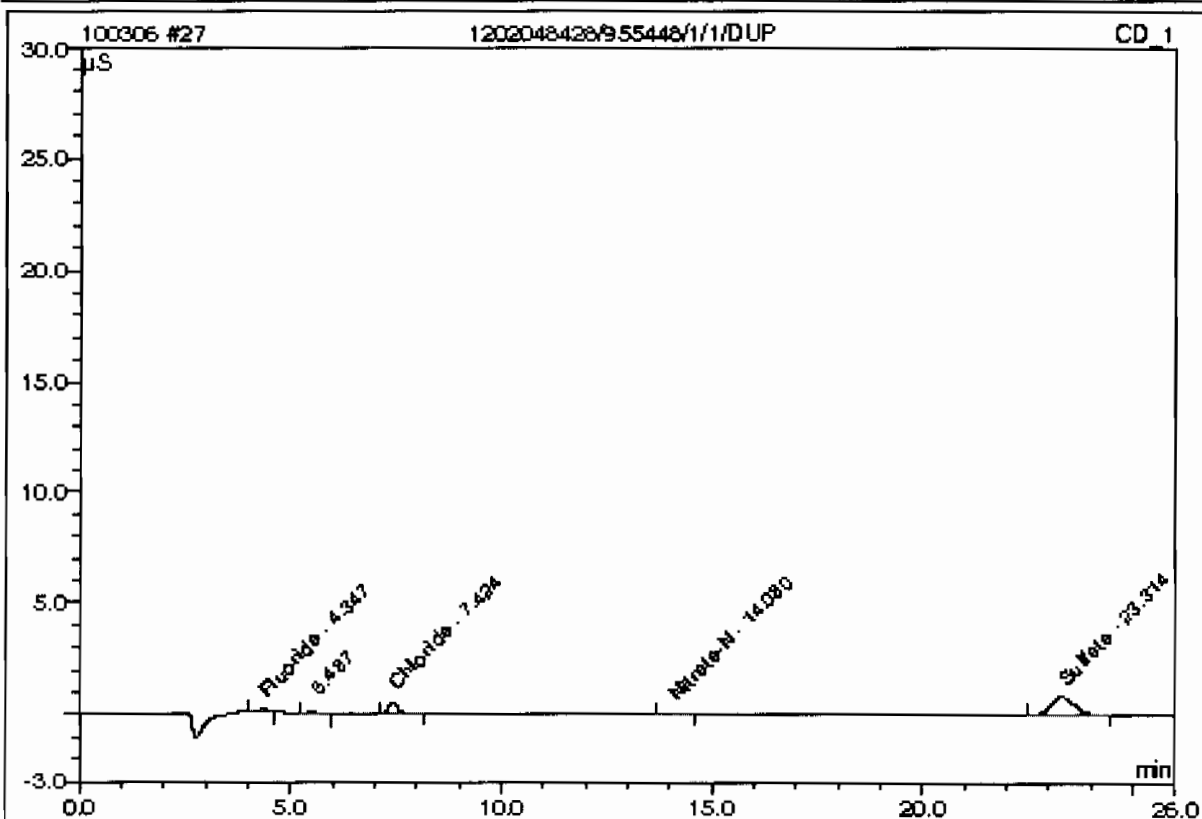
Sample Name:	247336001/955448/1/1/	Injection Volume:	1.0
Vial Number:	13	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 21:08	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.1468		0.04933	5.86
4	7.43	Chloride	n.a.	0.5019		0.13717	16.30
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
5	14.10	Nitrate-N	n.a.	0.1092		0.01919	2.28
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
6	23.29	Sulfate	n.a.	2.1550		0.55358	65.78
Total:				2.9129	0.000	0.759	90.22

**27 1202048428/955448/1/1/DUP**

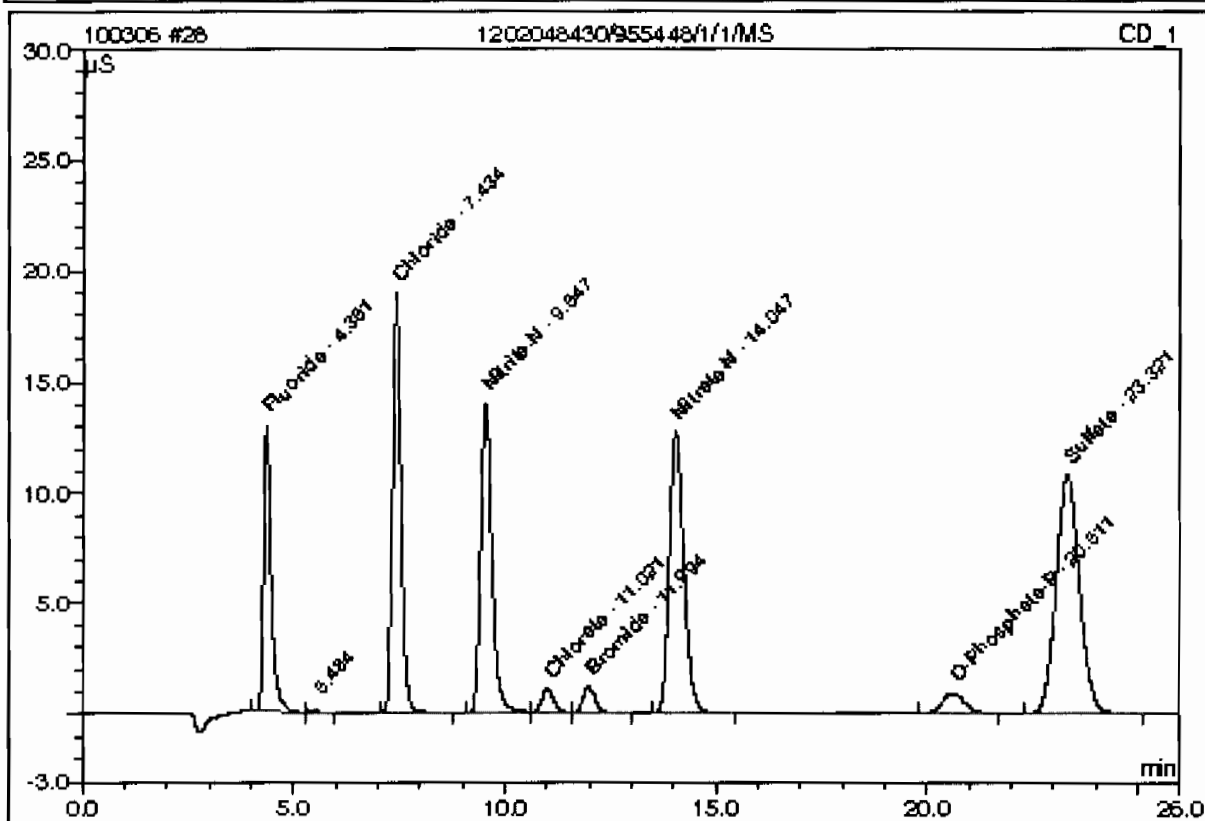
Sample Name:	1202048428/955448/1/1/DUP	Injection Volume:	1.0
Vial Number:	14	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 21:36	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.35	Fluoride	n.a.	0.1217		0.03487	4.51
3	7.42	Chloride	n.a.	0.5079		0.13978	18.07
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.08	Nitrate-N	n.a.	0.1085		0.01847	2.39
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	23.31	Sulfate	n.a.	2.0935		0.53536	69.19
Total:				2.8316	0.000	0.728	94.15

**28 1202048430/955448/1/1/MS**

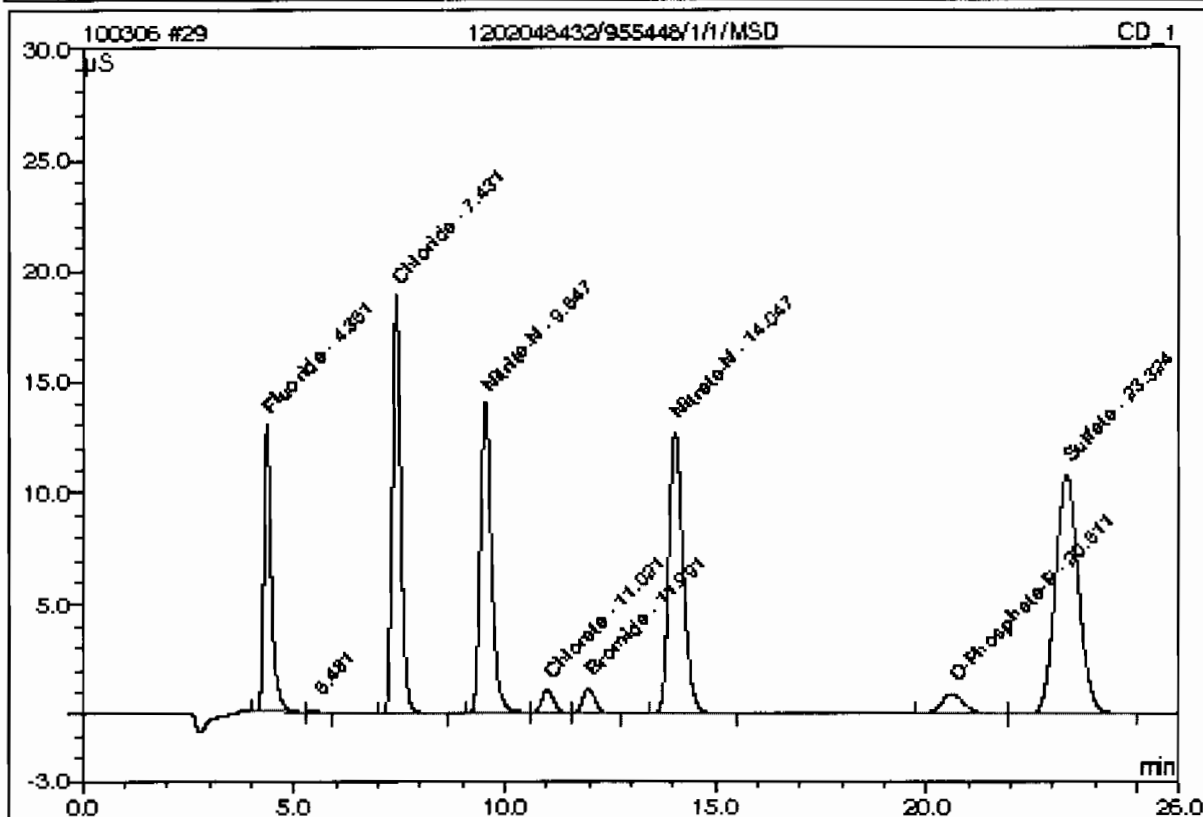
Sample Name:	1202048430/955448/1/1/MS	Injection Volume:	1.0
Vial Number:	15	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 22:05	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	4.7289		2.68883	10.84
3	7.43	Chloride	n.a.	10.5093		4.43460	17.88
4	9.55	Nitrate-N	n.a.	5.1925		4.30090	17.34
5	11.02	Chloride	n.a.	2.6077		0.37623	1.52
6	11.99	Bromide	n.a.	2.6458		0.40696	1.64
7	14.05	Nitrate-N	n.a.	5.1126		5.08077	20.48
8	20.61	O-Phosphate-P	n.a.	2.1386		0.56799	2.29
9	23.32	Sulfate	n.a.	23.6597		6.91583	27.88
Total:				56.5951	0.000	24.772	99.86

**29 1202048432/955448/1/1/MSD**

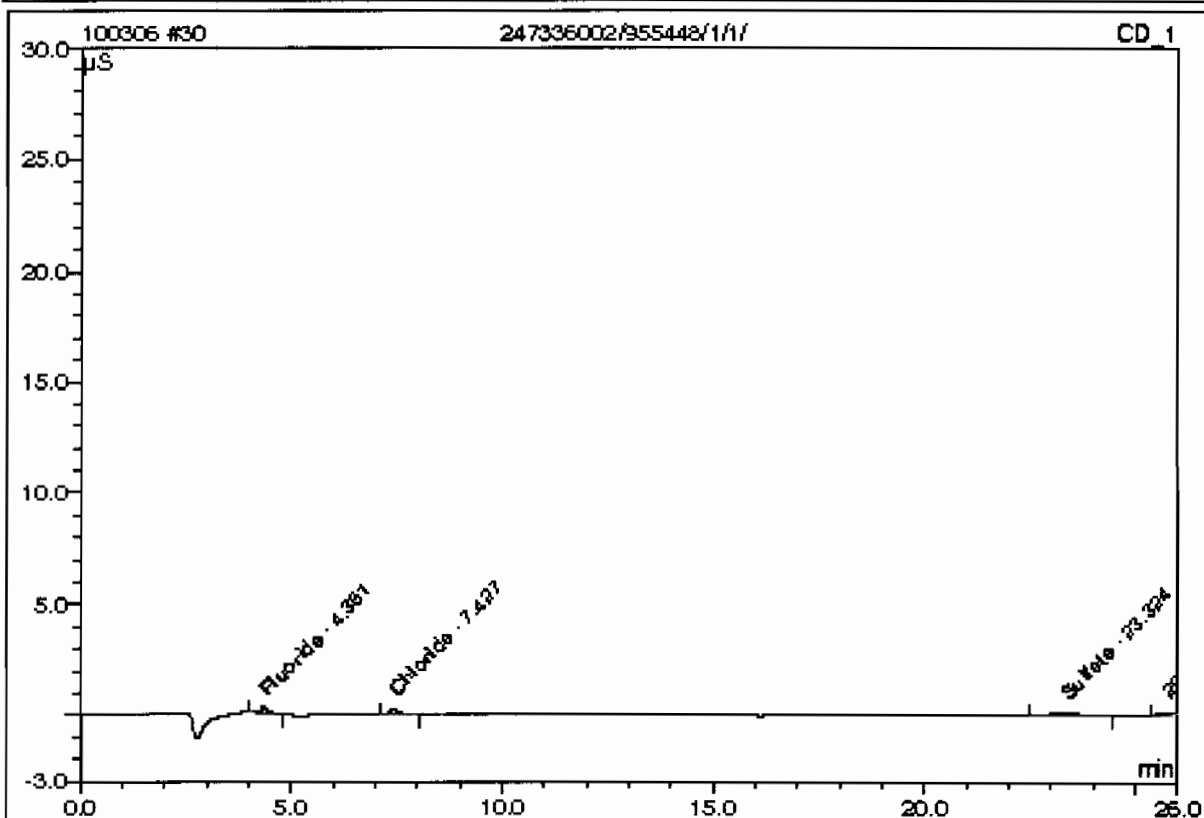
Sample Name:	1202048432/955448/1/1/MSD	Injection Volume:	1.0
Vial Number:	16	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 22:34	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	4.7102		2.67804	10.82
3	7.43	Chloride	n.a.	10.4697		4.41759	17.84
4	9.55	Nitrite-N	n.a.	5.1828		4.29277	17.34
5	11.02	Chlorate	n.a.	2.6340		0.38009	1.54
6	11.99	Bromide	n.a.	2.6147		0.40216	1.62
7	14.05	Nitrate-N	n.a.	5.1117		5.07985	20.52
8	20.61	O-Phosphate-P	n.a.	2.1954		0.58418	2.36
9	23.32	Sulfate	n.a.	23.5804		6.89237	27.84
Total:				56.4989	0.000	24.727	99.87

**30 247336002/955448/1/1/**

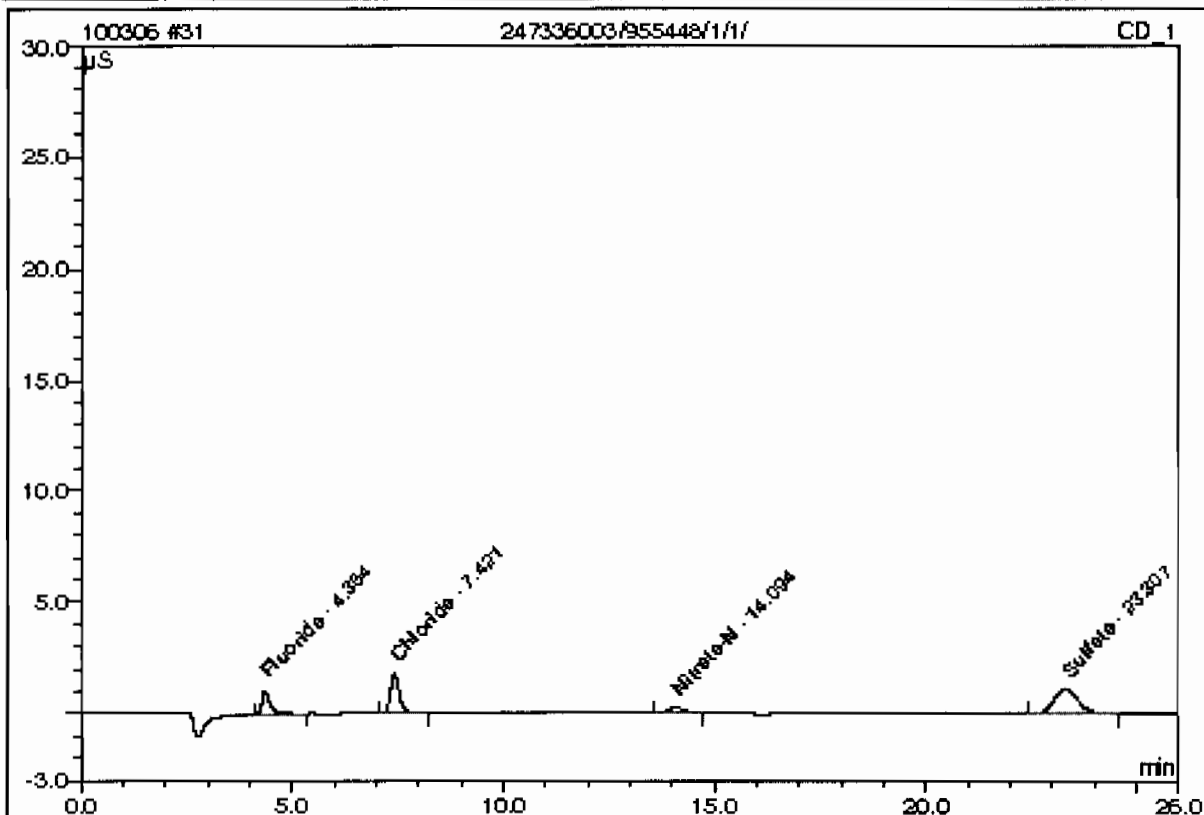
Sample Name:	247336002/955448/1/1/	Injection Volume:	1.0
Vial Number:	17	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 23:03	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.1707		0.06310	18.71
2	7.43	Chloride	n.a.	0.3793		0.08454	25.08
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	23.32	Sulfate	n.a.	0.8010		0.15299	45.38
Total:				1.3510	0.000	0.301	89.17

**31 247336003/955448/1/1/**

Sample Name:	247336003/955448/1/1/	Injection Volume:	1.0
Vial Number:	18	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/6/2010 23:32	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	0.4874		0.24551	15.83
2	7.42	Chloride	n.a.	1.2084		0.44058	28.41
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.09	Nitrate-N	n.a.	0.2025		0.11359	7.33
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.31	Sulfate	n.a.	2.8224		0.75103	48.43
Total:				4.7207	0.000	1.551	100.00

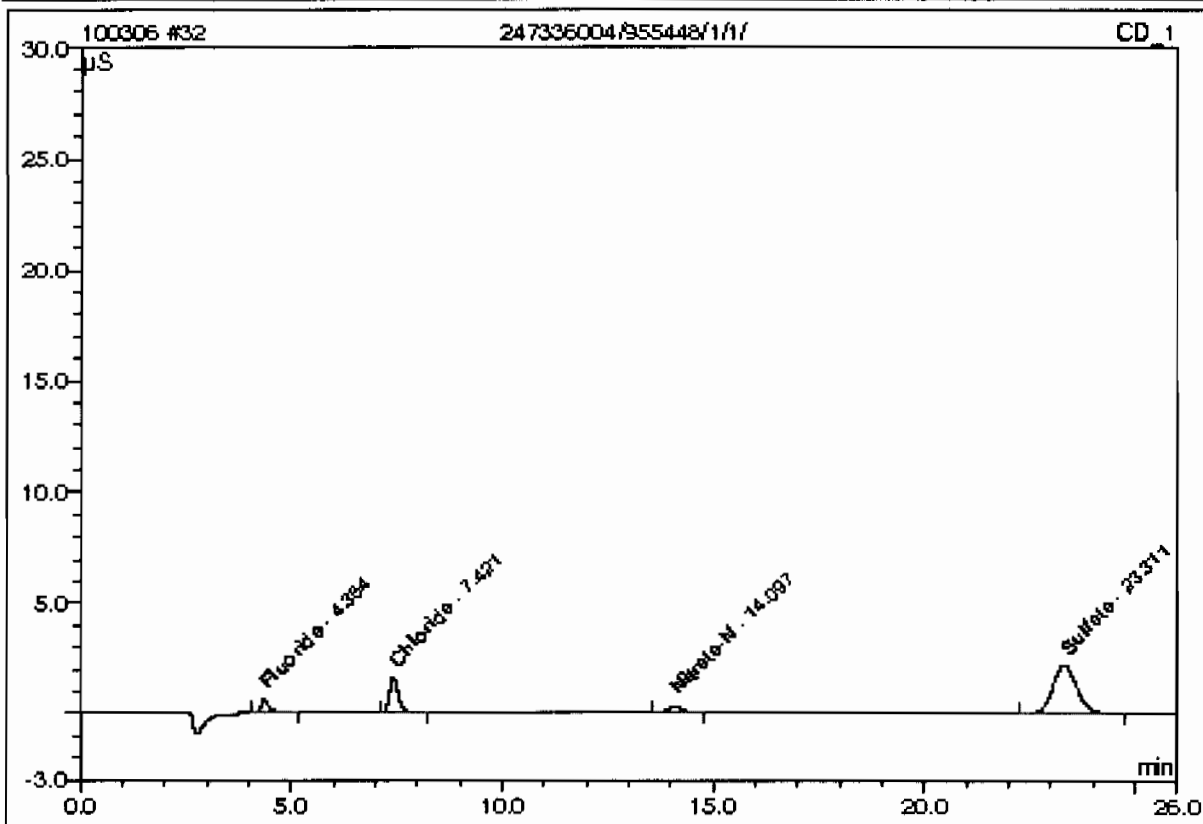


This is runlog for Sequence 100306.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
247336004	03/07/10 00:01	955448	1	100306	MAR1
247336005	03/07/10 00:30	955448	1	100306	MAR1
CCV	03/07/10 00:59		1	100306	MAR1
CCB	03/07/10 01:28		1	100306	MAR1
247336006	03/07/10 01:57	955448	1	100306	MAR1
247336007	03/07/10 02:26	955448	1	100306	MAR1
247359001	03/07/10 02:55	955448	1	100306	MAR1
247359002	03/07/10 03:23	955448	1	100306	MAR1
247359003	03/07/10 03:52	955448	1	100306	MAR1
247359004	03/07/10 04:21	955448	1	100306	MAR1
1202048429	03/07/10 04:50	955448	1	100306	MAR1
1202048431	03/07/10 05:19	955448	1	100306	MAR1
1202048433	03/07/10 05:48	955448	1	100306	MAR1
CVH	03/07/10 06:17		1	100306	MAR1
CCB	03/07/10 06:46		1	100306	MAR1
E	03/07/10 07:15		1	100306	MAR1
E	03/07/10 07:44		1	100306	MAR1
E	03/07/10 08:13		1	100306	MAR1
BLK	03/07/10 08:41		1	100306	MAR1
BLK	03/07/10 09:10		1	100306	MAR1

**32 247336004/955448/1/1/**

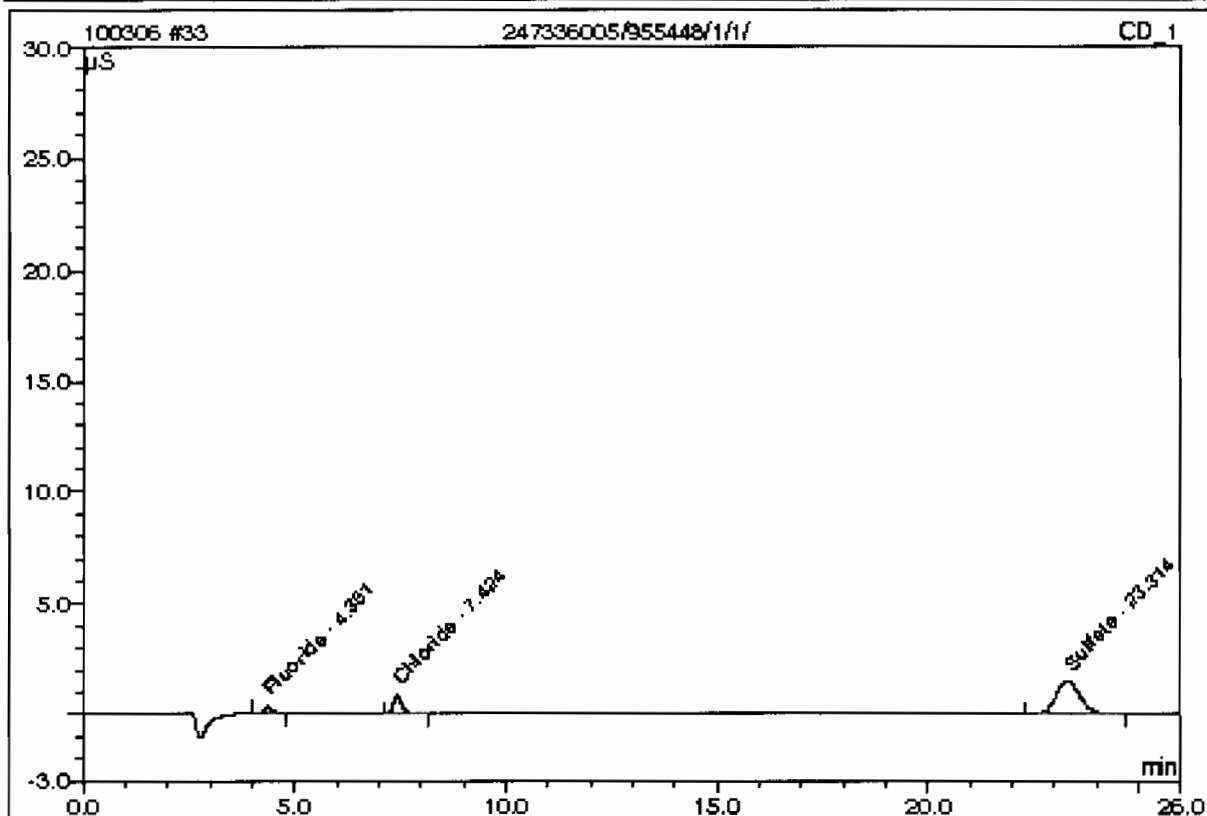
Sample Name:	247336004/955448/1/1/	Injection Volume:	1.0
Vial Number:	19	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 0:01	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.3106		0.14370	6.83
2	7.42	Chloride	n.a.	1.0994		0.39377	18.73
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.10	Nitrate-N	n.a.	0.2104		0.12156	5.78
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.31	Sulfate	n.a.	5.1634		1.44362	68.66
Total:				6.7838	0.000	2.103	100.00

**33 247336005/955448/1/1/**

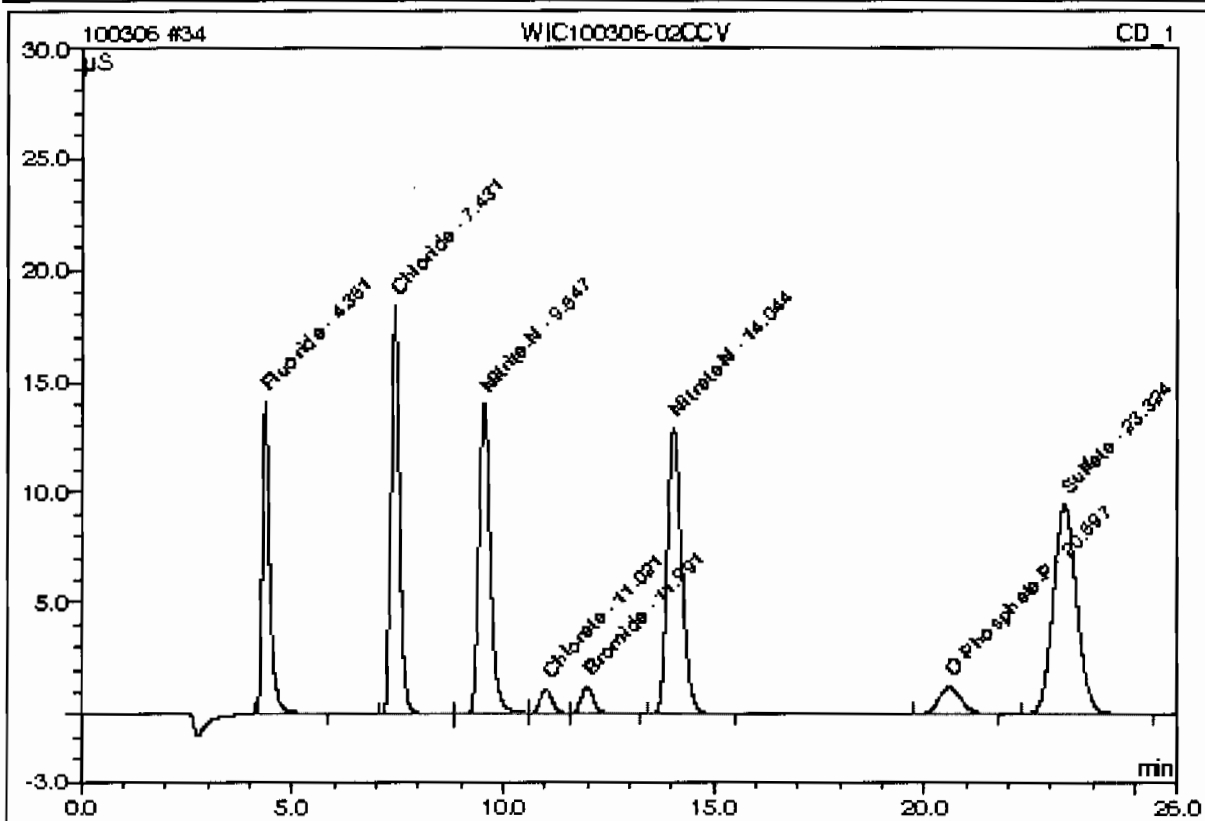
Sample Name:	247336005/955448/1/1/	Injection Volume:	1.0
Vial Number:	20	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 0:30	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.1763		0.06633	5.27
2	7.42	Chloride	n.a.	0.6651		0.20726	16.46
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	23.31	Sulfate	n.a.	3.6155		0.98566	78.27
Total:				4.4569	0.000	1.259	100.00

**34 WIC100306-02CCV**

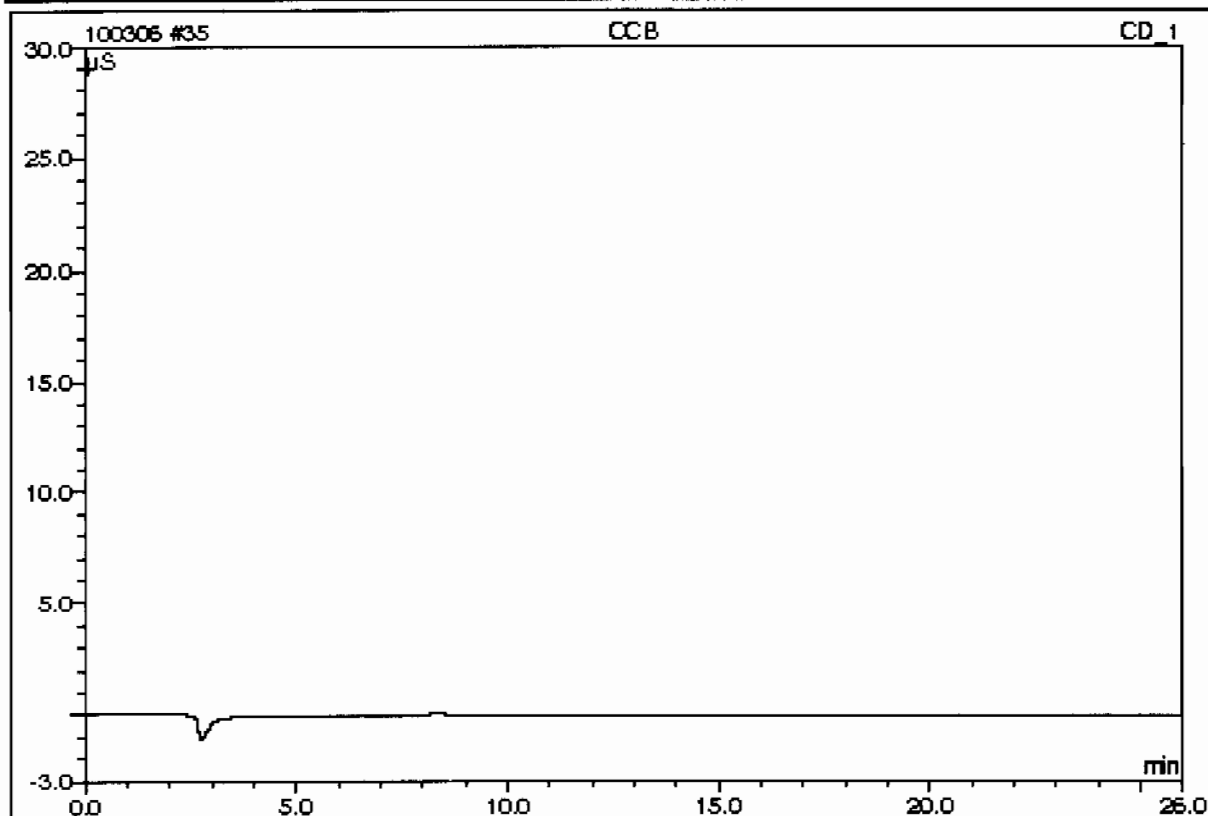
Sample Name:	WIC100306-02CCV	Injection Volume:	1.0
Vial Number:	21	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 0:59	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	5.1287		2.91908	12.00
2	7.43	Chloride	n.a.	10.2192		4.31001	17.71
3	9.55	Nitrite-N	n.a.	5.2264		4.32932	17.79
4	11.02	Chlorate	n.a.	2.7303		0.39423	1.62
5	11.99	Bromide	n.a.	2.7887		0.42899	1.76
6	14.04	Nitrate-N	n.a.	5.1735		5.14241	21.14
7	20.60	O-Phosphate-P	n.a.	2.8515		0.77121	3.17
8	23.32	Sulfate	n.a.	20.6824		6.03498	24.60
Total:				54.8006	0.000	24.330	100.00

**35 CCB**

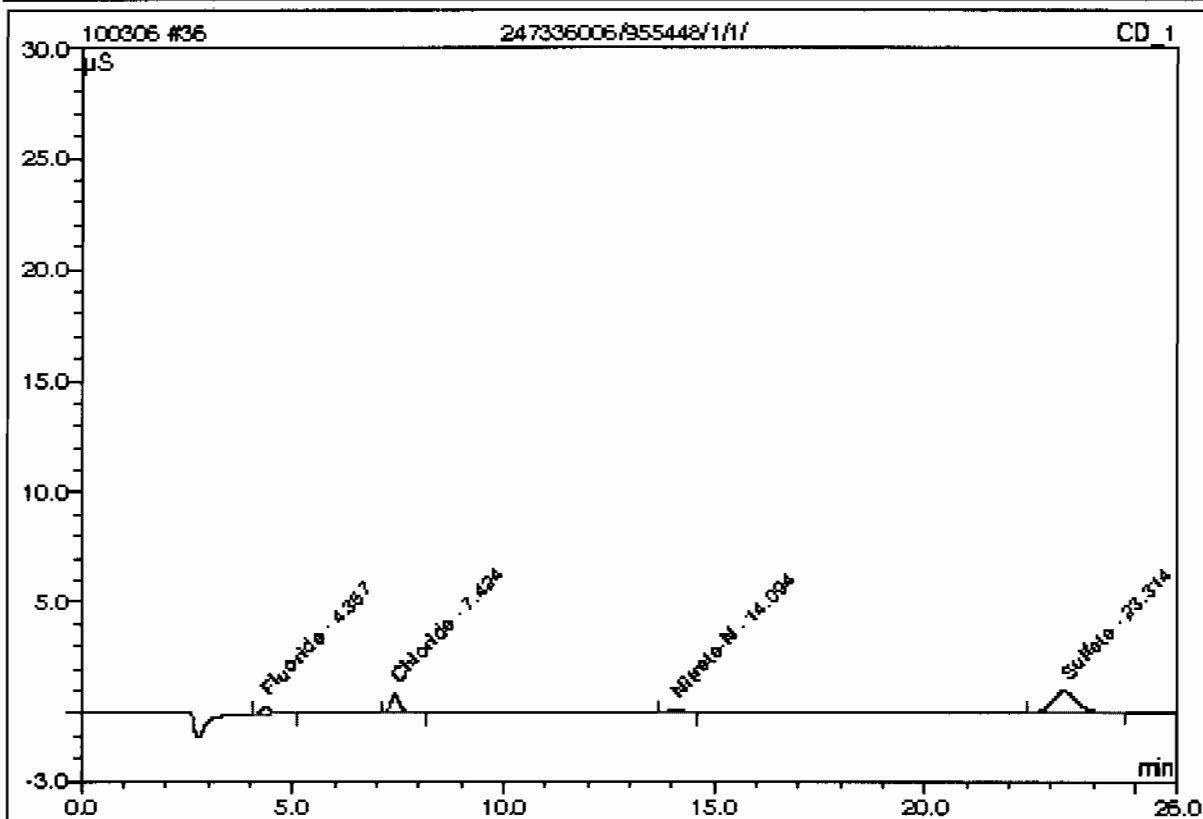
Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	22	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 1:28	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	<u>n.a.</u>	n.a.
Total:				0.0000	0.000	0.000	0.00

**36 247336006/955448/1/1/**

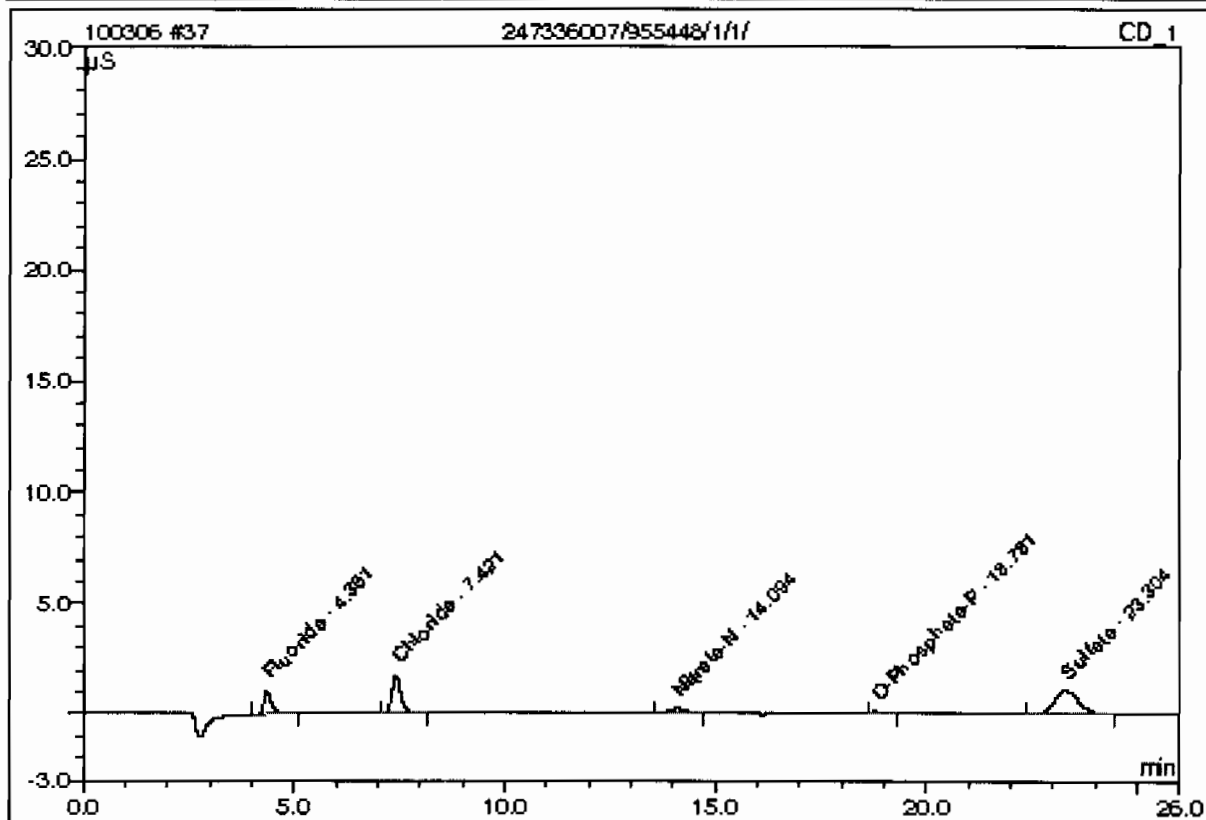
Sample Name:	247336006/955448/1/1/	Injection Volume:	1.0
Vial Number:	23	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 1:57	Analys:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;0056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.37	Fluoride	n.a.	0.1890		0.07364	7.53
2	7.42	Chloride	n.a.	0.6612		0.20558	21.02
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.09	Nitrate-N	n.a.	0.1494		0.05988	6.12
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.31	Sulfate	n.a.	2.4441		0.63910	65.33
Total:				3.4437	0.000	0.978	100.00

**37 247336007/955448/1/1/**

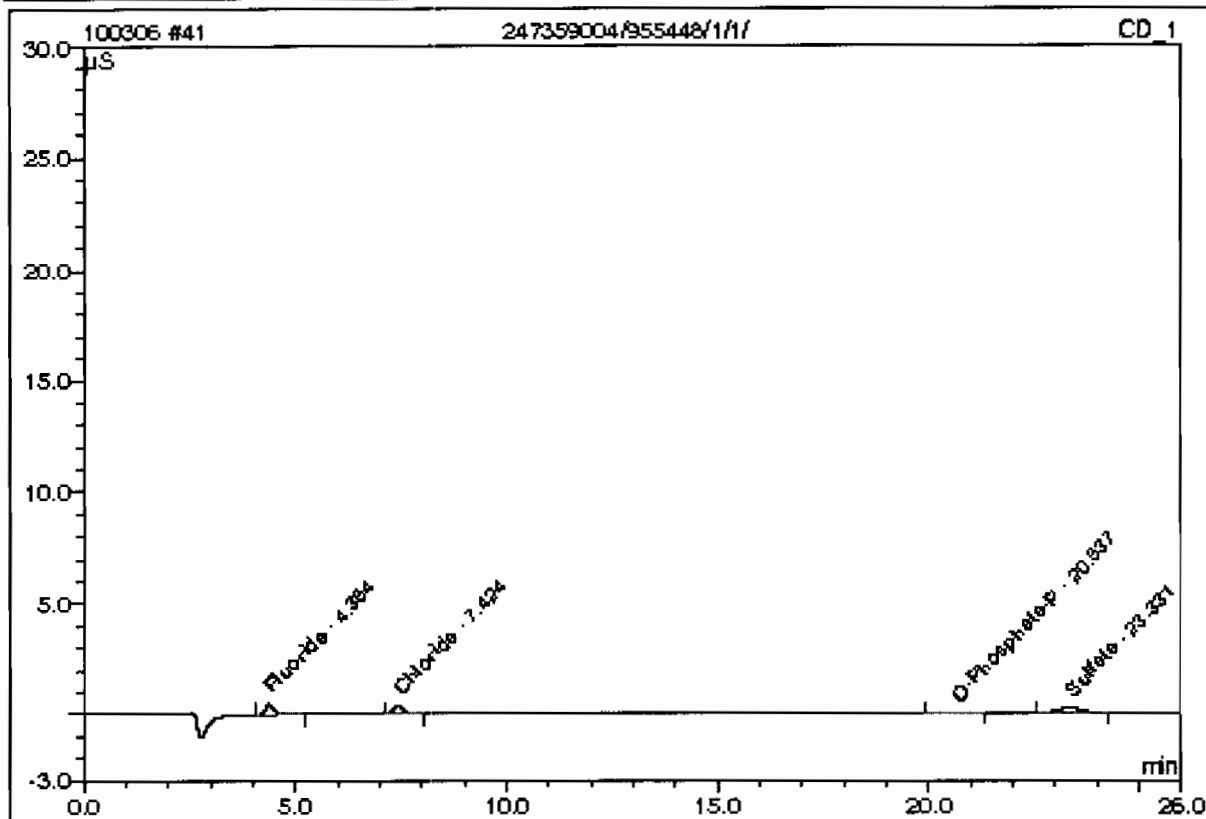
Sample Name:	247336007/955448/1/1/	Injection Volume:	1.0
Vial Number:	24	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 2:26	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.38	Fluoride	n.a.	0.4613		0.23051	15.46
2	7.42	Chloride	n.a.	1.1898		0.43258	29.01
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.09	Nitrate-N	n.a.	0.1841		0.09499	6.37
4	18.78	O-Phosphate-P	n.a.	0.2061		0.01710	1.15
5	23.30	Sulfate	n.a.	2.7041		0.71601	48.02
Total:				4.7453	0.000	1.491	100.00

**41 247359004/955448/1/1/**

Sample Name:	247359004/955448/1/1/	Injection Volume:	1.0
Vial Number:	28	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 4:21	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;8056

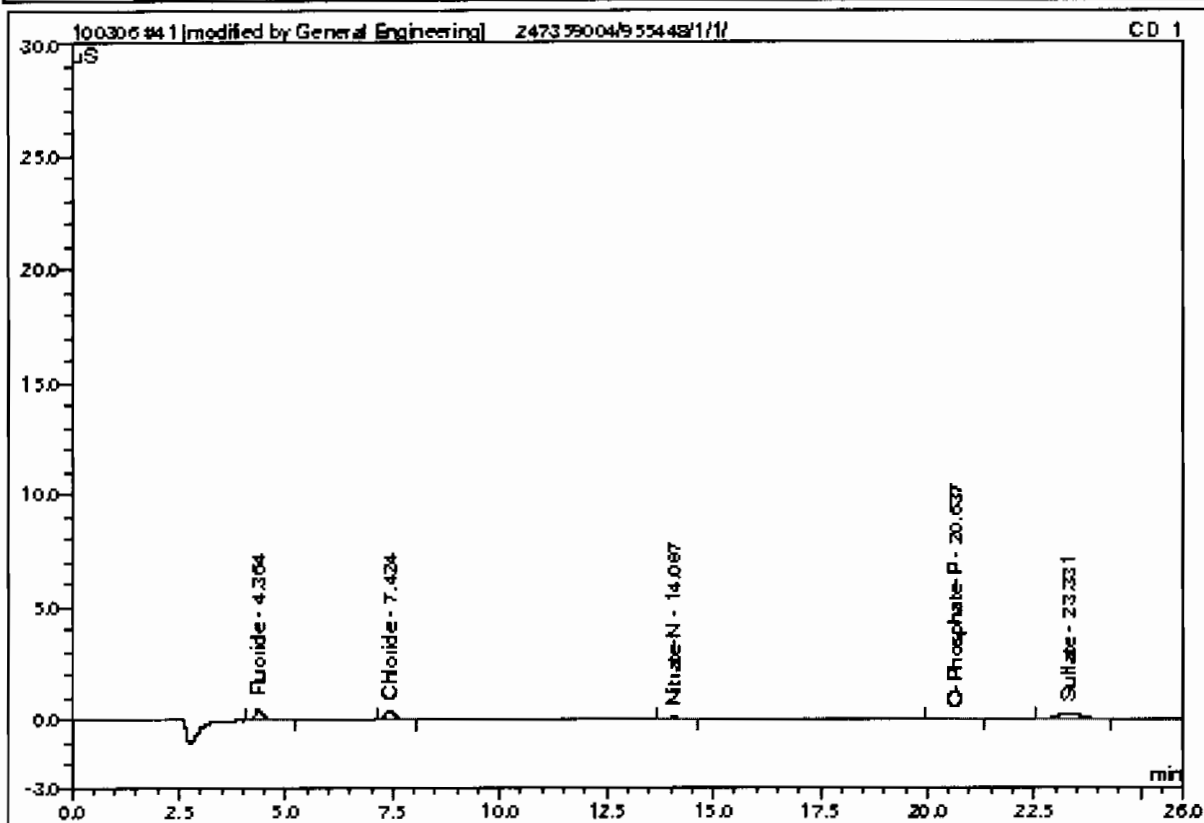


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2587		0.11379	27.29
2	7.42	Chloride	n.a.	0.4109		0.09812	23.53
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	20.64	O-Phosphate-P	n.a.	0.2488		0.02928	7.02
4	23.33	Sulfate	n.a.	0.8781		0.17579	42.16
Total:				1.7965	0.000	0.417	100.00



**41 247359004/955448/1/1/**

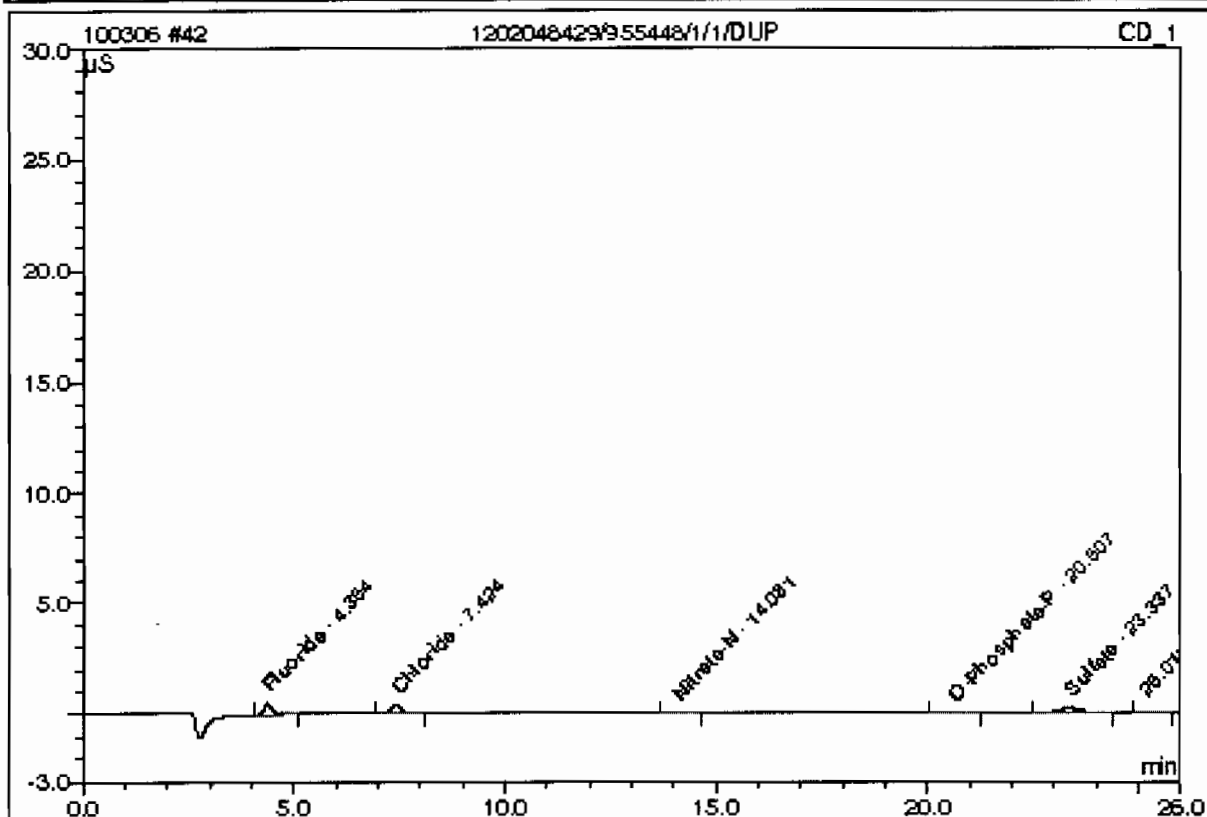
Sample Name:	247359004/955448/1/1/	Injection Volume:	1.0
Vial Number:	28	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 4:21	Analys:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2587		0.11379	25.46
2	7.42	Chloride	n.a.	0.4109		0.09812	21.95
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.10	Nitrate-N	n.a.	0.1198		0.02995	6.70
4	20.64	O-Phosphate-P	n.a.	0.2488		0.02928	6.55
5	23.33	Sulfate	n.a.	0.8781		0.17579	39.33
Total:				1.9164	0.000	0.447	100.00

**42 1202048429/955448/1/1/DUP**

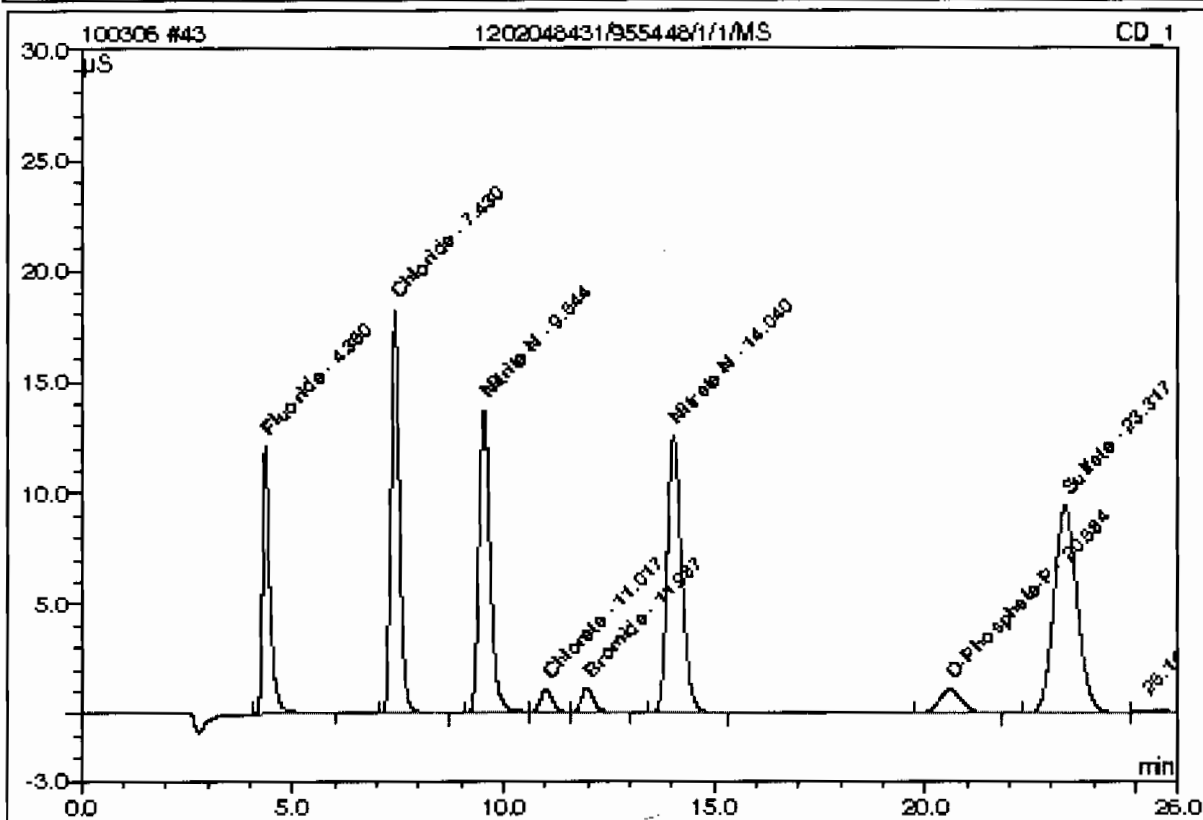
Sample Name:	1202048429/955448/1/1/DUP	Injection Volume:	1.0
Vial Number:	29	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 4:50	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	0.2574		0.11301	24.47
2	7.42	Chloride	n.a.	0.4150		0.09989	21.63
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.08	Nitrate-N	n.a.	0.1170		0.02711	5.87
4	20.61	O-Phosphate-P	n.a.	0.2311		0.02423	5.25
5	23.34	Sulfate	n.a.	0.8776		0.17564	38.03
Total:				1.8981	0.000	0.440	95.25

**43 1202048431/955448/1/1/MS**

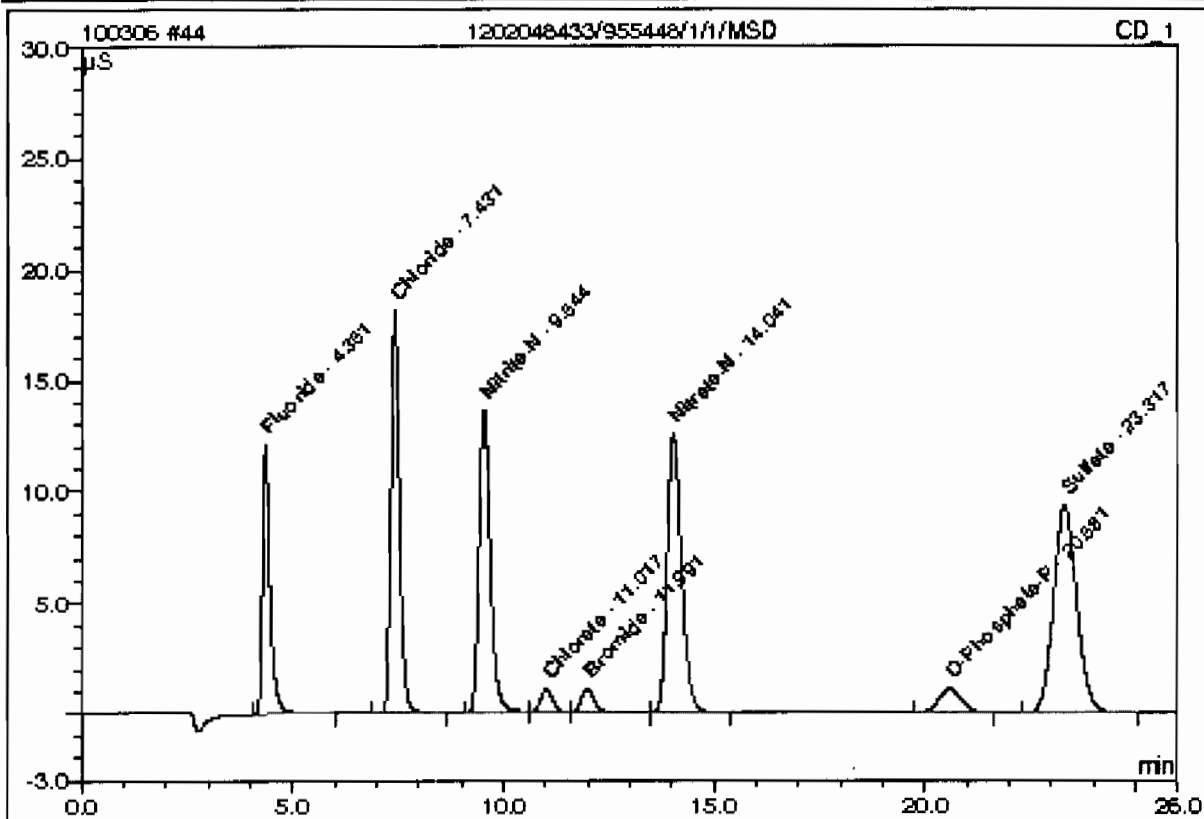
Sample Name:	1202048431/955448/1/1/MS	Injection Volume:	1.0
Vial Number:	30	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 5:19	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	4.5305		2.57451	10.89
2	7.43	Chloride	n.a.	10.1758		4.29137	18.15
3	9.54	Nitrite-N	n.a.	5.0992		4.22268	17.86
4	11.02	Chlorate	n.a.	2.6199		0.37802	1.60
5	11.99	Bromide	n.a.	2.6241		0.40360	1.71
6	14.04	Nitrate-N	n.a.	5.0268		4.99397	21.12
7	20.58	O-Phosphate-P	n.a.	2.5563		0.68705	2.91
8	23.32	Sulfate	n.a.	20.6111		6.01388	25.44
Total:				53.2435	0.000	23.565	99.68

**44 1202048433/955448/1/1/MSD**

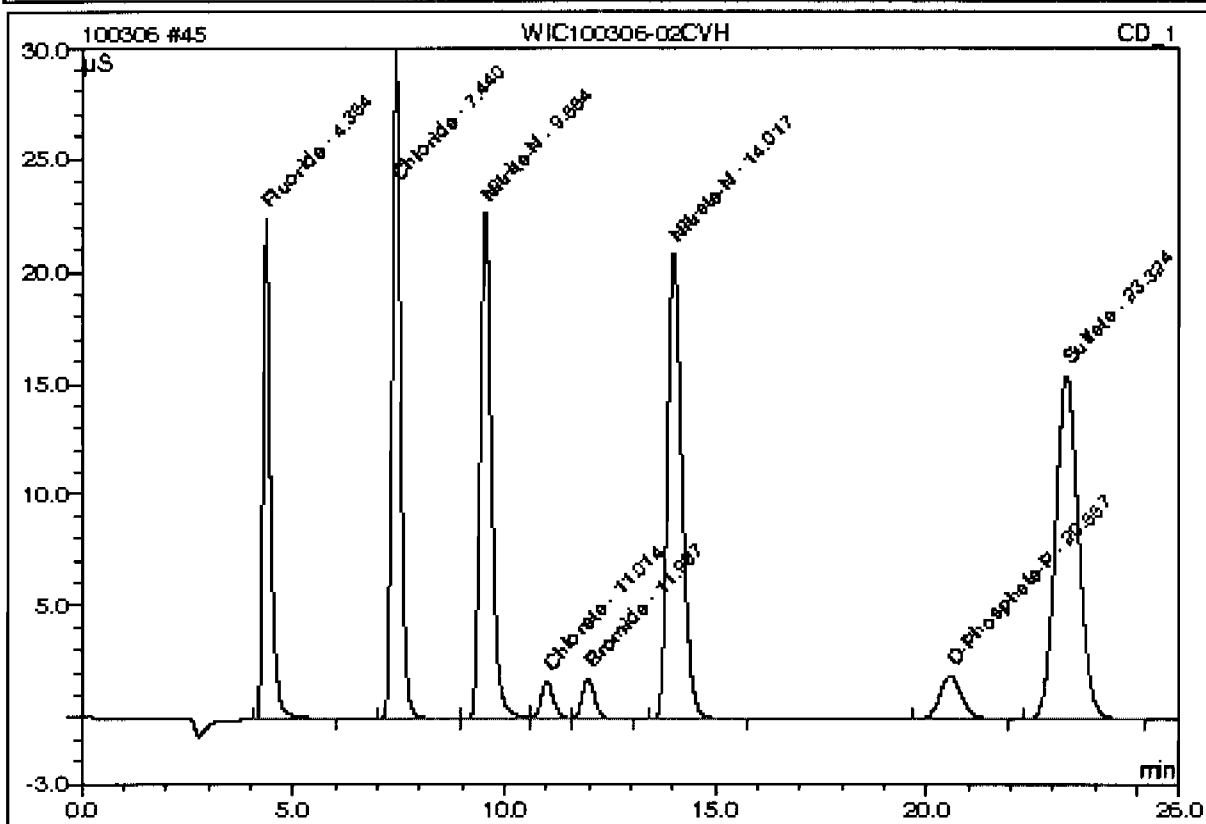
Sample Name:	1202048433/955448/1/1/MSD	Injection Volume:	1.0
Vial Number:	31	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 5:48	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.36	Fluoride	n.a.	4.4954		2.55427	10.89
2	7.43	Chloride	n.a.	10.1451		4.27820	18.23
3	9.54	Nitrite-N	n.a.	5.0816		4.20796	17.93
4	11.02	Chlorate	n.a.	2.5874		0.37325	1.59
5	11.99	Bromide	n.a.	2.7375		0.42109	1.79
6	14.04	Nitrate-N	n.a.	5.0067		4.97364	21.20
7	20.58	O-Phosphate-P	n.a.	2.5594		0.68796	2.93
8	23.32	Sulfate	n.a.	20.4504		5.96634	25.43
Total:				53.0635	0.000	23.463	100.00

**45 WIC100306-02CVH**

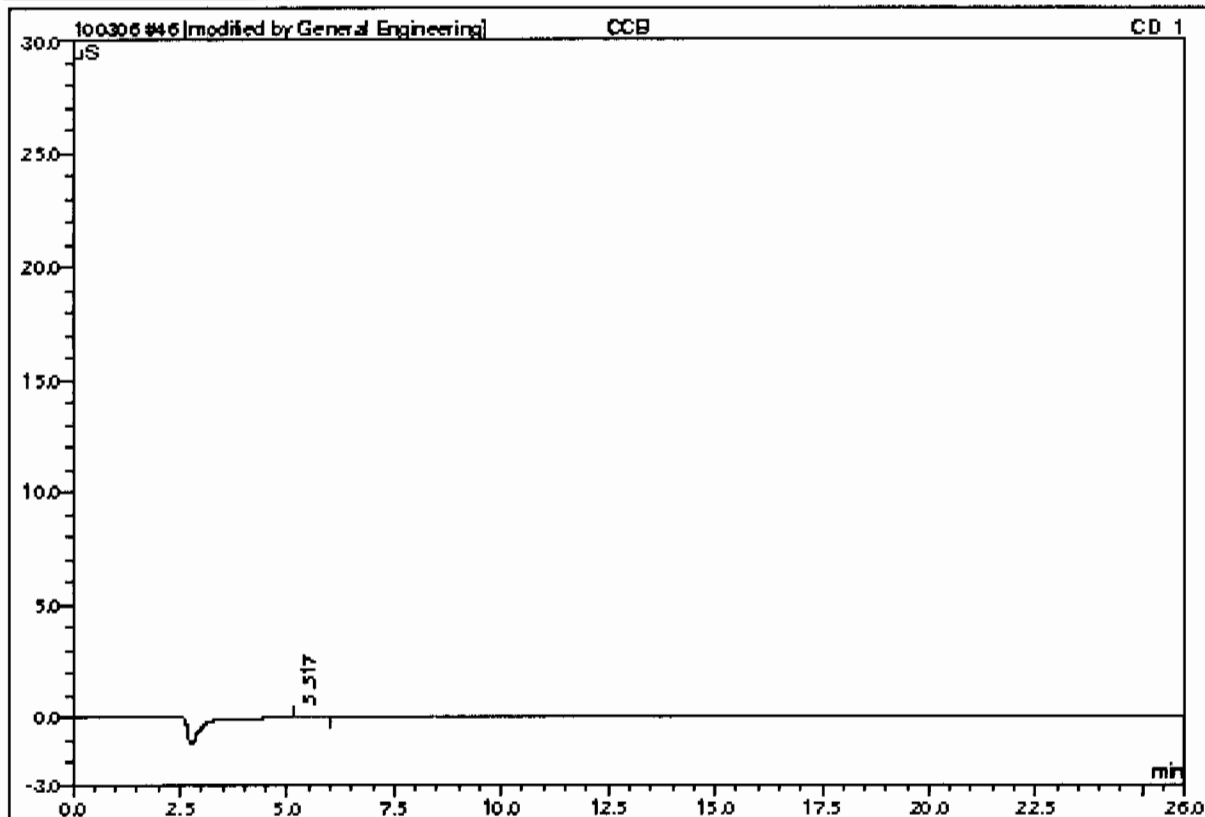
Sample Name:	WIC100306-02CVH	Injection Volume:	1.0
Vial Number:	32	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 6:17	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	8.2448		4.71412	12.00
2	7.44	Chloride	n.a.	16.6299		7.06293	17.98
3	9.55	Nitrate-N	n.a.	8.3728		6.96795	17.73
4	11.01	Chlorate	n.a.	4.1078		0.59650	1.52
5	11.99	Bromide	n.a.	4.1127		0.63318	1.61
6	14.02	Nitrate-N	n.a.	8.3311		8.33673	21.22
7	20.56	O-Phosphate-P	n.a.	4.3829		1.20775	3.07
8	23.32	Sulfate	n.a.	33.3112		9.77128	24.87
Total:				87.4933	0.000	39.290	100.00

**46 CCB**

Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	33	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 6:46	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



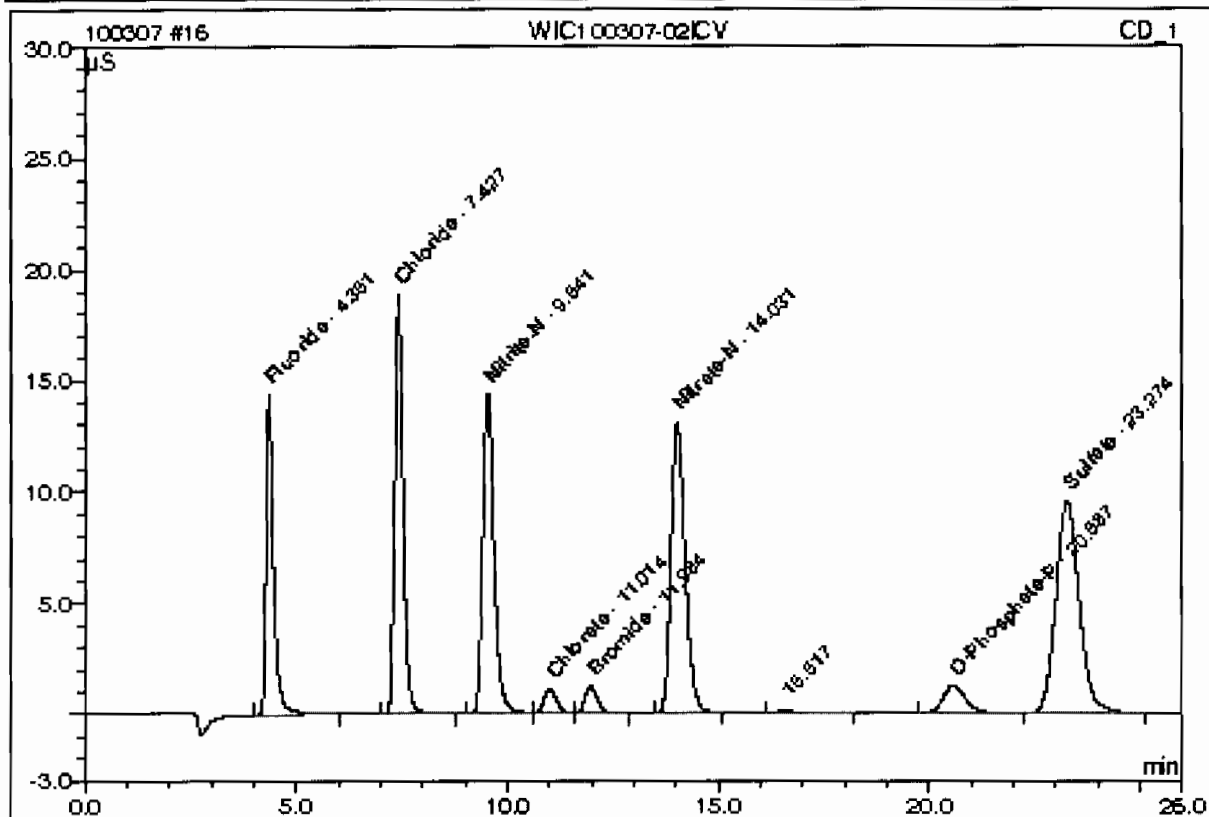
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 100307.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	03/07/10 10:58		1	100307	MAR1
BLK	03/07/10 11:26		1	100307	MAR1
ICV	03/07/10 11:55		1	100307	MAR1
ICB	03/07/10 12:24		1	100307	MAR1
247336006	03/07/10 12:53	955448	1	100307	MAR1
247336007	03/07/10 13:22	955448	1	100307	MAR1
247359001	03/07/10 13:51	955448	1	100307	MAR1
247359002	03/07/10 14:20	955448	1	100307	MAR1
247359003	03/07/10 14:49	955448	1	100307	MAR1
247359004	03/07/10 15:18	955448	1	100307	MAR1
1202048429	03/07/10 15:47	955448	1	100307	MAR1
1202048431	03/07/10 16:16	955448	1	100307	MAR1
1202048433	03/07/10 16:44	955448	1	100307	MAR1
CVH	03/07/10 17:13		1	100307	MAR1
CCB	03/07/10 17:42		1	100307	MAR1
1202061736	03/07/10 18:11	961199	1	100307	MAR1
1202061743	03/07/10 18:40	961199	1	100307	MAR1
247781001	03/07/10 19:09	961199	1	100307	MAR1
1202061737	03/07/10 19:38	961199	1	100307	MAR1
1202061739	03/07/10 20:07	961199	1	100307	MAR1
1202061741	03/07/10 20:36	961199	1	100307	MAR1
247781002	03/07/10 21:05	961199	1	100307	MAR1
247781003	03/07/10 21:34	961199	1	100307	MAR1
247781004	03/07/10 22:02	961199	1	100307	MAR1
247781005	03/07/10 22:31	961199	1	100307	MAR1
CCV	03/07/10 23:00		1	100307	MAR1
CCB	03/07/10 23:29		1	100307	MAR1
247781006	03/07/10 23:58	961199	1	100307	MAR1

**16 WIC100307-02ICV**

Sample Name:	WIC100307-02ICV	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 11:55	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056

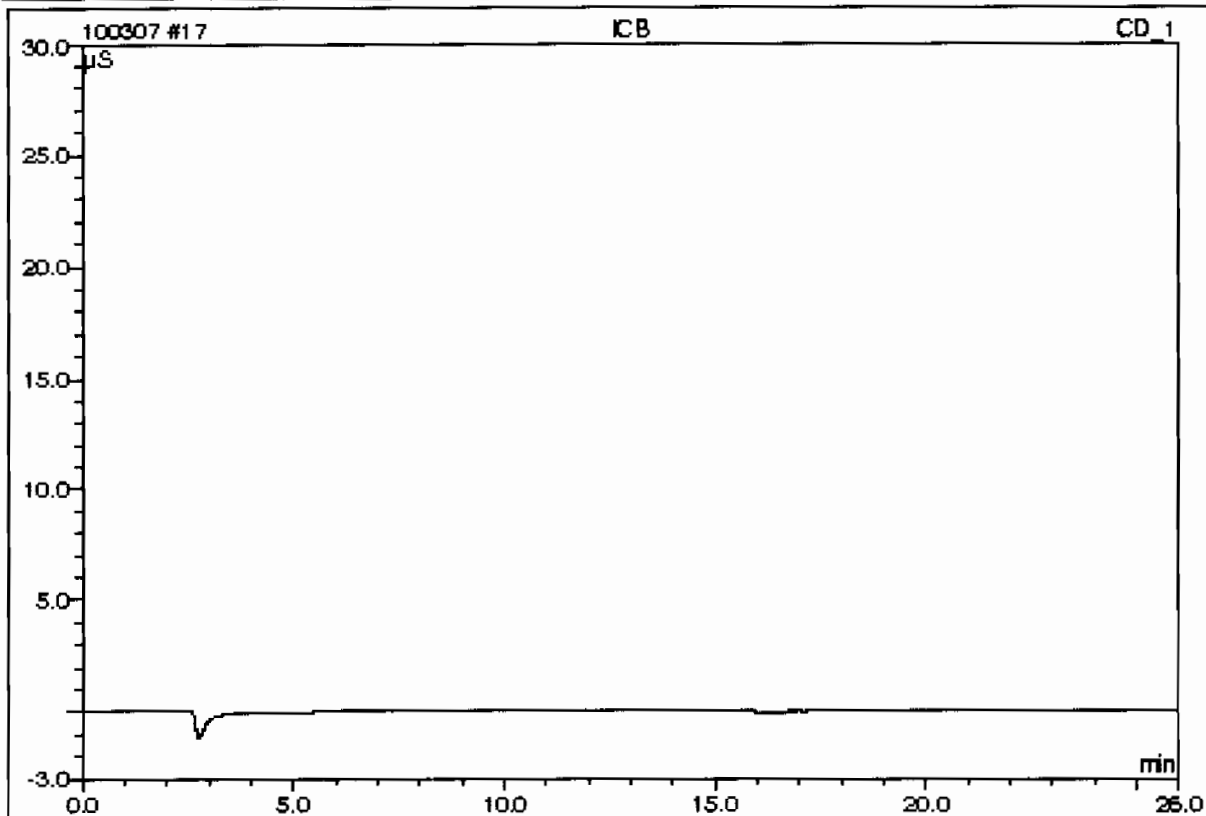


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	5.1937		2.95653	12.04
2	7.43	Chloride	n.a.	10.2904		4.34057	17.68
3	9.54	Nitrite-N	n.a.	5.2499		4.34908	17.72
4	11.01	Chlorate	n.a.	2.6911		0.38847	1.58
5	11.98	Bromide	n.a.	2.7061		0.41625	1.70
6	14.03	Nitrate-N	n.a.	5.1275		5.09582	20.76
8	20.59	O-Phosphate-P	n.a.	2.9287		0.79321	3.23
9	23.27	Sulfate	n.a.	20.9471		6.11330	24.90
Total:				55.1344	0.000	24.453	99.61



**17 ICB**

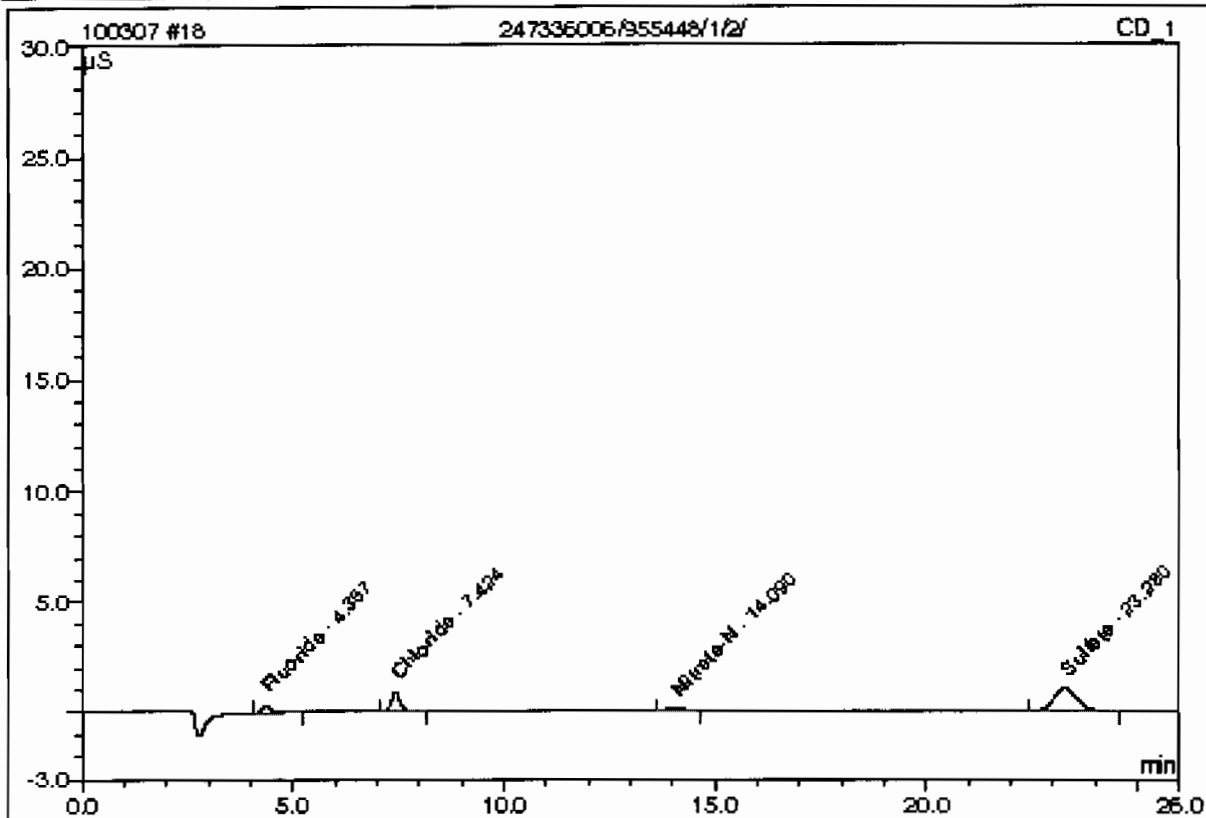
Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	4	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 12:24	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;8056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

**18 247336006/955448/1/2/**

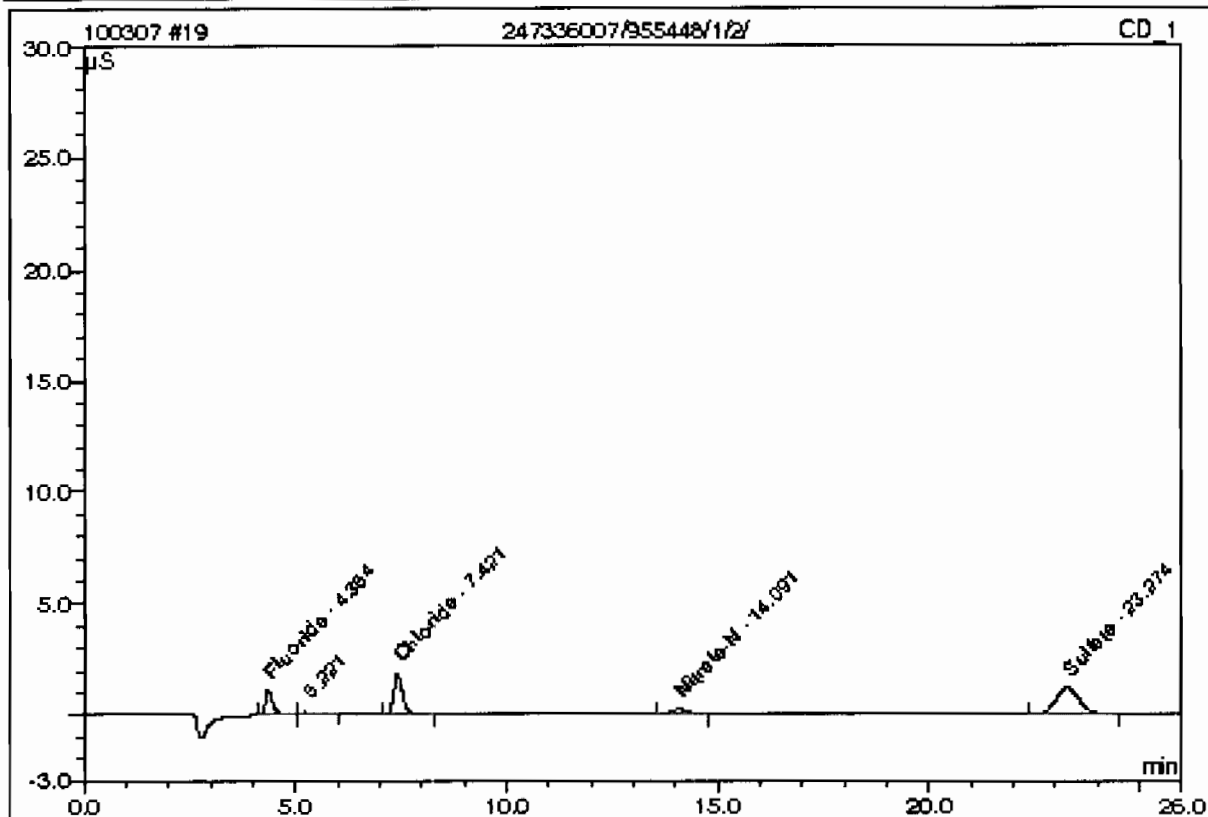
Sample Name:	247336006/955448/1/2/	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 12:53	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel.Area %
1	4.37	Fluoride	n.a.	0.2131		0.09750	7.93
2	7.42	Chloride	n.a.	0.7108		0.22667	20.56
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.09	Nitrate-N	n.a.	0.1572		0.06779	6.14
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	23.28	Sulfate	n.a.	2.7213		0.72113	65.36
Total:				3.8024	0.000	1.103	100.00

**19 247336007/955448/1/2/**

Sample Name:	247336007/955448/1/2/	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 13:22	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;0056



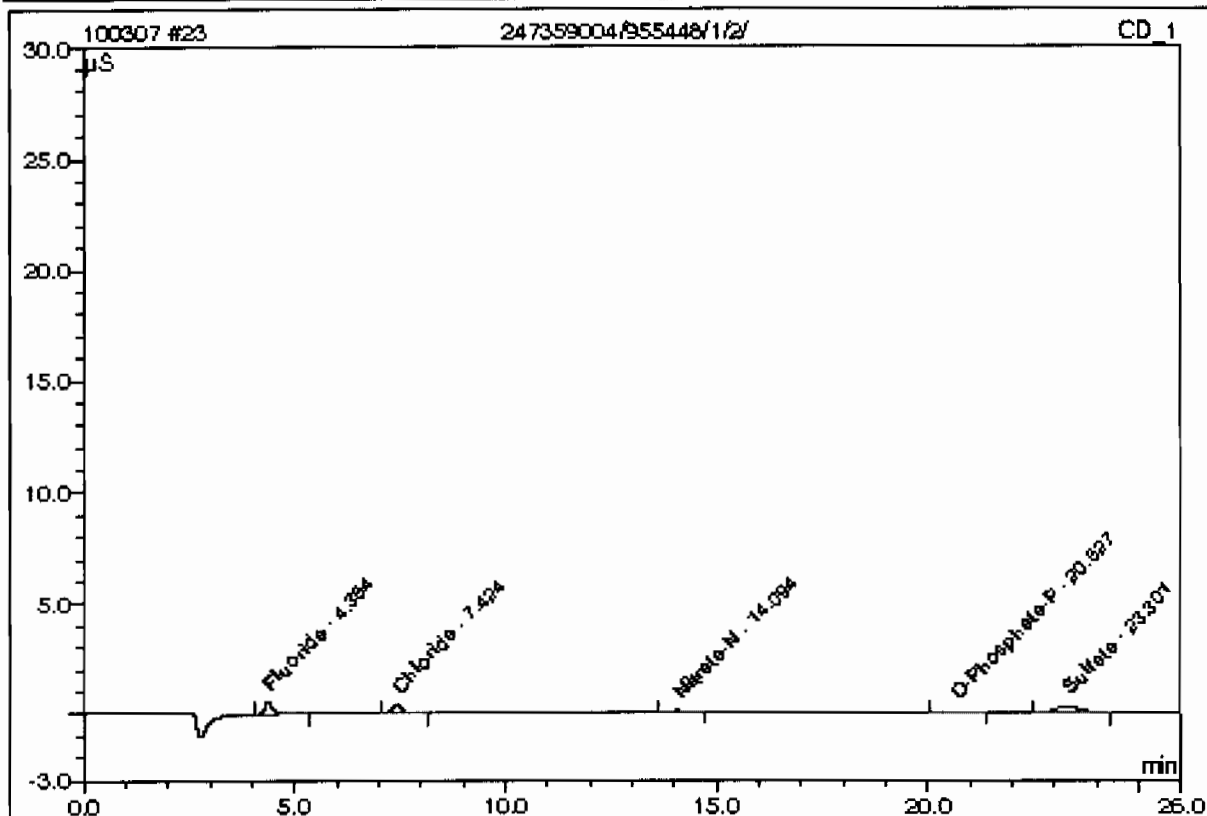
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.4779		0.24004	14.90
3	7.42	Chloride	n.a.	1.2310		0.45029	27.96
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.09	Nitrate-N	n.a.	0.1828		0.09366	5.82
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	23.27	Sulfate	n.a.	2.9403		0.78589	48.80
<b>Total:</b>				4.8320	0.000	1.570	97.47

This is runlog for Sequence 100308.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
1202053717	03/07/10 14:49	957728	1	100308	MAR1
247539001	03/07/10 15:18	957728	1	100308	MAR1
1202053711	03/07/10 15:47	957728	1	100308	MAR1
1202053713	03/07/10 16:16	957728	1	100308	MAR1
1202053715	03/07/10 16:44	957728	1	100308	MAR1
247539002	03/07/10 17:13	957728	1	100308	MAR1
247539003	03/07/10 17:42	957728	1	100308	MAR1
247539004	03/07/10 18:11	957728	1	100308	MAR1
247539005	03/07/10 18:40	957728	1	100308	MAR1
CCV	03/07/10 19:09		1	100308	MAR1
CCB	03/07/10 19:38		1	100308	MAR1
247539006	03/07/10 20:07	957728	1	100308	MAR1
247539007	03/07/10 20:36	957728	1	100308	MAR1
247539008	03/07/10 21:05	957728	1	100308	MAR1
247539009	03/07/10 21:34	957728	1	100308	MAR1
247539010	03/07/10 22:02	957728	1	100308	MAR1
247539011	03/07/10 22:31	957728	1	100308	MAR1
1202053712	03/07/10 23:00	957728	1	100308	MAR1
1202053714	03/07/10 23:29	957728	1	100308	MAR1
1202053716	03/07/10 23:58	957728	1	100308	MAR1

**23 247359004/955448/1/2/**

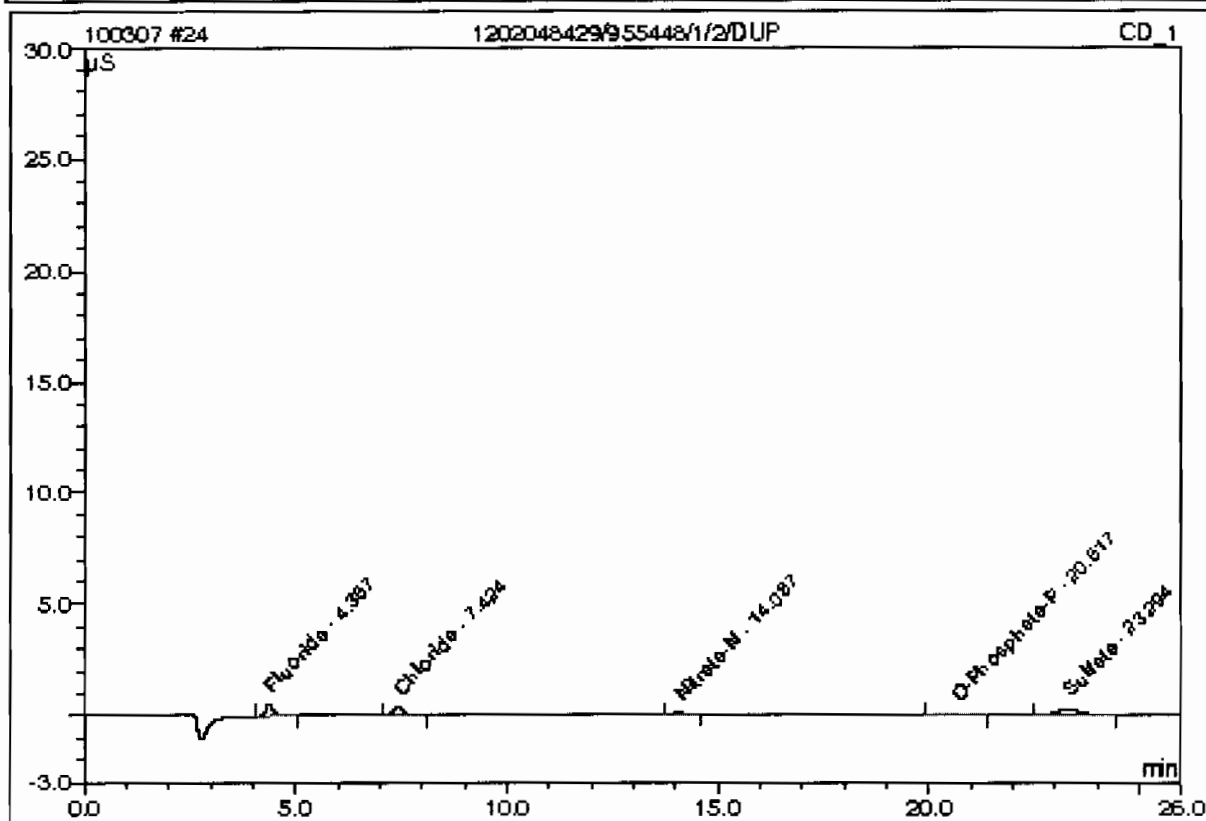
Sample Name:	247359004/955448/1/2/	Injection Volume:	1.0
Vial Number:	10	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 15:18	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.36	Fluoride	n.a.	0.2901		0.13189	25.47
2	7.42	Chloride	n.a.	0.4256		0.10444	20.17
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.09	Nitrate-N	n.a.	0.1212		0.03135	6.05
4	20.63	O-Phosphate-P	n.a.	0.2791		0.03793	7.32
5	23.30	Sulfate	n.a.	1.0013		0.21223	40.98
Total:				2.1174	0.000	0.518	100.00

**24 1202048429/955448/1/2/DUP**

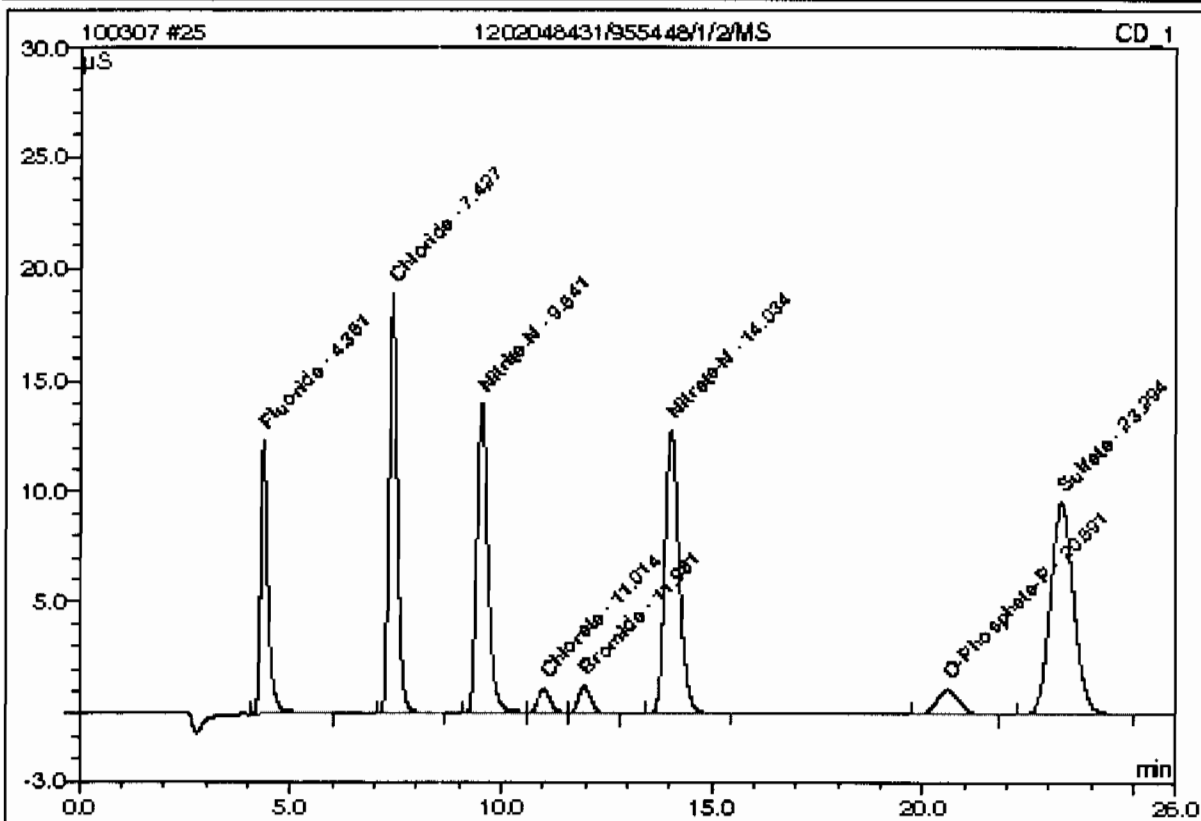
Sample Name:	1202048429/955448/1/2/DUP	Injection Volume:	1.0
Vial Number:	11	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 15:47	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;0056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.37	Fluoride	n.a.	0.2747		0.12302	24.38
2	7.42	Chloride	n.a.	0.4264		0.10478	20.76
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.09	Nitrate-N	n.a.	0.1133		0.02334	4.63
4	20.62	O-Phosphate-P	n.a.	0.3041		0.04505	8.93
5	23.29	Sulfate	n.a.	0.9884		0.20844	41.31
Total:				2.1070	0.000	0.505	100.00

**25 1202048431/955448/1/2/MS**

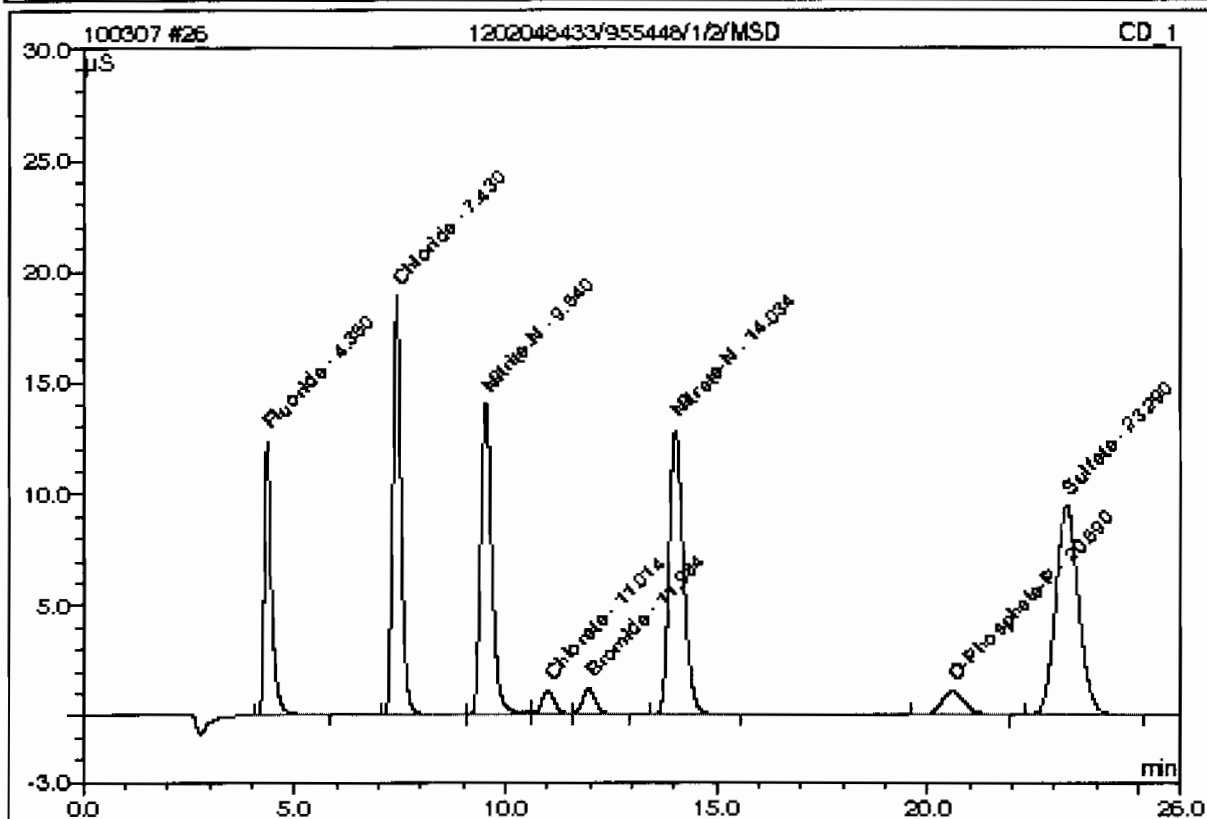
Sample Name:	1202048431/955448/1/2/MS	Injection Volume:	1.0
Vial Number:	12	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 16:16	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;0056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.36	Fluoride	n.a.	4.4740		2.54195	10.74
2	7.43	Chloride	n.a.	10.3039		4.34638	18.36
3	9.54	Nitrate-N	n.a.	5.1247		4.24404	17.93
4	11.01	Chloride	n.a.	2.5968		0.37463	1.58
5	11.98	Bromide	n.a.	2.6272		0.40409	1.71
6	14.03	Nitrate-N	n.a.	5.0701		5.03778	21.28
7	20.59	O-Phosphate-P	n.a.	2.5626		0.68886	2.91
8	23.29	Sulfate	n.a.	20.6805		6.03444	25.49
<b>Total:</b>				53.4398	0.000	23.672	100.00

**26 1202048433/955448/1/2/MSD**

Sample Name:	1202048433/955448/1/2/MSD	Injection Volume:	1.0
Vial Number:	13	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 16:44	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056

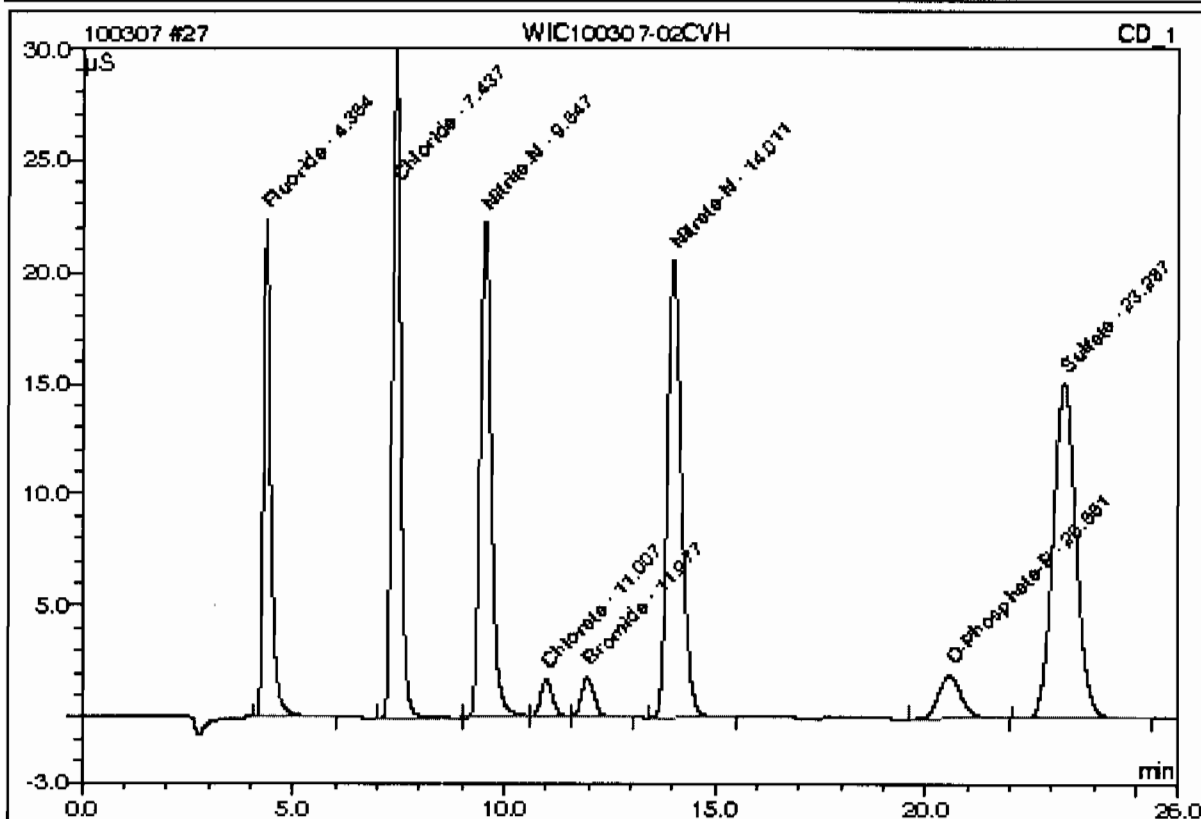


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.36	Fluoride	n.a.	4.4526		2.52965	10.66
2	7.43	Chloride	n.a.	10.3076		4.34797	18.33
3	9.54	Nitrite-N	n.a.	5.1617		4.27506	18.02
4	11.01	Chloride	n.a.	2.7363		0.39511	1.67
5	11.98	Bromide	n.a.	2.6917		0.41403	1.75
6	14.03	Nitrate-N	n.a.	5.0818		5.04965	21.29
7	20.59	O-Phosphate-P	n.a.	2.6136		0.70340	2.96
8	23.29	Sulfate	n.a.	20.5940		6.00885	25.33
Total:				53.6393	0.000	23.724	100.00



**27 WIC100307-02CVH**

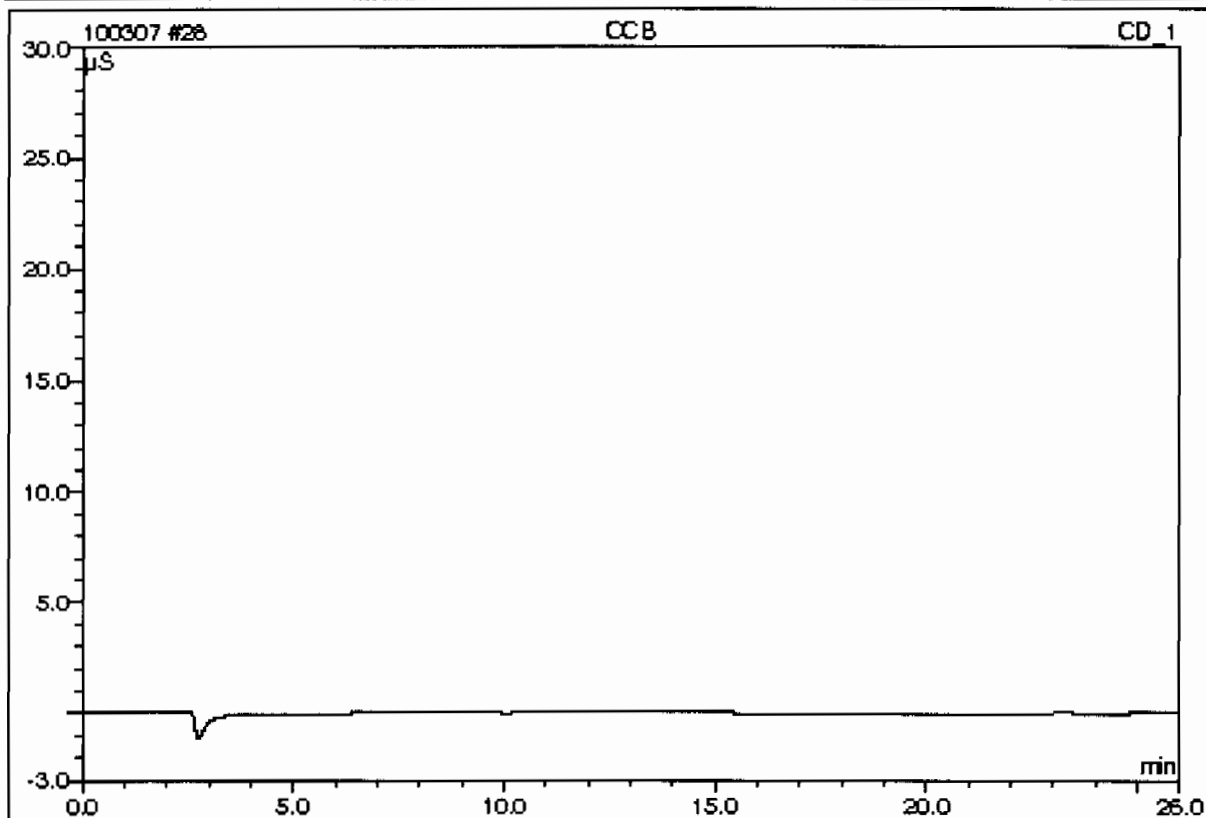
Sample Name:	WIC100307-02CVH	Injection Volume:	1.0
Vial Number:	14	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 17:13	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.36	Fluoride	n.a.	7.9583		4.54905	11.96
2	7.44	Chloride	n.a.	16.0681		6.82168	17.94
3	9.55	Nitrite-N	n.a.	8.0838		6.72558	17.69
4	11.01	Chlorate	n.a.	4.0239		0.58418	1.54
5	11.98	Bromide	n.a.	4.1051		0.63200	1.66
6	14.01	Nitrate-N	n.a.	8.0441		8.04641	21.16
7	20.56	O-Phosphate-P	n.a.	4.3592		1.20100	3.16
8	23.29	Sulfate	n.a.	32.2717		9.46373	24.89
Total:				84.9142	0.000	38.024	100.00

**28 CCB**

Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	15	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100225an	Sample Amount:	1.0000
Recording Time:	3/7/2010 17:42	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

**pH**

# pH / Corrosivity LogBook

Analyst: TXT1  
 Batch: 954988  
 Lab SOP: GL-GC-E-008 REV# 17  
 Description: pH  
 Method: SW846 9045C/9045D

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1202047374 LCS		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:06	pH	20	20	7.02	19.3°C	7	100.286	
1202047374 LCS		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:06	pH 2	20	20	7.02	19.3°C			
246249003		Misc Solid	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:09	pH	5	20	8.64	20.8°C			
246249003		Misc Solid	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:09	pH 2	5	20	8.64	20.8°C			
247283002		Misc Solid	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:13	pH	11	20	0.95	20.9°C			
247283002		Misc Solid	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:13	pH 2	11	20	0.95	20.8°C			
247336001		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:21	pH	20	20	11.37	20.0°C			
247336001		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:21	pH 2	20	20	11.39	20.0°C			
1202047372 DUP	247336001	Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:22	pH	20	20	11.22	20.1°C			1.328
1202047372 DUP	247336001	Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:22	pH 2	20	20	11.21	20.0°C			1.593
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:24	pH	20	20	7.01	18.6°C	7	100.143	
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:24	pH 2	20	20	7.01	18.5°C	7	100.143	
247336002		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:25	pH	20	20	9.05	19.9°C			
247336002		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:25	pH 2	20	20	9.05	19.9°C			
247336003		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:27	pH	20	20	8.77	19.9°C			
247336003		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:27	pH 2	20	20	8.77	20.0°C			
247336004		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:29	pH	20	20	11.13	20.1°C			
247336004		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:29	pH 2	20	20	11.13	20.1°C			
247336005		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:31	pH	20	20	10.36	19.8°C			
247336005		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:31	pH 2	20	20	10.36	20.0°C			
247336006		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:32	pH	20	20	10	19.2°C			
247336006		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:32	pH 2	20	20	10	19.4°C			

# pH / Corrosivity LogBook

Analyst: TXT1  
 Batch: 954988  
 Lab SOP: GL-GC-E-008 REV# 17  
 Description: pH  
 Method: SW846 9045C/9045D

Type Sample Id Serial Number Description  
 CCV 240 IMM091029-PH PH 7 BUFFER FOR PH  
 LCS 1202047374 IMM100209-01 LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:35	pH	20	20	7	18.5°C	7	100	
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:35	pH 2	20	20	7	18.5°C	7	100	
247336007		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:36	pH	20	20	9.17	19.3°C			
247336007		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:36	pH 2	20	20	9.17	19.7°C			
247359001		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:39	pH	20	20	5.29	19.8°C			
247359001		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:39	pH 2	20	20	5.26	19.8°C			
1202047373 DUP	247359001	Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:41	pH	20	20	5.3	19.8°C			.189
1202047373 DUP	247359001	Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:41	pH 2	20	20	5.29	19.9°C			.569
247359002		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:42	pH	20	20	5.96	19.8°C			
247359002		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:42	pH 2	20	20	5.96	19.9°C			
247359003		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:44	pH	20	20	6.58	19.7°C			
247359003		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:44	pH 2	20	20	6.58	19.8°C			
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:46	pH	20	20	7	18.5°C	7	100	
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:46	pH 2	20	20	6.99	18.5°C	7	99.857	
247359004		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:48	pH	20	20	8.4	19.5°C			
247359004		Soil	18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:48	pH 2	20	20	8.38	19.5°C			
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:51	pH	20	20	7	18.5°C	7	100	
CCV			18-FEB-2010 15:50:00	18-FEB-2010 15:55:00	18-FEB-10 16:51	pH 2	20	20	6.99	18.5°C	7	99.857	

Comments:

## pH / Corrosivity LogBook

### Calibration Information:

Run Date:	18-FEB-10 16:01	Standard	Observed	Theoretical	C	%Recovery
Instrument:	PHX742	IMM100218-PH1	4.01	4	SU	20.5 100.25
Analyst:	TX11	IMM100218-PH-	7	7	SU	20.5 100
		16:01 UPH100218-b	10.05	10	SU	20.5 100.5
		16:01 UPH100218-02c-	2.01	2	SU	20.5 100.5
		16:01 100218-b	12.08	12	SU	20.5 100.67
		16:01 IMM100218-01b	7.03	7	SU	20.5 100.43